



International
Labour
Organization

► Collecting and using wage and productivity data

A guide for Pacific employer and business
membership organizations



► **Collecting and using wage and productivity data**

A guide for Pacific employer and business membership organizations

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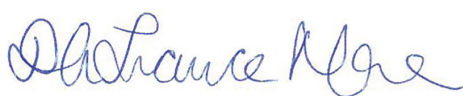
► Preface

The International Labour Organization ILO has long recognized the role that productivity contributes in enterprise development and job creation. The Conclusions Concerning the Promotion of Sustainable Enterprises adopted at the 2007 International Labour Conference incorporates the notion that enhancing productivity is a turning-point factor for business competitiveness and essential for sustainability. The ILO Centenary Declaration for the Future of Work, adopted by the International Labour Conference in 2019, also highlights productivity as a cornerstone of achieving a human-centred approach to the future of work. Increasing productivity is also one of the strategic priorities of the 2030 Agenda for Sustainable Development, as part of Sustainable Development Goal 8 on economic growth and promoting productive employment.

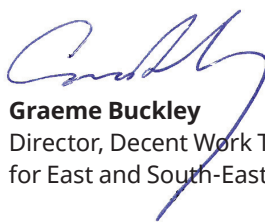
Following publication of *Driving Up Productivity – A Guide for Employer and Business Membership Organizations*, the ILO Bureau for Employers' Activities received direct requests from such organizations in the Pacific for assistance to contextualize and operationalize work on productivity.

This guide, produced by the Bureau for Employers' Activities, examines the prospects for collecting and effectively using data on wages and productivity. It reviews the definitions of these concepts and examines case studies from other employer and business membership organizations on collecting wage and productivity data. It also assesses the opportunities and challenges that these types of organizations face in data collection and use, and it reviews deployment strategies for data collection tools.

It is accompanied by a sample data collection tool that employers can use to help develop a national tool to gather information on wage and productivity trends across industry, firms and locations. Although member surveys may not paint a representative picture of a country's entire business community, given that probabilistic sampling is essential for statistical inference representative of the business community, the tool can help employers to introduce regular monitoring of wage levels and the benchmarking of productivity among members of employer and business organizations at both the enterprise and industry levels. The data collected can then be used by those organizations to develop services and assistance for member companies or in their advocacy for public policies that support productivity, which will in turn enhance competitiveness and result in the creation of more and better-quality jobs. The data will also empower those organizations to influence government decisions bilaterally and through genuine social dialogue at all levels and at all times.



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The contributions from the Malaysian Employers Federation and Employers Confederation of the Philippines were also critical to ensure that practical lessons learned and experience grounded the guide. We thank these organizations for their leadership in this area and willingness to share.

We extend our thanks also to ILO colleagues who provided peer review and made technical contributions to the guide. From the Bureau for Employers' Activities, Jose Luis Viveros Añorve and colleagues Rafael Gijón, Roberto Villamil, Andrés Yurén, Luís González and Paolo Salvai provided a robust technical grounding for this work through their publication *Driving Up Productivity – A Guide for Employer and Business Membership Organizations*.¹ Colleagues from the ILO Regional Office for Asia and the Pacific, the ILO Decent Work Technical Support Team (DWT) for East and South-East Asia and the Pacific and the ILO Country Office for Pacific Island Countries also provided technical inputs that enriched this guide. We thank Daniel Kostzer and Kinan Albahnasi for their time and important contributions.

Finally, we express deep appreciation to the ILO team that led and coordinated the production of this guide in response to employer and business membership organizations' calls for assistance, in particular Wade Bromley and Dong Eung Lee, Senior Specialists on Employers' Activities with ILO DWT for East and South-East Asia and the Pacific.

¹ ILO, *Driving Up Productivity – A Guide for Employer and Business Membership Organizations* (Lima: ILO Regional Office for Latin America and the Caribbean, Bureau for Employers' Activities, 2020).

► Inside the guide

► Preface	5
► Acknowledgements	6
► Introduction	8
► Wages and productivity: An overview	9
Defining wages and productivity	9
The relationship between wages and productivity	13
Wage and productivity trends in Pacific countries	15
► Wage and productivity research: Case studies	16
Malaysia	16
Philippines	18
► Opportunities and challenges when researching wages and productivity	21
Opportunities	21
Challenges	23
► Deploying wage and productivity data collection tools	25
Methodology for business-level surveys to determine productivity	25

Figures

Figure 1. Overview of the different types of productivity measures	10
Figure 2. Decomposition of multifactor productivity growth in Fiji	12
Figure 3. Output per worker, 2010–20	15
Figure 4. Salary surveys conducted by the Malaysian Employers Federation	16

► Introduction

Wages and productivity are important topics, about which employers and employer and business membership organizations (EBMOs) should work to stay well informed. For employers, wages are often one of the biggest costs of doing business. While a basic wage to meet workers needs is an established human right, most wage levels above this are determined through markets or collective agreements. Although wage data are readily available in some countries, this type of information is difficult to come by in Pacific countries. Some national statistics agencies collect this data, but they are often not published in a timely manner. Productivity, which generally shares a close correlation with wages, is difficult to measure and often not available in various Pacific island countries. Given the lack of information on both of these important topics, EBMOs in the region may be able to stay better informed about these key topics by collecting their own data on them.

This guide is designed to help EBMOs in the Pacific examine the prospects for collecting and using data on wages and productivity. It starts with a review of definitions of these concepts and discusses some of the challenges associated with measurement, especially of productivity. It then reviews two case studies of EBMOs in the Asia-Pacific region that have conducted their own wage data collection. It then moves to a brief discussion of the opportunities and challenges that EBMOs face in data collection and use. Finally, it reviews deployment strategies for data collection tools.

This guide is supplemented by a draft data collection tool that EBMOs can use to gather data. The tool will help these organizations gain a better understanding about productivity by industry, firm size and location. It provides a range of metrics on labour, capital and total factor productivity. It will also allow employers to compare wage levels and benchmark their productivity against other businesses in the same industry and/or location. The data collection tool may also be useful to EBMOs in their advocacy around wages and productivity, as well as internally to identify opportunities for member growth, service development and additional types of assistance to member companies.

► Wages and productivity: An overview

Defining wages and productivity

There are several definitions of wages, but it is generally viewed as remuneration for work done.

According to the International Labour Organization's (ILO) Protection of Wages Convention, 1949 (No. 95), wages are "remuneration or earnings, however designated or calculated, capable of being expressed in terms of money and fixed by mutual agreement or by national laws or regulations, which are payable in virtue of a written or unwritten contract of employment by an employer to an employed person for work done or to be done or for services rendered or to be rendered."² While this definition outlines wages in a broad sense, many countries have a specific national definition of wages that forms the basis for implementing labour legislation.

A number of countries in the Pacific have a specific definition of wages in their labour legislation.

This definition is used to clearly define which components of compensation fall under "wages" and which do not. This is a vital step, especially in employers' calculations of minimum wages, but also for their wage calculations more generally. Labour-related taxes and fees, such as payroll taxes or provident fund contributions, often use wages as the basis for calculating contribution size. These definitions of wages vary from country to country. In Fiji, for example, the Government defines wages as "all payments made to a worker for work done in respect of the worker's contract of service but does not include

- (a) the value of a house, accommodation or the supply of food, fuel, light, water or medical attendance, or amenity or services;
- (b) a contribution paid by the employer on the employer's own account to a pension fund or provident fund;
- (c) a travelling allowance or the value of a travelling concession;
- (d) a sum payable to the worker to defray special expenses incurred by the worker by the nature of the worker's employment; or
- (e) a gratuity payable on discharge or retirement."³

Samoa has a similar definition, including an identical list of other forms of compensation or benefit that do not fall under wages.

As a basic concept, productivity is straightforward – a measure of the efficiency with which inputs are turned into outputs.

The most basic definition of productivity is the number of outputs produced divided by the inputs used to produce them. It is a measure of the efficiency of a business (or industry or economy). A business that uses fewer inputs to produce the same number of outputs is more productive than a business that uses more inputs. While the basic concept of productivity is straightforward, it is difficult to translate into a tool to inform policymaking. This is due in part to the challenges with measuring inputs and outputs. Individuals and businesses in an economy produce a wide range of goods and services that vary in quality, quantity and other characteristics. This makes measuring and comparing a challenge. How does one compare the productivity of a doctor seeing patients to a factory worker assembling microwave doors? Due to this complexity, there are several approaches to

2 See www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C095.

3 Government of Fiji, "Employment Relations Promulgation 2007", available at <https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/76385/81511/F1365308060/FJI76385.pdf>.

productivity, each of which has advantages and disadvantages. The following chart provides an overview of various productivity measures, clearly showing the different inputs and outputs measured.⁴

► **Figure 1. Overview of the different types of productivity measures**

Type of output measure	Type of input measure			
	Labour	Capital	Labour and capital	Labour, capital and intermediate inputs (energy, materials, services)
Gross output	Labour productivity (based on gross output)	Capital productivity (based on gross output)	Labour–capital multi-factor productivity (based on gross output)	KLEMS multifactor productivity
Value added	Labour productivity (based on value added)	Capital productivity (based on value added)	Labour–capital multi-factor productivity (based on value added)	
	Single-factor productivity measures		Multifactor productivity measures	

Note: KLEMS refers to five measured factors: capital, labour, energy, materials and purchased service inputs.
Source: OECD, *Measuring Productivity: Measurement of Aggregate and Industry-Level Productivity Growth*, 2001, p. 14.

Some productivity measures take a simplified approach and look only at one factor at a time. In the real world, there is a wide range of factors that shape the productivity of a business. However, it is very challenging to accurately measure these many contributors to productivity. The productivity literature includes both simple measures as well as more complex measures. Simple measures of productivity include single-factor labour productivity and capital productivity, with the former being the most common. Single-factor labour productivity looks at output and divides it by the amount of labour, measured in either number of workers or more precisely in the number of hours worked. The latter measure is preferred because, over time, the amount of hours worked can increase or decrease, affecting the overall output. There are multiple potential measures of output, including gross output as well as value added.

While single-factory measures of productivity are useful because of their simplicity, they are often misinterpreted. Single-factor labour productivity is determined simply by dividing total economic output (GDP) by the number of workers – an approach for which data are often available. The ILO provides estimates of single-factor labour productivity in its global statistics database, ILOSTAT, although some values are estimated. The measure “output per worker” is calculated using GDP divided by the ILO estimates for total employment.⁵ This measure, however, suffers from a particular shortcoming and

⁴ For further information on productivity and elaboration of definitions, see ILO, *Driving Up Productivity: A Guide for Employer and Business Member Organizations* (Lima: ILO Regional Office for Latin America and the Caribbean, Bureau for Employers' Activities, 2020), 32.

⁵ ILO, ILOSTAT, available at: https://www.ilo.org/shinyapps/bulkexplorer56/?lang=en&segment=&id=SDG_A831_SEX_RT_A.

which is why it is called *single-factor* productivity: It ignores changes in other factors, such as capital, energy or materials, even though they affect the overall level of productivity.⁶ It also fails to take into account changes in skill levels over time. Because of this, single-factor labour productivity is subject to misinterpretation. The Organisation for Economic Co-operation and Development (OECD) explicitly notes that this measure is not the same as “the productivity of the individuals in the labour force”.⁷ For employers, this caution will heavily influence the use of single-factor productivity measures for wage setting, noting that proposals to increase workers’ wages by the same amount that single-factor labour productivity increases fail to distinguish between productivity gains that arise from capital investment, more efficient materials use and many other variables.

Other approaches to productivity measurement are known as multifactor productivity measures, which quantify the relative productivity contributions of many factors of production. Some multifactor productivity measures focus on capital and labour. They also regularly include a measure of total factor productivity, which is not directly measured but instead is the residual – any part of output that cannot be explained by changes in labour or capital. This approach is commonly adopted, both by countries and organizations, such as the Asian Productivity Organization. Other approaches to multifactor productivity provide even more detail. One example is KLEMS multifactor productivity, whereby KLEMS stands for the five factors that are included in the measure:

- (K)capital
- (L)labour
- (E)energy
- (M)materials
- (S)purchased service inputs

Multifactor productivity data and analyses are not common for Pacific island countries due to the complex data needed for their calculation. In comparison to single-factor labour productivity, multifactor productivity measures in the Pacific are sometimes less timely and require more data to measure. However, they provide more information about the production process and therefore are more insightful for employers.⁸

Productivity can be calculated in different ways, but different measures are not always comparable. One approach to productivity measurement is to use business-level data. An economic census or survey of a representative subset of enterprises can be used to capture information on inputs, including capital, labour and other factors, as well as outputs. Using this data and applying various statistical techniques can yield sector- and national-level productivity measures. Another approach is to measure revenues at the macrolevel. This data can come from administrative parts of government, such as the tax or commerce departments, and can then be compared with government data on employment to estimate productivity.⁹

6 Bureau of Labour Statistics, “How is Productivity Measured?” Available at: <https://www.bls.gov/k12/productivity-101/#how-is-productivity-measured/home/4>.

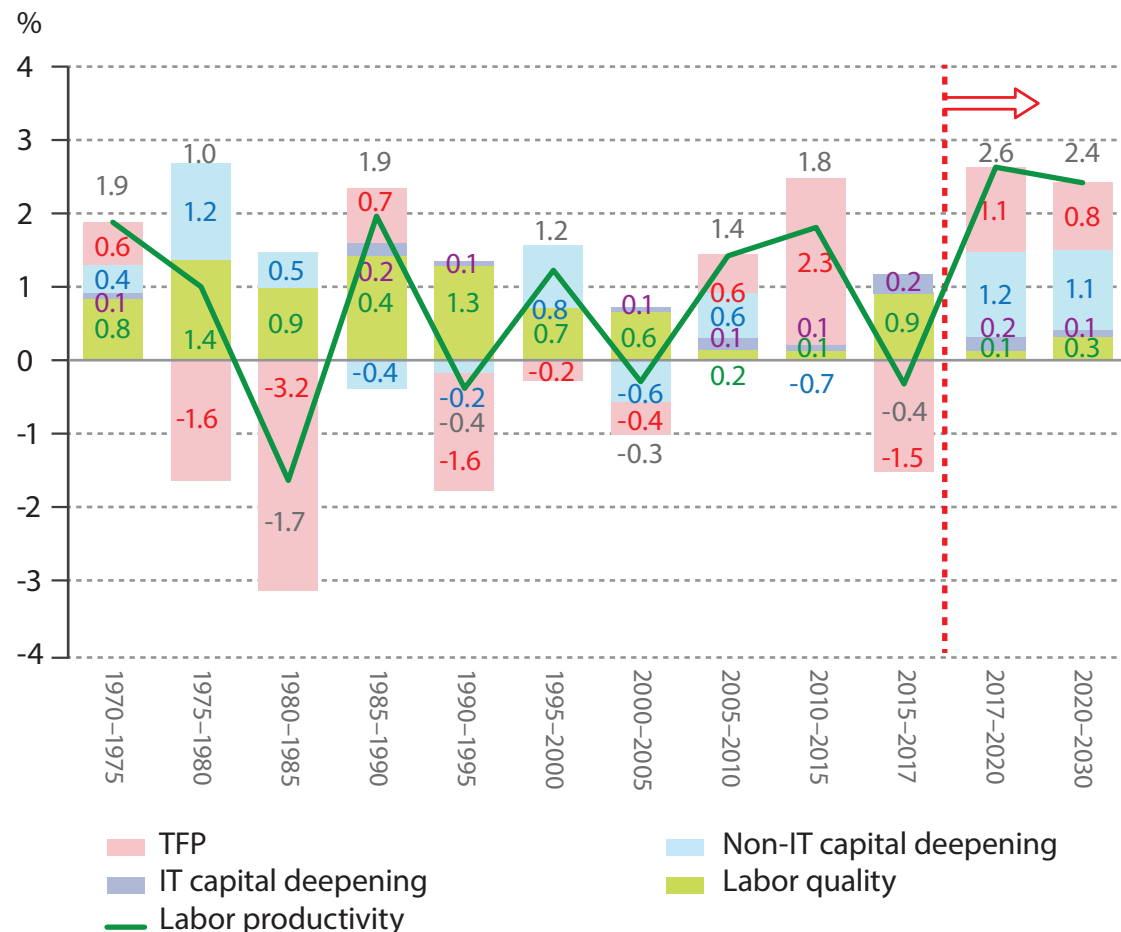
7 OECD, *Measuring Productivity: Measurement of Aggregate and Industry-Level Productivity Growth* (Paris, 2001), 14.

8 Bureau of Labour Statistics, “How is Productivity Measured?” (June 2020), available at: <https://www.bls.gov/k12/productivity-101/#how-is-productivity-measured/home/4>.

9 Comparing data from different sources can be problematic because of statistical discrepancies in accounting. For instance, some surveys are conducted at the household level while others are at the establishment level. Both may contain data on revenue (for example), but it is likely that different units of observation are used, so results will not match. EBMOs are advised to exercise caution when comparing such data, but the ability to draw on data from different sources is valuable.

Employers should focus on multifactor productivity measures because they provide a clear understanding of how different factors shape productivity growth. While multifactor productivity data are not available for all countries, the example of Fiji illustrates the benefits of the multifactor approach (figure 2).

► **Figure 2. Decomposition of multifactor productivity growth in Fiji**



Note: TFP=total factor productivity; IT=information technology.

Source: Asian Productivity Organization, *Asian Productivity Databook 2019* (Tokyo, 2019), p. 103.

Figure 2 shows the decomposition of Fiji's productivity growth, broken down into changes in labour quality, information technology capital deepening (or increases in the capital stock), non-information technology capital deepening and total factor productivity – or the residual.¹⁰ While changes in labour hours will affect overall output and the total amount of labour inputs, it does not affect productivity per worker. The data from Fiji show that total factor productivity and labour productivity growth have been fairly volatile. Since 2015, the country has actually experienced negative growth in output per worker. Despite this overall negative trend, however, labour quality improved by 0.9 per cent. Yet, it has not been sufficient to overcome the significant negative contribution to overall output stemming from the negative changes to total factor productivity. From 2010 to 2015, labour quality growth in Fiji was largely

¹⁰ Factors – including total factor productivity – can be negative. For factor inputs such as labour quality or capital, this represents a reduction in the contribution of these factors to growth. For total factor productivity, this represents the negative unexplained residual.



Industrial food-processing enterprise, Kyoto, Japan. © Marcel Crozet/ILO

stagnant – changing by an average of only 0.1 per cent. At the same time, total factor productivity growth was robust, at 2.3 per cent. This data illustrate an important point: that some drivers of productivity growth may experience decreases even if overall output per worker increases.

The relationship between wages and productivity

There is strong evidence in both economic theory and practice of a close relationship between wages and productivity. Studies have repeatedly found evidence of this close relationship. For example, in the United States, recent analysis has shown that 1 percentage point of productivity growth is associated with a 0.7–1 percentage point increase in median and average compensation.¹¹ Similar results were found in a study of manufacturing in 32 countries, which suggested a nearly one-for-one correlation between labour productivity and manufacturing compensation.¹² Another study from OECD countries similarly suggests a close correlation (coefficient of 0.8) between labour productivity and

11 Anna M. Stansbury and Lawrence H. Summers, “Productivity and Pay: Is the Link Broken?” NBER Working Paper Series No. 24165 (Cambridge, MA: National Bureau of Economic Research, 2017). Available at: https://www.nber.org/system/files/working_papers/w24165/w24165.pdf.

12 Robert Z. Lawrence, “Does Productivity Still Determine Worker Compensation? Domestic and International Evidence”, in *The US Labor Market: Questions and Challenges for Public Policy* (Washington, D.C.: American Enterprise Institute Press, 2017).

median household income.¹³ This link is not surprising for employers, who know well that the productivity of their employees is what pays for the wages that they earn. High wages become a problem only when workers do not produce efficiently enough to pay for that level of wages.¹⁴

Because wages and productivity have such a close relationship, measures of productivity often use wages as a proxy for the labour quality component of multifactor productivity. Labour quality, or human capital, is not directly observable. Instead, it is measured through proxies, such as years of schooling or wages. Using wages to measure labour quality may be a reasonable approach, given the close relationship between wages and marginal products – the marginal income generated by an additional unit of labour.¹⁵ For example, a leading chemist working for a company earns a higher wage than an administrative assistant at that same company is because the leading chemist generates a greater marginal product than the assistant. Among the most important characteristics of workers with higher marginal products is education, which closely correlates with higher wages.¹⁶ Because of the close

► Box 1 ILO Minimum Wage Fixing Convention and productivity

The ILO Minimum Wage Fixing Convention, 1970 (No. 131) is one of the most important international standards regarding wages and has important connections to productivity. Convention No. 131 was established with the stated purpose of “providing protection for wage earners against unduly low wages” and outlines many principles regarding minimum wage setting. Among other things, it reviews the coverage of minimum wages, the role of employers and workers in wage setting, the need for regular updates to minimum wages and the enforcement of minimum wages. It also outlines two criteria that should be considered when setting the minimum wage:

- the needs of workers and their families, taking into account the general level of wages in the country, the cost of living, social security benefits and the relative living standards of other social groups; and
- economic factors, including the requirements of economic development, levels of productivity and the desirability of attaining and maintaining a high level of employment.

Productivity is an important consideration in minimum wage setting but not the primary purpose nor the only consideration for minimum wages. Productivity is explicitly mentioned among the economic factors and also is among the primary factors that shape the general level of wages – under the needs of workers and their families criterion. Given this, it is important that minimum wage processes consider key questions regarding productivity, such as whether productivity levels suggest that minimum wages are reasonable or whether minimum wages are increasing in relation to productivity. Employers often work to bring productivity into discussions on minimum wage, as supported by Convention No. 131. However, other factors that go beyond the Convention, such as the cost of living, can have an even larger role than productivity in minimum wage setting.

Source: ILO, “C131 – Minimum Wage Fixing Convention, 1970”. Available at: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C131.

¹³ Stansbury and Summers, “Productivity and Pay: Is the Link Broken?”

¹⁴ Bruce W. Chew, “No-nonsense Guide to Measuring Productivity,” Harvard Business Review (1988). Available at: <https://hbr.org/1988/01/no-nonsense-guide-to-measuring-productivity>.

¹⁵ Canyon Bosler, Mary C. Daly, John G. Fernald, and Bart Hobijn, “The Outlook for U.S. Labor Quality Growth”, Federal Reserve Bank of San Francisco Working Paper 2016–14 (San Francisco, 2016), 2. Available at: https://www.frbsf.org/economic-research/files/wp2016-14.pdf?mod=article_inline.

¹⁶ A range of literature looks at the links between education and wages. This does not mean that the relationship is perfect, with some studies showing that workers capture only a share of the productivity gains of higher education. For a review of selected studies, see Colm P. Harmon, “Economic Returns to Education: What We Know, What We Don’t Know, and Where We Are Going – Some Brief Pointers”, IZA Policy Papers 29 (Bonn: Institute of Labor Economics, 2011). Available at <http://ftp.iza.org/pp29.pdf>.

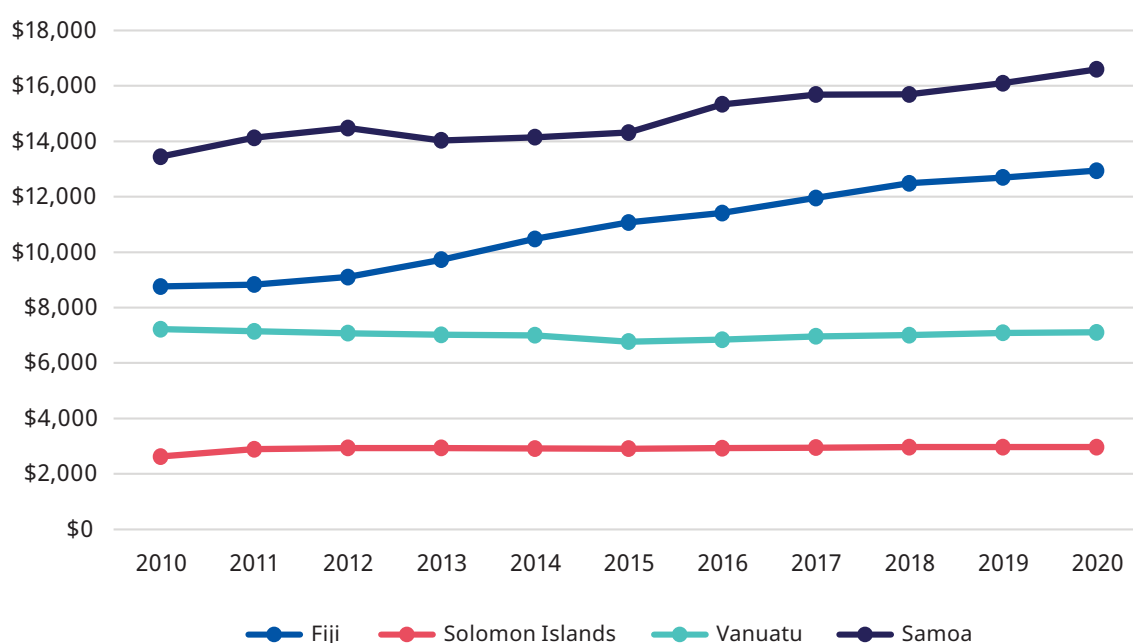
relationship between wages and labour quality, employers should seek to ensure that there is a close relationship between growth in negotiated wages and the growth of labour quality.

Wage and productivity trends in Pacific countries

Wage and productivity trends in the Pacific are somewhat difficult to assess due to the lack of data.

Data on wages is only available for a single year in some countries, which renders it impossible to assess change over time. Estimated productivity data is available for some countries in the Pacific. But the data simply reflect change in output per worker and do not disaggregate productivity into multiple factors, such as labour, capital and total factor productivity. In Fiji and Samoa, output per worker has increased significantly over the past two decades, by about one third in Fiji and almost 40 per cent in Samoa (figure 3). Vanuatu and the Solomon Islands have not seen similar growth. The Solomon Islands experienced a contraction in output per worker from the mid-1990s to the early 2000s, although starting in 2002, the country has seen growth return. Vanuatu experienced a decrease in output per worker over the past 20 years, although some of that growth is connected to Cyclone Pam, which devastated the country in 2015 and resulted in damages and losses of nearly US\$450 million, or 64 per cent of GDP.¹⁷ Overall output per worker in the Pacific has grown more quickly than in Western Europe but slower than in Eastern or Southern Asia.¹⁸ These figures give a general sense of the overall levels and changes in output per worker, but there is not sufficient data to further examine the links between wages and productivity in the region.

► Figure 3. Output per worker, 2010–20



Note: Some employment data are imputed and subject to significant uncertainty. Figures are in constant 2010 US dollars.

Source: ILOSTAT.

¹⁷ Government of Vanuatu, *Vanuatu: Post-Disaster Needs Assessment* (Port Vila, 2015). Available at: https://cop23.com.fj/wp-content/uploads/2017/06/vanuatu_pdna_cyclone_pam_2015.pdf.

¹⁸ Includes Australia, Fiji, French Polynesia, Guam, New Caledonia, New Zealand, Papua New Guinea, Samoa, Solomon Islands, Tonga, and Vanuatu.

► Wage and productivity research: Case studies

Several EBMOs in the Asia-Pacific region have conducted wage and productivity surveys, and these provide useful case studies to inform employers in the Pacific. Most of the surveys conducted in the region have focused on compensation, in part because this type of information is valuable for employers and therefore meets a clear market need. However, the compensation focus also partially relates to the challenges associated with documenting and comparing productivity. As these case studies show, conducting wage and productivity research can provide considerable benefits, both to the EBMO and its members. But this work involves much institutional commitment as well as the technical capacity to deliver quality products.

Malaysia

The Malaysia Employers Federation (MEF) conducts compensation surveys as part of the activities of the Research and Information Section. The executive and non-executive salary surveys are done annually, and they are now in the 26th edition. The fringe benefits survey is generally conducted once every two years and is at the 18th edition. The analysis of collective agreements taken cognizance by the Industrial Court and the awards on terms and conditions of employment handed down by the by Industrial Court is compiled yearly and is at its 15th edition. The findings enable benchmarking for unionized companies in the preparation for collective bargaining negotiations and can be used as an enabling reference tool. These surveys are released within the year that data are collected, ensuring that MEF members have access to detailed and timely data.

In 2020, published MEF survey findings on compensation encompassed:

- MEF Salary Survey for Executives, 2020
- MEF Salary Survey for Non-Executives, 2020
- MEF Fringe Benefits Survey, 2020
- MEF Analysis of Collective Agreements and Awards on Terms and Conditions of Employment, 2019.

► **Figure 4. Salary surveys conducted by the Malaysian Employers Federation**



Source: Malaysian Employers Federation. Available at: <https://www.mef.org.my/publications/surveyspublications.aspx>.

The MEF surveys cover a large number of employees and enterprises. The MEF invites all members from all industries via email and an online link to participate in the surveys. The findings reports present detailed analysis of the compensation packages of participating companies by industry, employment size, location, years of experience, capital ownership, sales turnover and local and multinational companies. A statistical package, IBM SPSS Statistics 21, was used to produce frequency statistics, quartile analysis and cross tabulations. The 2020 edition of the executive salary survey covered 20,733 executive salaries, while the non-executive salary survey covered 64,625 non-executives from both manufacturing and non-manufacturing sectors. The data derived from the responses of 226 MEF member companies, or about 5 per cent of the total number of members, which is in line with the long-run average participation rate. Participation in the fringe benefits survey in 2020 was modestly lower though still strong, with a total of 199 participating companies.

The surveys collect compensation data on a wide range of job benchmark positions and other characteristics. Among the compensation data published from the salary surveys are salary range, basic and gross salary, starting salary, salary increase, bonus, salary policy and salary forecasts. In 2020, the MEF included a special section on the impact of the COVID-19 pandemic on salary and bonuses. The fringe benefits survey covers leave, medical benefits, allowances, reimbursements, loans, retirement benefits, retrenchment benefits, educational benefits, club memberships, car parking, long service awards and others. The 2020 report also had special focus on how government-imposed movement controls affected flexible work arrangements and work from home. The data were collected and analysed for a wide range of job classifications. The executive salary survey includes 179 job classifications, while the non-executive salary survey has 138 job classifications.¹⁹ These positions are determined by the job market instead of using a standard national or international employment classification system.

Both the executive and non-executive salary surveys collect some productivity-related data, most notably on productivity-linked wage systems. This includes both fixed and variable components of the productivity-linked wages as well as the reasons for implementing the system and its effects. The questions on these wage systems are general, given that they can be difficult to compare between businesses. In the collective bargaining analysis report, there is somewhat more detail of productivity-linked wage systems contained in collective agreements.

The MEF compensation surveys require a significant investment to produce and then to provide detailed insights, and as such are priced to reflect this value. The MEF uses a multi-tiered pricing strategy that provides more favourable prices to members and survey participants. The members' price for the salary and benefits reports is approximately US\$225 (900 Malaysian ringgit (MYR)) while for participating member companies, the discounted price is US\$110 (MYR450). These prices reflect the high cost of production and the detailed insights in each of the volumes. For example, the MEF fringe benefits survey report contains 932 pages of information, while the salary survey for executives report contains nearly 800 pages. Both reports contain many detailed data tables.

The MEF engages in a range of marketing activities to encourage both participation in and sales of the surveys. To maximize publicity on the findings of the survey publications, the MEF conducts a media conference to launch the findings. The response from the media has been encouraging. In addition, email blasts to members include a brochure and order form. The MEF also promotes the publications at events, such as regional meetings and conferences. These marketing efforts are complemented with 50 per cent price discounts for members who participate in the survey, which is a key tool to drive both participation and sales. The MEF carefully plans the schedule of activities to ensure that the timing of the questionnaire and report launch help to maximize sales and awareness.

¹⁹ The full list of job classifications does not align with the international standard job classification system (ISCO-08) used by national statisticians and the ILO. Instead, the list was developed based on "market" position descriptions and includes numerous sector-specific classifications. While this approach may not be ideal for work related to national statistics, it may be easier for companies to complete if it uses job classifications more familiar to employers.

Over many years, the MEF has developed a fine-tuned process for implementing its surveys.

After an email invitation, questionnaires are distributed mainly via link to an online software program (Verint Enterprise Feedback Management) and as a Microsoft Word or Excel document. Respondents submit data for each benchmark position. In cases in which there are two or more employees within a position type, average data can be submitted, streamlining the survey process. Some companies – often larger ones – have multiple locations. For these cases, the company is asked to complete a separate questionnaire for each location. In some specific sectors, the number of responding companies is low, so multiple similar industries are grouped together for the analysis. After collection, data are analysed in a statistical package and prepared for publication.

The salary surveys have become an important part of the overall value proposition that the MEF provides to its members, though their successful implementation requires considerable organizational commitment.

They require the full support of management and qualified staff, especially data analysts, to ensure that the surveys and reports are successfully distributed. They also require the cooperation and support of members, including their trust in the MEF to treat the confidential salary and benefits data with great care. The end result is a significant added-value service for members that provides reliable and comprehensive data on compensation. The surveys are also beneficial for the MEF, including as a source of revenue for the organization. Beyond that, the data collected are also used to support members in other ways, especially the *Analysis of Collective Agreements and Awards on Terms and Conditions of Employment* report. This publication provides comparative analysis of collective agreements and is used by the Industrial Court as well as in negotiations with trade unions.

Philippines

In 2001, the Employers Confederation of the Philippines (ECOP) started conducting an annual compensation survey that provides detailed information on management and employee pay and benefits.

For 16 years, the compensation survey was a flagship product for ECOP, both enhancing the prestige of the organization while providing useful labour market insights. The survey was modelled on the highly successful annual compensation survey implemented by the MEF. It was originally developed with support from the ILO and then enhanced and localized through extensive effort by ECOP. Throughout the course of implementing the annual survey, ECOP has encountered a range of challenges and learned many lessons about effective survey implementation and marketing. After considerable reflection on these challenges and lessons, ECOP paused the survey implementation in 2017 to revise its approach and address issues including low participation and sales. It may restart the survey in the future.

When it conducted the compensation survey, ECOP invited all members to participate and sustained the survey through sales of the annual report of findings.

At the beginning of each annual process, ECOP extended an email invitation to all of its approximately 600 members to participate in the survey. If they received more than five responses per industry, they proceeded to analyse and publish the results. However, in some sectors, such as auto parts, ECOP has only eight members, making it difficult to obtain the minimum number of responses needed to publish. In situations such as this, they also targeted certain non-member companies for participation. This included making special efforts to get non-members to participate in the survey.

The ECOP compensation survey collected a wide range of data on employee characteristics, compensation, and benefits.

The survey collected basic employee biographical data, such as job title, sex and age. It collected detailed compensation data, including the salary or wage of each individual employee. Although the individual-level data were not published, the final report provided five compensation data points for each job description: the minimum compensation, 25th percentile, 50th percentile, 75th percentile and maximum compensation. The survey covered four groups of workers: executive, managerial, supervisory and rank and file. Within each group, there were numerous specific job types, which also varied by sector. The survey collected data on benefits, such as company-provided housing and cars, meal and transportation allowances, bonuses, life insurance and other benefits.



A rice combine harvester at work, Thailand. © Thierry Falise/ILO

Finally, the survey asked about previous compensation to allow for analysis about how compensation has changed over time. It did not include questions on other topics such as productivity.

According to ECOP, the compensation survey was a detailed though time-consuming undertaking.

To ensure rich and accurate data, the questionnaire asked companies to enter information for each individual employee. For example, a company with 900 employees would need to enter 900 unique Excel lines to complete the survey. While this level of detail provided rich data on compensation, it was also time-consuming. For larger companies, could take two to three weeks of data entry to complete. The expansive size of the survey led to delays in responses, with companies sometimes requiring several months to return a completed form. Other businesses left many items blank, while some simply did not complete the survey at all after viewing the questionnaire.

Marketing and promotion were integral to the success of the compensation survey. ECOP advertised the survey and compensation report in numerous ways, including through member emails, printed flyers and promotions at events. ECOP also developed marketing partnerships with a range of industry associations and a human resources management association. And they had a tie-up with a university library. Still, there were additional marketing steps that could have further helped the compensation survey, including a marketing campaign on social media.

In 2017, ECOP paused its compensation survey and is presently considering changes to better ensure that it meets members' needs. The ECOP compensation survey was a tremendous undertaking and after 16 years, the organization felt that it was no longer responsive to the needs of its members.

ECOP officials now think that the survey needs to be redesigned, including both a new questionnaire as well as modernized presentation. They noted that over the years readers increasingly came to expect easy-to-read figures and infographics, but they did not have the capacity to produce them. It is now important that they develop a cost-effective strategy for getting assistance for this capability. The ECOP officials also noted that there is a need to gather regular feedback from members about what they want from the compensation survey. This information will help ECOP adapt their work to be more reader friendly.

One of the drivers of the decision to pause the survey was the gradual decline in participation and sales. Before 2008, there were at least 100 survey respondents, but this fell to around 60 from 2008 to 2012. After 2012, they generally received 40–50 responses per year. While there are likely multiple drivers of this drop, the passage of a national data privacy law may have made some companies unwilling to participate. ECOP tried to encourage participation by offering participants a free or discounted copy of the compensation report. Sales also declined over time. In recent years, there were fewer than 50 reports sold annually. One year, the Government purchased between 30 and 50 copies of the survey, providing a one-time sales bump. There were multiple reasons for the sales decline, including the growth of human resources organizations in the Philippines that provide human resources professionals with an informal avenue to exchange salary information. Another trend that ECOP observed was that some companies purchased an older version of the survey, which was less expensive than the most recent version.

Managing the report distribution was another important challenge because ECOP worked to balance its member's desire for digital distribution and its own need to ensure that only paying customers would access the report. Historically, ECOP would print hard copies of the report and provide them to the paying customers. They traditionally did not distribute soft copies. In 2015, ECOP began to change this approach due to members' feedback as well as consideration for the environmental consequences of hard copy publication. They also started selling the report via compact disc and email distribution. ECOP recognizes that this may have contributed to unapproved distribution of the report and now aims to begin using digital encryption tools that could help them limit this.

ECOP found that providing accurate compensation data required considerable technical and statistical capacity, which was difficult to keep up. As with any complex survey, there were challenges associated with making sure the data were accurate. For example, some large companies have employees across multiple geographical areas, making it more difficult to link compensation to the location of the employee. ECOP encouraged companies to register their responses for each location, although it was time-consuming. Some companies registered all employees at a single location instead. Over time, finding the human resources to administer the survey also became more challenging. The survey, which was initially run by personnel with statistical experience, was eventually handed over to others who did not have the same background, presenting challenges in ensuring the continued accuracy of the compensation reports.

Despite these challenges, the compensation survey provided many benefits for ECOP and its members. The most direct beneficiaries of the work were the member and non-member companies that gained access to valuable compensation data. The survey findings also helped to raise the profile and prestige of ECOP, especially because they were the first organization in the Philippines to conduct a compensation survey. And it provided them with detailed labour market data that they were able to use in country reports, position papers and advocacy efforts with the Government. Because of these benefits, ECOP remains interested to reintroduce its compensation survey, using it to deliver important added value to its members.

► Opportunities and challenges when researching wages and productivity

Opportunities

There are a number of opportunities for EBMOs to use data collection and analysis to assist their members with new services and improved advocacy. For many countries in the Pacific, data on the economy and labour markets are not readily available. Surveys and data collection for many key measures do not take place regularly, and data that are collected are not always released in a timely fashion. This creates a data vacuum, leaving employers somewhat blind to ongoing economic and labour market developments beyond their anecdotal interactions with other employers. EBMOs can improve their insights by conducting regular data collection and analysis on wages and productivity. They can also complement this with awareness-raising activities to promote a culture of data collection and sharing.

Wage and productivity data allow EBMO members to have a clear picture of the health of businesses and the trajectory of the economy. It will give deep, timely insights into key questions, such as whether member companies are creating jobs and investing in new capital.²⁰ It will help stakeholders understand which sectors are thriving and which are not, as well as give a picture of the relative levels of wages and productivity in different sectors.

Wage and productivity data allow companies to benchmark themselves against other businesses in the same sector. For EBMO members, this is useful for numerous reasons. It allows them to better understand the overall state of a sector. It also helps them to understand how they compare with other companies and to track how their relative performance improves (or declines) over time. It helps them to get a better sense of whether the wage levels that they are paying are competitive. In particular sectors, companies may even be able to determine how their business compares in more advanced metrics, such as the labour cost per unit of output. This can be partly facilitated by using programmes that automate some of the data analysis and display results in graphical and visual form.

Benchmarking of wages and productivity will be possible in larger economic sectors, but not in smaller, more specialized parts of the economy. Benchmarking between different businesses is challenging for many reasons, including the variation in the quality, quantity and other characteristics of the goods and services they produce. To provide companies with metrics that are useful, benchmarking should be done for discrete sectors in which there is a significant number of businesses – enough to facilitate comparison. Sectors in which benchmarking may be possible include:

- manufacturing of food and beverage (ISIC 10-11);
- manufacturing of textiles and garments (ISIC 13-14);
- retail trade businesses (ISIC 47);
- accommodation businesses (ISIC 55); and
- restaurants (ISIC 56).²¹

²⁰ While some surveys specifically ask for the change in number of employees in each job classification, other surveys allow for this data to be determined by comparing two consecutive years of completed surveys. This allows for a direct comparison in the number of jobs created (or destroyed) in each classification, as well as an overall total for the enterprise.

²¹ International Standard Industrial Codes. Available at: <https://siccode.com/isic-code-lookup-directory>.

► **Box 2 Using government wage data in Fiji**

The availability of wage data in the Pacific varies considerably, but in Fiji there are a few sources of wage data for employers to use. These data provide a good point of comparison for employers when they collect their own data. One of the benefits of official government data is that companies are required to reply. The Statistics Act states that some types of census and survey responses, such as for population or business censuses, are mandatory. A company that does not complete a business census form, for example, may result in the government taking legal action against it. This is good because it helps ensure that the government data are largely representative of the private sector.

EBMOs can use government data in various ways to help their members gain additional insights about wages and productivity, for example:

1. Benchmark their own data to help members get a better picture of how their business compares with all businesses in the country, not only EBMO members.
2. Expand their data analysis into other sectors, importing government data to help employers in smaller sectors benchmark wages against sector-based averages.
3. Facilitate comparison of EBMO members' wages with public sector wages and salaries.

EBMOs can also draw institutional lessons by comparing their data and government data, such as:

1. Comparing government data with their own data to get a precise estimate of the share of private sector employees who are employed by members of the EBMO – a useful way to quantify their representation.
2. Identifying sectors in which they represent a small share of total employees and then targeting that sector for expansion of their membership base.

In some countries, EBMOs and members may be able to compare their data with official government data, providing another reference point about performance. For EBMOs, comparing with government data helps them to better understand how their members compare with the overall private sector in the country. EBMO members are not necessarily nationally representative, and in many contexts they may have an outsized proportion of formal and large companies. This type of comparison may be possible in Fiji, for example, where the government occasionally publishes wage data (broken down by sector, occupation and other characteristics) in its *Annual Paid Employment Statistics* publication.²² Alternatively, EBMOs may also improve the quality of their data through comparison with third-party sources, such as the World Bank Enterprise Survey reports. However, the most recent of those surveys in the Pacific are from 2015 for the Solomon Islands and from 2009 in the Federated States of Micronesia, Fiji, Samoa and Vanuatu. This data, and the potential comparison to data collected by the EBMO, are less useful due to their dated nature.

²² Although a rough comparison may be done, the job classifications in the wage data from the Fijian or any other government may not necessarily align with those of a survey completed by the EBMO. The ISCO-08 classification system contains a total of 438 unit groups, which is the most specific level of occupational classifications. In some areas, the ISCO system may not provide enough detail to be useful for employers. For example, ISCO contains a classification for "University and Higher Education Teachers", but this does not differentiate between associate, assistant and tenured professors, who receive significantly different levels of compensation. Therefore, information coded into the ISCO-08 system may be less useful than a customized classification system developed for the local context. EBMOs are encouraged to review the ISCO-08 system and consider whether it provides job classifications that are clear and useful for EBMO members. If organizations choose to develop their own job classifications for a productivity and compensation survey, they would benefit from technical assistance to "build a bridge" between these two classification schemes and enable comparison.

Challenges

Although the wage and productivity data work can benefit EBMOs and their members, it faces many challenges, including the need for both human and financial resources. Collecting and analysing data takes both time and money. EBMOs must design and implement surveys, clean and analyse data and develop evidence-based strategies from them. Companies must take the time to respond to surveys. Low levels of buy-in from EBMO members are a significant challenge because they must dedicate time and energy to respond to surveys in a way that is complete and accurate.

Low levels of buy-in can contribute to low survey response rates, particularly on more sensitive types of questions. Company owners and managers are – unsurprisingly – busy, and some do not have the time to respond to surveys. This can contribute to low response rates when a survey is sent out. In some cases, response rates can be less than 10 per cent. Because there is an existing relationship between an EBMO and companies, response rates may be somewhat higher than for other surveys. However, companies may be reluctant to disclose sensitive data on revenue, profit and other topics. A few countries, such as Fiji, require businesses to respond to some statistical surveys, but EBMOs cannot compel their members to respond.

Although EBMOs have many members, surveys may not paint a representative picture of a country's entire business community. In most countries, only some companies are members of an EBMO, and often they differ from the country's total population of businesses. Most EBMO members are formal businesses; thus, they may not be representative in a country with many informal businesses. Medium-sized and large companies may be more likely to be an EBMO member, whereas micro and small enterprises are less likely to be a member. EBMO members may be concentrated in large cities or in particular sectors. All of these traits may potentially mean that the EBMO members are not entirely representative of the country's private sector. Therefore, any surveys that an EBMO conducts will likely not be representative of the country's entire private sector. Instead, they should be used to communicate the situation of EBMO member businesses and not the private sector generally.

Properly collecting and analysing data is technically challenging. Unlike national statistics agencies, EBMOs do not have access to the same types of government-to-government support that help develop capacity within a government's statistical arms. In the Pacific, there is at least one regional statistical development programme. This technical assistance is especially helpful in sorting through a range of complex technical challenges. EBMOs may want to seek inputs from their national statistics agency to improve their data collection and analysis work. Technical questions could:

- **Weighting.** If EBMOs collect data at the enterprise level, it is vital that the data are weighted so that they accurately reflect all members or, if possible, the private sector as a whole. Unfortunately, some types of businesses are more likely to respond to data collection than others. If that difference is not accounted for, then the survey may not accurately represent the views of the EBMO members. This can be addressed through weighting. For example, imagine an EBMO that has 20 members in garment manufacturing and another 20 in food processing. If only five garment manufacturers respond but ten food processors respond, then the garment manufacturers' responses should be given twice the weight of the food processors' responses. In addition to the business sector, weighting also can be applied for other factors, such as business size or ownership characteristics.
- **Valuations.** While companies often have good data about their wage bills, assessing the market value of capital is often more difficult. This is especially the case for industry-specific capital, for which there may be few other examples in a country. Some approaches to measuring productivity require businesses to assess the rental value of capital, as opposed to the value of capital they own. This also may be difficult where there is no market for more specialized capital goods rental.

Companies with multiple locations can be difficult to survey. When multiple-location companies complete a single survey, it can create difficulties in understanding the wage level in a specific location. One approach to deal with this is to have a company complete a survey for each "establishment" – or



Seawall maintenance in Port Vila, Vanuatu. ©CO-Suva/ILO

each location of the business. This creates significant more work for company members, however. Without a clear approach, the survey may accidentally assign all the wages to the location of the company headquarters, even if the workers being paid that wage are located elsewhere.

Beyond challenges with technical accuracy, EBMOs may also struggle to convince social partners to trust their data. It is not surprising that government and trade unions would not immediately trust data presented by an EBMO because the EBMO has an advocacy agenda. EBMOs can help to address this challenge in several ways: They can be transparent about how data are collected and analysed, perhaps even releasing disaggregated (though anonymized) data to social partners. They could also try to bring in a government agency and unions into the data-collection process. EBMOs should recognize that their data are not a direct substitute for good national statistics while still encouraging social partners to recognize the insights provided, especially about EBMO members.

Given the small size of the Pacific economies, some sectors may not have enough companies to gather accurate data and engage in benchmarking. For companies to compare themselves with others in their sector, most approaches require a minimum number of respondents to ensure that the data are somewhat accurate. For example, the World Bank's enterprise surveys require a minimum of 45 businesses in each sector to conduct analysis and engage in benchmarking. Yet, some larger sectors, such as manufacturing, are subdivided due to major differences in labour and capital intensity among the different subsectors of manufacturing. This may further limit the number of sectors for which analysis and benchmarking are possible. Although minimum participant numbers may limit the use of surveys in some sectors, it is a vital step in providing useful benchmarks against similar businesses.

► Deploying wage and productivity data collection tools

While the deployment of wage and productivity surveys presents many challenges, the Fijian, Malaysian and Philippine experiences offer insights on navigating the difficulties. Among the most important findings from the two case experiences is the wisdom on starting small and gradually building up a survey while building up the trust with EBMO members and demonstrating the value of the work. This could mean starting with a focus on a particular industry or small group of industries. It may also mean keeping the surveying overhead expenses low, utilizing cost-effective data collection and analysis tools when first rolling out a survey. This should be accompanied by a dedicated marketing strategy, including member emails, social media campaigns and promotion at events. This could be combined with financial incentives, such as significant discounts, for companies that complete the survey. The case studies presented in this guide also demonstrate the importance of involving the right people in the survey, including both the organizations' leadership, which must drive the project, and the implementing staff, who need the right tools and skills to effectively implement it.

Online data collection tools, such as Qualtrics, are the most efficient way to deploy a wage and productivity survey. One of the most relevant findings from the case studies of Malaysia and the Philippines is that data collection is very time-consuming for companies, which is one of the biggest reasons that they do not participate. Collecting data using the most efficient tools available is key to the success of a survey. There are a number of advantages to using an online data collection platform, including ease of use for respondents and a reduction in data-processing errors. It can allow for easy-to-follow skip patterns, which are not possible in paper surveys. This format enables easy integration of sector-specific questions. An online platform can also help EBMOs analyse data. Some analysis can be automated in the platform, requiring little additional work for the EBMO. For more complex or tailored analysis, data can be available for download.

Data collection tools should be deployed regularly and aligned with both the financial year for companies and the advocacy needs of an EBMO. While there is no particular interval for the survey, employers should consider conducting a survey once every year or every two years. Intervals shorter than one year may place too great a burden on companies and thus lower the participation rate. Intervals of more than two years may not provide enough useful data. The timing of the survey should also be considered. It is sensible to deploy a survey not long after the financial year is completed, so that businesses still have a clear memory of the financial results from the previous year. But it should also not take place during peak seasons for sectors, which could lower response rates. Last, an EBMO should also consider its own advocacy schedule and try to do the survey at a time that aligns well with its need for data to support that advocacy agenda.

Methodology for business-level surveys to determine productivity

Survey tools collect data on inputs and outputs and then uses the data to determine various productivity metrics. This type of approach – using business-level surveys to determine productivity – has been done numerous times in both practical and academic settings. Advanced survey and data analysis, for example by the World Bank using global enterprise survey data, has been used to help estimate production functions.²³ The approach is detailed in the World Bank publication

²³ A production function is used to express the relationship between factors of production and the quantity of output produced. In microeconomics, a production function is a mathematical description of how the inputs a firm uses transform into output.

Total Factor Productivity Across the Developing World,²⁴ although it requires advanced econometric analysis. Instead, business-level surveys to determine productivity can allow a number of single-factor metrics to be calculated, largely focused on the internal performance of a company. The metrics shed light on the external business environment only indirectly, through their effect on costs. Among the metrics that can be derived from such surveys are:

- revenue per hour worked or full-time equivalent (FTE);²⁵
- capital stock per hour worked or per FTE;
- labour cost per dollar of output;
- capital cost per dollar of output;
- materials cost per dollar of output;
- FTE dividend by hours worked by occupation, sector, contract type and location;
- average wages by sector, location and occupation;
- lowest, highest and average wage by occupation;
- lowest, highest and average wage by sector; and
- worker turnover rate.

Once multiple surveys are completed, an EBMO can calculate how these metrics have changed over time, providing insights about potential economic trends. Examples of change-over-time metrics that can be calculated after multiple surveys include:

- change in revenue (total and by sector) and revenue per hour or FTE;
- change in number of FTEs and hours worked (total and by sector);
- change in capital stock (total and sector) and capital stock per hour or FTE;
- change in labour cost per dollar of output;
- change in capital cost per dollar of output;
- change in materials cost per dollar of output;
- change in wages by occupation;
- change in wages by sector; and
- change in wages by location.

The survey also has several other business characteristics, including ownership, management, skills development and specific types of capital. All these metrics can be used for comparison between companies or assessed in a variation of the production function.

Additional questions, such as on the sex and age of individual workers, would enable further insights but increase the data collection burden. Data on the sex and age of workers could help shed light on gender-based pay gaps, giving EBMOs insights on tackling stagnating productivity. It could also help individual employers identify when they may have a notable gender-based pay gap either at their enterprise or in relation to their sector. While these questions add valuable insights, they increase

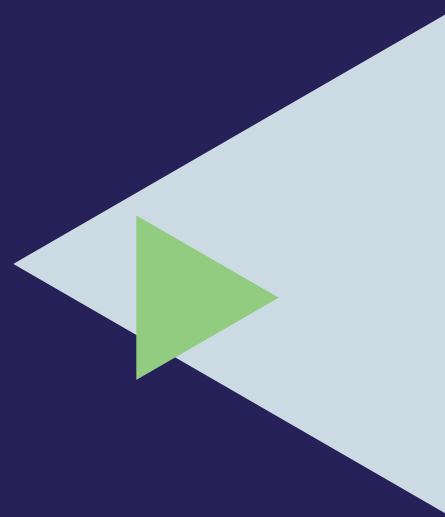
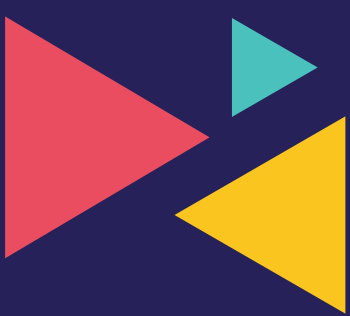
24 Federica Saliola and Murat Seker, *Total Factor Productivity Across the Developing World* (Washington, D.C.: World Bank, 2011). Available at: <http://documents1.worldbank.org/curated/en/646931468157519398/pdf>.

25 The draft survey mechanism gathers information on both hours worked and working weeks. Therefore, data analysis can present findings in either full-time equivalent (which may be easier for employers to compare) or hours worked.



A worker recycling batteries in Fiji © Blumel/ILO

the data collection burden considerably. To collect disaggregated information by gender, the number of responses in the labour and employment section of a survey (which collects data on averages by job classification) would double. To disaggregate data by gender and age, the entire labour and employment component of the survey may need to be changed, and employers may have to enter data for each employee instead of averages by job classification. Each EBMO must weigh the advantages of collecting additional data against the disadvantages or consider a phased approach that adds additional data collection on gender and age after the survey is established.



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