

DATA INTEGRATION: SERIES 7

INTRODUCTION TO THE COMPILATION OF EMPLOYEE WAGES STATISTICS (FORMAL SECTOR)

Leveraging administrative records for comprehensive wage statistics.

Introduction

The 2030 Agenda for Sustainable Development demands that the National Statistical Systems (NSSs) undertake a data revolution to provide more **timely, granular, and accurate data**. Consistent with the **Fundamental Principles of Official Statistics**, Principle 5 states: "*Data for statistical purposes may be drawn from all types of sources, be they administrative or statistical records. Statistical agencies are to choose the sources with regard to quality, timeliness, costs and burden on the respondents.*" This path forward involves integrating and harmonising multiple sources, including surveys, censuses, emerging digital traces, and administrative records into a cohesive system.

As Malaysia's national statistical office, the Department of Statistics Malaysia (DOSM) plays a central role in this effort. Moving beyond sole reliance on traditional sources, DOSM harnesses administrative records to produce more in-depth and reliable statistics on various topics, including **demographics, economics, employment, and poverty, among other development topics**.

Since 2010, DOSM has published annual wage and salary statistics, establishing an essential reference for government agencies, researchers, private sector organisations, and the general public to analyse remuneration trends in Malaysia. Initially, wage and salary statistics were compiled using a household-based approach through the **Salaries & Wages Survey**, guided by the International Labour Organization's manual, *An Integrated System of Wages Statistics: A Manual on Methods*.

Data-sharing initiatives and digitalisation have significantly enhanced DOSM's access to administrative data and enabled advanced analytics beyond conventional statistical methods. As a result, DOSM is now able to produce more comprehensive and timely wage and salary statistics, including higher-frequency data, particularly on a monthly basis, as published in the **Employee Wages Statistics (Formal Sector) Report**, by utilising administrative data.



Employee Wages Statistics (Formal Sector) Report

ISBN / ISSN: ISSN 3009-0490
Product Code: Q-2-0036
Description: Employee Wages Statistics (Formal Sector) Report is based on administrative data, which focus on citizen formal employees in Malaysia

Key benefits of Leveraging Administrative Data

- 
Improves data quality:
 Improve the quality and efficiency across the entire statistical production system.
- 
Enables more frequent and comprehensive statistics:
 Produce high-frequency and granular statistics while minimising the burden of respondents.
- 
Complements existing official statistics:
 Fills information gaps and strengthens data from other sources such as surveys.
- 
Reduces cost, time, and manpower:
 More cost-effective by optimising resources through data reuse, automation, streamlined processes, shared infrastructure, and enhanced collaboration.

A summary of main differences between Salaries and Wages Survey Report and Employee Wages Statistics (Formal Sector) Report

Salaries and Wages Survey Report

- **Definition:** Refer to **wage rate** which consisting of basic wages, cost-of-living allowances and other guaranteed and regularly paid allowances in cash or in kind and overtime payment. However, it excludes bonuses and gratuities, family allowances and social security payments made by employers.
- **Timeliness:** Published annually.
- **Reference Period:** Annual average of monthly salaries & wages.
- **Coverage:** Employees in the working age group of 15 to 64; excludes employers, own-account workers, unpaid family workers, domestic workers, casual workers, temporary workers, apprentices, employees on unpaid leave, volunteers, and others.

Employee Wages Statistics (Formal Sector) Report

- **Definition:** Refers to the **employees' earnings** before any deductions are made by the employer. This includes both regular and variable components, such as:
 - Basic salary or wages,
 - Bonuses, commissions, allowances, gratuities, and other monetary incentives.
 It excludes employer social contributions but includes all cash payments accrued during the reference period.
- **Timeliness:** Published quarterly.
- **Reference Period:** A monthly average.
- **Coverage:** Malaysian citizens aged 15 and above who were in the formal employment with a paid employee job during the reference period.



Practice of other countries

Many national statistical offices already use administrative records to compile labour statistics, especially on wages and the number of employees. In the United Kingdom, the Office for National Statistics (ONS) leverages Pay As You Earn Real Time Information to produce timely estimates of payrolled employees and median pay. In Australia, the Australian Bureau of Statistics (ABS) uses Single Touch Payroll to publish high-frequency indicators on payroll jobs and wages.



United Kingdom

Earnings and employment from Pay As You Earn Real Time Information, UK

- » **Focus of the statistics:**
 - Anyone who has a paid employee job during the reference period.
 - Calculated on a person basis
- » **Timeliness:** Published Monthly
- » **Reference period:** A monthly average of daily estimates.
- » **Coverage:** 30 million payrolled employees
- » **Data Source:** HM Revenue and Customs's (HMRC's) Pay As You Earn (PAYE) Real Time Information (RTI) system



Australia

Weekly Payroll Jobs and Wages in Australia

- » **Focus of the statistics:**
 - Focused on jobs
 - Each job is counted separately, irrespective of whether it is worked by a multiple jobholder. People who work multiple jobs may be counted multiple times
- » **Timeliness:** Published monthly
- » **Reference period:** Fortnightly
- » **Coverage:** Around 10 million payroll jobs for which a payment was reported to the Australian Taxation Office (ATO) through Single Touch Payroll (STP)
- » **Data Source:** Australian Taxation Office (ATO) Single Touch Payroll (STP) administrative data combined with ATO Client Register and ABS Business Register data.

Presentation of statistics

The estimates are presented at the national, state, and economic activities and employee demographic characteristics. Headline indicators include the number of employees, median wages, growth rates month on month and year on year, and percentiles to show distribution. Figures are presented in clear tables and visualisations at an aggregated level to protect confidentiality.

Indicator

- Number of formal employees
- Median monthly wages (RM)
- Wages distribution

Dimension

- By sex;
- By ethnicity;
- By age group;
- By economic activity;
- By state;
- By wage scale

Statistics are disseminated through...



Quarterly statistical report



Methodology

The estimation of employee wages in the **Employee Wages Statistics (Formal Sector) Report** is based on the wages and value of contributions reported by the employers. The number of employees is calculated on an individual basis, with the employee with multiple jobs only being counted once. The wage for an individual with multiple jobs refers to the sum of all wages earned through all jobs performed in the reference month. Key methodological details, including data sources, scope & coverage, and the data pipeline, are summarised below.

A Data Sources

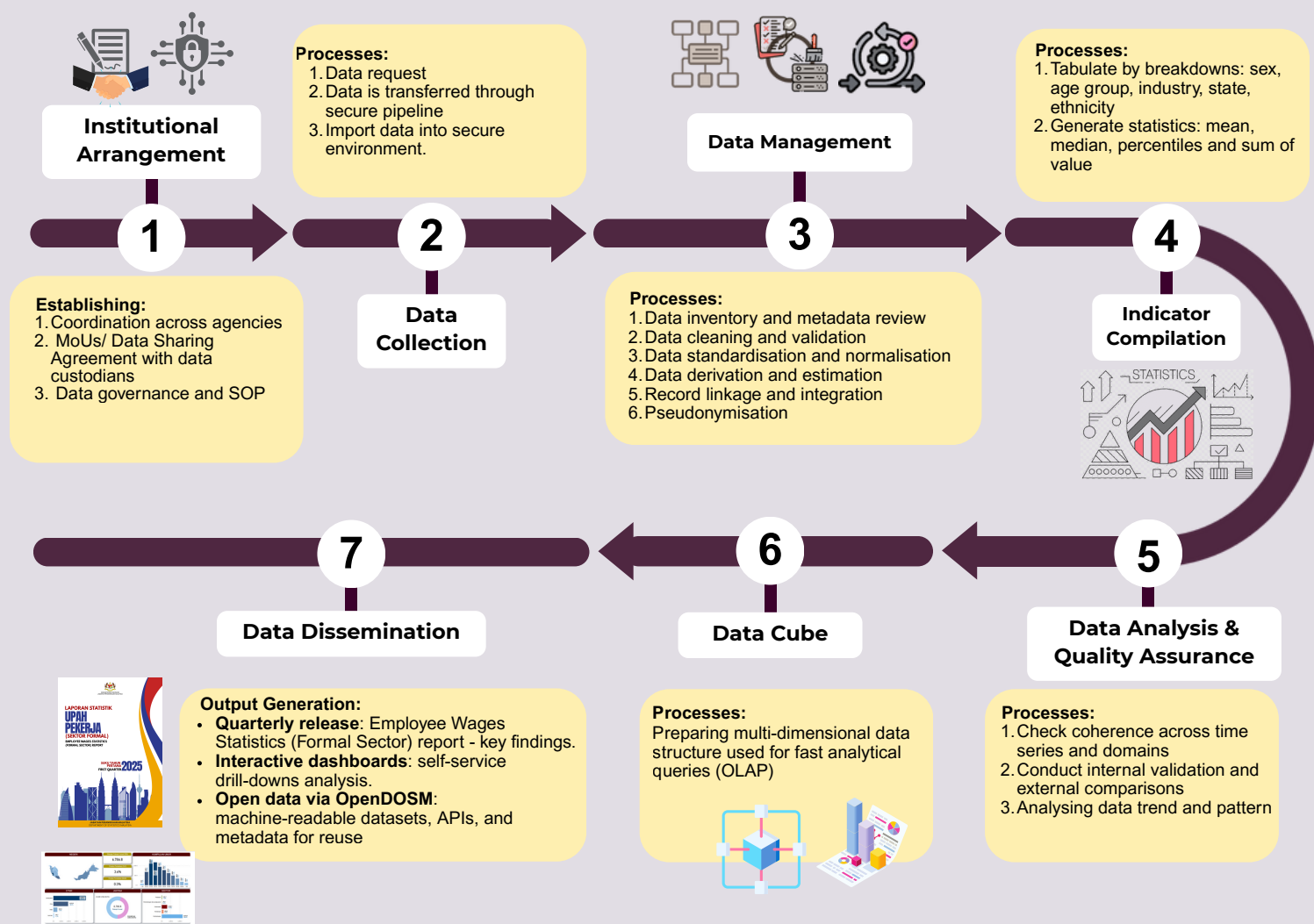
Main data sources for the publication:

- Multiple administrative records provided by relevant agencies, and
- DOSM's Malaysia Statistical Business Register (MSBR) which comprises the list of establishments or enterprises operating in Malaysia

B Scope & Coverage

These statistics primarily focus on Malaysia's citizens, who are formal employees in private sector, and contribute to retirement savings and social security. These statistics does not covered employed persons falls under informal employment i.e. own-account workers and unpaid family workers.

C Data Pipeline: From Administrative Data to Official Statistics



Way Forward

Additional Dimensions in Employee Wages Statistics (Formal Sector)

- I. Employee Wages Statistics by Micro, Small and Medium Enterprises (MSMEs) and Non-MSMEs
- II. Employee Wages Statistics by Labour-Intensive and Capital-Intensive Industries
- III. Employee Wages Statistics in Foreign Direct Investment (FDI) Companies
- IV. Employee Wages Statistics in Multinational Companies (MNCs)

Expansion of Wage Statistics Through the Integration of Additional Administrative Data Sources

- I. Federal Civil Servants Wages Statistics
- II. Employee Wages Statistics by Non Citizen
- III. Employee Wages Statistics (Citizen + Non citizen)

Conclusion

Surveys continue to serve as a key source for information that cannot be obtained through administrative records. At the same time, the Department of Statistics Malaysia (DOSM) has been actively leveraging and optimising administrative and non-traditional data sources to enhance industry statistics and develop new statistical products. With improved access to administrative data and advancements in data extraction and processing technologies, DOSM will further explore alternative data sources to produce more relevant, timely and user-centric statistics.

Reference

- Asian Development Bank. (2023). Using administrative data to strengthen development statistics in Asia and the Pacific. Asian Development Bank. <https://doi.org/10.22617/TIM230491-2>
- Australian Bureau of Statistics. (2025, July 23). Payroll jobs: Weekly payroll job indexes, sourced from Single Touch Payroll (STP) data. Retrieved from <https://www.abs.gov.au/statistics/labour/jobs/payroll-jobs/latestrelease>
- Department of Statistics Malaysia. (2023). Salaries & Wages Survey Report. Putrajaya: DOSM.
- Department of Statistics Malaysia. (2025). Employee Wages Statistics (Formal Sector), First Quarter 2025. Putrajaya: DOSM.
- International Labour Organization. (1979). An integrated system of wages statistics: A manual on methods. Geneva: International Labour Office.
- Office for National Statistics. (2025, July). Earnings and employment from Pay As You Earn Real Time Information, UK: July 2025. Retrieved from <https://www.ons.gov.uk>
- Singapore Department of Statistics. (2024). Use of administrative data and new data sources in industry statistics (Statistics Singapore Newsletter Issue 2, pp. 5–8). Retrieved from https://www.singstat.gov.sg/-/media/files/find_data/concepts_methods_and_applications/ssn224-pg5-8.ashx
- United Nations. (2014). Fundamental principles of official statistics. United Nations Statistics Division. https://unstats.un.org/unsd/dnss/hb/E-fundamental%20principles_A4-WEB.pdf

