Institutional Factors and FDI Inflows in ASEAN-7: A Bayesian Approach

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Abstract

Unlike previous research, which typically relied on frequency statistics, the research applies Bayesian regression to examine the impact of institutional factors on Foreign Direct Investment (FDI) inflows in the ASEAN-7 countries from 2002 to 2022. Counterintuitively, yet consistent with the unique context of the ASEAN-7, where institutional quality is relatively weak, the findings indicate that three institutional factors—control of corruption, rule of law, and voice and accountability—exerted a negative influence on FDI inflows. This suggests that strong anti-corruption measures, a robust rule of law, and high levels of voice and accountability do not necessarily attract more FDI in these countries. Only political stability and absence of violence/terrorism and Regulatory quality exhibited a positive correlation with FDI inflows, while Government effectiveness showed no significant impact. Robustness checks using Feasible generalized least squares estimation were conducted to ensure the reliability of the results and provide a solid foundation for policy implications. These findings underscore the intriguing possibility that countries with weaker institutional frameworks can compete effectively with developed economies in attracting FDI, a key driver of economic growth. Given the relatively low level of institutional quality in the ASEAN-7, other non-institutional factors may play a more prominent role in attracting FDI. Moreover, enhancing institutional quality to attract more FDI, as commonly perceived, requires a nuanced understanding of the specific conditions of each host country and necessitates further research on home country characteristics.

Keywords: ASEAN-7, Bayesian, FDI inflow, institutional factors

Introduction

FDI has long been recognized as a significant driver of economic growth (Hansen & Rand, 2006; Iamsiraroj, 2016), technological innovation (Ali et al., 2023), export activity (Kastratović, 2020; Kutan & Vukšić, 2007), and the creation of employment, higher wages, and enhanced productivity (Demena & van Bergeijk, 2017; Hale & Xu, 2016). For the Association

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of Southeast Asian Nations (ASEAN), a dynamic and rapidly growing region, FDI inflows have played a pivotal role in its economic transformation over the past decades (Intal Jr, 2017; Lee & Tan, 2006). Consequently, attracting sustainable and high-quality FDI is a primary priority for ASEAN member states seeking to enhance their competitiveness and achieve long-term prosperity.

While numerous factors influencing FDI decisions have been extensively studied (Tocar, 2018; Tokunaga & Iwasaki, 2017), the role of institutional factors has garnered increasing attention in recent years (Buchanan et al., 2012; Khan et al., 2023). Institutions, broadly defined as the formal and informal rules, norms, and organizations governing economic and political interactions, are considered to significantly shape the investment environment (Kaufmann & Kraay, 2023). However, the specific impact of different institutional dimensions on FDI attraction within the diverse context of ASEAN remains an area requiring further investigation. The heterogeneity in legal frameworks, governance quality, political stability, and corruption levels across ASEAN nations suggests that the influence of institutional factors on FDI may vary considerably.

ASEAN has been an increasingly attractive destination for FDI as some firms have shifted production out of China due to the US-China trade war and the COVID-19 pandemic (Cheung et al., 2023). However, the World Bank's institutional quality rankings for ASEAN countries reveal that most members, except for Singapore, possess relatively weak institutions (Kaufmann & Kraay, 2023). This raises the question of whether institutional factors are indeed the primary determinants of FDI inflows in these countries.

Empirically, previous research has examined the determinants of FDI inflows in general and the role of institutional factors in particular, using various samples including individual countries, regions, and the global economy. However, as Bailey (2018) concluded after reviewing 97 prior empirical studies, the results are inconsistent, and further research in specific contexts is warranted.

Another motivation for the research is the lack of a comprehensive theoretical framework in prior empirical research regarding the impact of institutional factors on FDI inflows. There seems to be an implicit understanding that good institutions attract more FDI inflows than poor ones, leading previous research to primarily present theories about the positive impact of institutions on FDI attraction rather than the converse (Dang & Nguyen, 2021; Gangi & Abdulrazak, 2012; Mengistu & Adhikary, 2011). Furthermore, Bailey (2018) confirmed the one-sided bias of previous research by affirming that certain institutional factors, such as political stability, democracy, and the rule of law promote FDI, inflows without demonstrating the opposite effect.

Furthermore, no research has applied Bayesian regression to assess the impact of institutional factors on FDI inflows. According to Nguyen et al. (2024), Bayesian regression offers several advantages over frequentist regression methods. These include its ability to continuously update evidence as new data becomes available, as Bayesian methods rely on observed data rather than hypothetical scenarios. Bayesian inference is considered more coherent and logical than frequentist statistics; it provides clear and direct interpretations of results through posterior probabilities, in contrast to the indirect measures of frequentist statistics. Additionally, Bayesian regression yields more accurate results with small sample sizes.

The research aims to address this gap in the literature by examining the impact of institutional factors on FDI inflows into ASEAN member states. Specifically, this study seeks to answer the following research question: How do different dimensions of institutional quality, such as political stability, rule of law, regulatory quality, government effectiveness, control of corruption, and voice and accountability influence FDI inflows in ASEAN countries? By empirically analyzing the relationship between these institutional factors and FDI inflows using Bayesian regression, this research intends to generate valuable insights into the institutional determinants of FDI inflows within the ASEAN region.

Institutional Factors in the ASEAN-7 from 2002 to 2022

The research applies the institutional quality indicators developed by Kaufmann and Kraay (2023). The measurement of institutional factors is based on percentile rank, which shows a country's ranking relative to all other countries in the dataset, ranging from 0 (lowest) to 100 (highest).

In their report, Kaufmann and Kraay (2023) define the six institutional dimensions as follows: (i) Political stability and Absence of violence/terrorism measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism; (ii) Government effectiveness captures perceptions of the quality of public services, the quality of the civil service and its degree of independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies; (iii) Control of corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests; (iv) Regulatory quality captures perceptions of the government's ability to formulate and implement sound policies and regulations that permit and promote private sector development; (v) Rule of law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence; and (vi) Voice and accountability captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.

Political Stability and Absence of Violence/Terrorism

The Philippines exhibited the lowest level of Political stability within the ASEAN-7 (20.28 in 2022), a significant divergence from Laos, which demonstrated the highest stability (74.06 in 2022) (Figure 1). Laos, as a traditional single-party state reminiscent of the Soviet era, has maintained high political stability (Lintner, 2008). In the case of the Philippines, Kraft

(2003) posits that state weakness and its involvement in counter-terrorism operations with the United States pose a threat to short- to medium-term stability. Furthermore, the persistent presence of the Abu Sayyaf Group and the government's limited response capabilities contribute to the Philippines being the least stable nation in the ASEAN-7 (Manalo, 2004). Unsurprisingly, Thailand ranked as the second least stable country in the ASEAN-7 (31.60 in 2022, though frequently lower than Indonesia). The 2006 military coup and subsequent instances of the military overthrowing democratically elected governments have generated a profound and prolonged political crisis and instability in Thailand for decades (Ferrara, 2015). Indonesia was the third most politically unstable nation in the ASEAN-7. The country experienced a greater impact from the 1997-1998 East Asian financial crisis compared to its neighbors, accompanied by regime collapse. Subsequent administrations were short-lived, with Indonesia having five presidents between 1998 and 2004 (Hill & Shiraishi, 2007). Following the fall of the Suharto authoritarian regime in 1998, Indonesia transitioned into a fragile, democratic, corrupt, and volatile state (Aswicahyono et al., 2009). Conversely, the Indochina nations (Vietnam, Laos, and Cambodia) and Malaysia were assessed as having better Political stability and fewer instances of terrorist events. However, the graphical representation indicates substantial fluctuations in the political stability of the ASEAN-7 countries throughout the research period.

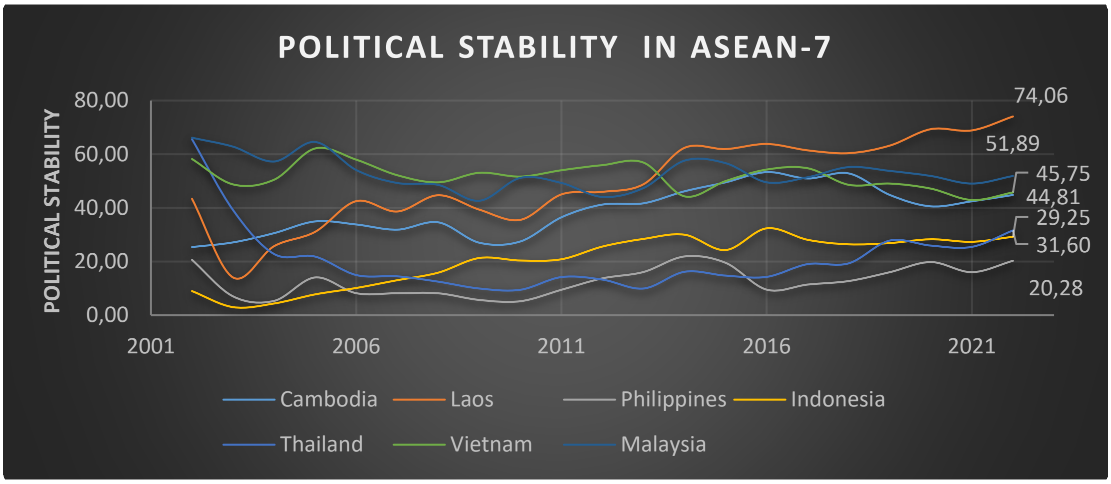

Figure 1. Political Stability and Absence of Violence/Terrorism in ASEAN-7
Source: Kaufmann and Kraay (2023)

Government Effectiveness

In 2022, Laos and Cambodia registered the lowest scores for government effectiveness indicator, at 30.19 and 36.79 respectively, while Malaysia exhibited the highest score at 79.25 (Figure 2). In Laos, the extensive scale of corruption has constrained Government effectiveness and fostered the growth of the informal economy. Furthermore, the Laotian economy is vulnerable to both exogenous and endogenous shocks (Carment et al., 2017). The remaining countries in the sample, ranked in ascending order of government effectiveness in 2022, are the Philippines (56.13), Thailand (58.02), Vietnam (59.43), and Indonesia (66.04). Although the government effectiveness index scores for the ASEAN-7 nations fluctuated during the research period, the variations were not substantial. Nevertheless, significant disparities in government effectiveness scores existed across these countries. For instance, in 2022, the highest recorded value was 79.25, and the lowest was 30.19.

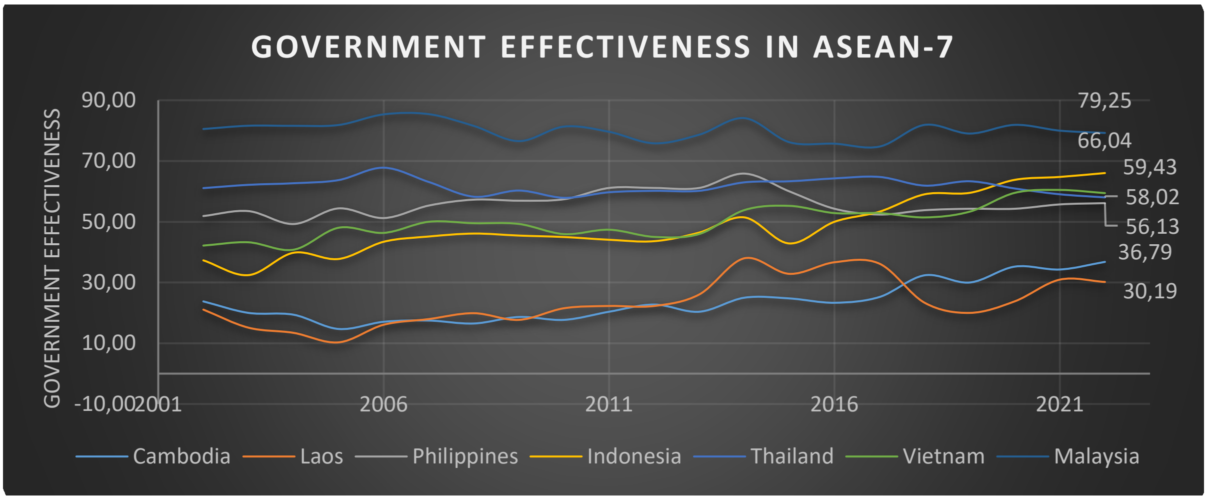

Figure 2. Government Effectiveness in ASEAN-7
Source: Kaufmann and Kraay (2023)

Control of Corruption

Control of corruption exhibits significant variation across the ASEAN-7 nations. In 2022, Malaysia demonstrated the strongest capacity for corruption control in the region, with a score of 62.26 (Figure 3). Conversely, Cambodia recorded the lowest control of corruption score among the seven surveyed countries, with a score of 9.91. Ear (2007) indicates that while Cambodia has achieved Political stability, the government has failed to control corruption effectively. Corruption in Cambodia has become pervasive due to limited anti-corruption efforts stemming from a lack of political will, rendering the implementation of anti-corruption measures a substantial challenge (Ear, 2016).

Laos also displays a very weak level of corruption control, with a score of 19.81 in 2022, ranking just above Cambodia within the ASEAN-7 (Figure 3). Williams (2020) assesses the prevalence of widespread corruption in Laos. Other nations in the region also receive low evaluations for their anti-corruption capabilities. The outlook for corruption control in Vietnam remains bleak, with a score of 45.75 in 2022, as corruption is deeply entrenched—particularly through elite rent-seeking (Gregory, 2016). Indonesia is similarly recognized as a country with high levels of corruption (Henderson & Kuncoro, 2004). Putra and Linda (2022) argue that corruption threatens all facets of Indonesian social, national, and state life, generating severe negative consequences for its economy, society, and culture, with a score of 37.74. The Philippines and Thailand also receive unfavorable assessments regarding corruption control, with respective scores of 33.49 and 35.85.

Evidently, the ASEAN-7 constitutes a region with high levels of corruption, yet it has become a leading global destination for investment. This raises the question of whether control of corruption genuinely impacts FDI inflows and weather investors can be compelled to coexist with corruption to capitalize on other advantages offer by the market.

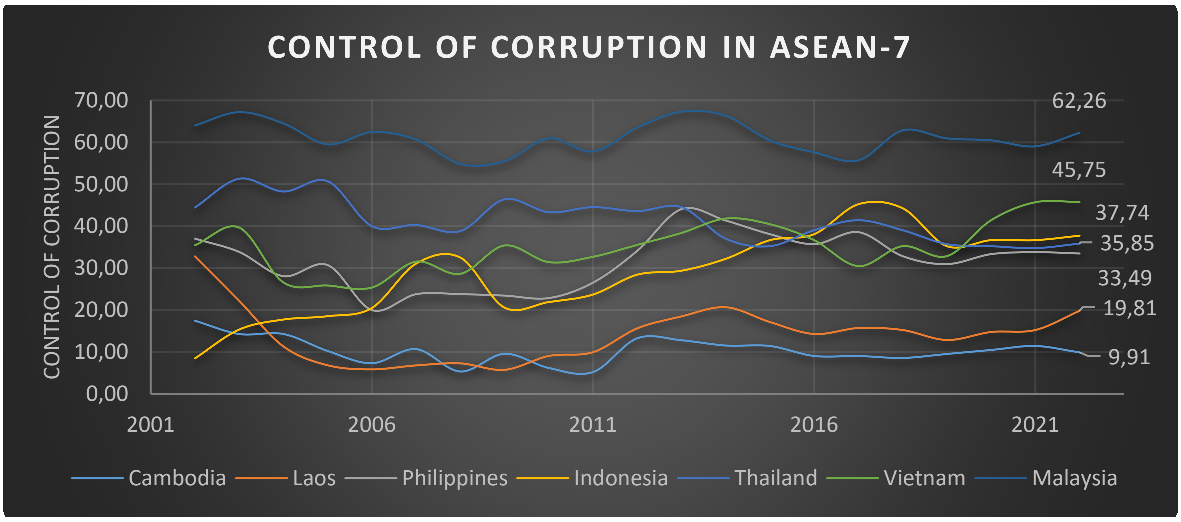

Figure 3. Control of Corruption in ASEAN-7
Source: Kaufmann and Kraay (2023)

Regulatory Quality

Regulatory quality exhibits substantial heterogeneity across the ASEAN-7 nations (Figure 4). Malaysia recorded the highest Regulatory quality index at 72.64 in 2022, while Laos registered the lowest at 16.04, representing a considerable divergence between the two extremes. Cambodia and Vietnam showed regulatory quality scores only slightly higher than Laos, at 25.00 and 36.32, respectively. Interestingly, in contrast to the general trend of improvement observed in most countries, Laos and Cambodia displayed a declining trajectory in their regulatory quality. Indonesia demonstrated the most significant advancement in regulatory quality, rising from the second-lowest rank (outperforming only Laos from 2002 to 2005) to the second-highest position (following only Malaysia) as of 2020, with a value of 59.43 in 2022. The regulatory quality indices of the Philippines and Thailand showed relative proximity, with Thailand at 58.49 and the Philippines at 53.77 in 2022.

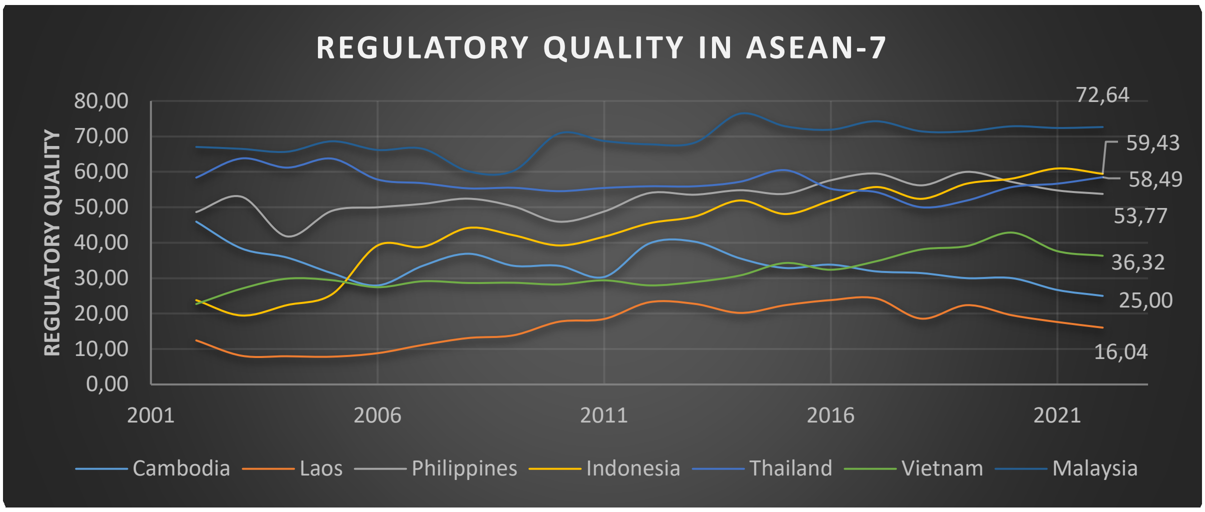

Figure 4. Regulatory quality in ASEAN-7
Source: Kaufmann and Kraay (2023)

Rule of Law

In 2022, Cambodia and Laos consistently ranked as the two nations with the lowest rule of law within the ASEAN-7, recording values of 21.23 and 23.58, respectively (Figure 5). Conversely, Malaysia and Thailand exhibited the highest levels of the rule of law, with indices of 68.40 and 54.72. Overall, the rule of law among the ASEAN-7 countries demonstrated limited fluctuation. Indonesia showed the most notable improvement in its rule of law, increasing from 23.38 in 2002 to 45.28 in 2022, positioning it fourth within the ASEAN-7. In contrast, Thailand's rule of law index declined from 62.19 in 2002 to 54.72 in 2022. Thailand, along with the Philippines, was one of the two countries experiencing a decrease in their rule of law during this period. The Philippines' rule of law index decreased from 39.80 in 2002 to 33.49 in 2022.

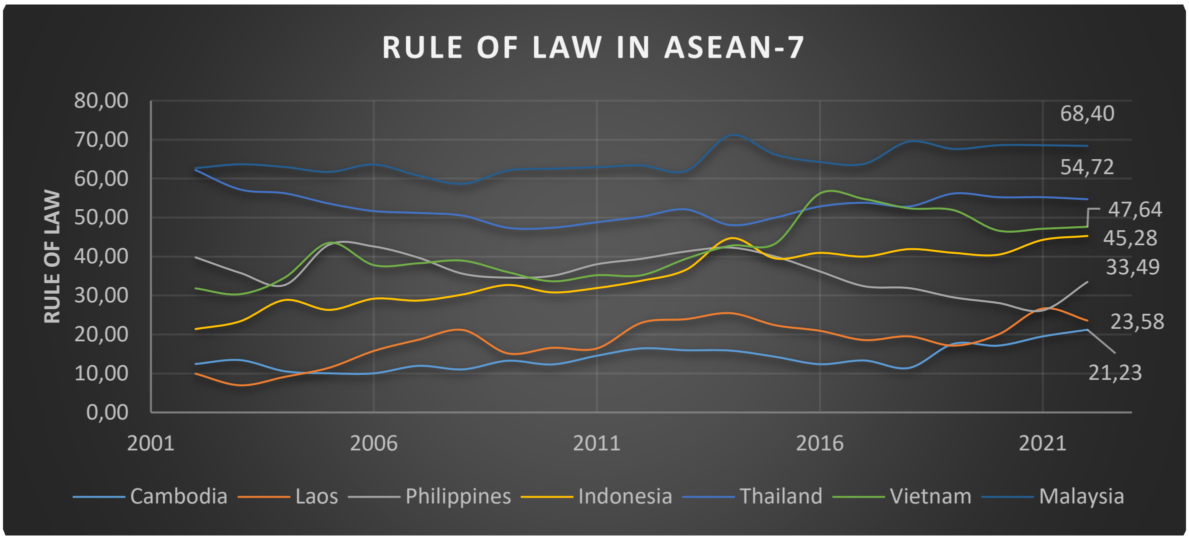

Figure 5. Rule of law in ASEAN-7
Source: Kaufmann and Kraay (2023)

Voice and Accountability

Voice and accountability represent the lowest performing indicator among the six institutional dimensions of Kaufmann and Kraay (2023) for the ASEAN-7. Laos and Cambodia consistently exhibited the lowest levels of voice and accountability, with indices of only 4.83 and 13.04, respectively, in 2022 (Figure 6). In contrast, Indonesia and Malaysia demonstrated the highest levels, registering 52.66 and 47.34, respectively. While the voice and accountability indices of Indonesia and Malaysia are not exceptionally high compared to developed nations, a substantial gap exists relative to countries with low scores, such as Laos, Cambodia, and even Vietnam (only 13.53 in 2022). The three Indochinese Peninsula nations recorded the lowest voice and accountability scores, significantly lagging behind the other ASEAN-7 countries. Thailand's voice and accountability index stood at 31.40 in 2020, lower than the Philippines' 43.96. Notably, while Indonesia showed an improvement in voice and accountability throughout the research period, several countries experienced a decline, particularly Cambodia and the Philippines. Thailand, in particular, experienced a sharp decline in this index, from 57.71 in 2002 to 19.90 in 2018.

Figure 6. Voice and Accountability in ASEAN-7
Source: Kaufmann and Kraay (2023)

The preceding analyses of the six components of institutional quality highlight the heterogeneity in institutional factors among the ASEAN-7 countries. Consequently, careful consideration should be given to selecting an appropriate methodology for estimating the impact of these institutional factors on FDI attraction. Given the observed disparities in institutional elements, a Bayesian approach may represent a suitable methodological choice for this study (Martin et al., 2024; Wagenmakers et al., 2017; Xin, 2024). Specifically, Bayesian models are effective in recovering actual parameters and selecting appropriate models in the presence of data heterogeneity (Ansari et al., 2002). Furthermore, Bayesian models exhibit robustness in handling data heterogeneity. Hierarchical Bayesian modeling techniques offer a means to quantify uncertainty not only within sources but also across sources, performing well even with small data samples, unlike classical likelihood methods (Iešmantas & Alzbutas, 2016).

Theoretical Background

Institutions are among the factors that may influence FDI inflows. There are several reasons to explain the impact of institutions on FDI attraction. Foreign investors are drawn to countries with strong institutions that foster sound governance and enhance productivity prospects. Moreover, poor institutions, such as high corruption, can increase the costs for FDI firms. Additionally, poor institutions, as manifested in ineffective governments, policy reversals, weak enforcement of property rights, frequent changes in the legal system, or high corruption, lead to high sunk costs, thereby negatively affecting FDI attraction (Bénassy-Quéré et al., 2007).

However, institutions are multi-faceted constructs. Kaufmann et al. (2003) developed six dimensions of governance, which have been widely used as a measure of institutional factors in previous research (Khan et al., 2023; Mengistu & Adhikary, 2011; Sabir et al., 2019; Saha et al., 2022). Therefore, to understand how institutional factors shape FDI inflows, it is essential to examine the role of each indicator.

Political Stability and FDI Inflows

Political risk in a country is a significant consideration for foreign investors when making investment decisions (Moosa, 2002). Investors are hesitant to risk their hard-earned capital in a politically unstable environment. The theoretical literature on the impact of Political stability on FDI is divided into two opposing schools of thought.

The first strand of literature posits that political stability is a prerequisite for fostering FDI inflows into host countries. Goswami and Haider (2014) argue that political instability, encompassing riots, strikes, bureaucratic red tape, civil wars, and inadequate socio-economic conditions, creates barriers to foreign investment. Additionally, Vadlamannati (2012) contends that political risk refers to the hazards Multinational Corporations (MNCs) face due to unexpected changes in host countries' regulatory frameworks, thereby significantly deterring FDI inflows. Alternatively, Alesina et al. (1996) define political instability as the propensity for government failure, stemming from conflict or competition among political parties. Political instability can shorten the time horizon of policymakers, leading to suboptimal short-term economic policies. Moreover, it can result in more frequent policy changes, creating uncertainty. Consequently, it has negative impacts on macroeconomic performance (Aisen & Veiga, 2013). Therefore, political instability deteriorates the investment climate, thereby reducing FDI inflows.

The second strand of literature argues that countries with low political stability can still attract higher levels of FDI. Bilateral investment treaties are one of the potential solutions. These treaties obligate host countries to protect investors from home countries, providing them equal or preferential treatment compared to domestic investors (Rose-Ackerman & Tobin, 2005). Shan et al. (2018) also support this view, arguing that China's higher FDI in politically unstable African countries is attributed to the bilateral investment treaties between China and these countries.

Past research has shown a positive relationship between political stability and FDI attraction, as evidenced by Mengistu and Adhikary (2011) for 15 Asian economies, Sadeghi et al. (2020) for 79 countries, and Elish (2022) for BRICS countries. However, some have found a negative impact of political stability on FDI attraction, as observed by Nizam and Hassan (2018) for 8 countries in the South Asian Association for Regional Cooperation, Shan et al. (2018) for 22 African countries, and Khan et al. (2023) for global countries.

This research hypothesizes that political stability in ASEAN-7 plays a significant role in promoting FDI inflows, given the less prevalent trend of signing China-Africa style bilateral investment treaties in the region.

H_1: Political stability has a positive impact on FDI inflows.

Government Effectiveness and FDI Inflows

Theoretically, an effective government ensures the establishment and implementation of policies that benefit investors (Awadhi et al., 2022). Moreover, countries with effective governments can build a reliable judicial system. Furthermore, a country with good government effectiveness can establish a transparent legal system and simplify administrative procedures to serve businesses and citizens efficiently, thereby creating a favorable business environment, mitigating risks for foreign investors, and strengthening confidence in the economy's stability. A country with good government effectiveness can participate in many free trade agreements, facilitating export and import activities. In addition, building the image of a dynamic country with an effective, transparent, and investor-friendly government is also a crucial factor in attracting FDI (Awadhi et al., 2022).

However, the government intervention theory suggests that an effective government may impose stricter regulations and higher requirements on investors. This can negatively impact investment growth and business turnover, especially for foreign investors (Lin & Wong, 2013). Additionally, the regulatory burden theory complements this explanation by arguing that the cost burdens from legislative, regulatory, and taxation measures increase costs and pressure on foreign investors. Therefore, it may hinder a country's ability to attract investment (Bickerdyke & Lattimore, 1997). Moreover, the government overreach theory suggests that excessive government intervention in business operations can limit investor activity competition and autonomy (Lai, 2021).

Empirically, it is not difficult to find evidence of the positive impact of Government effectiveness on FDI attraction, as shown by Nizam and Hassan (2018), Mengistu and Adhikary (2011), Gangi and Abdulrazak (2012) for African countries, and Younsi and Bechtini (2019) for 25 emerging economies. However, there is also research showing a negative impact, such as Méon and Sekkat (2004) for countries in the Middle East and North Africa, and Khan et al. (2023). However, research indicates that government effectiveness does not necessarily impact FDI attraction, as evidenced by Jurčić et al. (2020) for Croatia, Saha et al. (2022) for lower-middle income countries, and Faruq (2023) for emerging Asian economies.

ASEAN-7 is not considered a region with high government effectiveness (Kaufmann & Kraay, 2023), so the theories of government intervention, regulatory burden, and government overreach may not exist. Therefore, the research hypothesis is:

H_2: Government effectiveness has a positive impact on FDI inflows.

Control of Corruption and FDI Inflows

Theoretically, Boatright (2000) argues that an economy with corruption will limit investors' market access. Investors who are unaware of or unwilling to engage in corruption will be unable to access the markets of host countries. Payments to host country officials will increase business costs and reduce the competitiveness of goods on the market. In addition, corruption also affects other important factors that determine a country's ability to attract investment, such as economic growth (Mauro, 1995) and the quality of infrastructure and public investment productivity (Tanzi & Davoodi, 1998). Therefore, countries with high levels of corruption will find it more difficult to attract FDI. Empirically, the negative impact of corruption control on FDI attraction is evident in studies by Mengistu and Adhikary (2011), Sadeghi et al. (2020), and Khan et al. (2023).

In contrast, another perspective suggests that in countries characterized by rigid regulations and an inefficient, bureaucratic state apparatus, corruption can expedite the decision-making processes within the bureaucracy (Bardhan, 2017). Consequently, corruption may foster FDI inflows. Similarly, Leff (1964) argue that corruption could be beneficial for attracting FDI in economies where government agencies operate ineffectively, suggesting that "greasing the wheels" of government through corruption becomes a necessity.

Some research works even propose the "Corruption Tolerable Level of Investment" theory. This theory suggests that a certain level of corruption in host countries can be acceptable to foreign investors (Abotsi, 2016). Foreign firms may enter markets in host countries if they possess certain ownership and location advantages (Abotsi, 2016). In countries with high levels of corruption, foreign investors might utilize bribery to circumvent laws and regulations, thereby facilitating business operations and accelerating project implementation. While cumbersome procedures could deter foreign investors from funding projects in corrupt nations, the possibility of "buying their way out" of regulations can be appealing (Shaari et al., 2022). Several empirical studies indicate that high corruption levels act as a "helping hand" in promoting FDI attraction, as demonstrated by Kim (2010) for 28 countries and Syukri et al. (2022) for Indonesia. Furthermore, research by Moustafa (2021) on Egypt and Quazi et al. (2014) on 53 African countries also reveals a positive relationship between weak corruption control and increased FDI inflows.

ASEAN-7 is a region with a low corruption control index (Kaufmann & Kraay, 2023), yet it continues to attract FDI inflows. Corruption may be playing the role of a "helping hand" as suggested by Syukri et al. (2022) for Indonesia, a country in the ASEAN-7. Therefore, the hypothesis is:

H_3: Control of corruption has a negative impact on FDI inflows.

Regulatory Quality and FDI Inflows

Regulatory quality is related to the government's ability to implement sound policies to promote private sector development and rules for economic engagement. Goswami and Haider (2014) argue that regulatory quality measures risks such as contract viability, profits repatriation, and payment delays. It determines the ability of foreign investors to receive their lawful benefits. Therefore, high regulatory quality will encourage host countries to be chosen by MNCs.

High regulatory quality generates advantages for foreign investors across the dimensions of the Ownership, Location, and Internalization (OLI) framework (Dunning, 2013). Regarding location advantages, transparent and predictable regulations significantly reduce policy risk and uncertainty, making the host country more attractive compared to alternative locations (Hebous et al., 2020). Clear and predictable regulations are crucial for lowering transaction costs and enhancing profitability for foreign investors (Corcoran & Gillanders, 2015; Sabir et al., 2019). This necessitates a legal and regulatory system that is publicly available, easily accessible, and provides clear information on legal requirements and administrative procedures, enabling investors to better understand the business environment and mitigate risks arising from information asymmetry (Hebous et al., 2020). Concerning internalization advantages, high regulatory quality helps decrease transaction costs associated with establishing and operating businesses abroad. Explicit regulations and streamlined administrative procedures alleviate bureaucratic obstacles and compliance costs. Furthermore, access to effective dispute resolution mechanisms within a robust legal system reduces the potential risks and costs stemming from commercial disputes (Hebous et al., 2020).

Conversely, the regulatory burden implies that market-unfriendly policies can hinder inward FDI. For example, a regulatory burden in the labor market increases labor costs and becomes a barrier to inward FDI. Moreover, when regulatory costs in countries are already low, further reducing regulations may not stimulate but may decrease the ability to attract FDI. Furthermore, in countries with a favorable business environment (such as the G7), reducing business regulatory burdens decreases inward FDI flows (Borozan et al., 2022). At this point, tax incentives have a greater advantage in attracting FDI than improving regulatory quality.

Empirically, most previous research has shown that regulatory quality has a positive impact on the ability to attract FDI, such as Sadeghi et al. (2020) and Bouchoucha and Benammou (2020)'s research on African countries. Similar findings are reported by Bhujabal et al. (2024) in South and Southeast Asian countries, and by Kaushal (2021) in a research focused on India. However, Borozan et al. (2023) find that improving regulatory quality is effective in attracting FDI in BRICS countries but becomes a barrier to FDI inflows in G7 countries. Moreover, Khan et al. (2023) affirm that high regulatory quality has an attractive impact on FDI for a global sample but hinders FDI inflows in developed countries.

Since ASEAN-7 are developing countries with low regulatory quality (Kaufmann & Kraay, 2023), the hypothesis is:

$H_{4:}$ Regulatory quality has a positive impact on attracting FDI.

Rule of Law and FDI Inflows

The rule of law is understood as a fundamental value, manifested by the fact that the power of the government and the state can only be exercised lawfully within the framework of appropriate regulations and established procedures (Shivute, 2008).

The level of economic growth and prosperity, a significant driver of FDI attraction, depends largely on whether the government can make credible commitments to uphold the rule of law and protect property rights (North & Weingast, 1989). Moreover, the rule of law encourages FDI inflows because it demonstrates the host countries' commitment to implementing their FDI policies and protecting investors' future profits. The rule of law also prevents market-unfriendly policies and mitigates risks for investors (Hoff & Stiglitz, 2005).

However, Allen et al. (2005) argue that China, a country lacking the rule of law and weak in protecting property rights, has become the world's largest FDI recipient. This suggest that, while the rule of law may influence FDI, other factors must account for the differences in foreign investment in Chinese provinces and elsewhere. Furthermore, Alexander (2014) argues that countries with a weak rule of law can still attract FDI as investors can use personal relationships with business partners and government connections to reduce the uncertainty created by a weak rule of law. In this case, personal relationships can substitute for a strong rule of law.

Empirically, numerous research studies have shown the positive impact of the rule of law on FDI attraction, as seen in works by Gangi and Abdulrazak (2012) and Mengistu and Adhikary (2011). Meanwhile, Sachdev (2006) finds that China attracts more FDI than India, although the rule of law in China is lower. Wang et al. (2012) also show that the rule of law in China is neither necessary nor sufficient for a country to attract FDI. In this case, strong economic development can attract FDI flows without the rule of law. Besides, Younsi and Bechtini (2019) studied a sample of 25 emerging economies and also showed that the rule of law hurts inward FDI.

ASEAN-7 countries are not highly rated in terms of the rule of law (Kaufmann & Kraay, 2023). However, these countries continue to attract FDI inflows. Moreover, Vietnam and Laos are two socialist countries with many similarities to China. Therefore, the research expects the impact of the Rule of law on FDI inflows to be similar to research by Sachdev (2006) and Wang et al. (2012). The hypothesis is:

H_5: The Rule of law has a negative impact on FDI inflows.

Voice and Accountability and FDI Inflows

Voice and accountability reflect the freedom of speech, freedom of association, and free media enjoyed by a country's citizens. Through voice and accountability, citizens can choose a less corrupt government, creating a less risky environment for domestic and foreign investors (Sabir et al., 2019).

Higher voice and accountability contribute to higher institutional quality and better decision-making processes. It promotes citizen participation in lawmaking, government decision-making, corruption control, and better resource allocation (Shamsub, 2023). These are good conditions for attracting FDI. Moreover, voice and accountability increase the potential for attracting FDI as it enhances political credibility, encourages citizen participation in political arrangements, and promotes self-governing institutions (Khan et al., 2023).

Conversely, if investments have negative environmental impacts, voice, and accountability will empower citizens to oppose and hinder FDI inflows, especially in democratic institutions. Similarly, in countries with higher voice and accountability, citizens' awareness of environmental isssue is also higher, combined with a free media. They can form associations (freedom of association) and freely express their views on the impact of foreign investment projects on the environment (freedom of speech). This can be a barrier to FDI inflows with negative environmental impacts in democratic countries with high voice and accountability (Ha & Nguyen, 2021).

From a different perspective, Saha et al. (2022) argue that higher voice and accountability are associated with higher demands from citizens for a higher standard of living. Therefore, foreign investors will face higher demands for wages and social responsibility. This can become a barrier to attracting FDI as business operating costs become more expensive.

Many research studies have shown that voice and accountability have a positive impact on the ability to attract FDI, such as Gangi and Abdulrazak (2012), Nizam and Hassan (2018), and Bouchoucha and Benammou (2020). However, some research studies have shown a negative impact of voice and accountability on FDI inflows, as seen in Younsi and Bechtini (2019), Saha et al. (2022), which examine 28 lower-middle-income countries, and Khan et al. (2023).

ASEAN-7 is a region that is not highly rated in terms of voice and accountability (Kaufmann & Kraay, 2023). The research suggests that the view of Saha et al. (2022) may be reasonable, as this is one of the regions with high economic growth from a low base So, costs related to labor wages and investor social responsibility are increasing rapidly. Therefore the hypothesis is:

H_6: Voice and Accountability have a negative impact on FDI inflows.

Research Method

A singular, overarching theory of FDI remains elusive, with existing FDI theories adopting diverse perspectives that complement each other in the pursuit of a comprehensive understanding (Feng, 2017). Many prominent theories posit a linear relationship between institutional factors and FDI inflows. The Eclectic Paradigm, or OLI model, developed by Dunning (2013), stands as a leading framework for explaining MNCs' FDI decisions, predicated on three conditions: ownership advantages, location advantages, and internalization advantages. Within this framework, stable and effective institutions, characterized by a transparent legal system, robust protection of property rights, and favorable tax policies, enhance a location's attractiveness for FDI. Conversely, weak institutions, marked by lax regulations, high levels of corruption, and insecure property rights, impede investment. However, Dunning (2013) does not explicitly address the existence of a threshold at which the impact of institutional factors on FDI reverses. Besides, North (1990) conceptualizes institutions as the 'rules of the game' within a society or economy. These rules can be formally codified (e.g., laws, constitutions) or informally embedded (e.g., conventions, customs). The primary function of these rules is to mitigate uncertainty associated with human interaction and exchange, and to establish behavioral norms. Consequently, institutions provide society with a predictable framework for engagement.

According to North (1990), effective institutions reduce transaction and production costs, enhancing profitability and stimulating economic activity. Building on this, Henisz and Williamson (1999) argue that institutional quality is critically important for FDI. They, along with Henisz (2000), emphasize that MNCs face a heightened risk of expropriation in countries where property rights are poorly protected. For instance, host country governments may be tempted to appropriate a portion of MNE profits or even nationalize their assets. Furthermore, domestic firms may exert influence on their governments to enact policies that disadvantage MNCs. Consequently, weak institutional quality, particularly regarding property rights security, creates a risky investment environment for multinational corporations. The fear of asset loss due to governmental actions or unfair competition from domestic entities diminishes a nation's appeal for FDI. Thus, a robust institutional system that guarantees property rights is a crucial determinant in attracting and retaining foreign investment (Henisz, 2000; Henisz & Williamson, 1999).

Based on this theoretical framework, a substantial body of empirical research has indicated a linear relationship between institutional factors and FDI. However, the results regarding the impact of these factors on FDI inflows have consistently yielded inconclusive findings, as evidenced by studies such as Busse and Hefeker (2007), Jensen (2008), Buchanan et al. (2012), Sabir et al. (2019), Jurčić et al. (2020), Dang and Nguyen (2021), Ha and Nguyen (2021), Le and Kim (2021), Khan et al. (2022), Saha et al. (2022), Cetin and Yaman (2023), Khan et al. (2023), and numerous other investigations.

This research model is an adjusted extension of the research models by Dang and Nguyen (2021) and Saha et al. (2022) (see Equation 1).

$$FDI_{it} = \beta_0 + \beta_j \sum_{j=1}^{6} institutional\ variables_{i,t} + \beta_m \sum_{m=1}^{6} control\ variables_{i,t} + \varepsilon_{it} \quad (1)$$

Notes:

ε_{it} : the error term

i : ASEAN-7 countries

t : the time period of the sample, from 2002 to 2022

Six governance indicators, constructed by Kaufmann et al. (2003), represent institutional factors, including political stability and absence of violence/terrorism, government effectiveness, control of corruption, regulatory quality, rule of law, and voice and accountability. Control variables include factors representing: the labor force and consumer market (population growth), liberty and free markets (economic freedom), tax burden, inflation, GDP growth, and overall uncertainty affecting FDI attraction such as trade wars, COVID-19, and other uncertainties represented by the World Uncertainty Index (WUI).

Table 1 Variables, Measurements, and Expected Effects

Variables	Notation	Measurements	Expected effects	Sources
Dependent variable				
FDI inflows	FDI	Foreign direct investment, net inflows (%) of GDP)		WDI
Explanatory variables				
Political Stability and Absence of Violence/Terrorism	POLSTAB	measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism.	+	WGI
Government effectiveness	GOVEFF	captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.	+	WGI
Control of corruption	CCORRUP	captures perceptions of the extent to which public power is exercised for private gain, including petty and grand forms of corruption, and "capture" of the state by elites and private interests.	-	WGI
Regulatory quality	REGUQ	captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.	+	
Rule of law	ROLAW	captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.	-	
Voice and Accountability	VOICEACC	captures perceptions of the extent to which a country's citizens can participate in selecting their government, as well as freedom of expression, freedom of association, and free media.	-	
Control variables				
Population	POP	Population growth (annual %)		WDI
Economic Freedom	ECOFREE	measures the impact of liberty and free markets around the globe, at the country levels		Heritage Foundation
Tax burden	TAXBUR	measure that reflects marginal tax rates on both personal and corporate income and the overall level of taxation as a percentage of GDP		
Inflation	INF	Consumer prices (annual %)		WDI
Growth	GDP	GDP growth (annual %)		
World Uncertainty	WUI	World Uncertainty Index at the country levels		https://worlduncertaintyindex.com/

Notes: The measurement of institutional factors is based on "percentile rank", which shows a country's ranking relative to all other countries in the dataset, ranging from 0 (lowest) to 100 (highest).

Source: Author

The ASEAN has ten members. However, the research focuses on seven countries: Cambodia, Indonesia, Laos, Malaysia, Philippines, Thailand, and Vietnam. Brunei and Myanmar are excluded due to data limitations. Singapore is omitted as its institutional development is significantly more advanced than the others (Kaufmann & Kraay, 2023).

Data sources for each variable are listed in Table 1. Data on FDI inflows, institutional factors, population growth, inflation, and GDP growth are collected from the World Bank's Worldwide Governance Indicators (WGI) and World Development Indicators (WDI). Economic freedom and tax burden are published by the Heritage Foundation. The World Uncertainty Index at the country level is obtained from World Uncertainty Index website.

Unlike previous research that employed frequentist statistics, this research applies Bayesian regression to assess the impact of institutional factors on FDI inflows in the ASEAN-7 countries. Bayes' theorem in Bayesian regression enables the estimation of the probability of a set of parameters given the observed data (Thanh et al., 2024).

Wagenmakers et al. (2018) assert that the Bayesian approach offers ten advantages over frequentist estimation methods. Meanwhile, Xin (2024) argues that the Bayesian methodology can effectively handle complex features such as non-linearity and non-stationarity in financial data, thereby improving the accuracy and timeliness of risk warnings. Another key advantage is the Bayesian method's capacity for probabilistic forecasting. It allows for the quantification of uncertainty in predictions by considering all factors that may influence the outcomes, presenting results transparently and interpretably (Martin et al., 2024). Notably, the Bayesian method can mitigate the issue of multicollinearity in data (Assaf & Tsionas, 2021) and skewed distributions (Ghaderinezhad et al., 2020; Gong et al., 2023), potential concerns in this study given the various dimensions factors. Furthermore, the Bayesian approach is well-suited to address potential issues of data heterogeneity that this research may encounter (Ansari et al., 2002; Iešmantas & Alzbutas, 2016).

Furthermore, the Bayesian approach offers advantages over traditional maximum likelihood by incorporating prior information, accurately determining the number of factors, and providing improved estimates for financial data (Lee et al., 2007; Phoong & Ismail, 2015). The advancement of Markov Chain Monte Carlo (MCMC) and Gibbs sampling has facilitated the analysis of complex models and accelerated Bayesian parameter estimation (Paap, 2002). Notably, Gibbs sampling will be employed in this study to address missing data (Smith & Roberts, 1993).

Bayesian regression can determine the optimal estimates of all parameters in a model, reflecting the relationship between the prior probability of an event and its posterior probability after evidence is considered (Bayes, 1958) (see Equation 2):

$$P(A|B) = \frac{P(B|A)*P(A)}{P(B)} \tag{2}$$

A and B are events; P(A | B) is the Posterior; P(B | A) is the Likelihood; P(A) is the Prior and P(B) is the standardization constant. Therefore, Bayes' theorem can be expressed as a ratio (see Equation 3):

$$P(A|B) * P(B) = P(B|A) * P(A) \tag{3}$$

The principles of effective Bayesian estimation involve three steps, as outlined by Nguyen et al. (2024). First, a normal distribution prior is employed in the Bayesian analysis by using a prior distribution for the mean and an inverse-gamma distribution for the variance. Second, MCMC methods, combined with Gibbs sampling, are applied to generate posterior distributions. Finally, diagnostics are conducted to ensure MCMC convergence for reliable Bayesian regression results.

Gelman and Rubin (1992) suggest that stability and convergence must be ensured when using MCMC techniques to generate posterior distributions. An Efficiency of nearly 1 indicates a stable estimate. Additionally, the Rc statistic reflects the convergence of the MCMC process. An Rc value below 1.1 suggests that the MCMC process has converged sufficiently.

Results and Discussions

Descriptive Statistics

FDI inflows as a percentage of GDP for ASEAN-7 countries range from -0.99% to 14.15%, indicating substantial heterogeneity among countries in their ability to attract inward FDI. In 2020, Thailand had the lowest FDI inflow (-0.99% of GDP), due to lower new investment inflows than disinvestment. The country with the highest FDI inflow as a percentage of GDP in the sample was Cambodia in 2012, with 14.15% of GDP.

Table 2 shows that the mean values of institutional factors across ASEAN-7 countries are low and heterogeneous. Overall, ASEAN-7 countries have low institutional quality (the mean of all institutional variables is below 50). The wide range of data across all institutional factors indicates significant differences among these countries. Laos has the lowest values for four out of six indicators (GOVEFF, REGUQ, ROLAW, and VOICEACC), while Indonesia (POLSTAB) and Cambodia (CCORRUP) have the lowest values for the remaining two. In contrast, Malaysia has the highest values for four out of six indicators (GOVEFF, CCORRUP, REGUQ, and ROLAW), while Laos (POLSTAB) and Thailand (VOICEACC) have the highest values for the remaining two.

Table 2 Descriptive Statistics

Variables	Obs	Mean	Std. dev.	Min	Max
FDI	147	0.0415	0.0337	-0.0099	0.1415
POLSTAB	147	35.4062	18.4580	3.0151	74.0566
GOVEFF	147	49.0996	19.7720	10.2941	85.4369
CCORRUP	147	31.8612	16.9538	5.2133	67.2986
REGUQ	147	43.5099	17.6092	7.8431	76.4423
ROLAW	147	37.4675	17.3867	6.9652	71.1539
VOICEACC	147	28.4565	17.3134	2.4876	57.7114
POP	147	0.0131	0.0047	0.0013	0.0252
ECOFREE	147	58.5442	7.1507	36.8000	74.7000
TAXBUR	147	80.7007	6.3923	54.1000	91.4000
INF	147	0.0442	0.0416	-0.0124	0.2410
GDP	147	0.0536	0.0295	-0.0952	0.1325
WUI	147	0.1435	0.1157	0.0000	0.5047

Source: Author

Main findings

The estimation results presented in Table 3 indicate that five out of six institutional factors considered have a significant impact on ASEAN-7 countries' FDI attraction, except for government effectiveness.

Table 3 Estimation Results

Independent variables	Mean	Probability of Mean	Equal-tailed 95% credible interval		MCMC Diagnostics Efficiency	MCMC Diagnostics Rc
POLSTAB	0.0008	0.9999	0.0004	0.0011	1.0000	1.0000
GOVEFF	0.0006	0.8886	-0.0003	0.0014	1.0000	1.0000
CCORRUP	-0.0011	0.9945	-0.0019	-0.0003	0.9804	1.0000
REGUQ	0.0013	0.9948	0.0003	0.0022	0.9879	1.0000
ROLAW	-0.0011	0.9899	-0.0020	-0.0002	0.9893	1.0000
VOICEACC	-0.0007	0.9985	-0.0012	-0.0002	0.9775	1.0001
POP	-0.9171	0.9652	-1.9003	0.0756	1.0000	1.0001
ECOFREE	-0.0005	0.7261	-0.0020	0.0011	1.0000	1.0000
TAXBUR	0.0012	0.9851	0.0001	0.0022	0.9693	1.0000
INF	-0.0358	0.7225	-0.1534	0.0807	1.0000	1.0002
GDP	0.1421	0.9608	-0.0180	0.3012	1.0000	1.0003
WUI	0.0067	0.6355	-0.0332	0.0454	1.0000	1.0000
Constant	-0.0340	0.7908	-0.1157	0.0478	0.9896	1.0000
Variance	0.0007	-	0.0005	0.0008	0.8559	1.0001

Notes: Convergence rule: Rc < 1.1; Efficiency: the closer the value to 1, the better.
Source: Author

The mean parameter of POLSTAB is 0.0008, with a 99.99% probability, suggesting a highly robust effect of political stability on FDI inflows in these countries. The positive coefficient implies that the more stable the political situation, the higher the FDI attraction in ASEAN-7 countries. This finding supports hypothesis H_1 and is consistent with previous research by Mengistu and Adhikary (2011), Sadeghi et al. (2020), and Elish (2022). Thus, a stable political system with fewer strikes, riots, and terrorism reassures investors to commit their hard-earned funds (Goswami & Haider, 2014).

The result is consistent with several theories positing that political stability is a prerequisite for attracting FDI. Foreign investors are generally hesitant to invest in countries with unstable political environments (Moosa, 2002). Accordingly, political stability is a crucial determinant for FDI inflows, as instability creates barriers and risks (Goswami & Haider, 2014). Furthermore, political instability can lead to short-term and suboptimal economic policies, characterized by frequent changes (Alesina et al., 1996; Vadlamannati, 2012), which negatively impact macroeconomic performance and consequently reduce the attractiveness for FDI (Aisen & Veiga, 2013). Additionally, heightened political risk can incentivize MNCs to withdraw from politically volatile markets (Gonchar & Greve, 2022; Vortherms & Zhang, 2024).

Control of corruption also impacts the ability to attract inward FDI, but the negative mean implies that a better ability to control corruption does not help host countries increase FDI inflows. ASEAN-7 countries, which are not highly rated for their ability to control corruption, are among the world's leading FDI destinations. This finding is supported by the perspectives of Bardhan (2017) and Leff (1964). When government machinery in countries is inefficient and bureaucratic, corruption can help lubricate and accelerate the decision-making process. The probability of the CCORRUP mean parameter is 99.45%, indicating a highly robust negative impact of control of corruption on inward FDI attraction, consistent with hypothesis H_3.

The Corruption Tolerable Level of Investment theory may help explain ASEAN's attractiveness for FDI inflows in recent times. The region possesses advantages such as a large population (offering a substantial market and a large, low-wage labor force), proximity to China (a significant market and source of raw materials), and relatively less stringent environmental quality requirements. Consequently, international investors may tolerate a certain level of corruption (Abotsi, 2016) to capitalize on these benefits. When operating in this region, investors might utilize 'bribery' as a tool to circumvent regulations, thereby accelerating project implementation and facilitating smoother business operations. Bribery becomes a means for foreign investors to influence government officials, persuading them to overlook regulations to favor project approval and subsequent business activities. Research on other developing and less developed nations also support this argument, including those by Kim (2010), Moustafa (2021), Quazi et al. (2014), and Syukri et al. (2022).

Regulatory quality also has a positive impact on FDI inflows with a mean of 0.0013. Therefore, how a host government is perceived in terms of its ability to create and implement investor-friendly policies is a crucial factor in attracting FDI (Goswami & Haider, 2014). This result supports hypothesis H_4 and is consistent with previous studies by Sadeghi et al. (2020), Bouchoucha and Benammou (2020), Kaushal (2021), Saha et al. (2022), and Bhujabal et al. (2024). The probability of the REGUQ mean parameter is 99.48%, confirming the strong role of Regulatory quality in attracting investment in ASEAN-7 countries.

These findings reinforce the notion that high regulatory quality provides advantages to foreign investors in terms of location and internalization (Dunning, 2013), thereby enabling host countries to attract increased FDI inflows. Specifically, high regulatory quality reduces policy risk and uncertainty, lowers transaction costs, and enhances profitability for foreign investors (Corcoran & Gillanders, 2015; Hebous et al., 2020; Sabir et al., 2019). Transparent and predictable regulations facilitate a clearer understanding of the business environment for investors and mitigate risks associated with information asymmetry, consequently reducing transaction costs for establishing and operating businesses abroad. Furthermore, effective dispute resolution mechanisms help to minimize risks and costs arising from commercial disputes (Hebous et al., 2020).

The rule of law is the fourth institutional factor that impacts ASEAN-7 countries' FDI attraction. The probability of the mean parameter is 98.99%, indicating a highly robust effect. However, a higher rule of law does not necessarily lead to more FDI attraction, as the mean is -0.0011. It seems that the assessments of Allen et al. (2005) and Alexander (2014) also hold for ASEAN-7, where the rule of law is not highly rated. In these countries, foreign investors may still rely on personal relationships with business partners and connections with the government to reduce the uncertainty created by a weak Rule of law. The result supports hypothesis H_5 and is consistent with the research by Sachdev (2006), Wang et al. (2012), Younsi and Bechtini (2019), and Saha et al. (2022). However, the result may yield significant policy implications for policymakers as it contradicts the mainstream view, as well as most prior empirical studies (Gangi & Abdulrazak, 2012; Gani, 2007; Mengistu & Adhikary, 2011; Minović et al., 2021).

ASEAN countries are not typically rated as having a strong rule of law (Kaufmann et al., 2003), yet the region remains a significant attractor of FDI. This finding partially aligns with the results regarding the impact of control of corruption on FDI. Weak rule of law and weak control of corruption not only fail to deter but may even act as potential drivers of FDI inflows. This suggests that in countries with a less robust rule of law, such as the ASEAN nations, investors might leverage personal connections with government officials to gain advantages in their investment activities (Alexander, 2014; Allen et al., 2005).

Voice and accountability also have a negative impact on FDI attraction with a probability of the mean of 99.85%, supporting hypothesis H_6 and similar to the findings of Younsi and Bechtini (2019), Saha et al. (2022), and Khan et al. (2023). Thus, high coice and accountability may be becoming a barrier to FDI attraction in ASEAN-7 as workers voice their concerns about environmental protection and demand higher wages and greater corporate social responsibility (Saha et al., 2022).

Freedom of speech and freedom of association are factors that empower citizens to participate more actively in the processes of law-making and policy formulation, including policies for foreign investors. High voice and accountability enable host countries to select investment attraction strategies that align with the interests of their citizens, such as ensuring minimum wages, environmental protection, and demanding greater corporate social responsibility from investors, which in turn may deter FDI inflows. This outcome does not bode well for the citizens of the studied nations, as it suggests that the governments of the ASEAN-7 countries may be overlooking the interests of the majority of their population in their investment attraction strategies. Legitimate demands from citizens and civil society that could potentially increase the operating costs for FDI enterprises might lead these enterprises to favor countries with lower voice and accountability for their investments (Ha & Nguyen, 2021; Saha et al., 2022).

The only institutional factor that does not impact FDI attraction is government effectiveness, thereby not supporting hypothesis H_2. The finding is unexpected. Government effectiveness does not necessarily help countries attract more FDI. Other institutional factors may play a more important role than government effectiveness in attracting FDI. Some other research studies have similar results, such as Jurčić et al. (2020), Saha et al. (2022) and Faruq (2023).

Consistent with prior empirical research on the impact of government effectiveness on FDI attraction, it appears that factors other than government effectiveness are considered by international investors in their investment decisions within the ASEAN-7 nations. Dimensions of effective governance, such as establishing and enforcing investor-friendly policies, fostering a reliable judicial system, developing transparent legal frameworks, streamlining administrative procedures to serve the business community, creating a favorable business environment, mitigating risks for foreign investors, and enhancing confidence in economic stability, do not seem to influence MNCs' investment decisions. While these findings deviate from initial expectations, they align with the observed effects of the control of corruption and the rule of law on FDI. It suggests that foreign investors may be leveraging personal connections and potentially engaging in bribery to secure advantages by influencing government officials, rather than relying on an effective government characterized by transparent and dependable policies.

Among the control variables, the tax burden has a significant impact on FDI attraction in ASEAN-7 countries. This suggests that foreign investors consider the tax rate that MNCs have to pay in host countries when making investment decisions. The probability of the mean parameter of TAXBUR is 98.51%, indicating a highly robust effect of a tax burden on inward FDI. Meanwhile, population growth, GDP growth, inflation, economic freedom, and world uncertainty at the country level seem to have no significant impact on foreign investors' decisions.

Robustness Check

This research applies the Feasible Generalized Least Squares (FGLS) method to examine the robustness of the impact of institutional factors on FDI attraction in the ASEAN-7 countries. The results, presented in Table 4, illustrate two cases: (i) the full sample and (ii) the sample excluding the top 5% and bottom 5% of FDI values.

Table 4 Robustness Checks using FGLS Estimation

Independent Variables	(i) Full Sample		(ii) Trimmed 5% Sample	
	Coefficient	P>|z|	Coefficient	P>|z|
POLSTAB	0.0008 (0.0002)	0.0000	0.0007 (0.0002)	0.0000
GOVEFF	0.0006 (0.0004)	0.1100	0.0006 (0.0004)	0.1110
CCORRUP	-0.0011 (0.0003)	0.0020	-0.0010 (0.0003)	0.0010
REGUQ	0.0013 (0.0004)	0.0010	0.0012 (0.0004)	0.0020
ROLAW	-0.0012 (0.0004)	0.0030	-0.0011 (0.0004)	0.0040
VOICEACC	-0.0007 (0.0002)	0.0010	-0.0007 (0.0002)	0.0000
POP	-1.2394 (0.4896)	0.0110	-1.1328 (0.4636)	0.0150
ECOFREE	-0.0006 (0.0007)	0.3690	-0.0004 (0.0006)	0.4980
TAXBUR	0.0012 (0.0004)	0.0070	0.0011 (0.0004)	0.0070
INF	-0.0378 (0.0499)	0.4490	-0.0307 (0.0473)	0.5160
GDP	0.1507 (0.0682)	0.0270	0.1412 (0.0645)	0.0290
WUI	0.0069 (0.0166)	0.6780	0.0045 (0.0157)	0.7750
Constant	-0.0281 (0.0351)	0.4230	-0.0308 (0.0332)	0.3540

Notes: Standard errors are reported in parentheses.

Source: Author

For the explanatory variables, the FGLS estimation results in both cases are consistent with the Bayesian regression. Accordingly, except for government effectiveness, which does not affect inward FDI, the remaining five institutional factors all have an impact on FDI inflows in ASEAN-7 countries. Among them, political stability and absence of violence/terrorism and regulatory quality have a positive impact, while control of corruption, rule of law, and voice and accountability have a negative impact on FDI attraction.

For the control variables, the estimation results in both cases are also quite similar to the Bayesian regression estimation. The difference lies in the fact that in addition to TAXBUR, POP and GDP growth are also statistically significant. Meanwhile, foreign investors in ASEAN-7 are not affected by inflation, economic freedom, and world uncertainty.

Conclusion

Applying Bayesian regression, the research reveals interesting findings regarding the impact of institutional factors on FDI inflows in ASEAN-7 countries. Except for government effectiveness, which has no significant impact, political stability and regulatory quality positively affect FDI inflows, while control of corruption, rule of law, and voice and accountability have a negative impact. These results suggest that maintaining political stability and high regulatory quality are drivers for attracting more FDI. However, promoting other good governance indicators does not yield the expected results.

These findings pose challenges for policymakers in ASEAN-7 countries as improving institutional factors does not guarantee increased FDI inflows. This is likely due to a relatively low level of institutional development in these countries. Foreign investors are accustomed to investment environments with corruption, weak rule of law, and low voice and accountability. They may utilize personal relationships with governments and relevant partners in host countries to facilitate their investments.

Furthermore, the findings outline a rather comprehensive, consistent, yet somewhat unsettling picture regarding the role of institutional factors in attracting FDI to ASEAN-7. International investors do not select ASEAN due to its robust institutions but rather because of weaknesses in government administration, poor policy planning, bureaucracy, corruption, and limited freedom of expression. This is likely because they can manipulate government officials through personal connections and informal benefits. Typically, such outcomes are observed in less developed nations with low-quality institutional foundations. The success of ASEAN-7 countries in attracting foreign investment is clearly unsustainable and disregards the interests and voices of the populace. The process of institutional reform may be protracted and face numerous obstacles, stemming not only from internal national issues but also requiring time to shift the perceptions of international investors. Nevertheless, this process must be undertaken and continued, as it is crucial for ensuring that foreign investment attraction and economic development ultimately serve the long-term and sustainable interests of the people.

The results also suggest avenues for future research to provide a stronger foundation for policymakers' decision-making. Which countries are the main sources of FDI for ASEAN-7 nations? Do these investors also come from countries with high corruption, weak Rule of law, and low Voice and Accountability? Are there any differences in investment decisions between investors from developed and developing countries? Which countries do ASEAN-7 nations prioritize for investment? With these answers, institutional solutions to enhance FDI inflows can be more grounded.

The most significant limitation of the research is the relatively small sample size, encompassing only 7 out of the 10 ASEAN nations due to Singapore's institutional distinctiveness and data unavailability for Myanmar and Brunei. This represents an inherent constraint. However, this limitation consequently complicates the handling of potential endogeneity issues. Expanding the scope of the research to include a broader range of countries represents a pertinent avenue for future research. This would aim to assess the impact of institutional factors on FDI inflows not only within ASEAN but also across Asia and globally, potentially yielding more comprehensive and robust findings.

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