Original Researcher Article

A Comparative Analysis of Japan and Malaysia's Macroeconomic Trade-offs Between Inflation and Unemployment

Chan Xin Liang[1]*, Tan Seng Teck[1], Lim Swee Geok[1], Chee How Liau[2], Pradeep Sonar[3]
[1]INTI International University, Nilai, Seremban, Malaysia
[2]Lecturer in Marketing, Danford Higher Education, Melbourne, Australia
[3.]Professor (Management), Head - International Program Office, Nodal Officer-NEP 2020, HOD - School of Management, D Y Patil University, Pune, Ambi
*Corresponding Author
Email ID : i25038783@student.newinti.edu.my

ABSTRACT

The trade-off between controlling inflation and creating jobs is a typical issue that macroeconomic policy makers deal with and the Phillips Curve is a traditional way of explaining the relationship between the two. This paper will provide the comparative analysis of Japan and Malaysia between 2000 and 2020 to determine the dynamics of inflation and unemployment in two economies with structural and institutional differences. Japan is a developed economy which has had long-term deflation, slow growth and a fast-aging population, whereas Malaysia is a developing economy which has had moderate inflation and comparatively low unemployment assisted by a looser labour market and a demand-based growth. The study analyses descriptive statistical analysis on secondary data obtained through the World Bank through the World Development Indicators as well as a graphical interpretation of the Phillips Curve to determine the validity of the inflation-unemployment trade-off. The results indicate that Japan has a weak and flattened Phillips Curve that is constrained in part by structural reasons, deflationary anticipations and smothered wage expansion, which restrict the ability of demand-side approaches. Conversely, Malaysia has a stronger negative correlation between inflation and unemployment in a stable period, whereas this is not the case in major external shocks, like the 2008 oil price boom and the COVID-19 pandemic. The research paper finds that, although the Phillips Curve is clearly an effective tool of analysis, its own applicability is strongly context-specific and is inseparable with structural and institutional implications of macroeconomic policy formulation

Keywords: Inflation–unemployment trade-off, Phillips Curve, Macroeconomic policy, Inflation control, Employment generation, Comparative analysis, Japan, Malaysia, Employment equity ..

1. INTRODUCTION:

The nature of the macroeconomic policy is built on the need to create a balance in the essential economic goals, with price stability and full employment playing a central role (Fouejieu et al., 2019). The governments and central banks constantly strive to regulate the inflation but, in the process, they also encourage employment and sustainable economic growth. These goals however tend to clash especially in the short run (Chen et al., 2024). The policies designed to spur employment and output can cause inflationary pressures, but stringent controls against inflation can cause an aggregate demand slowdown, cut down investment, and restrain increase in jobs. It is hence important in the macroeconomic policymaking to understand the nature of this trade-off (Mathosa, 2025; Gazi et.al, 2025).

The Phillips Curve is one of the most powerful models that has been adopted to explain this trade-off and it assumes that there is an inverse relationship between unemployment and inflation (Okeowo, 2023). The Phillips Curve had originally been suggested by A.W. Philips in 1958, postulating that wage inflation would be increased in order to maintain lower unemployment. Later extensions connected this relationship with price inflation, which supported the notion that policymakers had the option of inflation and unemployment results. This framework has been used as a backbone of macroeconomic policy in a number of decades, especially in Keynesian thoughts of the economy, as it urges governments to tolerate moderate inflation in order to achieve lower unemployment (Abu, 2019).

However, as time progressed, the Phillips Curve has come to be questioned in its empirical correctness. It has been proved by evidence in various countries and various historical periods, that the relationship between inflation and unemployment is not that stable and universal (Hongo et al., 2019). There are episodes where the economy has been in stagflation where the amount of inflation has been high and the amount of unemployment has been high and in other instances, there has been a period of low inflation that has been accompanied by a consistent level of unemployment (Vincent et al., 2024). These findings indicate that the trade-off between inflation and unemployment is influenced by a wider range of factors which include inflation expectations, demographic shifts,

labour market institutions, productivity growth and structural rigidities.

The failure of the old Phillips Curve was especially noticed after the stagflation of the 1970s. As an answer, economists like Milton Friedman and Edmund Phelps came up with the natural rate of unemployment, explaining that there will be any short-term trade-off between inflation and unemployment that is eliminated in the long run as expectations change. This school of thought states that expansionary policies can only be able to reduce unemployment in the short term by producing unanticipated inflation; once the expectations are adjusted, unemployment will go back to its natural state (Daniel et al., 2021). This theoretical development also focused on the relevance of expectations and structural features in the determination of macroeconomic results and greatly diminished the capability of policy-makers to control both inflation and unemployment at the same time.

Even with these criticisms, Phillips Curve has not completely become irrelevant. Rather, it has become a more subtle and context-based framework (Chukwuka & Chukunalu, 2025). Contemporary theories have come to appreciate that the slope and stability of the Phillips Curve are not universal and time specific, as they differ across countries and within countries depending on institutional arrangements, labor market flexibility, monetary policy credibility and economy structural characteristics. Consequently, the cross-economic comparisons are especially useful in exploring the nature of the Phillips Curve in relation to its theoretical behavior in practice and its deviating nature (Haschka, 2024).

It is against this backdrop that the current research paper conducts a comparative study of Japan and Malaysia between the year 2000 and 2020 to study the dynamics of inflation and unemployment in two economies with dissimilar structural and institutional features (Crump et al., 2024). Japan is a developed economy that has been struggling with deflation, low growth rate and high population aging thus casting doubt on the relevance of the traditional demand-side policies (Okeowo, 2023). However, a developing economy like Malaysia has had moderately high inflation and quite low unemployment rates, with the help of a more flexible labor market and demand-based growth. Using these two cases, the study will be able to assess the applicability of the Phillips Curve, success of macroeconomic policies, and structural and institutional effects in determining the level of inflation and employment (Hongo et al., 2019).

2. INFLATION AND UNEMPLOYMENT: THE PHILLIPS CURVE PERSPECTIVE

2.1 Inflation–Unemployment Trends in Japan

The inflation-unemployment relationship of Japan between the years 2000-2020 is a unique phenomenon that cannot be explained with the conventional Phillips Curve (Kitov & Kitov, 2013). Low inflation levels, regular incidences of deflation, and unemployment rates which, although not extremely high as against other countries in the world, were still high compared to Japan experience, have all influenced the macroeconomic performance of the country. This phenomenon can be traced back to the bursting of the asset price bubble in Japan in the late 1980s

which led to the onset of a long stretch of economic stagnation that came to be known as the Lost Decade (Kitov, 2010). In fact, the consequences of this stagnation did not end in the 1990s, and they can be seen in the economic situations of the 2000s and 2010s. In spite of the aggressive monetary easing policy adopted by the Bank of Japan, which comprised of interest rates of almost zero, quantitative easing and subsequently negative interest rates, inflation was kept tamed in most of the period of study. Over a couple of years, there was a growth or even negative inflation rates and an increase or a steady rise in unemployment in Japan, which is a direct opposite of an inverse relationship that should have been observed through the Phillips Curve. This poor correlation indicates that conventional stimulus on the demand side could not produce any long-term inflation or substantial employment increases (Grabia & Bywalec, 2024).

The major cause of this deviation is the fragile aggregate demand, which was caused by a wary consumer behavior and minimal business investment. Japanese households, who had spent decades with price stagnation, formed a high level of deflationary expectations, and consequently delayed their consumption patterns in an expectation of low prices in the future. Simultaneously, the companies had few incentives to increase salaries or recruit new employees since demand was low, and no one could be sure of further growth (Alisa, 2015). The growth in wages was not increasing and this undermined the transmission mechanism by which inflation normally impacts upon employment. Despite the fact that despite significant changes in the late 2010s, as the unemployment decreased, there were some positive but narrow and weak results in terms of inflation. In general, the experience of Japan shows that structural problems like demographic aging, ingrained expectations, and labor market rigidities may seriously undermine the relationship between inflation and unemployment. Consequently, the Phillips Curve in Japan looks quite flat and shaky and thus it is not good to trust it in order to make macroeconomic policy.

2.2 Inflation–Unemployment Trends in Malaysia

Unlike Japan, the inflation-unemployment relationships in Malaysia in 2000-2020 have more similarities to the traditional Phillips Curve relationship, especially in times of economic stability. During the greater part of the period under study, Malaysia suffered a moderate inflation and pretty low unemployment, which reflected the process of increasing and diversified economy under the conditions of the prudent macroeconomic management. Bank Negara Malaysia was at the center of ensuring price stability by ensuring that it monitored its monetary policy put in place and the government intervened by subsidizing and price controls, cushioning households and firms against large price fluctuations (Solarin et al., 2025). Diversification of labor market in Malaysia was facilitated by the manufacturing industry, services and agricultural industry. This diversification increased the ability to absorb labor and this factor also led to comparatively steady employment rates. Inflation and unemployment occurred contrary to one another during the times of consistent growth, as it is possible to note the Phillips Curve hypothesis. There was a tendency to relate moderate inflation rises with decreasing unemployment

implying the short-run trade-off between the two. The experience in Malaysia however also shows the shortcomings of the Phillips Curve especially when it comes to the times when major external shocks occur (Bokhari, 2020). The international oil boom in 2008 caused a drastic upsurge in domestic production and transportation prices, which caused inflation based on the cost. Meanwhile, increased input prices and the uncertainty of the world economies undermined output and employment resulting in an increase of unemployment. This increase in both the inflation rate and unemployment at the same time is a definite failure of the Phillips Curve, which occurred due to supply-side shocks and not due to demand factors.

The same deviation happened in 2020 during the pandemic of COVID-19. The resultant economic activity became deflationary as demand dropped drastically, and unemployment shot up because of most businesses closing and disruptions (Baboshkin et al., 2021). In this instance, there was a reduction in the inflation, and rise in unemployment which is contrary to the Phillips Curve relationship. These episodes show that, although in Malaysia, inflation and unemployment tend to have a stronger trade off than in Japan, the trade off is very vulnerable to external shocks and structural limitations. All in all, the history of Malaysia implies that the Phillips Curve is still applicable when it comes to explaining short-run macroeconomic processes in stable environments, although the forecasting ability of the model reduces drastically when the situation is crisis-driven or supply-based.

2.3 Theoretical Framework of the Phillips Curve

The Phillips Curve has a long-standing history in the field of macroeconomic theory as it has been used to provide the theoretical basis of the relationship between inflation and unemployment (Lawler & Pavlenko, 2020). The concept was first introduced by A.W. Phillips in 1958 and it explained an inverse relationship between unemployment and the pace of change in nominal wages. Phillips noted that in the low unemployment rates, wages were likely to increase fast because of the high bargaining power of the employees, but high unemployment reduced wage increments. Later economists have generalized this scheme by connecting inflation in wages to price inflation and in this manner created a trade-off between inflation and unemployment in the short run (Palley, 2018). This interpretation would indicate that policymakers would lower the unemployment rate by boosting the aggregate demand at the expense of higher inflation. Keynesian macroeconomic policies were strongly shaped by this opinion in the post-war era.

Nevertheless, the apparent failure of the Phillips Curve in stagflationary periods caused some significant theoretical improvements (Eser et al., 2020). Inflation expectations were introduced by economists like Milton Friedman and Edmund Phelps who believed that the trade-off between inflation and unemployment only occurs on a short run basis. They suggested the idea of the natural rate of unemployment which states that expansionary policies could only lower unemployment in the short run by creating unwanted inflation (Lombardi et al., 2020). When the expectations of workers and firms had been set, unemployment would go back to its natural state and make the long-run Phillips Curve vertical. This was later to be expanded as rational anticipations were added further undermining systematic policy intervention. By this perspective, even short-run trade-offs can be eliminated in case the economic agents properly predict the policy actions. Research on the Phillips Curve in the current times therefore focuses on the conditional aspect of the Phillips Curve as its slope and stability is subject to institutional credibility, labor market flexibility, and anchoring of inflation expectations (Wickens, 2011).

2.4 Breakdown of the Phillips Curve

The experiences of the Japanese and Malaysian countries under research give unmistakable empirical evidence to the circumstances in which Phillips Curve fails. In Japan, structural and institutional limitations are the major cause of the decomposition of the relationship between inflation and unemployment (Thavarasa, 2024). The existence of deflationary expectations, aging of the demographic and the low rate of wage growth have caused employment to become much less responsive to inflation. Even in times of money creation, companies were not keen to increase wages or widen the hiring process leading to a flattened Phillips Curve. Moreover, the aging Japanese society also changed the consumption and saving patterns with older households being more concerned with price stability rather than expansion (Azimi & Rahman, 2024). This age distribution undermined the level of aggregate demand and reduced the impact of the demand-side policies. This meant that the impact of inflationary changes did not converge into any significant employment result, defying the predictive ability of the Phillips Curve.

In Malaysia, Phillips Curve disintegrations were both less structural and episodic. The greatest departures were at the times when supply-side or demand-side shock were significant (Poetranto, 2025). The global energy prices have risen in 2008 leading to the simultaneous rise in inflation and unemployment, which is a classic example of a supply shock. In 2020, the supply chains and the demand were disrupted by COVID-19 causing deflation and increased unemployment. The inflation unemployment interaction has been trampled by extraordinary externalities in both instances. These results show that Phillips Curve is very context dependent. It may be quite workable in times of stable growth, but this fails in times of crisis or when economic behavior is dominated by structural rigidities. As a result, policy makers should be cautious when using the Phillips Curve, and supplement it with structural and institutional analysis in formulation of macroeconomic policies (Kueh, 2016).

3. LITERATURE REVIEW

The recent empirical and review-based research is cumulative in terms of the insight into the macroeconomic relationship between inflation and unemployment, wage growth and productivity, and policy effectiveness in emerging and developing economies. Hui (2025) proves that moderate labour-hoarding-based wage growth in manufacturing and services work goes some way to explain labour hoarding in Malaysia, whereby firms hoard labour during downturns and, as a result, marginal

productivity declines, as do wage increases, which are captured by the newly constructed RES Labour Hoarding Index. In addition to providing valuable understanding of the labour markets, it is demonstrated by Chen et al. (2025) that the developed deep learning models, especially the Transformer-based, in predicting per capita GDP perform much better than the traditional econometric models because they are able to capture nonlinear relationships between the major macroeconomic factors, including inflation and unemployment, to provide effective economic planning tools. Structural and technological Chukwuere (2024) points to the increasing applicability of machine learning to unemployment prediction and management in developing countries in the context of Industry 4.0 and how economic growth, inflation, education and technological developments interact to define labour. Tang et al. (2023) offers evidence provided by Southeast Asian regions at the panel level that inflation is highly dependent on the prices of crude oil, interest rates, and nominal wages, whereas the role of unemployment and money is less significant, which underlines the significance of joint monetary, wage, and energy policies. Rathnayaka et al. (2023) emphasize the disruptive nature of exogenous shocks by providing a systematic account of how COVID-19 impacted prices and employment, and consumption patterns across the globe negatively and requiring adaptive and resilient policies. Regarding the monetary frameworks, Duong (2022) concludes that inflation targeting in emerging economies does not substantially change both long-run inflation and overall growth, but proves useful in keeping inflation within bounds during tastes of increased uncertainty. To be more precise, Naqibullah et al. (2021) validate the Phillips Curve in the long-run, finding that there is an inverse correlation between unemployment and inflation, but no significant trade-offs in short-runs. Greater development views are presented by Duoku (2021) who, through a comparative study of Liberia and Malaysia, explains that an industrial policy and value-chain integration play a significant role in changing the low-productivity sectors into drivers of inclusive growth. Lastly, Trifena (2021) notes that good macroprudential governance in places like Malaysia and Singapore requires strong legal frameworks, data access and institutional coordination and Lisani et al. (2020) present evidence on the same showing that the inflation-unemployment relationship is largely a long-term phenomenon across the entire ASEAN. Combined, the studies indicate that labour market behaviour, technological progress, monetary and macroprudential policy formulation and structural change all collaborate to determine the dynamics of inflation and unemployment and the resilience of emerging economies.

4. RESEARCH METHODOLOGY

4.1 Research Design

The research design to be used in this study is comparative and descriptive research design because it aims to investigate the relationship between inflation and unemployment in Japan and Malaysia. It is a quantitative study based on the macroeconomic theory and specifically on the Phillips Curve theory. It is a comparative method that shows the effects in which the economic structure,

institute and policy frameworks differ on the inflation unemployment trade-off in a developed economy and an emerging economy.

4.2 Data Sources

The research is based solely on secondary data which is gained with the help of reliable foreign sources. The data on Japan and Malaysia on annual inflation (consumer price index, annual percentage change) and annual unemployment (total unemployment as a percentage of the labor force) between 2000 to 2020 were obtained via the World Bank World Development Indicators (WDI) database. The additional data associated with monetary and fiscal policies was obtained in central bank, international financial institutions, and state policy reports.

4.3 Variables of the Study

The important variables in the analysis are:

Inflation rate (Independent Variable): It is the rate of change in the Consumer Price Index (CPI) annually expressed as a percentage.

Unemployment rate (Dependent Variable): This variable will be measured as a percentage of total labour force that is unemployed.

These variables have been chosen in order to test empirically the validity of the Phillips Curve and also in order to establish the differences in the relationships between inflation and unemployment in the various economic contexts.

4.4 Period of Study

The time frame of 2000 to 2020 was chosen to capture the long-term macroeconomic trend, such as the events of the world and the region, such as the aftermath of the asset bubble bursts in Japan, the Global Financial Crisis of 2008, and the COVID-19 pandemic. Such a period enables the determination of periods of stability as well as structural breaks in the inflation-unemployment relationship.

4.5 Analytical Techniques

The descriptive statistical analysis was used to provide a summary of the inflation and unemployment rates in both nations. The relationship between the inflation and unemployment as well as the slope and stability of the Phillips Curve were observed and seen through the use of scatter plots. The scatter plots were fitted with trend lines to determine the direction and strength of relationship. Besides this theoretical analysis, the deviations against the Phillips Curve were interpreted by the aid of such concepts like inflation expectations, shocks in supply, and demographics. The policy analysis was done by evaluating the responses to the monetary policy and the fiscal policy and their macroeconomic results.

4.6 Comparative Policy Analysis

The qualitative comparative study was done to determine how well the monetary and fiscal policies of Japan and Malaysia have worked. This included consideration of policy instruments like changes in interest rates, quantitative easing, government spending schemes and fiscal stimulus packages. The discussion has centered on

the effects of structural differences of Japan (aging population) and Malaysia (flexible labor market) on policy transmission mechanisms.

4.7 Structural and Institutional Assessment

In order to supplement the quantitative analysis, structural and institutional variables that impact on the inflation-unemployment relationship were investigated. These are demographic trends, institutions of the labor market, wage-setting mechanism, growth in productivity, and skills mismatches. This analytic confusion offers a better insight into the reasons why the same macro-economic policies may produce varying effects in different nations.

4.8 Limitations of the Study

The research is limited in some way. One, it is based on secondary data and, therefore, does not provide control of the accuracy and consistency of the data. Second, the analysis is rather descriptive and it does not use some sophisticated econometric modeling, like regression or a vector autoregression. Lastly, the results are confined to two countries and might not be applicable to all the developed and developing economies.

5. RESULTS

The results of this study present a comparative overview of inflation and unemployment trends in Japan and Malaysia over the period 2000–2020. Using descriptive statistics and Phillips Curve–based analysis, the findings highlight clear differences in the inflation–unemployment relationship between the two economies. While Japan exhibits persistently low inflation with limited responsiveness of unemployment, Malaysia shows a more pronounced short-run trade-off between inflation and employment, particularly during periods of economic stability. These results underscore the role of structural and institutional factors in shaping macroeconomic outcomes.

5.1 Descriptive Analysis of Inflation and Unemployment

The descriptive statistics of annual data on inflation and unemployment of Japan and Malaysia, 2000-2020, shows that there is a significant variation in the macroeconomic behavior of the two economies. Japan registered a continuous low inflation, with the episodes of deflation, as well as mediocre yet comparatively inelastic unemployment rates. Conversely, Malaysia had relatively steady inflation and low unemployment throughout the analysis period with exceptions being largely due to major external shocks. During a good part of Japan, inflation was near to zero or negative, which is indicative of a poor aggregate demand and deeply rooted expectations of deflation. Unemployment was responsive to the effects of inflation with not much responsiveness meaning that there were structural rigidities in labour market. Malaysia on the other hand was more variable in inflation and had low unemployment, which implies that it has more flexible labor market and stronger demand side transmission processes.

Table 1: Descriptive Statistics of Inflation and Unemployment (2000–2020)

Country	Variable	Mean (%)	Minimum (%)	Maximum (%)	Standard Deviation
Japan	Inflation Rate	~0.2	-1.4	2.7	Low
Japan	Unemployment Rate	~4.1	2.4	5.4	Moderate
Malaysia	Inflation Rate	~2.3	-1.2	5.4	Moderate
Malaysia	Unemployment Rate	~3.3	2.9	5.1	Low

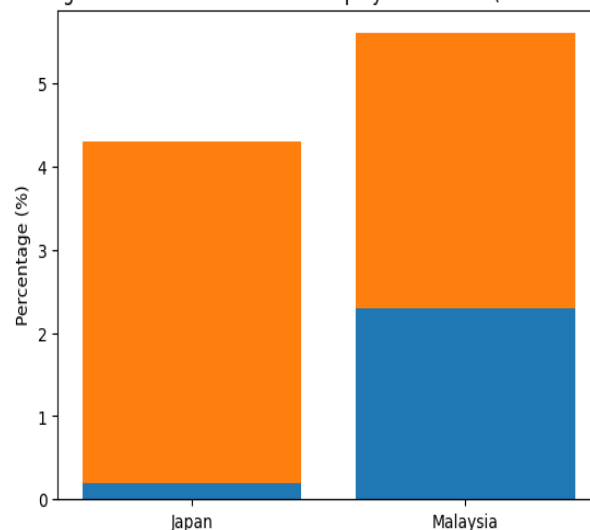**Source:** World Bank World Development Indicators (2000–2020)

Figure 1: mean inflation and unemployment rates in Japan and Malaysia over the period 2000–2020.

The table will give a comparative descriptive summary of inflation and unemployment in Japan and Malaysia during the study period and clearly show distinct differences in the macroeconomic situation in both countries. The inflation rate of Japan is very low with a mean of 0.2 percent and a low standard deviation, which shows that the prices have been stagnant and have been experiencing deflation on numerous occasions. Unlike that, the unemployment rate in Japan records higher average at 4.1 percent which varies with moderate flexibility 2.4 percent to 5.4 percent, indicating relative inflexibility of the labor market as prices vary. Malaysia, in contrast, has a better mean inflation of approximately 2.3 percent that has a broader version of -1.2 percent to 5.4 percent with moderate variability which shows that price movement is more active in the developing economy. Concurrently, unemployment rate in Malaysia has lower average of

about 3.3 percent with low variability which signifies a higher labor market stability and flexibility. In general, the table indicates that Japan can be described as having low inflation persistence, and relatively higher and less reactive unemployment, compared to Malaysia that has moderately higher inflation, and more stable and lower unemployment rates, which favor the existence of stronger short-run inflation unemployment trade-off in Malaysia.

5.2 Phillips Curve Relationship

The Phillips Curve of inflation versus unemployment of Japan is weak and fairly flat as is indicated in the scatter plot. Although some of the year's show the reverse relationship as per the Phillips Curve theory, there are also years when the relationship was not in line with the theory with the declining inflation being accompanied by the increasing unemployment. This trend indicates that the classical inflation-unemployment trade-off in Japan is no longer holding in the country, especially in the deflation times and low inflation expectations. Using the inflation and unemployment in Malaysia, it can be seen that the relationship is more of an inverse one, particularly when the economy is stable. The Phillips Curve of Malaysia seems steep as compared to the one of Japan, which implies that the alterations in inflation are connected with the stronger change in unemployment. The relationship however cracks down during such times as 2008 and 2020 where inflation and unemployment are both going in the same direction with supply-side shocks and collapses in demand.

Table 2: Direction of Inflation–Unemployment Relationship

Country	Period	Phillips Curve Relationship	Observation
Japan	2000–2005	Weak / Breakdown	Deflation with rising unemployment
Japan	2006–2012	Weak	Structural stagnation
Japan	2013–2019	Mild inverse	Partial recovery
Malaysia	2000–2007	Strong inverse	Stable growth
Malaysia	2008	Breakdown	Supply shock (oil prices)
Malaysia	2020	Breakdown	COVID-19 shock

The table outlines the changes in the relationship between inflation and unemployment at the Phillips Curve in Japan and Malaysia over time and how economic situations and shocks affected the trade-off between inflation and unemployment. The relationship is weak or broken in 2000-2005 in Japan because the economy was faced with

deflation with increased unemployment as the post-bubble stagnation continued to be felt. This low relationship persists in 200612, where there are structural stagnation, low inflation expectations and demographic issues constrained the responsiveness of unemployment to price changes. In the period 20132019, a weak negative correlation is observed in Japan, which denotes partial economic recovery and partial nature of the restoration of the Phillips Curve mechanism, but the trade-off is not so high. Quite on the contrary, the relationship between the two in Malaysia is very strong at inverse Phillips Curve over the years 2000-2007, when the country experienced stable growth with inflation and unemployment changing in opposite directions as the theory suggests. This, however, collapses in 2008 because there is a severe supply shock as a result of the dramatic rise in oil prices in the world that causes increased inflation and the rise in unemployment at the same time. In 2020, in the context of the COVID-19 pandemic, where demand dropped and unemployment soared and inflation came down, this kind of breakdown is proven, showing that significant external shocks can dominate the traditional Phillips Curve relationship even in otherwise flexible and growing economic contexts.

5.3 Identification of Structural Breaks

The findings show that there is a structural break in the inflation-unemployment relationship of both countries. The early 2000s in Japan is a time when deflation was still a problem as unemployment continued to increase as a result of long-term financial instability and low consumer confidence. The other significant change happens in the late 2010s when the mild inflation went along with a falling unemployment rate, indicating that the Phillips Curve correlation is partially restored. The largest structural breaks experienced in Malaysia happened during the Global Financial Crisis in 2008 and the COVID-19 pandemic in 2020. These periods were characterized by supply shocks and demand disruptions that led to inflation and an increase or decrease in unemployment at the same time which is contrary to the Phillips Curve hypothesis. The relationship between inflation and unemployment is relatively stable outside these shock periods.

5.4 Policy Outcome Assessment

The macroeconomic results were observed to be of varied policy effectiveness. Expansionary fiscal and monetary policies in Japan were effective in bringing modest implication on inflation and employment levels. The monetary easing, which lasted quite a long time, did not cause inflation and the unemployment issues demonstrated only slight decrease. The implications of these findings are that the policy transmission was limited by structural issues i.e. demographic aging and low inflation expectations. The monetary easing and fiscal stimulus measures proved to be more useful in stabilizing employment and economic recovery in Malaysia. Lower interests and government expenditure added to faster output and job recovery, especially after the decline induced by the COVID-19. The findings show that demand-side policies have been found to be more

effective in Malaysia in affecting macroeconomic performance compared to Japan.

5.5 Structural and Institutional Influences

The findings also emphasize an institutional and structural factor in the determination of the relationship between inflation and unemployment. The growth in wages in Japan was stifled and the population was aging, which meant that the responsiveness of employment to changes in inflation was weakened thus leading to a flatter Phillips Curve. The more flexible labor market in Malaysia was vulnerable to skills shortages and productivity limits which increased inflationary pressures in times of high growth.

5.6 Discussion

The results of the current research can offer valuable information on the changing character of the inflation-unemployment relationship and the contingent applicability of the Phillips Curve to modern macroeconomic research. The analysis of Japan and Malaysia between 2000 and 2020 shows that the phenomenon of inflation unemployment trade-off is not consistent and stable across economies, but rather influenced by structural, institutional, and policy-specific factors. In the example of Japan, the findings show that it has a constantly weak and flat Phillips Curve. With a widespread monetary easing and fiscal stimulus, inflation was kept under control and unemployment turned out to be only slightly responsive. This result suggested the theoretical explanations provided by Friedman and Phelps that highlight the limitations of the long-run efficacy of demand-side policies by expectations and the natural rate of unemployment. The low inflation expectations that were embedded in Japan due to its long experience of deflation undermined the consumption, investment and wage growth. In addition to that, demographic aging lowered the participation in and the bargaining power of labor to additional degree, which weakened the sensitivity of the employment to inflationary adjustments. The findings are consistent with the literature findings that identify the role of structural rigidities and demographic changes in undermining the predictive and policy relevance of the Phillips Curve in mature economies.

However, the case of Malaysia depicts a more classic short-run Phillips Curve in the case of macroeconomic stability. Mostly, moderate inflation was linked to low and stable unemployment implying that demand side policies were more effective in determining employment performance. This justifies Keynesian versions of the Phillips Curve in the emerging markets with a relatively elastic labor market and an emerging productive potential. But the failures of 2008 and 2020 clearly indicate the susceptibility of this relationship to external shocks. The movements in the inflation and unemployment simultaneously caused by supply-side shocks, like an increase in the global oil prices, and demand shocks, like the one induced by the COVID-19 pandemic, were not in line with the normal inverse relationship. Such episodes support the perception that the Phillips Curve is also very sensitive to exogenous shocks and it cannot be depended in isolation when the economy is in crisis.

The comparative results also underline the importance of the structural and institutional circumstances in the development of the policy effectiveness. Although the problems of Japan are more structural and based on long term issues, the Malaysia deviations are occasional and shock-induced. This difference is a factor that has significant policy implications. Additional dependence on demand-side stimulus would bring decreasing returns in structurally constrained economies such as Japan unless it is coupled with reforms to address demographic contraction, labor market inflexibility and productivity stagnation. Conversely, countercyclical demand management is better suited to developing economies such as Malaysia on the condition that it is accompanied by supply side policies that can improve skill and productivity. In general, the discussion supports the conclusion that the Phillips Curve is to be regarded as a situational theory, but not a general law. To come up with effective and sustainable economic strategies, policymakers need to incorporate macroeconomic theory and structural and institutional analysis.

2. CONCLUSION

This paper has explored the inflation-unemployment trade-off by considering the Phillips Curve by comparing Japan and Malaysia in the years 2000-2020. Through the macroeconomic trends, policy reactions and structural anomalies, the study aimed at assessing the empirical relevance of the Phillips Curve and the role of the institutional and demographic aspects in shaping its effectiveness in the various economic environments. The results demonstrate that the relationship between the Phillips Curve is weak and unstable in Japan. Even with long-term monetary easing policies and recurrent fiscal stimulus policies, Japan recorded significantly low inflation and very slight gains in employment. The transmission mechanism between inflation and employment was greatly undermined by structural constraints like population aging, deeply entrenched deflationary expectations and suppressed wage growth. Consequently, inflationary modifications registered no significant effect on unemployment resulting in a flattened Phillips Curve and decreased the usefulness of traditional demand-side policies. Conversely, Malaysia had stronger short run negative relationship between inflation and unemployment especially when the economy had good performance. Demand-side policies could have a better impact on employment through prudent monetary management, a more flexible labor market and diversified economic structure. Nevertheless, the Phillips Curve association in Malaysia was not exempted of the derailment. Significant external shocks such as the global oil price spike in 2008 and the COVID-19 pandemic in 2020 resulted in both inflation and unemployment moving in the same direction which indicated the sensitivity of the trade-off to supply-side and demand-side shocks. In general, this research paper illustrates that the Phillips Curve is a practical but conditional analysis tool. It can be said to be highly contingent because it applies differently in different countries at different times and depends heavily on the structure and institutions. The findings highlight that macroeconomic policies should not be dependent on the demand management strategies only to

attain long term employment and price stability in the country. Rather, policymakers need to supplement these strategies with structural changes, including increasing the labour market flexibility, productivity, and dealing with demographic pressures and anchoring the inflation expectations. The experience in Japan and Malaysia leads to the realization of the inapplicability of one-size-fits-all prescriptions of the policy. Macroeconomic policymaking needs to be done contextually to the extent that the structural realities of each economy are acknowledged. Although the Phillips Curve still offers good insights on short-run inflation- unemployment relationship, it should be used cautiously and supplemented by institutional and structural analysis in order to realize the sustainability of the economy

.

REFERENCES

1. Abu, N. (2019). Inflation and Unemployment Trade-off: A Re-examination of the Phillips Curve and its Stability in Nigeria. Contemporary economics, 13(1), 21-34.

2. Alisa, M. (2015). The Relationship between inflation and unemployment: a theoretical discussion about the Philips Curve. Journal of International Business and Economics, 3(2), 89-97.

3. Azimi, M. N., & Rahman, M. M. (2024). Examining the environmental Phillips curve hypothesis in G7 nations: critical insights from wavelet coherence and wavelet causality analysis. Quality & Quantity, 58(6), 5683-5713.

4. Baboshkin, P., Yegina, N., Zemskova, E., Stepanova, D., & Yuksel, S. (2021). Non-classical approach to identifying groups of countries based on open innovation indicators. Journal of Open Innovation: Technology, Market, and Complexity, 7(1), 77.

5. Bokhari, A. A. (2020). The twinning of inflation and unemployment phenomena in Saudi Arabia: Phillips curve perspective. Contemporary Economics, 14(2), 254-271.

6. Chen, X. S., Kim, M. G., Lin, C. H., & Na, H. J. (2025). Development of per capita GDP forecasting model using deep learning: including consumer goods index and unemployment rate. Sustainability, 17(3), 843.

7. Chen, Y., Lyulyov, O., Pimonenko, T., & Kwilinski, A. (2024). Green development of the country: Role of macroeconomic stability. Energy & Environment, 35(5), 2273-2295.

8. Chukwuere, J. E. (2024). Conceptualizing predictive conceptual model for unemployment rates in the implementation of Industry 4.0: Exploring machine learning techniques. arXiv preprint arXiv:2403.13536.

9. Chukwuka, M. F., & Chukunalu, M. (2025). Tradeoff between Inflation and Unemployment: Implications on the Growth of the Nigerian Economy.

10. Crump, R. K., Eusepi, S., Giannoni, M., & Şahin, A. (2024). The unemployment–inflation trade-off revisited: The Phillips curve in COVID times. Journal of Monetary Economics, 145, 103580.

11. Daniel, S. U., Israel, V. C., Chidubem, C. B., & Quansah, J. (2021). Relationship between inflation and unemployment: Testing Philips curve hypotheses and investigating the causes of inflation and unemployment in Nigeria. Traektoriâ Nauki= Path of Science, 7(9), 1013-1027.

12. Duoku, T. K. (2021). A Comparative analysis of the rubber industries in Liberia and Malaysia: Lessons for industrial policy. University of Johannesburg (South Africa).

13. Duong, T. H. (2022). Inflation targeting and economic performance over the crisis: evidence from emerging market economies. Asian Journal of Economics and Banking, 6(3), 337-352.

14. Eser, F., Karadi, P., Lane, P. R., Moretti, L., & Osbat, C. (2020). The Phillips curve at the ECB. The Manchester School, 88, 50-85.

15. Fouejieu, A., Popescu, A., & Villieu, P. (2019). Trade-offs between macroeconomic and financial stability objectives. Economic Modelling, 81, 621-639.

16. Gazi, M. A. I., Al Masud, A., Emon, M., Ibrahim, M., & bin S Senathirajah, A. R. (2025). The triadic relationship between green HRM, innovation, and pro-environmental behaviour: a study of their interactions and impacts on employee productivity and organizational sustainability. Environmental Research Communications, 7(1), 015016. DOI 10.1088/2515-7620/ada676

17. Grabia, T., & Bywalec, G. (2024). Relationships between Inflation and Unemployment in the United States, Japan and Germany during the Economic Crisis Caused by the COVID–19 Pandemic.

18. Haschka, R. E. (2024). Examining the New Keynesian Phillips Curve in the US: Why has the relationship between inflation and unemployment weakened?. Research in Economics, 78(4), 100987.

19. Hongo, D. O., Li, F., & Ssali, M. W. (2019). Trade-off Phillips curve, inflation and economic implication: The Kenyan case. International Journal of Economics and Finance, 11(4), 60-73.

20. Hui, G. T. E. (2025). Bank Negara Malaysia Working Papers WP4/2025 Balancing Wages: Investigating Labour Hoarding Dynamics in Malaysia.

21. Kitov, I. O. (2010). Inflation and unemployment in Japan: from 1980 to 2050. arXiv preprint arXiv:1002.0277.

22. Kitov, I., & KItov, O. (2013). Inflation, unemployment, and labor force. Phillips curves and long-term projections for Japan. arXiv preprint arXiv:1309.1757.

23. Kueh, S. M. (2016). Artificial neural networks in downscaling and projections of long term future precipitation and development of future Intensity-Duration-Frequency Curves (Doctoral dissertation, Swinburne).

24. Lawler, K., & Pavlenko, I. (2020). The Phillips curve: A case study of theory and practice. Вісник Київського національного університету ім. Тараса Шевченка. Серія: Економіка, (4 (211)), 28-38.

25. Lisani, N., Masbar, R., & Silvia, V. (2020).

Inflation-unemployment trade-offs in ASEAN-10. Signifikan: Jurnal Ilmu Ekonomi, 9(2), 241-256.

26. Lombardi, M. J., Riggi, M., & Viviano, E. (2020). Bargaining power and the Phillips curve: a micro-macro analysis. Bank of Italy Temi di Discussione (Working Paper) No, 1302.

27. Mathosa, M. (2025). Inflation targeting, economic growth and unemployment rate conundrum amidst energy price pressures and monetary policy in South Africa (Doctoral dissertation).

28. Naqibullah, H., Rahmatullah, P., Zmarai, M., Safiullah, S., & Ahad, Z. A. (2021). The long-run determinant of inflation in Malaysia: A Philips Curve review. European Journal of Molecular & Clinical Medicine, 7(11), 2020.

29. Okeowo, A. I. (2023). Unemployment and inflation trade-off: the Nigeria experience in the context of Philip curve. Journal of economics and Allied Research (JEAR), 109.

30. Palley, T. (2018). Recovering Keynesian Phillips curve theory: hysteresis of ideas and the natural rate of unemployment. Review of Keynesian Economics, 6(4), 473-492.

31. Poetranto, I. P. (2025). State Capacity in the Digital Age: Explaining Varieties of Information Controls in Indonesia, Malaysia, and the Philippines (Doctoral dissertation).

32. Rathnayaka, I. W., Khanam, R., & Rahman, M. M. (2023). The economics of COVID-19: a systematic literature review. Journal of Economic Studies, 50(1), 49-72.

33. Solarin, S. A., Lafuente, C., Gil-Alana, L. A., & González-Blanch, M. J. (2025). Persistence in the unemployment and inflation relationship. Evidence from 38 OECD countries. Journal of the Knowledge Economy, 16(1), 1236-1257.

34. Tang, C. T., Yong, H. N. A., Yap, M. T., & Chong, X. Y. (2023, December). Inflation, Interest Rate and Wage Trade-offs in Southeast Asia Countries. In 11th International Conference on Business, Accounting, Finance and Economics (BAFE 2023) (pp. 202-212). Atlantis Press.

35. Thavarasa, S. (2024). Phillips Curve: Is it Pertinent for Sri Lanka and Developing Countries?. Available at SSRN 4754685.

36. Trifena, L. (2021). Designing and operationalising macroprudential supervisory reforms in Indonesia, Malaysia, Singapore, and the UK: a comparative legal analysis with lessons for Indonesia (Doctoral dissertation, University of Warwick).

37. Vincent, A. A., Dantong, R. T., Velji, G. D., & Sitdang, C. A. (2024). The Relationship between Unemployment and Inflation: A Study of the Philips Curve. American Journal of Multidisciplinary Research & Review (AJMRR), 3.

38. Wickens, M. (2011). Macroeconomic theory: a dynamic general equilibrium approach. Princeton University Press.

.