*Applied Journal of Economics, Law and Governance* https://doi.org/10.57017/ajelg.v2.i1(3).03

# Fiscal Management and Business Cycle Synchronization: A Governance-Based Assessment of South Korea's Composite Index[1]

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## Abstract

Government fiscal health is intrinsically linked to the cyclic regularity of national economic activity. However, fiscal management can be stabilized if the underlying governance framework maintains consistency in economic and social policy implementation. This study analyses the fiscal management of the South Korean government with a specific focus on the composite index of business indicators. The research explores the important role of strategic policy alignment in maintaining fiscal sustainability, evaluating production activity performance in the context of national finance. The study utilizes longitudinal trends from South Korea to assess how fiscal management adapts to business cycle indicators. Findings suggest that proactive and consistent policy governance reduces the need for disruptive fiscal adjustments during economic downturns. The research provides actionable insights for policymakers regarding the integration of business cycle signals into long-term national financial governance.

Keywords: fiscal management; government finance; composite index of business indicators; South Korea; economic governance; fiscal sustainability.

JEL Classification: E62; E32; H30; O23; K23.

## Introduction

The public and private sectors are both critical in economic growth. The public sector spends and distributes taxes only as a resource in accordance with government policy, where resource allocation takes place without going through a market mechanism. The private sector, on the other hand, allocates scarce resources through market mechanisms. Even with the private sector functioning smoothly within the market mechanism, the public sector still plays a key economic function of the government because if the market economy does not function sufficiently or if the market fails, it needs to be resolved through market intervention by the government. The government intervenes in the market to prevent distortion of resource allocation and stabilize the economy. If the entire economy depends only on the movement of the market economy, policy intervention is required in unemployment and inflation. The functions of the government can be perceived as coordination of resource allocation, redistribution of income, and economic stabilization.

[1] This article is a revised and expanded version of a paper entitled "*Sensitivity of fluctuations in national finance for business cycle*" presented at 51st EBES Conference, Rome, Italy, April 2025.

Ensuring efficient allocation of resources is feasible in the market economy system, but providing sufficient supply of public goods is difficult, and only with the function of the market economy can the government intervene and adjust resource allocation. In the operation of the macroeconomy, the government promotes economic stabilization through macroeconomic policy measures anchored on the interplay of relevant factors such as finance and foreign exchange. The macro-economic policy an important tool in stabilizing the business cycle (Takahashi, 2020). Frequent reversals in business cycles pose the question whether country can achieve macroeconomic stability and/or economic growth by coordinating its economic policies (Škare & Tomić, 2015). The contributors to business cycle fluctuations, export growth deceleration is the main contributor to the current contraction phase of business cycles, while financial volatility is very likely to be a key driver of future business cycle fluctuations (Song et al., 2022).

Commodity markets are strongly related to the business cycle, this evidence goes nevertheless against the widespread intuition that commodity markets are a strong source of diversification in a standard cash–bond–equity portfolio (Chevallier et al., 2014). The cyclical features of USA, Japan and the Euro area appear quite distinct (McAdam, 2007). Preventing future crises requires not only macroeconomic adjustments but also deep legal and governance reforms (Singh & Sahu, 2025). The nature and scope of CSR activities play an important role in shaping banks' tax-related behaviour (Salah, 2025). Countries with similar cultural values have similar economic structures and similar exposures to global shocks, which lead to business cycle co-movements (Fang & Yin, 2024). When the business cycle is mainly driven by supply-side shocks real wages present a pro-cyclical behaviour. On the contrary, when the business cycle is driven by aggregate demand shocks real wages move counter-cyclically (Altavilla & Vinci, 2011).

Rising public debt levels point to a growing reliance on deficit financing, much of which is likely sourced from banking sector borrowings (Ahamed & Chowdhury, 2025). The financial risk has a non-linear effect on business cycle fluctuations and a significant global financial risk threshold effect (Shi & Chen, 2021). In this context, proper allocation of fiscal expenditure is necessary to achieve national policy goals, such as expansion of infrastructure or social overhead capital, efficient resource allocation, and rational industry development.

Fiscal policy targets appropriate allocation of available resources to both the public and private sectors. It presupposes that the use of government resources by fiscal expenditure is efficient. Social benefits generated through fiscal expenditure should be distributed equally to all citizens, satisfying the needs of the people. Hence, the government is challenged to efficiently generate social benefits at an appropriate time through fiscal expenditure, minimize the range of economic fluctuations, and promote economic and social development.

Accordingly, this paper analyses the sensitivity of national finances to economic fluctuations. The role of economic and social policies is discussed and presented in detail by analysing the performance of production activities on the national finance and the sensitivity to fluctuations in the national finance.

## 1. Literature Review

The recent upward trend in the leading indicator did initially signal the end of the current downward phase in the business cycle in an unambiguous manner (Venter, 2017). One significant characteristic of the Chinese growth cycle is the relatively direct influence of government policies. However, recently these policy effects have become less significant when compared to global economic influences (Becker & Wang, 2013). It is shown that Wicksell described the business cycle as oscillations of an economy with increasing population and scarce natural resources around its steady growth path ('dynamic equilibrium'), provoked by sporadic technological progress (Boianovsky, 1995).

The majority of the propositions claim that cartel formation is more likely in expansionary and less likely in contractionary phases of the business cycle (Huric-Larsen, 2024). Using a time-varying measure of business cycle synchronization and Bayesian model averaging methods, we find that increase in uncertainty tends to robustly predict desynchronization, in particular for countries whose business cycles are not in line with those of the rest of the monetary union (Cuaresma, 2022).

During the Great Recession of 2008–2009, international business cycle spillovers increased to unprecedented levels (Antonakakis & Badinger, 2014). An increase in exchange rate volatility has a strong deterrent effect on US foreign investments. This effect is fairly stable over the business cycle (Cavallari & D'Addona, 2013). Both domestic economies and financial markets are affected by cycles that are often represented through multi-state models such as Markov Switching (MS) models (Ielpo, 2012).

In times of expansion, the accumulated public debt effects are likely transmitting through Ricardian equivalence effect and concerns from expected high long-term interest rate leading to crowding-out effect, thus, lowering fiscal multipliers (Bentour, 2022). An extended European business cycle moving toward the synchronization levels enjoyed by core countries (Santos & Rodríguez, 2016).

The business cycle behaviour of macroeconomic variables has long been of interest to economists, and attention has recently focused on two aspects of this behaviour - the 'stylized facts' of cyclical asymmetry and duration dependence (Mills, 2001). Åkerman's emphasis on seasonal changes in his path-breaking application of harmonic analysis to economic fluctuations was rejected by Frisch, who instead suggested the explanation of business cycles as free oscillations determined by impulse and propagation mechanisms (Boianovsky & Trautwein, 2007). Empirical test results show that the constructed BPI index has a significant impact on business cycle synchronization, confirming that countries with closer production relations tend to have a consistent business cycle (Zhao & Li, 2025).

## 2. Research Methodology and Methodological Framework

The study utilized the composite index of business indicators (2010-2024) of the Statistics Korea and the government’s financial scale (2010-2024) of the Ministry of Strategy and Finance to analyse the sensitivity of fluctuations in national finance to the business cycle. The composite index of business indicators was analysed by dividing the coincident index circulation fluctuation and the lagging index circulation fluctuation, and the government’s financial scale was divided into the central government’s total expenditure and the central government’s consolidated financial scale.

To identify the overall economic trend of the national economy, the composite index of business indicators is prepared by selecting major economic indicators sensitive to the economy by economic sector (e.g., production, investment, employment, and consumption) and reflecting the increase or decrease rate compared to the previous month. Since the amplitude of economic fluctuations can be determined based on the size of the increase or decrease rate of individual constituent indicators, it is possible to analyse the direction, phase, and turning point of economic fluctuations as well as the speed of economic fluctuations simultaneously. In the composite index of business indicators, the coincident index circulation fluctuation is an index that removes trend fluctuations from the cyclical component of the coincident index, which is used to identify the current economic phase and turning point. On the other hand, the leading index circulation fluctuation is an index that removes trend fluctuations from the cyclical component of the leading index, which is used to predict future economic phases and turning points. The central government's total expenditure is the amount of central government expenditure, excluding internal transactions between accounting and funds.

The preservation transactions of debt repayment among all expenditures of general accounts, special accounts, and funds, and can be expressed as:

Central government's total expenditure = Current expenditure + Capital expenditure + Loan expenditure

The government's consolidated financial scale can be expressed as follows:

Central government's consolidated financial scale = Expenditure (Current expenditure + Capital expenditure) + Net loan (Loan expenditure - Loan collection)

$$\hat{\rho}_{xy\cdot z} = \frac{\mathrm{N}\sum_{i=1}^{N} e_{X,i}e_{Y,i} - \sum_{i=1}^{N} e_{X,i}\sum_{i=1}^{N} e_{Y,i}}{\sqrt{\mathrm{N}\sum_{i=1}^{N} e^2{}_{X,i} - (\sum_{i=1}^{N} e_{X,i})^2}\sqrt{\mathrm{N}\sum_{i=1}^{N} e^2{}_{Y,i} - (\sum_{i=1}^{N} e_{Y,i})^2}} = \frac{\mathrm{N}\sum_{i=1}^{N} e_{X,i}e_{Y,i}}{\sqrt{\mathrm{N}\sum_{i=1}^{N} e^2{}_{X,i}}\sqrt{\mathrm{N}\sum_{i=1}^{N} e^2{}_{Y,i}}}.$$

This study primarily aimed to measure the sensitivity of fluctuations in national finance to the business cycle. Generally, the central government's total expenditure and the size of the central government's consolidated financial scale have a high correlation affecting each other. Therefore, in this study, the following partial correlation analysis was conducted:

- The central government's total expenditure was set as the third control variable, and the correlation to the cyclical component of the coincident index and the central government's consolidated financial scale was analysed.
- The central government's consolidated financial scale was set as the third control variable, and the correlation to the cyclical component of the coincident index and the central government's total expenditure was compared.
- The central government's total expenditure was set as the third control variable, and the correlation to the cyclical component of the leading index and the central government's consolidated financial scale was evaluated.
- The central government's consolidated financial scale was set as the third control variable, and the correlation to the cyclical component of the leading index and the central government's total expenditure was examined.

This study analysed the sensitivity of the composite index of business indicators and its effect on the national finance status through partial correlation analysis. The research hypotheses are as follows:

Hypothesis 1: The cyclical component of coincident index and the central government's consolidated financial scale

$H_1$: The cyclical component of coincident index affects the central government's consolidated financial scale.

$H_0$: The cyclical component of coincident index does not affect the central government's consolidated financial scale.

Hypothesis 2: The cyclical component of coincident index and the central government's total expenditure

$H_1$: The cyclical component of coincident index affects the central government's total expenditure.

$H_0$: The cyclical component of coincident index does not affect the central government's total expenditure.

Hypothesis 3: The cyclical component of leading index and the central government's consolidated financial scale

$H_1$: The cyclical component of leading index affects the central government's consolidated financial scale.

$H_0$: The cyclical component of leading index does not affect the central government's consolidated financial scale.

Hypothesis 4: The cyclical component of leading index and the central government's total expenditure

$H_1$: The cyclical component of leading index affects the central government's total expenditure.

$H_0$: The cyclical component of leading index does not affect the central government's total expenditure.

## 3. Research Findings for Data Analysis

First, we set the central government's total expenditure as the third control variable and analysed the correlation between the cyclical component of coincident index and the central government's consolidated financial scale. The descriptive statistics for the cyclical component of the coincident index, the central government's consolidated financial scale, and the central government's total expenditure (control variable) is listed in Table 1.

Table 1: Descriptive statistics of the cyclical component, fiscal scale, and government expenditure

| Control Variables | Mean | Std. Deviation | N |
|---|---|---|---|
| Cyclical component of coincident index | 99.8833 | .98190 | 60 |
| Central government's consolidated financial scale | 409.5667 | 120.11438 | 60 |
| Central government's total expenditure | 443.9400 | 119.79542 | 60 |

Source: own data

The correlations between the cyclical component of the coincident index, the central government's consolidated financial scale, and the central government's total expenditure (control variable) are illustrated in Table 2. The topmost part of Table 2 reveals that the central government's total expenditure is not set as a control variable. Both the cyclical component of coincident index and the central government's consolidated financial scale exhibited a significant correlation ($p < .1$).

Table 2's -none-[a] means zero order partials and depicts a general correlation coefficient because it is a partial correlation coefficient when there is no control variable. The bottom part of Table 2 reflects the correlation described between the cyclical component of the coincident index and the central government's consolidated financial scale with the central government's total expenditure, which was set as a control variable. The value of the partial correlation coefficient of the cyclical component of the coincident index and the central government's consolidated financial scale (.150, $p = .256$) was lower and less significant than the value (-.298, $p= .021$) in the absence of a control variable. That is, the central government's consolidated financial scale was affected by the cyclical component of the coincident index and the central government's total expenditure. Hence, the cyclical component of the coincident index and the central government's consolidated financial scale had a relatively high correlation. It can also be concluded that the cyclical component of the coincident index and the central government's consolidated financial scale have low pure correlation.

Table 2: Correlation matrix of the cyclical component, fiscal scale, and government expenditure

| Control Variables | | | Coincident | Integrated | Total |
|---|---|---|---|---|---|
| none[a] | Cyclical component of coincident index | Correlation | 1.000 | -.298 | -.305 |
| | | Significance (2-tailed) | . | .021 | .018 |
| | | df | 0 | 58 | 58 |
| | Central government's consolidated financial scale | Correlation | -.298 | 1.000 | .999 |
| | | Significance (2-tailed) | .021 | . | .000 |
| | | df | 58 | 0 | 58 |
| | Central government's total expenditure | Correlation | -.305 | .999 | 1.000 |
| | | Significance (2-tailed) | .018 | .000 | . |
| | | df | 58 | 58 | 0 |
| Total | Cyclical component of coincident index | Correlation | 1.000 | .150 | |
| | | Significance (2-tailed) | . | .256 | |
| | | df | 0 | 57 | |
| | Central government's consolidated financial scale | Correlation | .150 | 1.000 | |
| | | Significance (2-tailed) | .256 | . | |
| | | df | 57 | 0 | |

Note: [a]Cells contain zero-order (Pearson) correlations.
Source: Own data

We set the central government's consolidated financial scale as the third control variable and analysed the correlation between the cyclical component of coincident index and the central government's total expenditure. The descriptive statistics for the cyclical component of the coincident index, the central government's total expenditure, and the central government's consolidated financial scale (control variable) is presented in Table 3.

Table 3: Descriptive statistics of the cyclical component, government expenditure, and fiscal scale

| Control Variables | Mean | Std. Deviation | N |
|---|---|---|---|
| Cyclical component of coincident index | 99.8833 | .98190 | 60 |
| Central government's total expenditure | 443.9400 | 119.79542 | 60 |
| Central government's consolidated financial scale | 409.5667 | 120.11438 | 60 |

Source: own data

The correlations between the cyclical component of coincident index, the central government's total expenditure, and the central government's consolidated financial scale (control variable) are outlined in Table 4. The results depict that the central government's consolidated financial scale is not set as a control variable. Both the cyclical component of the coincident index and the central government's total expenditure were significantly correlated ($p < .1$).

Table 4's -none-[a] means zero order partials and demonstrates a general correlation coefficient because it is a partial correlation coefficient when there is no control variable. Table 4 specifies that the correlation described between the cyclical component of the coincident index and the central government's total expenditure with the central government's consolidated financial scale was set as a control variable. The value of the partial correlation coefficient of the cyclical component of the coincident index and the central government's total expenditure (-.164, $p = .214$) appeared lower and less significant than the value (-.305, $p= .018$) in the absence of a control variable, indicating that the central government's total expenditure was affected not only by the cyclical component of coincident index but also by the central government's consolidated financial scale. The cyclical component of the coincident index and the central government's total expenditure had a relatively high correlation. Contrarily, the cyclical component of the coincident index and the central government's total expenditure had low pure correlation.

Table 4: Correlation matrix: Coincident index (cyclical), government expenditure, and fiscal scale

| Control Variables | | | Coincident | Integrated | Total |
|---|---|---|---|---|---|
| -none-[a] | Cyclical component of coincident index | Correlation | 1.000 | -.305 | -.298 |
| | | Significance (2-tailed) | . | .018 | .021 |
| | | df | 0 | 58 | 58 |
| | Central government's total expenditure | Correlation | -.305 | 1.000 | .999 |
| | | Significance (2-tailed) | .018 | . | .000 |
| | | df | 58 | 0 | 58 |
| | Central government's consolidated financial scale | Correlation | -.298 | .999 | 1.000 |
| | | Significance (2-tailed) | .021 | .000 | . |
| | | df | 58 | 58 | 0 |
| Total | | Correlation | 1.000 | -.164 | |

| Control Variables | | | Coincident | Integrated | Total |
|---|---|---|---|---|---|
| | Cyclical component of coincident index | Significance (2-tailed) | . | .214 | |
| | | df | 0 | 57 | |
| | Central government's total expenditure | Correlation | -.164 | 1.000 | |
| | | Significance (2-tailed) | .214 | . | |
| | | df | 57 | 0 | |

Note: [a]Cells contain zero-order (Pearson) correlations.
Source: Own data

The central government's total expenditure was set as the third control variable and analysed the correlation between the cyclical component of the leading index and the central government's consolidated financial scale. The descriptive statistics for the cyclical component of the leading index, the central government's consolidated financial scale, and the central government's total expenditure (control variable) is displayed in Table 5.

Table 5: Descriptive statistics: Leading index (cyclical), fiscal scale, and government expenditure

| Control Variables | Mean | Std. Deviation | N |
|---|---|---|---|
| Cyclical component of coincident index | 100.2750 | .95361 | 60 |
| Central government's consolidated financial scale | 409.5667 | 120.11438 | 60 |
| Central government's total expenditure | 443.9400 | 119.79542 | 60 |

Source: Own data

The correlations between the cyclical component of the leading index, the central government's consolidated financial scale, and the central government's total expenditure (control variable) are described in Table 6. The results specify that the central government's total expenditure is not set as a control variable. Both the cyclical component of the leading index and the central government's consolidated financial scale do not have a significant correlation ($p > .1$).

Table 6's -none-[a] means zero order partials and presents a general correlation coefficient because it is a partial correlation coefficient when there is no control variable. The correlation described between the cyclical component of the leading index and the central government's consolidated financial scale with the central government's total expenditure was set as the control variable. The value of the partial correlation coefficient of the cyclical component of the leading index and the central government's consolidated financial scale (.220, $p = .094$) was higher and more significant than the value (-.013, $p = .919$) in the absence of a control variable. This means that the central government's consolidated financial scale and the cyclical leading of coincident index did not affect each other. Moreover, this infers that it did not significantly affect the central government's total expenditure. The cyclical component of the leading index and the central government's consolidated financial scale appeared to have a relatively low correlation.

Table 6: Correlation matrix: Leading index (cyclical), fiscal scale, and government expenditure

| Control Variables | | | Coincident | Integrated | Total |
|---|---|---|---|---|---|
| -none-[a] | Cyclical component of leading index | Correlation | 1.000 | -.013 | -.023 |
| | | Significance (2-tailed) | . | .919 | .859 |
| | | df | 0 | 58 | 58 |
| | Central government's consolidated financial scale | Correlation | -.013 | 1.000 | .999 |
| | | Significance (2-tailed) | .919 | . | .000 |
| | | df | 58 | 0 | 58 |
| | Central government's total expenditure | Correlation | -.023 | .999 | 1.000 |
| | | Significance (2-tailed) | .859 | .000 | . |
| | | df | 58 | 58 | 0 |
| Total | Cyclical component of leading index | Correlation | 1.000 | .220 | |
| | | Significance (2-tailed) | . | .094 | |
| | | df | 0 | 57 | |
| | Central government's consolidated financial scale | Correlation | .220 | 1.000 | |
| | | Significance (2-tailed) | .094 | . | |
| | | df | 57 | 0 | |

Note: [a]Cells contain zero-order (Pearson) correlations.
Source: Own data

We set the central government's consolidated financial scale as the third control variable and analysed the correlation between the cyclical component of the leading index and the central government's total expenditure. The descriptive statistics for the cyclical component of the leading index, the central government's total expenditure, and the central government's consolidated financial scale (control variable) is synthesized in Table 7.

Table 7: Descriptive statistics: Leading index (cyclical), government expenditure, and fiscal scale

| Control Variables | Mean | Std. Deviation | N |
|---|---|---|---|
| Cyclical component of coincident index | 100.2750 | .95361 | 60 |
| Central government's total expenditure | 443.9400 | 119.79542 | 60 |
| Central government's consolidated financial scale | 409.5667 | 120.11438 | 60 |

Source: Own data

The correlations for the cyclical component of the leading index, the central government's total expenditure, and the central government's consolidated financial scale (control variable) are described in Table 8. The results explain that the central government's consolidated financial scale is not set as a control variable. Both the cyclical component of the leading index and the central government's total expenditure did not have a significant correlation ($p > .1$).

Table 8's -none-[a] means zero order partials and shows a general correlation coefficient because it is a partial correlation coefficient when there is no control variable. Table 8 also details the correlation described between the cyclical component of the leading index and the central government's total expenditure with the central government's consolidated financial scale, which was set as a control variable. The value of the partial correlation coefficient of the cyclical component of the leading index and the central government's total expenditure (-.221,

p = .093) was higher and more significant than the value (-.023, p= .859) in the absence of a control variable. This means that the central government's total expenditure and the cyclical component of the leading index did not affect each other, meaning, it did not significantly affect the central government's consolidated financial scale. The cyclical component of the leading index and central government's total expenditure can have a relatively low correlation.

Table 8: Correlation matrix: Leading index (cyclical), government expenditure, and fiscal scale

| Control Variables | | | Coincident | Integrated | Total |
|---|---|---|---|---|---|
| -none-[a] | Cyclical component of leading index | Correlation | 1.000 | -.023 | -.013 |
| | | Significance (2-tailed) | . | .859 | .919 |
| | | df | 0 | 58 | 58 |
| | Central government's total expenditure | Correlation | -.023 | 1.000 | .999 |
| | | Significance (2-tailed) | .859 | . | .000 |
| | | df | 58 | 0 | 58 |
| | Central government's consolidated financial scale | Correlation | -.013 | .999 | 1.000 |
| | | Significance (2-tailed) | .919 | .000 | . |
| | | df | 58 | 58 | 0 |
| Total | Cyclical component of leading index | Correlation | 1.000 | -.221 | |
| | | Significance (2-tailed) | . | .093 | |
| | | df | 0 | 57 | |
| | Central government's total expenditure | Correlation | -.221 | 1.000 | |
| | | Significance (2-tailed) | .093 | . | |
| | | df | 57 | 0 | |

Note: [a]Cells contain zero-order (Pearson) correlations.
Source: Own data

The results of the analysis show that the cyclical component of the coincident index and the central government's consolidated financial scale have significant correlations, meaning, that the central government's consolidated financial scale is affected not only by the cyclical component of the coincident index but also by the central government's total expenditure.

The cyclical component of the coincident index and the central government's total expenditure all have significant correlations. This suggests that the central government's total expenditure is influenced not only by the cyclical component of the coincident index but also by the central government's consolidated financial scale. Neither the cyclical component of the leading index nor the central government's consolidated financial scale had a significant correlation, implying that the central government's consolidated financial scale and the cyclical component of the leading index do not have a causal relationship. This also suggests that it does not significantly affect the central government's total expenditure.

Additionally, neither the cyclical component of the leading index nor the central government's total expenditure was significantly linked, highlighting that the central government's total expenditure does not have a significant correlation. Consequently, the central government's total expenditure did not influence the cyclical component of the leading index and vice versa, which also means that it does not significantly affect the central government's consolidated financial scale.

## 4. Research Discussion and Research Review

The fiscal aspect of a country, which has redistribution and finance functions, accounts for a large portion of its economy. It actively supports national production activities and plays a vital role in raising the level of national income. Accordingly, the fiscal policy, a specific means of economic policy that functions as an industrial activity, plays a critical role. The government's fiscal expenditure is more suitable for stimulating the economy than for expanding growth potential. When discussing the economic effects of government spending, it is imperative to consider partial expenditure and increase government investment expenditure rather than government consumption expenditure.

The government's fiscal expenditure is covered by the government's budget. The budget collects taxes to raise the necessary resources for the people, and tax revenues are the main source of the expenditure budget. The government's budget, which should be centralized to the public, serves as a fundamental tool for achieving social and economic goals, specifically for the creation and allocation of savings. While the effects of both fiscal expenditure and tax cuts are both representative means of fiscal policy, the outcome of tax cuts begins to appear with a time lag; hence, tax cuts are a more effective means of economic stabilization. In this context, the business cycle, indicating fluctuations in total economic activity, needs GDP data, which is used to measure total economic activity. Nevertheless, the business cycle cannot be evaluated solely using GDP. It is essential to consider other variables such as employment, inflation, investment, and financial market variables, such as interest rate and money supply. The business cycle does not occur only in a few economic variables.

Expansion and contraction occur almost simultaneously in many economic activities. Factors such as production, employment, consumption, investment, government expenditure, and price exhibit regular and predictable behaviour during the business cycle. However, the business cycle does not occur at regular and predictable intervals, it cannot be considered periodic. Still, in an advanced capitalist economy, the typical pattern of expansion, peak, contraction, and trough is constantly repeated. Since the business cycle is diverse, it is challenging to predict it accurately in advance. Hence, it is important to identify a turning point in the business cycle because the direction of the business cycle is changed by a turning point. The asymmetry of the business cycle, the rising and falling phases, that make up the cycle do not happen simultaneously. Hence, the government strives to make extensive efforts to maintain economic stability by changing fiscal measures, such as tax rates and fiscal expenditure levels. The fiscal policy is thus promoted through these policy measures, and the level of tax rates, non-taxation, and reduction is adjusted accordingly. Generally, the policy aims to promote economic growth and improve public welfare by supplying public goods by adjusting fiscal expenditure scale or expenditure structure.

## Conclusion

This study examined the sensitivity of economic fluctuations in the South Korea's national finance. The paper discussed and presented the performance of production activities on the national finance and the role of economic and social policies in maintaining national finance. The findings demonstrate that both the cyclical component of the coincident index and the central government's consolidated financial scale are significantly correlated.

Similarly, both the cyclical component of the coincident index and the central government's total expenditure are significantly correlated. Specifically, the cyclical component of the coincident index, which moves in almost the same direction as the economic fluctuations

of the national economy, greatly affected the sensitivity of fluctuations in national finance. On the other hand, the cyclical component of the leading index and the central government's consolidated financial scale do not have significant correlations. The cyclical component of the leading index, which predicts future economic trends, did not significantly affect sensitivity of fluctuations in national finance.

This research found that economic fluctuations in the national economy greatly affect the sensitivity of fluctuations in national finance. The South Korean government is actively promoting the fiscal policy in response to the low economic growth, the sluggish domestic demand, and the global economic uncertainty. In the COVID-19 pandemic, stimulus measures were implemented. In recent years, it has maintained a trend of expanding national finance to improve the people's lives and welfare. The South Korean government is implementing the fiscal policy to improve the business cycle. Currently, securing the fiscal soundness is very important. The study presented trends in South Korea's national finance and economic fluctuations as well as analysed the sensitivity of the national finance to economic fluctuations. The results on the economic phenomena are expected to contribute to national finance research through its analysis of economic fluctuations and its direct impact on national finance.

## Credit Authorship Contribution Statement

The author contributed the writing, the visualization, the validation, the supervision, the software, resources, the project administration, the methodology, the investigation, the formal analysis, the data curation, and the conceptualization.

## Acknowledgments

N/A

## Conflict of Interest Statement

The author declares no conflicts of interest.

## Data Availability Statement

Data included in article/supp. material/referenced in article. Data can be accessed.

## Ethical Approval Statement

This study is based exclusively on the analysis of publicly available data. It did not involve human participants, personal data, or animal subjects. Therefore, ethical approval was not required.

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How to cite this article:

Yoon, D. (2026). Fiscal Management and Business Cycle Synchronization: A Governance-Based Assessment of South Korea's Composite Index. *Applied Journal of Economics, Law and Governance*, Volume II, Issue 1(3), 59-72. https://doi.org/10.57017/ajelg.v2.i1(3).03

Article's history:

Received 7th of January, 2026; Revised 2th of February, 2026;
Accepted for publication 17th of February, 2026; Available online: 6th of March, 2026;
Published as research article in Volume II, Issue 1(3), 2026.