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Business Sentiment of Japanese Companies and Wages in Thailand

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Abstract

This study examines the relationship between Japanese companies' business sentiment toward Thailand and key economic factors, including wages, the industrial share of GDP, and international tourism. Using time series analyses—including the Vector Autoregression (VAR) model, Granger causality tests, and impulse response functions—this study analyzes data from 2003 to 2022 to identify the primary drivers of Japanese investment sentiment. The results indicate that business sentiment is significantly influenced by international tourism, reflecting Thailand's market size and economic attractiveness. Contrary to survey responses, wage increases do not have a significant impact on Japanese companies' business sentiment or their investment decisions. Additionally, business sentiment does not exert a direct influence on wages. These findings suggest that, in contrast to past assumptions that labor costs are a primary determinant of investment, Japanese companies now prioritize market size and economic stability when evaluating Thailand as an investment destination. This study contributes to the literature by reassessing investment drivers in an emerging market and providing insights for policymakers seeking to maintain Thailand's competitiveness as a regional business hub.

Keywords: foreign direct investment; Japan; Thailand; business sentiment; market size; wages
JEL Classification: C32; F21; F23; O53; R11

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1. Introduction

Thailand experienced rapid economic growth from the late 1980s, driven by industrialization and export expansion. One key element of this growth was the adoption of foreign technologies (World Bank, 1993). Additionally, attracting foreign direct investment (FDI) played a crucial role in this economic transformation. Between 1965 and 1987, FDI inflows to Thailand totaled 72.4 billion baht, including 21.4 billion baht from the U.S. and 16.2 billion baht from Japan. During the subsequent period from 1988 to 1996, FDI inflows rose to 123.4 billion baht from Japan, 99.7 billion baht from NIEs (Newly Industrialized Economies), and 60.8 billion baht from the U.S. (Suehiro, 2008). These figures highlight Japan as a significant source of FDI. Japanese firms collaborated with Thai companies to expand business opportunities, which contributed to Thailand's economic growth (Suehiro, 2008). As a result, nearly 6,000 Japanese companies and over 70,000 Japanese citizens now reside in Thailand (Japan External Trade Organization, 2021; Ministry of Foreign Affairs of Japan, 2024). This has fostered deeper economic and cultural ties between the two countries.

However, since the COVID-19 pandemic, the business sentiment of Japanese companies toward Thailand has become less favorable. For example, the number of members in the Japanese Chamber of Commerce (JCC) in Thailand has declined. The JCC, established in 1954 with 30 member companies, had grown to 394 members by 1985, the year of the Plaza Accord. During the late 1980s and early 1990s, the appreciation of the Japanese yen further incentivized investment in Thailand, and JCC membership increased to 1,028 by 1995, before the Asian Financial Crisis in 1997. Although membership remained relatively stable during the 2000s, it surged again in the 2010s, peaking at 1,772 members in 2019, before declining in the post-COVID-19 era (Figure 1).

Another key indicator is the Survey Report on Overseas Business Operations by Japanese Manufacturing Companies, conducted by the Japan Bank for International Cooperation (JBIC). In this survey, Japanese manufacturing companies were asked to list up to five countries for medium-term business development (over the next three years). As shown in Figure 2, Thailand was consistently ranked between second and fourth place as the most promising or potential country between 1994 and 2020, with the exception of 2008. However, in the most recent survey, Thailand dropped to sixth place.

Although various reasons for decreased Japanese investment have been widely discussed, Itagaki et al. (2023) summarized the key negative factors for Thailand based on the 2023 JBIC survey, including rising wages and difficulties in hiring workers due to labor shortages (Figure 3). From a theoretical perspective, vertical FDI is influenced by wage differentials. Thailand has experienced significant wage increases, particularly since the 2010s. As shown in Figure 4, the starting salary for high school graduates in Japanese companies in Bangkok is approximately 1.5 times the minimum wage. In 2010, both the minimum wage and starting salaries in Japanese companies increased substantially. Subsequently, wages have risen several times.

However, empirical studies suggest that wages are not necessarily the decisive factor in FDI location decisions. Through a literature review, Nielsen et al. (2017) found that 49% of studies showed negative relations between wages and FDI, 17% showed positive relations, and 34% showed no significant relationship (Hou et

al., 2021). Although labor shortage is also a significant concern, this study focuses on wages since labor shortages can be partially addressed through higher compensation.

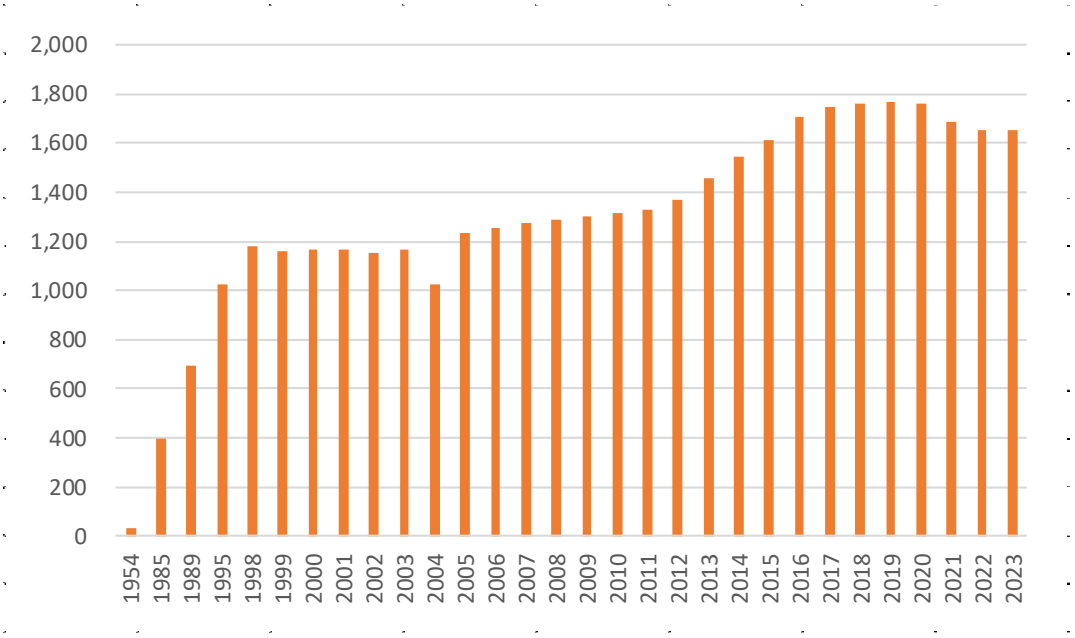

Figure 1: The number of members in the Japanese Chamber of Commerce (JCC) in Thailand

Source: Japanese Chamber of Commerce (2023)

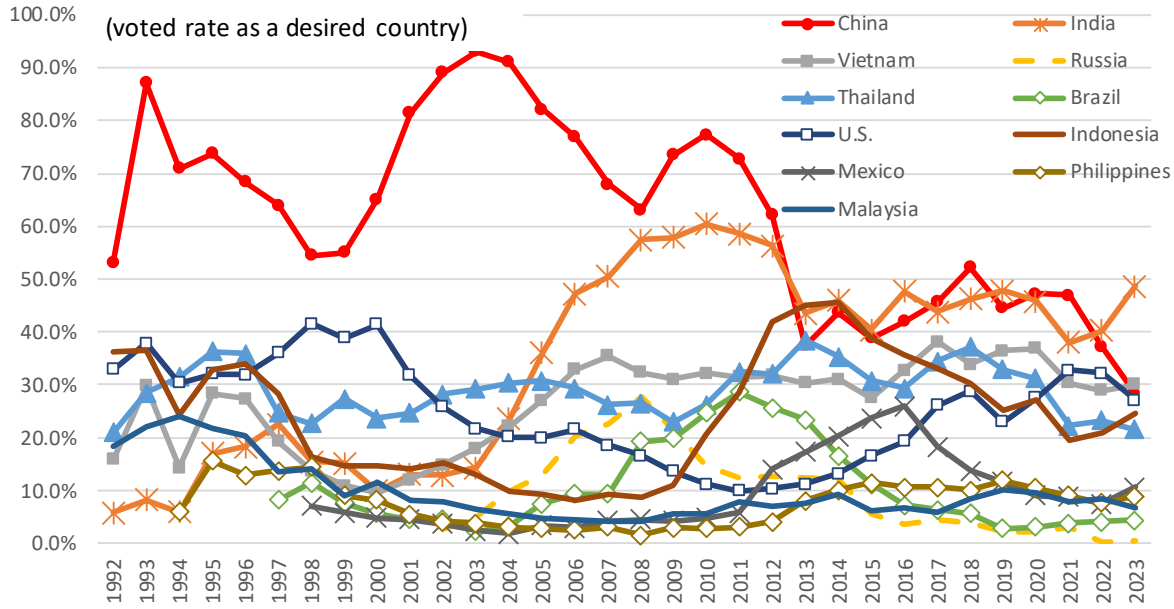

Figure 2: Trends in promising or potential countries by Japanese companies in the JBIC survey

Source: Itagaki et al. (2023)

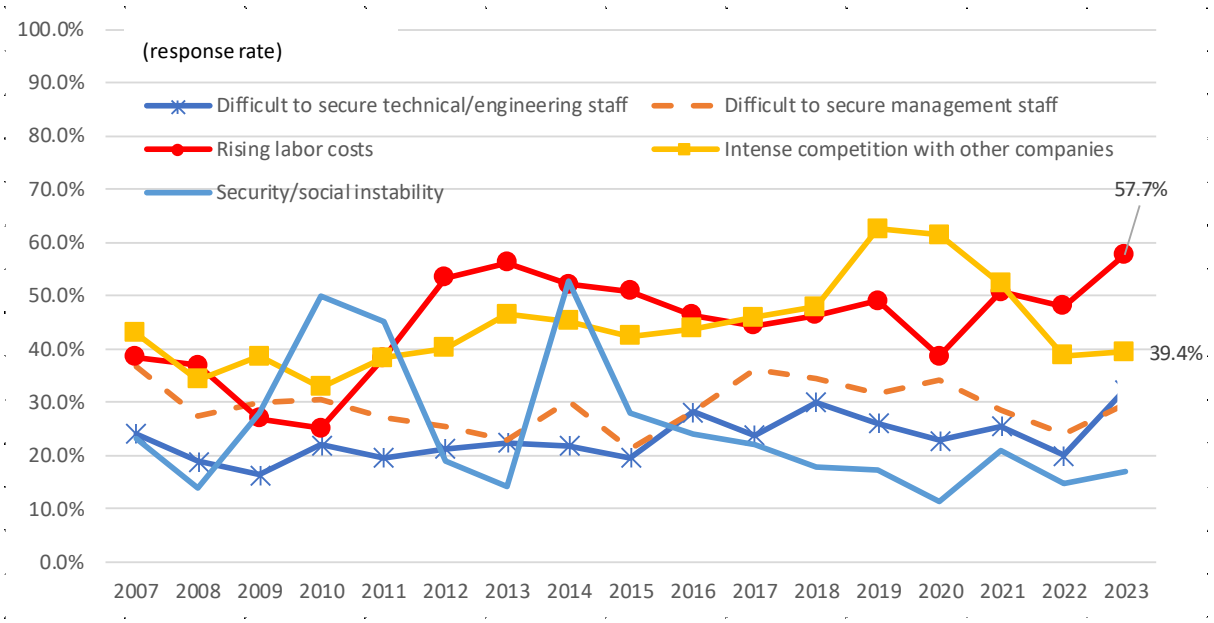

Figure 3: Issues in Thailand for promising or potential countries by Japanese companies in the JBIC survey

Source: Itagaki et al. (2023)

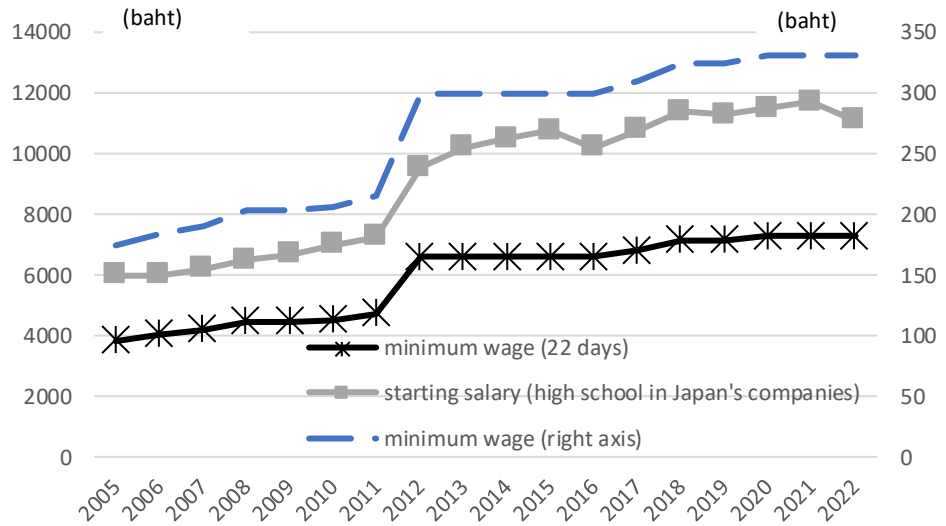

Figure 4: Minimum wage per day, per month by 22 times, and median of the starting salary graduated from high schools in Japanese companies

Source: Itagaki et al. (2023)

Another point raised by Japanese board members concerns the potential contraction of the Thai economy under restrictions on tourism during the COVID-19 era, although this issue is not explicitly addressed in the JBIC survey. Typically, the relationship between tourism and foreign direct investment (FDI) is not considered significant from a theoretical perspective. However, in the case of Thailand, tourism can be seen as a proxy for market size, as it accounts for nearly 20% of the country's GDP, underpinning the concept of tourism-led growth. In contrast, during the 2000s, a primary reason for Japanese companies investing in Thailand was to align with the needs of their business partners—a motivation that is rarely emphasized today.

While the decline in Japanese companies' business sentiment does not necessarily have immediate adverse effects on the Thai economy, from an efficiency standpoint, a weaker relationship could result in missed future business opportunities for Japanese firms. This outcome persists despite Thailand's substantial assets and potential as a host for foreign investment.

Although wages in Thailand have risen due to economic development and increased productivity, the recent changes in Japan's evaluation of Thailand in the JBIC survey seem disproportionately significant compared to the actual wage increases. This suggests that other factors may contribute to the lowered ranking. Sakurai (2024) demonstrated that Thailand's evaluation in the JBIC survey is closely tied to GDP trends in the short term, with tourism restrictions during the COVID-19 era playing a notable role.

This study examines the relationship between the JBIC survey results and key variables, including wages of JCC members and the number of foreign tourists visiting Thailand, using ordinary least squares (OLS) and vector autoregressive (VAR) models in a time series analysis. Reflecting on the JBIC survey and anecdotal evidence, three relationships are analyzed. First, the relationship between wages and business sentiment is explored. Second, the link between inbound tourism and business sentiment is assessed. Third, the relationship between the manufacturing share of GDP (a proxy for industrial maturity) and business sentiment is examined.

This study aims to provide valuable insights for both Japanese companies and Thai policymakers, enabling them to better understand the factors influencing business sentiment and to enhance Thailand's appeal as an investment destination. The remainder of this paper is organized as follows: Section 2 reviews the relevant literature. Section 3 presents the data and methodology. Section 4 discusses the estimation results. Finally, Section 5 concludes the study.

2. Literature Review

Previous related studies can be categorized into three main areas.

First, the literature on outward foreign direct investment (FDI) has developed extensively from both theoretical and empirical perspectives. Dunning (1981) established the OLI framework, which explains FDI location choices based on three advantages: ownership, location, and internalization. Outward FDI can be classified into two types: horizontal and vertical. Horizontal FDI, primarily observed among developed countries, aims to reduce transportation costs and political conflicts (Brainard, 1993, 1997; Markusen, 1984). In contrast, vertical FDI focuses on dividing the production process to reduce costs, particularly by exploiting wage differences between countries. This type is commonly observed between developed and developing countries in labor-intensive industries or processes (Helpman, 1984). The choice between domestic production, export, or outward FDI is determined by productivity levels (Helpman et al., 2004), though studies show that most companies choose to operate within their home country, as demonstrated by Bernard et al. (2009) in the US and Tomiura (2007) in Japan. Further research by Antràs and Helpman (2004) and Keller and Yeaple (2013) examined the decision-making process between FDI and outsourcing, while Combes et al. (2008) analyzed location selection factors.

Second, the relationship between business sentiment and investments can be understood through the lens of macroeconomic and policy uncertainty. The connection between business cycles and investments is reflected in common business behaviors, such as reducing investments and workforce during recessions (Bernanke, 1983; Bloom, 2009). Ludvigson et al. (2021) explored future uncertainty, demonstrating that macroeconomic uncertainty during recessions generates endogenous shocks, while financial market uncertainty tends to drive output fluctuations. Policy uncertainty, particularly prevalent in emerging markets, represents another crucial factor in investment decisions. This phenomenon is analyzed through imperfect information models (Mankiw & Reis, 2002; Sims, 2003). From a theoretical perspective, Reis (2006) emphasized how producers face costs in acquiring, absorbing, and processing information. This research showed that producers tend to prefer establishing quantity plans while rationally choosing to update information only periodically. In the specific context of Thailand, tourism-led growth is an additional important consideration. Bakker and Messerli (2017) provided a comprehensive review of literature on tourism-led growth, while Jeyacheya and Hampton (2020) demonstrated how tourism has driven inclusive growth across Southeast Asia.

Third, the specific reasons in Thailand and Japan have been analyzed extensively. Thailand, having experienced the 1997 financial crisis, remains vulnerable to external shocks due to its open economy. Apaitan et al. (2022) showed that uncertainty encompasses three key points: companies' behavioral changes under financial and economic policies and financial uncertainty; the timing and mechanism of transmitting uncertainty; and crossover effects from abroad and increased domestic uncertainty. Jirasakuldech and Emekter (2021) examined herding behavior during crises in Thailand and found it occurred frequently around the 1997 financial crisis. Investment serves as an important channel in the transmission mechanism of uncertainty shocks (Bernanke, 1983; Bloom, 2009; McDonald & Siegel, 1986). Japanese companies, influenced by the bad loan crisis of the late 1990s and early 2000s, prefer cash holdings over borrowing for investment. Fujitani et al. (2023) comprehensively summarized previous studies in this field. Several studies have examined various aspects of Japanese corporate behavior: Sakai (2020) demonstrated that Japanese firms faced financial constraints for two decades; Masuda (2015) showed how contractionary monetary policy tightens corporate liquidity constraints; Ushijima (2020) found that firms with focused business lines maintain tighter cash positions; Uchino (2013) documented reduced investments during the 2008 financial crisis; and Tsuruta (2019) observed slower working capital adjustment during financial crises.

Although extensive theoretical and empirical research exists for both countries, the relationships between business sentiment and wages, as well as between business sentiment and tourism's economic scale, remain understudied. This research aims to contribute to both Thai government policymaking and Japanese corporate management by elucidating these relationships.

3. Data and Methodologies

3.1 Data

This study employs five key variables: The first endogenous variable is “attractiveness” or Business Sentiment (BS) from the JBIC Survey Report on Overseas Business Operations by Japanese Manufacturing

Companies. The JBIC survey, conducted annually since 1989 with data available from 1992, targets Japanese manufacturing companies including three local companies located outside Japan. The number of companies surveyed has increased to approximately 1,000 in recent surveys. Companies are asked to identify five promising or potential countries for investment in the next three years. The second and third variables are wages from JCC member companies' wage surveys, conducted every April as "Chingin Roumu Zittai Chousa" (Actual Survey for Wage and Labor). This study uses monthly wages for first-year employees (WAGE1) and employees with approximately ten years of experience (or 35 years old, WAGE10), though survey contents have slightly evolved with membership growth and maturity. The wage data is available from 2000 when survey participation stabilized. The fourth variable is the manufacturing ratio of GDP (MANU), representing industry maturity in Thailand, sourced from the System of National Accounts published by Thailand's National Economic and Social Development Council (NESDC). The fifth variable is the number of foreign tourists visiting Thailand (TOUR), obtained from Thailand's Ministry of Tourism and Sports. The study period spans 2003 to 2022, accounting for data availability and the effects of Thailand's 1997 financial crisis. Although the time series sample size is relatively small, this period represents consistent Japanese corporate management approaches post-1997 crisis. Bulteel et al. (2018) and Hecht and Zitzmann (2021) suggest that periods with similar characteristics tend to converge more effectively, even with smaller sample sizes.

Table 1: Data description

	BS	WAGE1	WAGE10	MANU	TOUR
Observations	20	20	20	20	20
Mean	0.301	8.833	17.443	0.342	19.670
Minimum	0.385	11.700	20.000	0.371	39.916
Maximum	0.223	6.000	15.000	0.306	0.428

Source: Author's calculation

3.2 Methodologies

The estimation of the relationship between confidence and wages follows these processes:

First, unit root tests are performed to convert variables to I(0), preventing spurious regression. Since most economic statistics contain one unit root, first differences are often used. Under rapid growth, nominal statistics may exhibit I(2) characteristics. In such cases, either eliminating these statistics or converting them to second differences, shown as $\Delta(\Delta x_t) = \Delta x_t - \Delta x_{t-1}$, is necessary. This study employs second differences due to limited time and statistical data. Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests are used to determine whether these variables have unit roots. The ADF test covers up to an AR(p) process, while the PP test is more comprehensive, considering serial correlation and heteroscedasticity in the differenced time series error term. The stationarity test involves null hypotheses of unit roots on the values and their first differences, including both "intercept" and "trend and intercept" specifications.

Subsequently, Granger causality tests are employed to determine relationships between specific variables and to track their interactions. For examining Granger causality, a VAR model with p periods lag, shown as equation (1), is established to determine the effects of exogenous shocks.

$$y_t = \alpha + V_1 y_{t-1} + \cdots + V_p y_{t-p} + \varepsilon_t \quad (1)$$

where y_t is a (5×1) column vector of endogenous variables:

$y_t = (BS_t\ WAGE1_t\ WAGE10_t\ MANU_t\ TOUR_t)$, which will include the first difference or second difference in period t, depending on the result of the unit root test. Other terms in Equation (1) are shown as follows: α presents the constant term, V_1, …, and V_p denotes (5×5) coefficient matrix, each of y_{t-1}, …, y_{t-p} is a (5×1)vector of the lag endogenous variables, and ε_t provides a (5×1) vector of the error term.

4. Estimation Results and Discussion

This section presents the estimation results in three parts. First, the results of the unit root tests are presented. Second, based on the unit-root test results, the estimation results of the VAR model, Granger causality test, and impulse response tests are described to illuminate short-term relationships. Although this study examined the cointegrated VAR model for estimating both short- and long-term relationships simultaneously, no cointegrating relationships were found. Therefore, the analysis focuses on examining the VAR model, the Granger causality tests, and the impulse response tests.

4.1 Unit root tests

The unit-root tests were conducted for all five variables. Table 2 summarizes the test results. Only WAGE10 was estimated as white noise, I(0); BS and MANU were estimated as I(1), while WAGE1 and TOUR were estimated as I(2). Although most economic statistics exhibit I(1) characteristics, some statistics are estimated as I(2) under nominal series due to rapid economic growth. In this study, I(1) variables are transformed using first differences, and I(2) variables using second differences, while the I(0) variable is maintained at level series in estimating the VAR model to preserve statistical information.

Table 2: Estimation results of unit root tests

	BS: I(1)			
	ADF		PP	
	intercept	intercept & trend	intercept	intercept & trend
level	-1.675	-1.477	-1.865	-1.672
first difference	-3.814**	-3.788**	-3.814**	-3.789**
	WAGE1: I(2)			
	ADF		PP	
	intercept	intercept & trend	intercept	intercept & trend
level	-0.790	-1.393	-0.810	-1.586
first difference	-3.271**	-3.172	-3.268**	-3.156
		-5.755***		-13.732***
	WAGE10: I(0)			
	ADF		PP	
	intercept	intercept & trend	intercept	intercept & trend
level	-4.429***	-4.616***	-4.412***	-5.326***
first difference	-	-	-	-
	MANU: I(1)			
	ADF		PP	
	intercept	intercept & trend	intercept	intercept & trend
level	-0.804	-2.206	-0.793	-2.200
first difference	-4.281***	-4.167**	-4.281***	-4.167**
	TOUR: I(2)			
		ADF		PP
	intercept	intercept & trend	intercept	intercept & trend
level	-2.267	-1.480	-1.913	-1.661
first difference	-3.441**	-3.682*	-3.301**	-3.314*
		-2.830		-7.258***

Note: ***, **, and * indicate significance at the 1 %, 5 %, and 10% levels, respectively.

Source: Author's calculation

4.2 VAR model, Granger causality tests, and impulse response tests

Table 3 shows the estimation result of the optimal lag length. Although the result of the AIC and SC show the minimum in the lag 0, one period of lag is necessary to conduct a VAR model. Hence one period of lag is selected in this study.

Table provides the pairwise Granger causality tests, and Table 5 reports the results of the VAR model in Equation (1). D(--) denotes the first difference, D(--, 2) depicts the second difference, and (-1) means the previous period.

The estimated results of pairwise Granger causality in Table 4 summarizes as follows. First, wage-to-BS is not effectively estimated since neither the column "D(WAGE1,2) does not Granger cause D(BS)" nor the

column “WAGE10 does not Granger cause D(BS)” is estimated effectively. Second, conversely, the inbound number of tourists affects BS since “D(TOUR,2) does not Granger cause D(BS)” to be effectively estimated at 10%. Third, the BS of Japanese managers will not affect the wage since neither the column “D(BS) does not Granger cause D(WAGE1,2)” nor the column “D(BS) does not Granger cause D(WAGE10)” is ineffectively estimated. Fourth, MANU is ineffectively estimated, either.

The VAR model in Table 5 shows the following four points, as the same trend of the Grander causality tests. First, WAGE1 and WAGE10 in the previous period were ineffectively estimated using BS, implying that wages do not affect managers’ business sentiment. Second, conversely, the number of tourist arrivals in the previous period was effectively estimated by BS in the present period at the 10% level, as stated by some business persons. Third, BS does not affect to wages including WAGE1 nor WAGE10. Fourth, MANU is ineffectively estimated.

Table 3: Estimation results of the optimal lag length

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-18.826	NA	0.000	2.978	3.220	2.991
1	5.667	30.616	0.000	3.042	4.490	3.116
2	102.677	60.631	0.000	-5.960	-3.304	-5.824

Source: Author’s calculation

Table 4: Estimation results of the Granger causality tests

Null Hypothesis	Obs	F-Statistic	Null Hypothesis	Obs	F-Statistic
D(WAGE1,2) does not Granger Cause D(BS)	17	1.880	D(MANU) does not Granger Cause D(WAGE1,2)	17	2.481
D(BS) does not Granger Cause D(WAGE1,2)	17	1.644	D(WAGE1,2) does not Granger Cause D(MANU)	17	0.002
WAGE10 does not Granger Cause D(BS)	18	0.228	D(TOUR,2) does not Granger Cause D(WAGE1,2)	17	0.751
D(BS) does not Granger Cause WAGE10	18	0.732	D(WAGE1,2) does not Granger Cause D(TOUR,2)	17	1.032
D(MANU) does not Granger Cause D(BS)	18	0.125	D(MANU) does not Granger Cause WAGE10	18	0.175
D(BS) does not Granger Cause D(MANU)	18	1.949	WAGE10 does not Granger Cause D(MANU)	18	0.155
D(TOUR,2) does not Granger Cause D(BS)	17	4.125*	D(TOUR,2) does not Granger Cause WAGE10	17	4.600*
D(BS) does not Granger Cause D(TOUR,2)	17	0.477	WAGE10 does not Granger Cause D(TOUR,2)	17	1.857
WAGE10 does not Granger Cause D(WAGE1,2)	17	3.653*	D(TOUR,2) does not Granger Cause D(MANU)	17	2.103
D(WAGE1,2) does not Granger Cause WAGE10	17	0.220	D(MANU) does not Granger Cause D(TOUR,2)	17	4.374*

Source: Author’s calculation

Notes: D(--) indicates the first difference, D(--,2) depicts the second difference, and (-1) indicates the previous period.

***, **, and * shows the significance at the 1%, 5%, and 10%, respectively.

Table 5: Estimation results of the VAR model

	D(BS)	D(WAGE1,2)	WAGE10	D(MANU)	D(TOUR,2)
D(BS(-1))	0.025	1.219	10.574	-0.095	21.206
	(0.252)	(4.775)	(6.566)	(0.060)	(71.963)
D(WAGE1(-1),2)	0.021	-0.402	-0.209	0.000	3.525
	(0.012)	(0.231)	(0.317)	(0.003)	(3.479)
WAGE10(-1)	-0.010	-0.254	0.676	0.000	3.959

	D(BS)	D(WAGE1,2)	WAGE10	D(MANU)	D(TOUR,2)
	(0.009)	(0.162)	(0.223)***	(0.002)	(2.447)
D(MANU(-1))	-0.721	-29.475	23.591	-0.039	728.320
	(1.174)	(22.214)	(30.545)	(0.280)	(334.797)**
	0.002	0.002	-0.050	0.000	-0.542
D(TOUR(-1),2)	(0.001)**	(0.017)	(0.024)*	(0.000)	(0.262)*
	0.177	4.350	5.842	0.003	-67.178
C	(0.149)	(2.815)	(3.870)	(0.035)	(42.418)
Adj. R-squared	0.201	0.205	0.318	-0.009	0.222

Source: Author's calculation

Notes: D(--) indicates the first difference, D(--,2) depicts the second difference, and (-1) means the previous period. Standard errors are shown in parentheses.

***, **, and * shows the significance at the 1%, 5%, and 10%, respectively.

Since D(TOUR) and D(BS) , are related, we conducted an impulse response test as shown in Figure 5, from D(TOUR) to D(BS) of a single standard deviation shock. The middle line shows the accumulated response curve, and the bar lines represent the upper and lower bounds. Estimated results show that BS is affected by the number of tourists within two years in the short term.

Although other VAR models using limited variables, such as BS, WAGE1, and WAGE10, are also estimated, this result remains unchanged. Therefore, the result from BS on wages is considered stable.

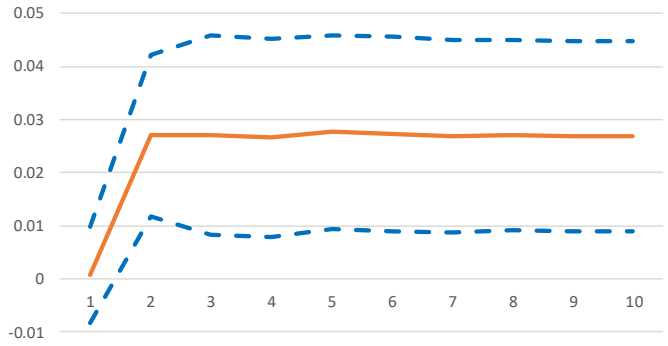

Figure 5: Impulse response test from TOUR to BS

Source: Author's calculation

The following three points are inferred from the estimation results in this subsection. First, wage hikes do not necessarily affect BS, contrary to the hypotheses or JBIC survey results. Second, inbound tourists affect BS as a substitute for the Thai economy, not to be mentioned so often regardless of the significance. Third, manufacturing GDP ratio, as a substitute of business partner, does not have impacts to BS. Although these results are important from the practical point of view for both Japanese companies and Thai government, they are suitable as one possibility from the previous studies.

5. Conclusion

This study examines the relationship between Business Sentiment (BS) of Japanese companies and three factors: wages of Japanese companies, industrial ratio of GDP, and international tourist arrivals from 2003 to 2022. The analysis employs time series methodologies including VAR models, Granger causality tests, and impulse response tests. The results reveal four key findings: First, BS is significantly influenced by international tourism, which constitutes a substantial portion of Thailand's market size. Second, BS shows no significant response to Japanese companies' wage levels in Thailand. Third, wage increases do not demonstrate a significant impact on BS of Japanese companies. This suggests that recent wage increases in Thailand may not be the primary reason for reduced Japanese investment post-COVID-19, despite being frequently cited by Japanese companies. Fourth, the manufacturing GDP ratio, serving as a proxy for business partnerships, shows no significant relationship with BS, possibly because this factor's influence has diminished over time.

The findings indicate that recent BS of Japanese companies toward Thailand is more influenced by domestic market size than by labor costs. While these results suggest that Thai policymakers should focus on expanding the domestic market rather than concerning themselves with wage increases, further research in this area is warranted.

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