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Do Institutions Create Jobs? Governance Quality and Unemployment Across Asia-Pacific Income Levels

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Abstract

Geopolitical uncertainty and trade wars cause the Asia Pacific unemployment rate to be above the world unemployment rate, this condition requires the government to respond appropriately, seeing this phenonema, this study aims to analyze the effect of Good Governance on the unemployment rate in the Asia Pacific Region. The method used is descriptive analysis of Klassen typology with the division of 4 quadrants and quantitative method using panel data regression to examine the effect of Good Governance and unemployment rate. Data was collected from 2002 to 2023 for 33 countries in the region. The findings of this study state that improving good governance has a negative effect on the unemployment rate. This study suggests that policymakers should improve good governance to reduce the unemployment rate.

Keywords: Asia pacific, Good Governance, Klassen Typology, Panel Regression, Unemployment Rate

1 Introduction

The stability of the industrial sector and job creation in the Asia-Pacific region are increasingly vulnerable to the escalation of various complex geopolitical conflicts (Steindl 2024; Fröhlich 2025). Tensions in various areas directly and indirectly create an environment of uncertainty for the labour market (Kalleberg 2020). Key conflicts shaping the Asia-Pacific landscape include territorial disputes in the South China Sea, which threaten vital maritime trade routes and heighten the risk of inter-state confrontation. In South Asia, historical tensions between India and Pakistan periodically flare up. Furthermore, instability in the Middle East contributes to fluctuations in energy prices and investment flows into Asia.

The culmination of this geopolitical rivalry is manifested economically in the trade war between the United States and China. The tit-for-tat imposition of import tariffs is not merely a commercial dispute, but rather an instrument in a broader strategic competition (LI 2026; Ali and Sultan 2026). The direct impact is massive disruption to global supply chains, which have long been centred in China. In response to mitigate geopolitical risks, many global companies have been driven to relocate their manufacturing facilities (Ali 2026; Bednarski et al. 2026; Patsiaouras et al. 2026).

The Asia-Pacific region is dynamic and diverse in addressing the challenges of urbanisation and job creation, or how small Pacific nations cope with the impacts of changes that are reshaping the labour market. As a hub for manufacturing, trade and innovation, the Asia-Pacific exerts a significant influence on global trends, including in the area of employment, specifically unemployment (Nabahan et al. 2026; Wan Ibarahim et al. 2026).

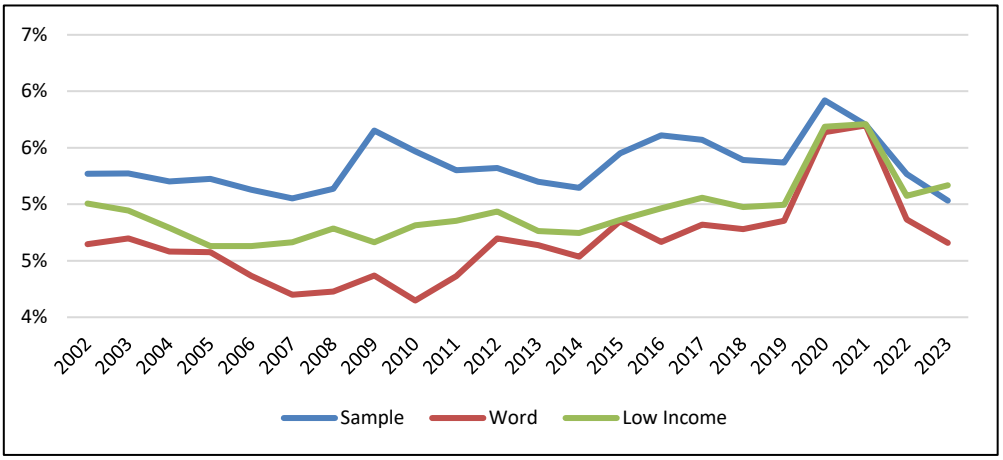


Fig. 1 Global unemployment rates 2002–2023 (adapted from ILO, 2025)

Unemployment is a central issue in economic development that has a direct impact on people's welfare (Ayund et al. 2026; Zain et al. 2026). Based on data from 2002 to 2023 (Fig. 1), it is evident that the unemployment rate among the 'sample' group is consistently higher than both the global average unemployment rate and that of low-income countries. High unemployment rates not only reflect a loss of potential economic output but also have serious implications for social issues such as increased poverty and inequality (Mensah 2026; Milovanovic et al. 2026). Globally, unemployment rates fluctuate in response to economic crises, demographic changes, and technological shifts (Maza 2026;

Weder and Zettelmeyer 2026)

A country's unemployment rate is influenced by gross domestic product, inflation and remittances, which have a negative impact, whilst population growth and external debt have a positive impact (Siddiqa 2021; Pudasaini 2026; Ma'in et al. 2026). Unemployment rates in various countries not only reflect economic challenges but also highlight the crucial role of good governance in creating conditions that support inclusive growth (Pal 2026; Zain et al. 2026; Nzabirinda 2026). Unemployment cannot be separated from the importance of applying the principles of Good Governance, which encompass responsive, participatory, and results-oriented governance. With good governance, governments have greater capacity to design adaptive labour market policies; Good Governance also exerts a negative influence on unemployment rates (Shabbir et al. 2019).

Good governance is one of the key factors influencing a country's economic performance, including in creating jobs and reducing unemployment (Mahdi 2026; Vasudevan et al. 2026). Good governance encompasses aspects such as policy effectiveness, transparency, accountability, and the capacity of institutions to manage resources for the public good (Kaufmann and Kraay 2024).

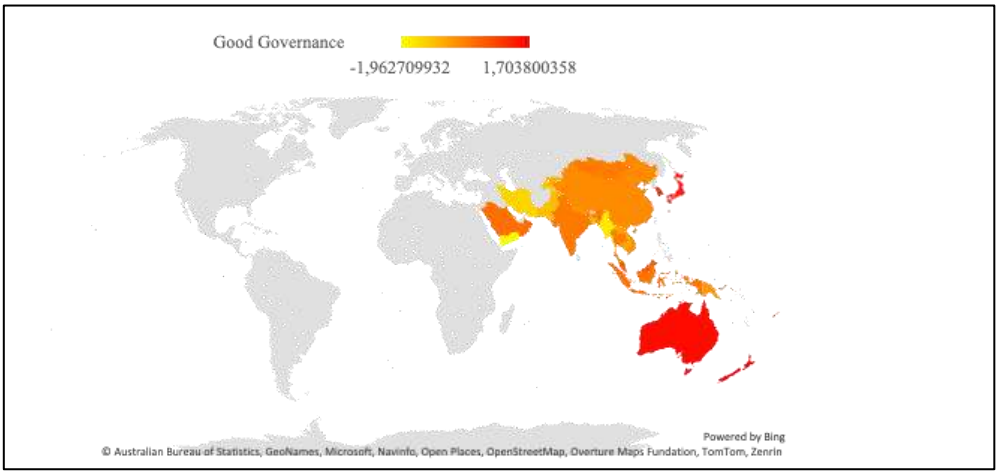


Fig. 2 Good governance in the asia-pacific 2023 (adapted from WGI)

The 2023 Good Governance data in Fig. 2, reveals a striking disparity among countries in the Asia-Pacific region in terms of good governance. Developed countries such as New Zealand (1.70), Singapore (1.61), and Australia (1.54) have recorded high scores, reflecting the effectiveness of institutions, legal stability, and the government's capacity to formulate and implement public policy. Conversely, countries such as Yemen (−1.96), Afghanistan (−1.73), and Myanmar (−1.65) show very low scores, indicating weak governance infrastructure, a lack of accountability, and a high risk of institutional dysfunction. Most developing countries, such as Tajikistan, Kyrgyzstan, Bangladesh, and Pakistan, are in the lower-middle range, reflecting the challenges in improving inclusive and responsive good governance.

Unemployment rates are closely linked to issues of good governance (Ullah and Rahman 2021; Atufe-Musa 2026; Krause and Hong 2026). The inability to create and access employment opportunities fairly is often caused by corruption, lack of transparency, and legal injustice (Bulama 2026; Nguyen et al. 2026). The politicisation of government institutions exacerbates this situation, as public policy is based more on political interests

than on real economic needs, meaning that projects capable of creating jobs do not receive the attention they deserve. Good Governance is crucial for realising aspirations and advancing social development, reducing unemployment rates, and boosting a nation's economy (Hill 2026; Hope 2026).

Geopolitical uncertainty, trade wars, and the adaptive shift of the labour market place pressure on unemployment rates; this situation demands that governments respond in a targeted manner. Good Governance is a crucial factor in determining the extent to which a country can manage external impacts and protect its labour market. It is therefore important to examine how variations in Good Governance affect unemployment rates amidst the complexity of ever-evolving global challenges.

Good governance and unemployment rates are two key interrelated aspects of a country's or region's economic development (Niken et al. 2023). The Asia-Pacific region comprises a diverse range of countries with varying levels of economic development, political systems and governance capacity. The diversity of good governance in the Asia-Pacific region can be observed through these countries' per capita income.

Good Governance in the Asia-Pacific region from 2020 to 2023 in Fig. 3 shows variations between high-income, upper-middle-income, and lower-middle-income countries. High-income countries consistently recorded positive values that even tended to increase from 0.77 in 2002 to 0.91 in 2023. Meanwhile, the Upper Middle Income group showed stable negative values in the range of -0.2 to -0.4 without drastic fluctuations, whilst the Lower Middle Income group also maintained a pattern of lower negative values, namely around -0.9 to -1.0 throughout the observation period.

The persistent disparities and internal homogeneity within each of these categories suggest that aggregating the data would obscure crucial dynamics (Zhou et al. 2026; Cheng et al. 2026). Therefore, this study aims to elucidate why these differing patterns occur at each income level, to examine what consistently drives the differences in the impact of income levels, and to identify the specific mechanisms driving the sharp divergence among these groups.

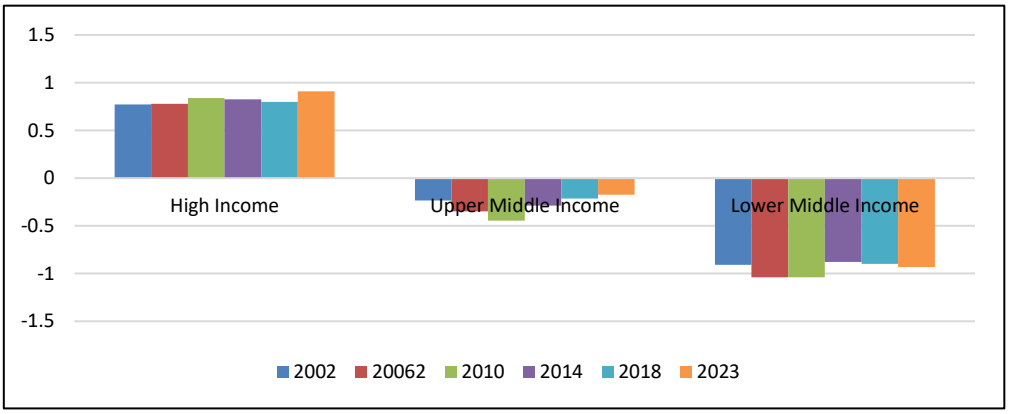


Fig. 3 Good Governance in the Asia-Pacific Region (adapted from WGI, -2.5 to 2.5)

High unemployment is a serious problem that can hinder a country's economic growth and social stability (Ramzan 2021). Unemployment not only results in a loss of income for individuals and families, but also reduces national productivity and increases social inequality. In the long term, high unemployment can trigger problems such as rising poverty rates, increasing hunger, and exacerbating political instability (Hassan 2025;

Ngubane et al. 2023).

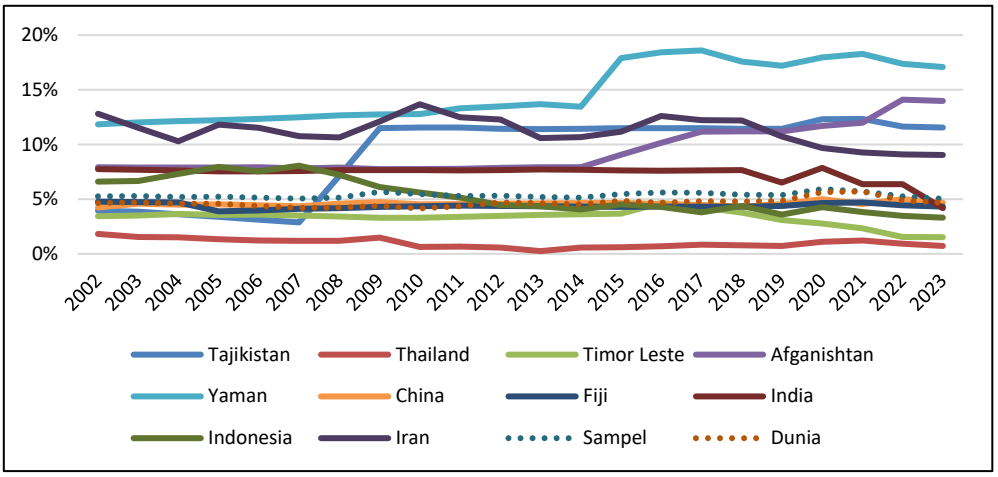


Fig. 4 Unemployment Rates in Asia-Pacific Countries (adapted from the World Bank, 2025)

Unemployment data from 2002 to 2023 in Fig. 4 reveal a stark disparity among the countries examined. Countries such as Yemen, Afghanistan and Tajikistan consistently record very high unemployment figures, often exceeding double digits. Yemen, for example, saw unemployment surge to over 17–18% after 2015, whilst Tajikistan and Afghanistan also persistently remained above 11%. Thailand presents the opposite reality with remarkable stability, having an unemployment rate that almost never exceeds 2% and is often recorded below 1%. This sharp contrast in unemployment rates illustrates two starkly contrasting labour market realities within the sample. Other countries, such as Indonesia and India, show a clear trend of improvement. Indonesia managed to reduce its unemployment rate from around 6–7% to below 4% by the end of the period. These figures provide important context for the aggregate 'Sample' and 'World' data. The average 'Sample' unemployment rate fluctuates between 5–6%, whilst the 'World' average is in the range of 4–5%. This descriptive data clearly shows that although the average appears stable, labour market conditions at the level of individual countries can vary greatly, ranging from full stability to chronic labour market crises.

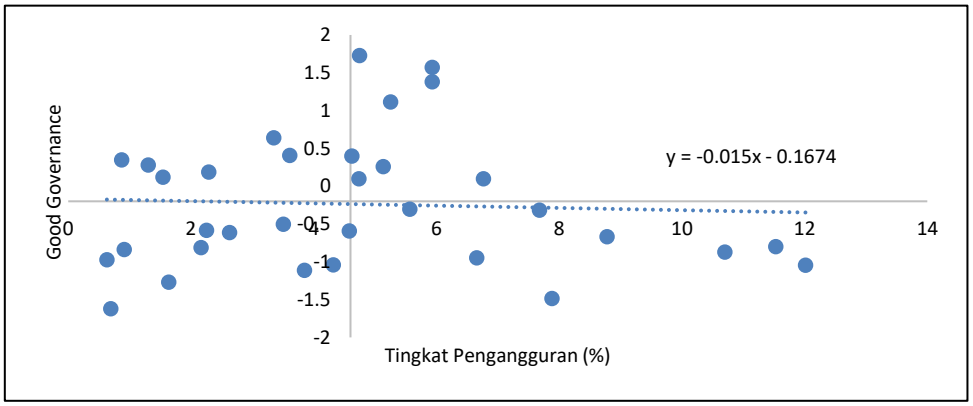


Fig. 5 The relationship between good governance and unemployment rates 2023 (adapted from the World Bank, 2025)

There is a long-term relationship between Good Governance and unemployment rates,

indicating that the effectiveness of Good Governance has a significant impact on a country's labour market conditions (Boţa-Avram et al. 2021). Governments with high levels of Good Governance, characterised by transparency, accountability, and efficiency in policy-making, tend to create an environment conducive to economic growth and job creation.

The relationship between good governance and unemployment rates is reflected in the 2023 data (in Fig. 5), where the relationship is negative; this means that an increase in good governance will reduce unemployment rates. The slope of the data is negative, with y = -0.015x - 0.1674. Based on this analysis, this study aims to analyse the impact of the quality of governance (Good Governance) on unemployment rates across income groups in the Asia-Pacific region. The novelty of this research lies in three key aspects. First, this study uses a more comprehensive sample than previous studies, namely 33 countries in the Asia-Pacific region over the period 2002–2023. Second, the analysis is conducted separately based on three income groups (High Income, Upper Middle Income, and Lower Middle Income), thereby enabling the identification of different transmission mechanisms of Good Governance within each group. Third, this study combines Klassen's typological descriptive analysis with static panel data regression to produce a more holistic picture. Thus, this study fills a research gap in the literature, namely the scarcity of studies that simultaneously examine the heterogeneity of the impact of Good Governance on unemployment rates across income groups in the Asia-Pacific region.

2 Method

This study utilises secondary data obtained from various reliable sources such as the World Bank, the International Labour Organisation, and the World Governance Indicator. The secondary data consists of panel data comprising time-series and cross-sectional data. The time period selected spans from 2002 to 2023. The subjects of this study are 33 countries in the Asia-Pacific region that have been classified.

This study uses the Unemployment Rate as the dependent variable, with Good Governance, Minimum Wage, Population Growth, Economic Growth, Per Capita Income, Fixed Internet Subscriptions, and Government Expenditure on Education as independent variables (Table 1).

Table 1 Data, data sources, and data units used in the study

Data	Units	Data source
Unemployment rate	Percent (%)	*International labour organization*
Good governance	Index	*World governance indicator*
Minimum wage	US$	*International labour organization*
Population growth	Percent (%)	*World bank*
Economic growth	Percent (%)	*World bank*
Per capita income	US$	*World bank*
Fixed-line internet subscription	US$ per 100 people	*World bank*
Government spending on education	percent of GDP	*World bank*

The Good Governance Index is a composite index. According to Boţa-Avram et al. (2021), the Good Governance Index is the average of the following indices in Table 2:

Table 2 Data, data sources and units used to measure the good governance index

Data	Units	Data source
Voice and accountability	Index	*World governance indicator*
Political stability	Index	*World governance indicator*
Government effectiveness	Index	*World governance indicator*
Regulatory quality	Index	*World governance indicator*
Rule of law	Index	*World governance indicator*
Perception of corruption	Index	*World governance indicator*

The classification of the sample countries is based on their per capita Gross National Income (Saha 2023). The 33 countries included in the sample have been grouped and are presented in Table 3, with the following details:

Table 3 List of sample countries

Lower middle income	Upper middle income	High income
Myanmar	China	Jepang
Afghanistan	Malaysia	Korea Selatan
Bangladesh	Thailand	Singapura
Pakistan	Fiji	Qatar
Kamboja	Kazakhstan	Arab Saudi
Timor Leste	Mongolia	Selandia Baru
Nepal	Maladewa	Australia
Yaman	Iran	Oman
Kirgizstan	Indonesia	Kuwait
Tajikistan	India	
Kepulauan Solomon	Vietnam	
Laos		
Papua Nugini		

2.1. Data Analysis Methods

Based on the data collected, this study combines quantitative and qualitative analysis. Quantitative analysis involves the use of static panel data methods and the presentation of data in graphical form. Furthermore, the results of the quantitative analysis are interpreted qualitatively to draw more comprehensive and in-depth conclusions. The research process and data processing will be carried out and estimated using Microsoft Excel 365 and Stata 15 software.

2.1.1. Descriptive Analysis Method

For the descriptive analysis method, this study employs Klassen's typological analysis. The Klassen typology analysis is a method used to group or classify a region or unit of analysis based on specific performance or characteristics (Elpisah et al. 2021). The Klassen typology analysis incorporates descriptions into a four-quadrant Cartesian diagram to determine the position of each country in the Asia-Pacific region based on good governance and its unemployment rate. The use of Klassen's typological analysis is expected to provide accurate and representative data to link the conditions of each country in the Asia-Pacific region, which will facilitate the process of formulating appropriate policy recommendations for each country. The analysis of the relationship between government and unemployment in the Asia-Pacific region utilises Klassen's typological analysis; this analysis employs four quadrants to determine the position of each country, with the criteria for determining quadrant positions as follows.

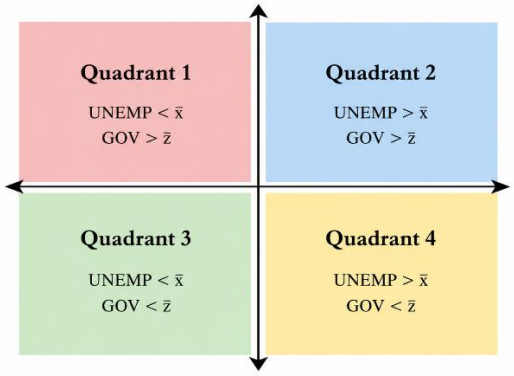


Fig. 6 Klassen's typology quadrant

The in Fig. 6, Quadrant 1 is the position where a country has an unemployment rate below the average and Good Governance above the average; Quadrant 2 is the position where both the unemployment rate and Good Governance are above the average; Quadrant 3 is the position where the unemployment rate is below the average and Good Governance is below the average; and Quadrant 4 is the position where both the unemployment rate and Good Governance are below the average.

2.1.2. Quantitative Analysis Method

Quantitative analysis in this study was conducted to determine how Good Governance (GOV), Minimum Wage (WAGE), Population Growth (POPG), Economic Growth (ECON), Per Capita Income (GDPC), Fixed Broadband Subscriptions (FBS), and Government Expenditure on Education (EDUC) affect the Unemployment Rate (UNEM) using a panel data regression approach. The panel data in this study consists of a combination of cross-sectional data covering 33 countries in the Asia-Pacific region and time-series data spanning the years 2002–2023.

Panel data regression (pooled least squares) is an approach that combines time-series and cross-sectional data. The use of this method yields more comprehensive estimates than using cross-sectional or time-series data alone (Wooldridge 2019). This is due to the large number of observations in panel data, which increases the degrees of freedom and reduces the likelihood of multicollinearity between independent variables. Consequently, the estimation results obtained using panel data are significantly better than those obtained using cross-sectional or time-series data separately.

Panel data analysis involves three commonly used estimation techniques: Pooled Least Squares (PLS), Fixed Effects Model (FEM), and Random Effects Model (REM). PLS represents the simplest approach, pooling data across the entire time series. This model maintains consistent intercepts and slopes. FEM accommodates variations in the intercepts in cross-sectional and time-series data caused by unobserved variables. Conversely, REM is used when there are patterns of correlation or non-randomness between individual effects and explanatory variables. Consequently, REM improves the efficiency of parameter estimation by incorporating differences between time periods and individuals into the error term.

This study examines the impact of good governance on unemployment rates in the Asia-Pacific region. The study uses one dependent variable, namely the unemployment rate (UNEM), and seven independent variables, namely good governance (GOV), Minimum

Wage (WAGE), Population Growth (POPG), Economic Growth (ECON), Per Capita Income (GDPC), Fixed Broadband Subscriptions (FBS), and Government Expenditure on Education (EDUC).

The formulation of this model is based on previous research conducted by Shabbir et al. (2019), Bosna (2022), Al-Qudah and Nsairat (2024), and Siddiqa (2021). The research model is formulated as follows:

- Model 1: The Effect of Good Governance on Unemployment Rates Across All Countries
- Model 2: The Effect of Good Governance on Unemployment Rates in High-Income Countries
- Model 3: The Effect of Good Governance on Unemployment Rates in Upper-Middle-Income Countries
- Model 4: The Effect of Good Governance on Unemployment Rates in Lower-Middle-Income Countries

$$UNEM_{it} = \alpha 0 + \beta 1 lnGOV_{it} + \beta 2 lnWAGE_{it} + \beta 3 POPG_{it} + \beta 4 ECON_{it} + \beta 5 lnGDPC_{it} + \beta 6 FBS_{it} + \beta 7 EDUC_{it} + \epsilon_{it} \quad (1)$$

Note:

$\alpha 0$: Intercept
$\beta 1 - \beta 6$: Coefficients of independent variables (%)
$UNEM_{it}$: Unemployment Rate (%)
$lnGOV_{it}$: Good Governance (Index, natural logarithm)
$lnWAGE_{it}$: Minimum Wage (US$, natural logarithm)
$POPG_{it}$: Population Growth (%)
$ECON_{it}$: Economic Growth (%)
$lnGDPC_{it}$: Per Capita Income (US$, natural logarithm)
FBS_{it} : Fixed Internet Subscriptions (US$ per 100 people)
$EDUC_{it}$: Government Expenditure on Education (% of GDP)
ϵ_{it} : *error*

The framework for this study is presented in the form of the following diagram (Fig. 7):

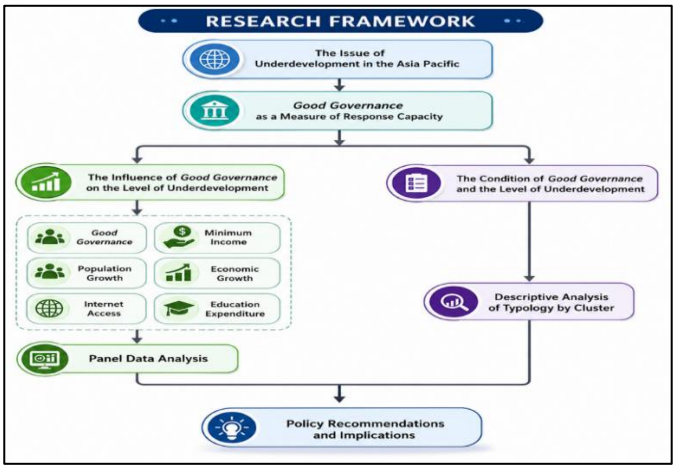


Fig. 7 Research framework

3 Results

3.1 Good Governance and Unemployment in the Asia-Pacific Region Based on Per Capita Income

The diversity within the Asia-Pacific region is a complex reality, with each country following a distinct development trajectory. To map this complexity effectively, one relevant approach is to classify countries according to the Klassen typology quadrants. This approach enables us to identify patterns, specific challenges, and the relationship between good governance and unemployment rates.

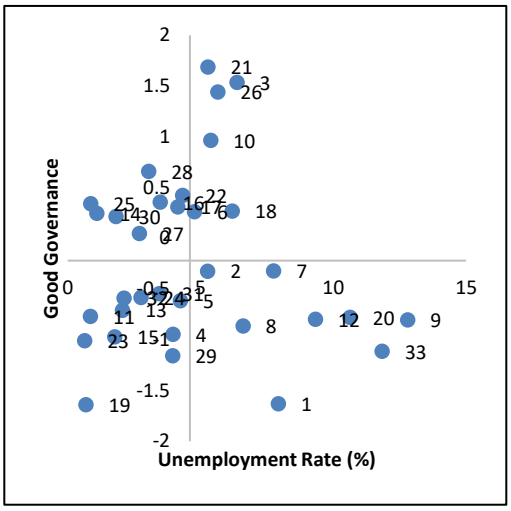


Fig. 8 Good governance and unemployment rates in asia-pacific countries, 2002 (adapted from WGI and ILO 2025)

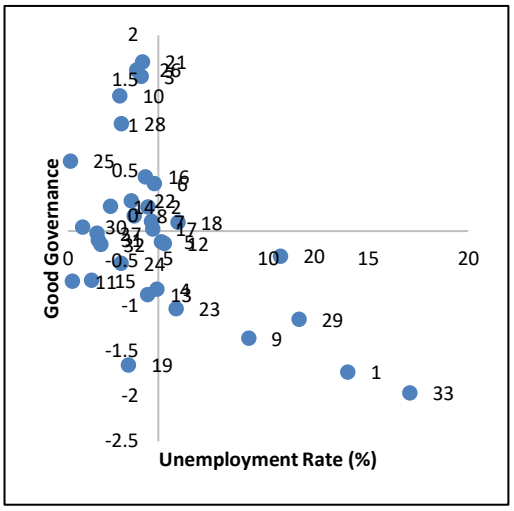


Fig. 9 Good governance and unemployment rates in asia-pacific countries, 2023 (adapted from WGI and ILO 2025)

Fig. 8 shows the position of countries in the Asia-Pacific region in 2002, Quadrant 1 comprises 8 countries, the majority of which are high-income countries; Quadrant 2 comprises 6 countries, 5 of which are high-income countries; Quadrant 3 comprises 11 countries, comprising upper-middle-income and lower-middle-income countries; and finally, Quadrant 4 comprises 8 countries of varying types. As shown in Fig. 9, the number of countries in Quadrant 1 increased to 16 in 2023, indicating an improvement in good governance and a decline in unemployment rates. Table 4 shows in Quadrant 2 in 2023, only one country is positioned there, namely Mongolia, whilst Quadrant 3 is still occupied by nine countries characterised by low unemployment and low levels of good governance; in Quadrant 4, there are eight countries situated in that quadrant.

Table 4 Characteristics of asia-pacific countries

Quadrant	Year in 2002	Year in 2023
Quadrant I	(25) Qatar, (14) Kuwait, (28) South Korea, (22) Oman, (30) Thailand, (16) Malaysia, (17) Maldives, (27) Solomon Islands	(25) Qatar, (14) Kuwait, (28) South Korea, (22) Oman, (21) New Zealand, (26) Singapore, (3) Australia, (10) Japan, (2) Saudi Arabia, (30) Thailand, (16) Malaysia, (17) Maldives, (8) Indonesia, (7) India, (6) Fiji
Quadrant II	(21) New Zealand, (26) Singapore, (3) Australia, (10) Japan, (6) Fiji, (18)	(18) Mongolia

Quadrant	Year in 2002	Year in 2023
	Mongolia	
Quadrant III	(32) Vietnam, (5) China, (31) East Timor, (4) Bangladesh, (29) Tajikistan, (24) Papua New Guinea, (13) Kyrgyzstan, (15) Laos, (11) Cambodia, (23) Pakistan, (19) Myanmar	(32) Vietnam, (27) Solomon Islands, (19) Myanmar, (11) Cambodia, (13) Kyrgyzstan, (15) Laos, (4) Bangladesh, (24) Papua New Guinea, (31) East Timor
Quadrant IV	(2) Saudi Arabia, (8) Indonesia, (7) India, (12) Kazakhstan, (9) Iran, (1) Afghanistan, (20) Nepal, (33) Yemen	(5) China, (7) India, (9) Iran, (12) Kazakhstan, (29) Tajikistan, (33) Yemen, (20) Nepal, (1) Afghanistan

3.2. Good Governance and Unemployment Rates in High-Income

Countries High-income countries are those with a Gross National Income (GNI) per capita of more than $13,845 per year, according to the classification established by the World Bank. Countries in this category enjoy a high level of economic well-being, supported by stable economic growth, high labour productivity, and effective government policies to promote development (Moridian et al. 2024). The position of high-income countries is illustrated in the figure below.

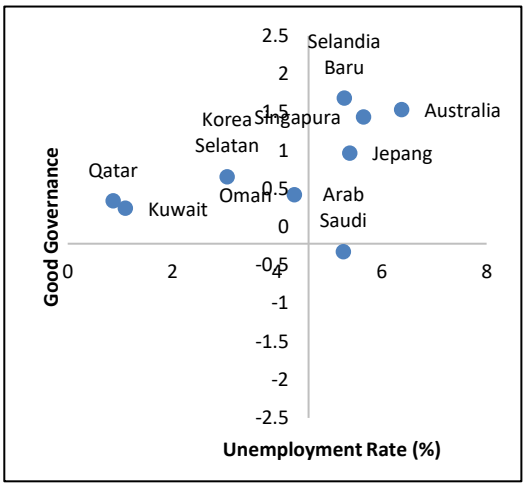


Fig. 10 Good governance and unemployment rates in high-income countries in the asia-pacific region, 2002 (adapted from WGI and ILO 2025)

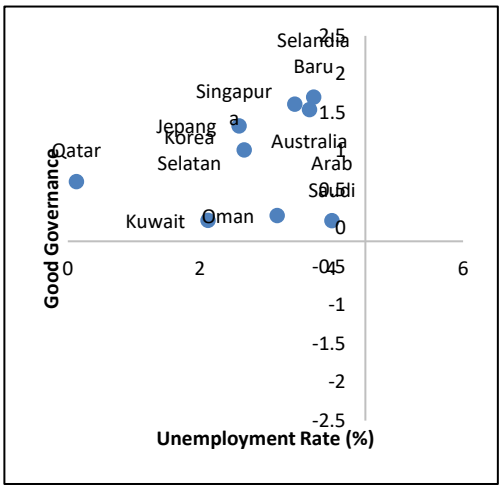


Fig. 11 Good governance and unemployment rates in high-income countries in the asia-pacific region, 2023 (adapted from WGI and ILO 2025)

Based on Fig. 10 and 11, the majority of high-income countries have above-average levels of good governance. In 2002, several countries such as New Zealand, Japan, Australia and Singapore had above-average unemployment rates, placing them in Quadrant 2. Over time, all high-income countries reached Quadrant 1 by 2023. Unemployment rates in high-income countries tend to decline; for instance, Japan saw its unemployment rate fall from 5.386% to 2.6%, whilst Qatar achieved near-zero unemployment by 2023 (0.13%). These figures demonstrate that high-income countries possess a strong capacity for labour absorption and maintaining low unemployment rates.

Data on changes in Good Governance from 2002 to 2023 Fig. 12 reveal a clear divergence in performance among high-income countries. One group, comprising East Asian and Gulf states such as Japan, South Korea, Saudi Arabia and Qatar, has managed to record an overall

improvement in Good Governance. This progress was driven primarily by major reforms in the pillars of Government Effectiveness and Regulatory Quality, indicating a strong focus on improving bureaucracy and the business climate. However, this technocratic progress has not always been accompanied by improvements in political aspects, with some countries actually experiencing a decline in the Voice and Accountability indicators.

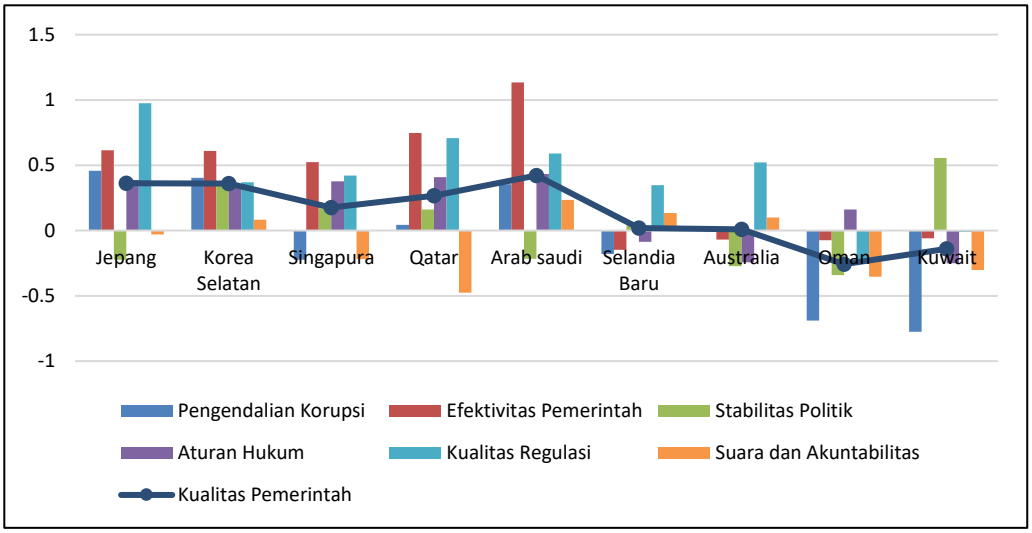


Fig. 12 Changes in good governance in high-income countries from 2002 to 2023 (adapted from ILO 2025)

On the other hand, the group of mature democracies, such as New Zealand and Australia, showed performance that tended to stagnate. Starting from an already very high level of governance in 2002, the scope for major improvements became more limited, and the data actually showed a slight weakening in some areas. In contrast, Oman and Kuwait stand out for experiencing an overall decline in performance. The main factor behind this negative trend is a very drastic decline in the Control of Corruption, which proves that failure to tackle corruption can be a major obstacle to governance progress, even for high-income countries.

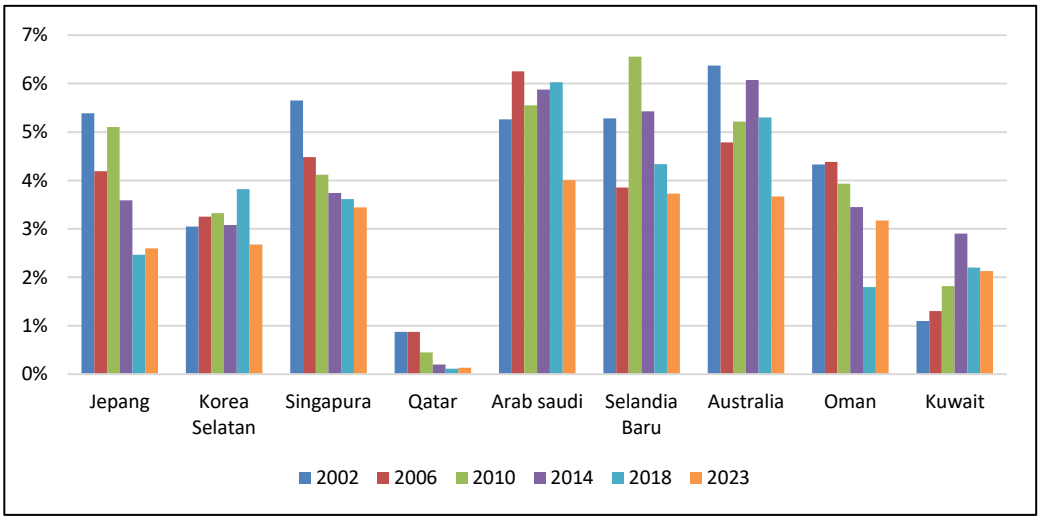


Fig. 13 Unemployment rates in high-income countries (adapted from WGI 2025)

Fig. 13, Japan saw a decline from 5.39% in 2002 to 2.60% in 2022. This reflects Japan's success in maintaining labour market stability, despite facing demographic challenges such as an ageing population. South Korea has maintained a relatively stable unemployment rate within the 3% range, with a decline in 2022 to 2.86%. New Zealand and Australia have shown a fairly sharp decline over the past decade; unemployment in Australia fell from 6.38% in 2002 to 3.73% in 2022, whilst New Zealand's rate dropped from 5.28% to 3.30% over the same period. Singapore has maintained a low and stable unemployment rate throughout the two decades, ranging between 3–5%. Qatar and Kuwait, two Gulf states with small populations and oil-based economies, recorded very low unemployment rates throughout the period. Qatar showed a downward trend from 0.87% in 2002 to just 0.13% in 2022. Kuwait remained stable at 2%. Oman showed fluctuations, with a decline from 4.33% (2002) to 1.80% (2018), but then rose again to 3.30% in 2022.

3.3. Good Governance and Unemployment Rates in Upper-Middle-Income Countries

Upper-middle-income countries are those with a Gross National Income (GNI) per capita of between $4,256 and $13,845 per year. Countries in this group are experiencing fairly rapid economic growth and are in the process of transitioning to high-income status through various economic reforms, infrastructure investment, and improvements in industrial and technological competitiveness (Boukraine 2021).

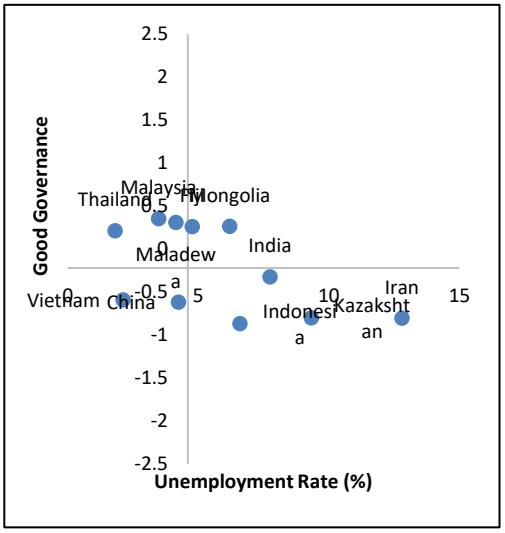


Fig. 14 Good governance and unemployment rates in upper-middle-income countries in the asia-pacific region, 2002 (adapted from WGI and ILO 2025)

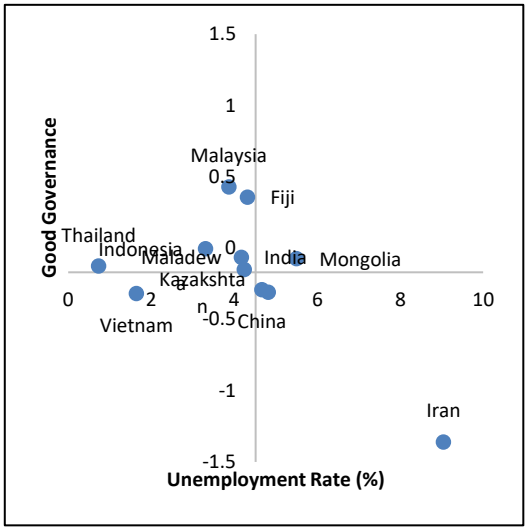


Fig. 15 Good Governance and Unemployment Rates in Upper-Middle-Income Countries in the Asia-Pacific Region, 2023 (adapted from WGI and ILO 2025)

Fig. 14 and 15 illustrate the rise in Good Governance among Upper Middle Income countries such as Malaysia (0.354 → 0.428), Fiji (0.261 → 0.357) and Indonesia (-0.865 → -0.004). This indicates an improvement in Good Governance in Upper Middle Income countries. Unemployment rates have also shown a downward trend, such as in Indonesia from 6.604% to 3.308%, Kazakhstan from 9.33% to 4.821%, and India from 7.753% to 4.172%. However, there are still countries experiencing a rise in unemployment, such as China (4.24% → 4.67%) and Malaysia (3.48% → 3.869%).

An analysis of data on changes in Good Governance in Upper-Middle-Income Countries from 2002 to 2023 (Fig. 16) for the cohort of countries under observation indicates significant heterogeneity in performance, reflecting divergent reform trajectories. Indonesia stands out as a positive anomaly, demonstrating the most substantial improvement with gains across all seven indicators. Specifically, significant increases in Government Effectiveness (+1.13), Political Stability (+1.17), and Regulatory Quality (+1.04) imply the successful implementation of comprehensive structural reforms. Other groups of countries, including China, Kazakhstan, and Vietnam, also demonstrate quantitative improvements in state capacity and effectiveness. However, progress in these technocratic dimensions often occurs simultaneously with a decline in political stability or stagnation in participatory governance dimensions, such as Voice and Accountability.

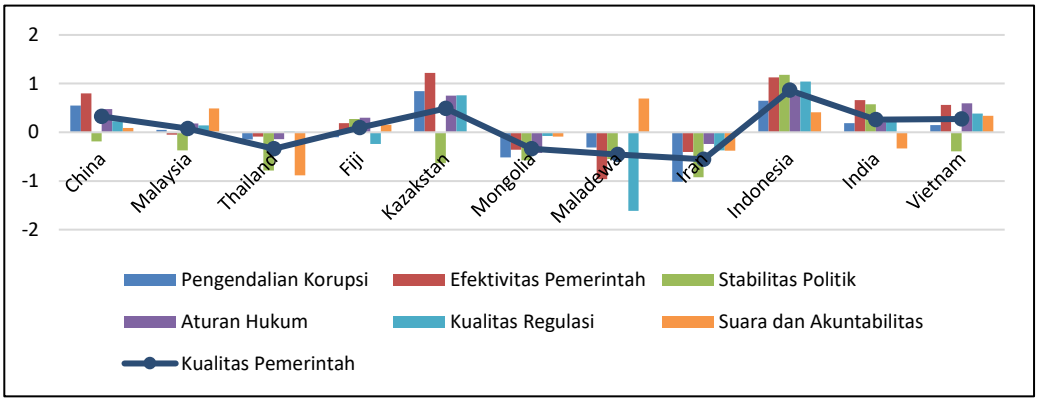


Fig. 16 Changes in good governance in upper-middle-income countries between 2002 and 2023 (adapted from WGI 2025)

A number of countries in the sample show clear trends. Iran and Mongolia have seen deterioration across almost the entire spectrum of indicators, with Iran showing the most drastic decline in Control of Corruption (-1.01) and Political Stability (-0.92). Good Governance in Thailand also saw a significant decline, which can be predominantly attributed to a sharp deterioration in the Political Stability (-0.78) and Voice and Accountability (-0.88) indicators, reflecting a period of internal political instability. These findings confirm that for middle-income countries, the evolution of governance is not a linear or deterministic process. The capacity to implement effective reforms and maintain political stability are critical determinants that distinguish between progressive and regressive trajectories of governance development.

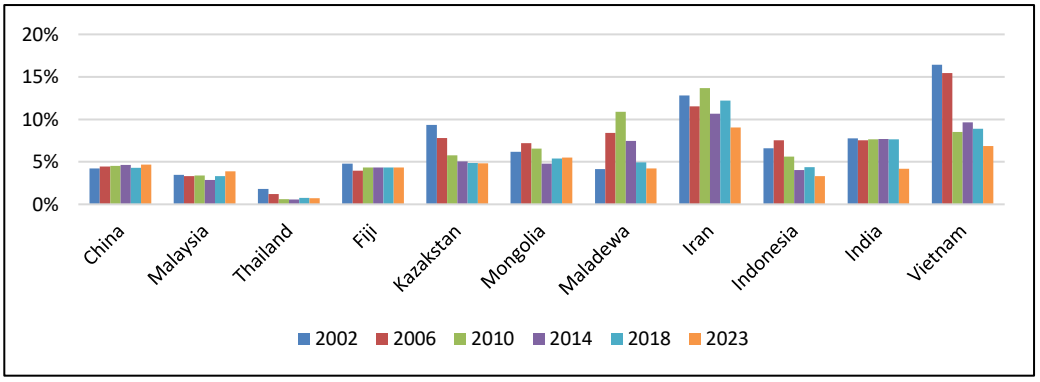


Fig. 17 Unemployment trends in upper-middle-income countries (adapted from ILO 2025)

Based on unemployment rate data from 2002 to 2023 in Fig. 17, cross various countries in Asia and the Pacific, it is evident that the majority of countries have experienced a long-term downward trend in unemployment. Countries such as Vietnam, Indonesia, and Kazakhstan have shown a decline in unemployment rates, reflecting the effectiveness of economic policies, structural reforms, and the ability to create new jobs. Some countries, such as Thailand and Qatar, consistently record very low unemployment rates, although these figures may also be influenced by recording methods and the high proportion of informal workers. Meanwhile, countries such as China and Malaysia show relatively stable unemployment rates.

Several countries face serious labour market challenges. Iran, although recording a decline in the unemployment rate, remains at a relatively high level due to structural barriers and geopolitical pressures. Small countries dependent on specific sectors, such as the Maldives and Fiji, also show fluctuations that reflect their vulnerability to external shocks.

3.4. Good Governance and Unemployment Rates in Lower-Middle-Income Countries

Lower-middle-income countries are those with a Gross National Income (GNI) per capita of between $1,086 and $4,255 per year. Countries in this category are in the early stages of economic development and still face various challenges in improving public welfare, reducing unemployment rates, and accelerating economic growth (Sattar and Khan 2021).

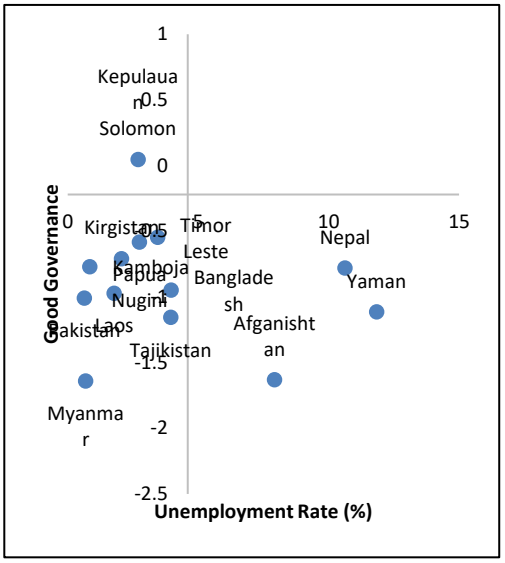


Fig. 18 Good governance and unemployment rates in Lower-Middle-Income countries in the asia-pacific region, 2002 (adapted from WGI and ILO 2025)

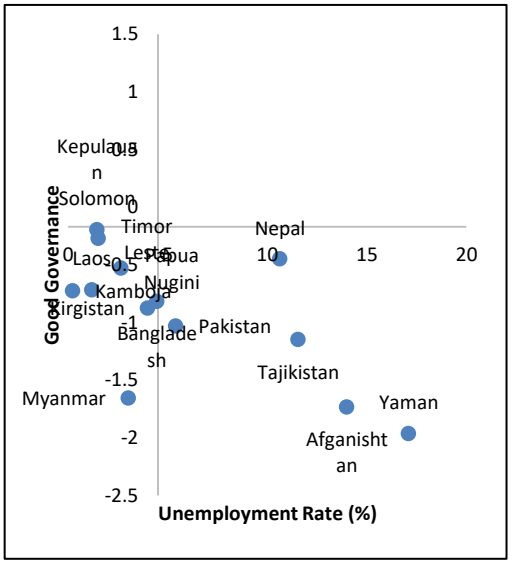


Fig. 19 Good governance and unemployment rates in Lower-Middle-Income countries in the asia-pacific region, 2023 (adapted from WGI and ILO 2025)

Fig. 18 and 19 show the varying trends in unemployment rates across different countries. An upward trend is observed in Afghanistan (7.93% → 13.99%), Yemen (11.84% → 17.09%), and Tajikistan (3.95% → 11.54%). This is due to political turmoil and governmental instability in countries such as Afghanistan and Yemen, leading to a surge in unemployment rates. Meanwhile, a downward trend in unemployment was observed in Cambodia (0.852% → 0.225%), Laos (1.775% → 1.188%), and Timor-Leste (3.453% → 1.521%).

Based on an analysis of changes in Good Governance for this group of lower-middle-income countries from 2002 to 2023 in Fig. 20, it is evident that political stability is the most dominant

determining factor in shaping the trajectory of governance performance. Countries such as Nepal, Timor-Leste and Laos have shown the most significant improvements in overall Quality of Government. This improvement was directly driven by a massive surge in the Political Stability indicator (Nepal +1.49, Laos +0.91, Timor-Leste +0.74), indicating that their ability to emerge from periods of conflict or internal instability has yielded dividends in the form of institutional recovery and governance improvements across various other sectors.

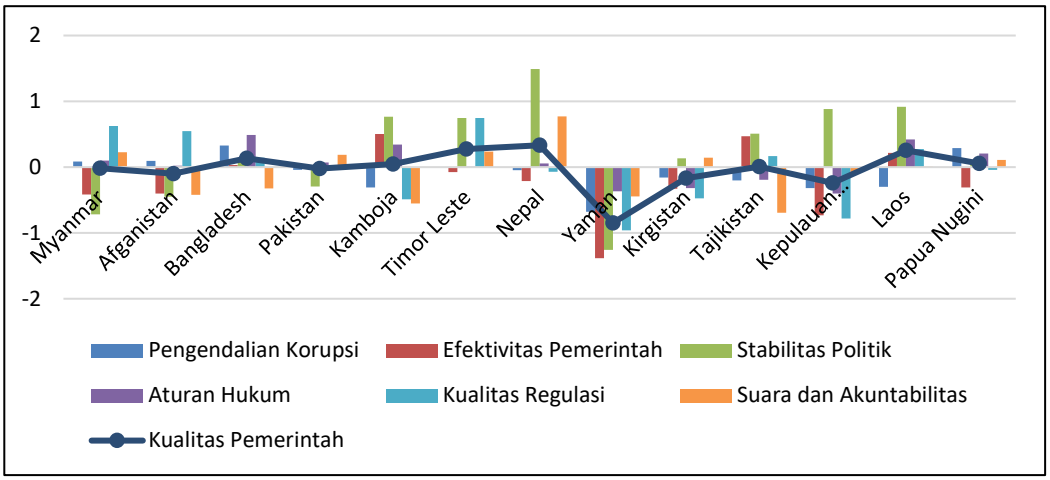


Fig. 20 Changes in good governance in Lower-Middle-Income countries between 2002 and 2023 (adapted from WGI 2025)

The data also reveals a narrative of state failure, where political instability is the primary trigger. Yemen stands as the most extreme example, with a catastrophic decline across all indicators, particularly in Government Effectiveness (-1.38) and Political Stability (-1.25), reflecting the collapse of institutions due to war. A similar pattern, albeit on a smaller scale, is also evident in Myanmar and Afghanistan, where a sharp decline in political stability correlates strongly with a deterioration in overall governance. Thus, these data confirm that, for countries in this category, the achievement of peace and political stability is a fundamental prerequisite before broader improvements in governance can be sustainably realised.

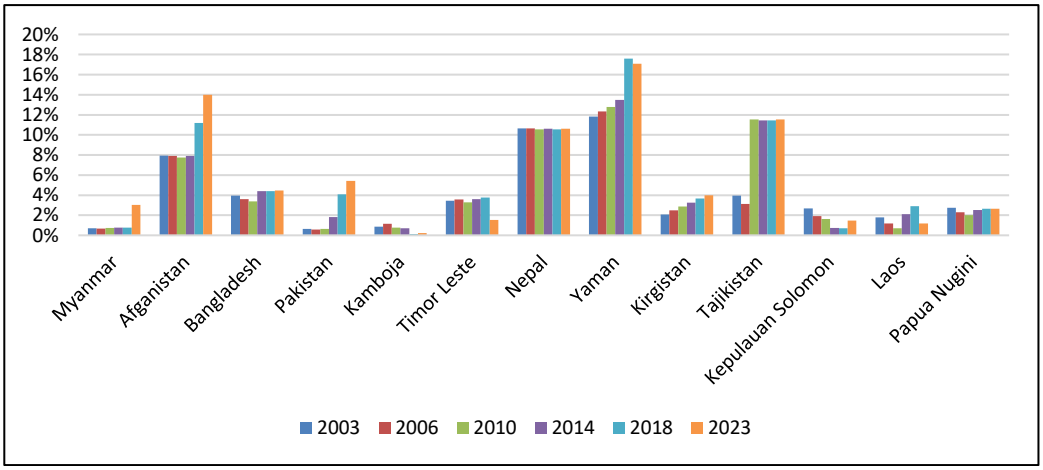


Fig. 21 Unemployment trends in Lower-Middle-Income countries (adapted from ILO 2025)

The data (Fig. 21) shows that most countries in this group face fluctuating unemployment rates, with some recording quite marked spikes in recent years. Countries such as Myanmar have experienced a sharp rise from very low unemployment rates of under 1% over two decades to 3.03% in 2023, likely influenced by political instability and the humanitarian crisis following the coup. Pakistan also shows a consistent upward trend, rising from just 0.64% in 2003 to 5.41% in 2023, reflecting economic challenges and social instability. Meanwhile, Afghanistan and Yemen have consistently recorded high unemployment rates, which have even continued to rise over the past decade, indicating the impact of prolonged conflict, political crises and a lack of economic development.

Timor-Leste reduced its unemployment rate from around 3.6% to 1.52% in 2023, whilst the Solomon Islands and Laos also recorded relatively low figures despite experiencing fluctuations. However, this stability must be viewed with caution, given that the dominance of the informal sector in developing countries can mask hidden unemployment. Nepal and Tajikistan, with rates remaining above 10% over the past 20 years, demonstrate structural challenges in terms of creating adequate and sustainable employment. Overall, this data confirms that political stability, the quality of regulation, and domestic economic capacity play a key role in determining labour market dynamics in these countries.

3.5. Analysis of the Impact of Good Governance on Unemployment Rates in the Asia-Pacific Region

3.5.1. Selection of the Best Model

The selection of the best model for this study was based on several model options, namely Pooled Least Squares (PLS), the Fixed Effects Model (FEM) and the Random Effects Model (REM). Table 5 shows, the model selection was carried out using the Chow test and the Hausman test; the Chow test was used to determine between PLS and FEM, whilst the Hausman test was used to determine between FEM and REM.

Table 5 Selection of the Best model

Samples	Best model test	Chi-square probability	Decision
All samples	Chow test	0.0000	REM
	Hausman test	0.8970	
High income	Chow test	0.0000	FEM
	Hausman test	0.0000	
Upper middle income	Chow test	0.0000	FEM
	Hausman test	0.0000	
Lower middle income	Chow test	0.0000	REM
	Hausman test	0.9912	

Source: Stata 15 (processed)

3.5.2. Results of Classical Assumption Tests

In the best-fit results, there are two models that use the Random Effects Model (REM): the Lower Middle Income model and the All Samples model. The use of the REM indicates that the Lower Middle Income and All Samples models satisfy the classical assumptions. The Upper Middle Income and High Income samples use the Fixed Effects Model (FEM) in their best-

performing models; however, these models suffer from heteroscedasticity, and the High Income model also exhibits autocorrelation. To address the issues of heteroscedasticity and autocorrelation, this study employs robust standard errors.

3.6. Estimated Effects of Good Governance on Unemployment Rates in the Asia-Pacific Region

The results of this static panel data estimation show the effects of good governance, the minimum wage, population growth, economic growth, per capita income, fixed-line internet subscriptions, and government expenditure on education on unemployment rates. The estimation results are presented in Table 6.

Table 6 Estimated effects

Independent variable	Dependent variable: UNEM			
	All samples	*High income*	*Upper middle income*	*Lower middle income*
lnGOV	-1.361**	-0.3381	-0.8321	1.5698
	(0.008)	(0.874)	(0.473)	(0.341)
lnWAGE	1.112***	-0.7548	0.4706	1.1647***
	(0.000)	(0.378)	(0.407)	(0.000)
POPG	0.6478	0.0251	-0.0951	-0.4768*
	(0.252)	(0.463)	(0.917)	(0.095)
ECON	-0.037**	-0.0569	-0.0296	-0.0383*
	(0.009)	(0.230)	(0.254)	(0.097)
lnGDPC	-0.3850**	0.5662	-1.3494**	-0.2312
	(0.044)	(0.533)	(0.020)	(0.547)
FBS	-0.059***	-0.0440	0.0101	0.1047
	(0.000)	(0.293)	(0.824)	(0.272)
EDUC	-0.0004**	0.8409**	-0.0006***	0.1256
	(0.002)	(0.009)	(0.000)	(0.263)
C	1.7783	0.6965	13.6185**	1.8555
	(0.210)	(0.945)	(0.017)	(0.432)
R-square (within)	0.2072	0.5496	0.2936	0.3392
Probability (f-statistic)	0.000	0.000	0.000	0.000
Number of observations	421	87	170	164
Number of countries	33	9	11	13

***) Significant at the 1% significance level
**) Significant at the 5% significance level
*) Significant at the 10% significance level
Source: Stata 15 (processed)

4 Discussion

Based on Table 6, all models in this study are significant for the F-test, indicating that the independent variables as a whole have a significant effect on the dependent variable; the coefficients of determination in the models of this study show varied results: 0.2072 and 0.3392 for the 'All Samples' and 'Lower Middle Income' groups, and 0.84 and 0.9117 for the 'High Income' and 'Upper Middle Income' groups.

In this study, the relatively low coefficient of determination for the All Samples group is thought to be caused by the weak correlation between the independent variables used and the unemployment rate. As shown in Appendix 9, most independent variables exhibit a low correlation with the unemployment rate, which ultimately results in a low coefficient of determination in the All Samples model.

4.1. The Effect of Good Governance on Unemployment Rates in the Asia-Pacific Region

The Good Governance variable has a negative coefficient and is only significantly influential in the All-Sample model, implying that a 1% increase in Good Governance reduces the unemployment rate by -1.361%; however, in the High-Income, Upper-Middle-Income, and Lower-Middle-Income models, Good Governance does not have a significant effect. Siddiqa (2021), Reck et al. (2025), Radulescu et al. (2019), and Mariko and Niare (2024) state that the Good Governance variable has a negative effect on the unemployment rate, meaning that a higher level of Good Governance leads to a decrease in the unemployment rate. The study by Shabbir et al. (2019) specifically mentions that in South Asia, Good Governance and the unemployment rate have a negative relationship with a coefficient of -0.526023.

These findings are consistent with broader cross-country studies. Pham (2024) found that improvements in institutional quality significantly reduce unemployment rates; more intriguingly, better institutional quality was found to amplify the negative impact of government spending on unemployment, suggesting that governance reforms and fiscal policy must proceed in tandem for optimal results. On the other hand, Rahman et al. (2025) demonstrate that improvements in indicators of the rule of law and government effectiveness are consistently negatively correlated with unemployment rates. Kirşanlı (2023) reinforces these findings, showing that corruption—measured via the World Governance Indicators—is shown to increase unemployment rates across all tested model specifications. Similarly, Fagbemi (2023) found that high levels of corruption directly hinder job creation and undermine overall governance quality.

From an Asian perspective, Stylianou et al. (2025) found that political stability, government effectiveness, the rule of law, and control of corruption significantly promote inclusive human development (IHDI) in the Asian region; whilst the dimensions of voice and accountability and regulatory quality were not found to be significant. This strengthening of inclusive human development, in turn, opens up greater opportunities for the absorption of a skilled workforce. Mahran (2023) demonstrates that a 1% increase in the composite governance index boosts average economic growth by 1%, whilst also indicating the presence of significant spatial spillovers. Tanjung and Shimada (2025) reinforce this argument specifically for the ASEAN region and developed countries, where corruption control and government effectiveness are shown to be significant predictors of economic growth, which in turn contributes to a reduction in unemployment rates.

4.2. The Effect of the Minimum Wage on Unemployment Rates in the Asia-Pacific Region

The minimum wage variable has a positive coefficient and a significant effect in the All Samples and Lower Middle Income models, implying that a 1% increase in the minimum wage will raise the unemployment rate by 1.12% in the All Samples model and by 1.16% in the Lower Middle Income model, whereas in the High Income and Upper Middle Income models, the minimum wage has no significant effect. Jimmy Lynn Verner et al. (2009), Kwiatkowski and Krzętowska (2024), Michie and Wilkinson (1995), and Gregory (1986) demonstrate that high minimum wage policies can suppress labour absorption and that increases in the minimum wage have the potential to create rigidity in the labour market, thereby driving up unemployment.

4.3. The Effect of Population Growth on Unemployment Rates in the Asia-Pacific Region

The population growth variable has both positive and negative coefficients depending on the model type. In the significant model—namely the Lower Middle Income model—the population growth coefficient is negative, meaning that a 1% increase in population reduces the unemployment rate by 0.47%. In other models, however, population growth is not significant. Al-Qudah and Nsairat (2024) state in their research that population growth has a positive effect at a 5% significance level with a coefficient of 1.86, whilst the research by Freedline Baba and Abang Ali (2021) states that population growth is a key factor in achieving long-term equilibrium, with a coefficient of 0.02 and is statistically significant at the 5% significance level.

4.4. The Effect of Economic Growth on Unemployment Rates in the Asia-Pacific Region

The economic growth variable has a negative coefficient, meaning that a 1% increase in economic growth reduces the unemployment rate by 0.037% across the entire sample, and a 1% increase in economic growth reduces the unemployment rate by 0.038% in lower-middle-income countries. Batool and Liu (2021), Vikia et al. (2023), Irushad et al. (2023), Alrakhman et al. (2022), and Susilowati and Sadirsan (2022), this study indicates that economic growth has a significant effect on reducing the unemployment rate; Acharya's (2020) study also states that a 1% increase in economic growth reduces the unemployment rate by 0.07%.

4.5. The Effect of GDP per Capita on Unemployment Rates in the Asia-Pacific Region

The GDP per capita variable has a negative coefficient, meaning that a 1% increase in GDP per capita reduces the unemployment rate by 0.38% across the entire sample, and a 1% increase in GDP per capita reduces the unemployment rate by 1.35% in upper-middle-income countries. ALTUNÖZ (2019), Azmi (2013), Okada et al. (2020), Kasirlou and Rajaei (2017), and Khachaturyan and Klicheva (2025) state that a higher GDP per capita reduces the unemployment rate, meaning that the larger a country's economy, the lower the unemployment rate in that country.

4.6. The Effect of Fixed Internet Subscriptions on Unemployment Rates in the Asia-Pacific Region

The fixed internet subscription variable is only significant in the All Countries model with a negative coefficient, meaning a 1% increase in fixed internet subscriptions reduces the unemployment rate by 0.059%. In a study conducted by Shabbir et al. (2019), it was specifically noted that in the South Asian region, there is a negative relationship between fixed internet subscriptions and the unemployment rate, with a coefficient of -0.531762.

4.7. The Effect of Government Expenditure on Education on Unemployment Rates in the Asia-Pacific Region

The coefficient for the variable 'government expenditure on education' depends on the model: in the All-Sample model, a 1% increase in government expenditure on education reduces unemployment by 0.0004%; in the Upper Middle Income model, a 1% increase in government expenditure on education reduces the unemployment rate by 0.0006%; whereas in the High-Income model, a 1% increase in government expenditure on education increases the unemployment rate by 0.8409%. Afonso et al. (2021), Mehmetaj and Xhindi (2022), Pirim et al. (2014), Singh and Shastri (2020), and Rahmawati and Putri (2021) state that a country's government expenditure, particularly on education, has a significant impact on the unemployment rate in that country.

5 Conclusion

5.1. Conclusion

Based on the results of the research conducted, it can be concluded that: (1) Good Governance, comprising the Voice and Accountability Index, the Political Stability Index, the Government Effectiveness Index, the Regulatory Quality Index, the Rule of Law Index, and the Corruption Perceptions Index—and unemployment rates show varied conditions across countries. High-Income and Upper-Middle-Income countries share the commonality that their Good Governance scores are mostly above average, whereas Lower-Middle-Income countries have scores below average. (2) The variables of economic growth, GDP per capita, fixed-line internet subscriptions, and government spending have a significant effect on reducing the unemployment rate, whereas the minimum wage variable has a significant effect on increasing the unemployment rate.

5.2. Recommendations

The following recommendations and suggestions should be implemented by policymakers: (1) Based on this study, good governance has a significant impact on reducing unemployment rates; therefore, the government should increase its focus on the six pillars of good governance to improve good governance within a country. Among these six pillars, high-income countries need to strengthen the pillars of Voice and Accountability, whilst upper-middle-income countries need to strengthen the pillar of Control of Corruption, and lower-middle-income countries need to strengthen the pillar of Rule of Law. (2) The variables of Fixed Internet Subscriptions and Government Expenditure on Education have a significant impact on reducing unemployment; therefore, the government can increase its focus on education and infrastructure to reduce unemployment rates.

Limitations of the study

This study has several limitations. First, it relies on secondary panel data, which may be affected by differences in data quality and reporting across countries. Second, the use of a static panel model does not capture the dynamic effects of unemployment over time. Finally, the analysis includes only selected governance and macroeconomic variables, while other factors influencing unemployment were not considered due to data limitations. Future research is encouraged to apply dynamic panel models and include additional explanatory variables for more comprehensive results.

Ethics Statement

Ethical approval was not required as the data did not involve direct interaction with human subjects or personal identification

Funding Declaration

This research received no external funding

Data Availability

Data from this study are available for sharing in raw format. The covariance matrix and analysis codes can be obtained by submitting a request to the first author.

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