

**Title:** Do foreign direct investments (FDI) under asymmetric information, microstructures, or other factors affect stock market efficiency? Comparative analysis of different economic cases.

## 1. Introduction

This literature review examines the efficiency of the stock market and its role in relation to foreign direct investment (FDI), different microstructures, and other external factors. A range of measurements and data constraints have been used in previous studies to document changes in FDI. In some other studies, information asymmetry has been incorporated as a significant influencing factor of capital flows (Razin et al. 1998; Mohd Nor et al., 2021). Therefore, three major areas are covered in this literature review. Firstly, I examine what the FDI flows of different scenarios mean in terms of the stock market's external effects (Koptuyug et al. 2020). The second area explores the association between asymmetric information and FDI. And as a final point, a hybrid model of data envelopment (DEA) and other methods (Sarfaraz et al. 2022) for evaluating stock market investment behavior are discussed briefly.

## 2. Literature review

### *Stock market and FDI effects*

From my view, capital markets and economic growth rely heavily on the stock market. There are a number of factors that influence stock market performance, including FDI, which provides countries with alternative capital support. Koptuyug et al. (2020) investigated the economic effects of the stock market on declining public corporations. The survey examines the role of the stock market and possible positive and negative external effects linked to a well-functioning financial market. A positive impact of increased investments on research and development, labor, and consumer surplus is highlighted. The researchers have concluded that agency costs, mispricing of stocks, and a shortage of liquidity negatively impact corporate governance. A strength of this study lies in its comprehensive analysis of financial structure literature regarding the decline of public organizations. A study such as this one provides insight into the relative importance of both positive and negative external factors in relation to the challenges of an active stock market.

As Ramirez (2018) reports, inward FDI flows are having a significant impact on developing economies worldwide. An analysis of 14 developing economies around the world was carried out, with a particular focus on how FDI inflows affect stock market development (SMD). A regression analysis was used to analyze Ramirez's concern about FDI inflows impacting stock market liquidity. According to the paper, inflows and returns are correlated negatively, and there is a significant "lag" between them. Based on the author's analysis, FDI inflows have a minimal impact on the size and liquidity of the market. It is a strength of the study that empirical evidence is provided for the effects of FDI on the stock market.

A similar study by Agbloyor et al. (2013), and the one conducted by Ramirez considered that an increase in FDI inflows could result in spillover effects, poverty reduction, and casualties. In the same way, Agbloyor estimated FDI, the stock market, and additional banking data separately. A more advanced banking system may lead to an increased FDI influx, according to the authors. Further, the results indicate that FDI has casualties on domestic stock markets, particularly in Africa. This causality link is indicative of the domestic stock market development.

### *Information asymmetry and FDI*

Subsequently, using the daily stock prices of ASEAN Plus Three (ASEAN+3) listed companies, Aisyah et al. (2022) outlined the association between asymmetric information through micro-structures and FDI. The study uses illiquidity measures of *Amihud* and liquidity measures of *Amivest* to evaluate information asymmetry in the stock market. Overall, the results of the study demonstrate that *Amihud* has a negative relationship with FDI in contrast to *Amivest*, which has a positive relationship. A strength of the study is that it provides empirical evidence in the context of ASEAN+3 using more comprehensive asymmetric information measures, such as *Amihud* and *Amivest* (ratios). The study, however, is limited by the fact that it takes on a singular type of approach to the topic. As far as I am concerned, it could be improved by reevaluating the methods used under different factors, such as trading effects under asymmetric information.

Correspondingly, Mohd Nor et al. (2021) examined the impact of asymmetric information on foreign capital inflows in ASEAN+3 countries. To demonstrate the effects of market transparency on foreign direct investment, Mohd Nor employed a slightly different method, *Roll* and *Amivest* measurements, compared to Aisyah et al. (2022). Further, the authors compared FDI and foreign

portfolio investment (FPI), two of the most common methods of investing. It was suggested by Aisyah et al., (2022) as well as Mohd Nor et al., (2021) that market transparency and stern disclosures be overseen in order to attract foreign investment into the economy, which benefits investors, domestic firms, and policymakers alike.

#### *Stock market investment behaviour*

As a final point, the literature also includes an analysis of stock market investment behavior using a hybrid model and other methods. Due to the wide variety of industries that participate in the stock exchange, I believe that data envelopment analysis is a beneficial tool for constructing portfolios and assessing performance. Therefore, in their study, Sarfaraz et al. (2022) assess the efficiency of various industries of Iran's largest stock exchange, Tehran, in the wake of COVID-19. This study employs a hybrid model of data envelopment analysis (DEA) and data mining techniques to analyze investment behavior in the Tehran stock market. According to the study, only nine out of 23 industries listed on the Iranian stock market in 2019 were efficient regarding various aspects of the economy, including banking, investment, transportation, and more. Results indicate that industries whose performance was strongly influenced by COVID-19 had the worst performance and witnessed a decline. One strength of the study is its proposal of solutions for the enhancing performance and efficiency of companies in different industries during the pandemic. The study is valuable because it provides consistent evidence from supporting studies that compare the economic situation with a normal economy. Moreover, the study provides evidence for the strong effect the virus has had on an industry, which could lead to future research.

### **3. Conclusion**

The review of relevant literature has indicated that FDI, microstructures, and analysis techniques influence the stock market's efficiency. The focus of my discussion was external effects on the stock market, as well as the impact of information asymmetry on FDI flows. In addition, I discussed techniques for evaluating investment behavior, as well as implications for the economy and other participants. While there are many benefits, I believe the available research has some limitations, such as being economically infeasible in the case of FDI, which could lead to economic exploitation. Even so, further research on the subject guarantees the development of a stock market, which then leads to an increase in foreign direct investment flows to the country as well as other benefits. To conclude, a comprehensive analysis of microstructure models and a deep understanding of fundamental economic decisions cannot be completed without recognizing the significance of stock market participants and behavior.

### **4. Resources:**

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Sarfaraz, A. H., Yazdi, A. K., Hanne, T., Gizem, Ö., Khalili-Damghani, K., & Husseinagha, S. M. (2022). "Analyzing the investment behavior in the Iranian Stock Exchange during the COVID-19 pandemic using hybrid DEA and data mining techniques". *Mathematical Problems in Engineering*, p1-16, 1667618.