# THE EFFECT OF REGULATION IN MODERATING THE INFLUENCE OF THE INTERNET ON ASIAN STOCK INDICES THROUGH THE MEDIATION OF INCOME INEQUALITY

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## Abstract

There is a phenomenon where, although most Asian countries experience high stock price indices growth, at the same time, there are still several Asian countries that are included in the category of the poorest countries in Asia. This study explains the relationship between income inequality and stock price indices growth and what factors can narrow income inequality, which is a combination of many previous studies, including research from Isojärvi and Jerow (2024) and Yunga et al. (2022). The population in this study is from all Asian countries. The samples used were taken using stratified random sampling techniques from 2020 to 2025. The results of the study prove the importance of a country having a quality internet network at competitive rates to support internet shopping, which is guaranteed by good regulations to support internet network users to increase the income inequality indices. The narrowing of the income gap leads to an increase in the purchasing power of the wider community, which increases the consumption and sales of businesses. This increases the company's profits and ensures positive sentiment and economic stability, which ultimately pushes the stock price indices higher. Another finding is that the function of regulatory policy turns out to have a unique influence on income inequality.

**Keywords:** Stock Price Indices, Regulatory Policies, Sustainability, Internet Development, Income Inequality

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## 1. INTRODUCTION

Stock market indices in Asia are growing rapidly, implying that the average level of prosperity of the population in several Asian countries is also increasing. Countries in Asia, such as China, India, Japan, and South Korea, play an important role in the international arena.

Unfortunately, on the other hand, the stark income inequality found in the Asian continent, which is the largest on the planet, still occurs; many other countries in Asia experience lower levels of prosperity. Various indicators can be used to assess the health of a country's economy, including gross domestic product per capita, purchasing power parity, and gross national income per capita. Although the methods used differed, the results obtained remained consistent, where several of the same countries emerged as the poorest countries in Asia, namely: Cambodia, India, and Timor-Leste[1].

Based on the results of Wike et al.'s (2025) research, there are findings where more than 50% of adults in various countries believe that the income gap is still a major problem, even 30% of them say that it is a big problem for the majority of Asian countries, such as Thailand, South Korea, Malaysia, Bangladesh, the Philippines, Singapore, Sri Lanka, Japan, and India.

According to economic theory, income inequality is a huge difference in the distribution of income in a country's society. Income inequality will also affect inequality in wealth, political power, and social status, and can have an impact on quality of life, such as the quality of health and well-being of people (Beech et al., 2021; Jetten et al., 2021). Significant income inequality can have a variety of negative consequences, including:

- Social problems: high income inequality can trigger social issues such as increased crime, unrest, and tensions in society (Jetten et al., 2021).
- Economic growth: large income inequality can hinder economic growth by reducing people's purchasing power and investment (Shen & Zhao, 2023; Simionescu & Gavurová, 2023).
- Health: high income inequality can have a devastating impact on public health, including declining life expectancy and mental health (Jetten et al., 2021).
- Political instability: glaring income inequality can lead to political instability, where people feel dissatisfied and lose trust in the government (Jetten et al., 2021; Shen & Zhao, 2023).
- Increased pollution: income inequality has triggered an increase in carbon dioxide due to the use of energy sources that are not environmentally friendly but easy to obtain, such as wood and plastic waste that are burned to obtain thermal energy (Ghazouani & Beldi, 2022; Simionescu & Gavurová, 2023).
- Environmental damage: energy sources are a major problem in modern society's life; if people's incomes fall, they will look for cheaper alternative energy sources. In many cases, encroachment of forests in search of firewood or coal mining as a cheap source of energy can have a long-lasting, damaging impact in the future (Yang et al., 2022).

It turns out that a number of research results conclude that there is a relationship between income inequality and the capital market indices, including research in 37 countries using data from 2001 to 2018, concluding that the wider the level of income inequality, the more vulnerable the stock market is to volatility (Blau et al., 2021). In addition, a number of studies have concluded that the inflation rate also affects the capital market indices (Al-Rimawi & Kaddumi, 2021). This research focuses on the impact of income inequality on the capital market, and a number of factors that affect income inequality will also be researched.

Research in the Southern African Development Community (SADC) region, using data from 1990 to 2023, concluded that trade can reduce income inequality in the SADC; in other words, income inequality can be reduced by international trade (Chigwenembe & Zheng, 2025). Research in a number of regions, including Latin America, Africa, Asia, the Middle East, and Europe in 2021, also concluded that there is an influence of trade in improving income inequality, but, on the contrary, regulation turns out to worsen income inequality (Acheampong et al., 2021). But there are also research results that conclude that trade openness is not even beneficial for the very poor population in developing countries. In contrast, in China and Europe, trade openness has succeeded in correcting the income inequality gap (Dorn et al., 2022).

Research in one Asian country, Vietnam, concluded that mobile internet has a very important role in increasing income and productivity, so that it can improve income inequality (Pham, 2025). Research conducted between 2005 and 2020 in 86 countries concluded that the existence of the internet actually increases income inequality. The explanation is that technological advances will increase the demand for soft skills and will instead make menial work obsolete, and this contributes to increased income inequality. However, the researchers in this study suggest conducting further research by adding many other variables, such as the quality of governance and social factors (Afzal et al., 2022).

Although the growth of stock market indices in Asia has experienced rapid growth, there are still a number of Asian countries that are included in the category of the poorest countries in Asia, causing income inequality, which is what is raised as a phenomenon in this study. From a number of studies in the last five years on the conditions of globalization and technological change, the most discussed factors that affect income inequality are trade, regulation, and mobile internet. As for today, modern trade definitely uses mobile internet, while regulations also regulate many trades that use mobile internet.

From the results of a search on a number of journal sites, it turns out that there is still very little research that links income inequality and inflation rate with the capital market indices in Asia, so this study is not only re-examining this in Asia. This research will also delve deeper into what factors affect income inequality, so that the results of this research will be useful for decision-makers and investors in assessing the potential of the capital market.

[1] https://worldpopulationreview.com/country-rankings/poorest-asian-countries

The theoretical framework of this research was derived from grand theory (La Porta et al., 1996), and applied theory (Borowicz, 2025). This study uses an explanatory method and a multivariate regression equation model with panel data. The data collection techniques used to obtain secondary data are tracing and processing data from https://networkreadiness index.org/, https://www.investing.com, and https://www.bbvaresearch.com.

The remainder of this paper is structured as follows. Section 2 reviews the previous and relevant literature. Section 3 presents the research methodology. Section 4 reports the results. Section 5 discusses the research findings. Section 6 wraps up the paper with concluding remarks, study constraints, and future implications.

## 2. LITERATURE REVIEW

### 2.1. The relationship between stock price indices and income inequality

A number of studies that link income inequality to capital market indices have yielded different results.

Research in 37 countries using data from 2001 to 2018 concluded that the wider the income gap, the more vulnerable the stock market is to volatility (Blau et al., 2021). This is supported by another study that concluded that the income inequality rate has an effect on stock market returns in the USA with observations from 1947 to 2020 (Markiewicz & Raciborski, 2022). In fact, research with a range of data from 2000 to 2022 in 47 countries concluded that the wider the income inequality gap, the greater the likelihood of a fall in stock market prices (Askarzadeh, 2024). Research conducted between 1964 and 2019 with data in the USA also concluded that income inequality is linked to many vulnerabilities that have been shown to cause shocks in the financial sector (Isojärvi & Jerow, 2024). However, studies in 154 countries between 1950 and 2008 concluded that there was no relationship between income inequality and capital market excess returns (Zhang, 2012).

Several results of the study show that there is a difference between the results of the study, so we re-examine the effect of income inequality on the capital market indices with the hypothesis:

*H1: There is an effect of income inequality on the stock price indices.*

### 2.2. The relationship between stock price indices and inflation rate

The results of research on the Amman Stock Exchange with data from 1999 to 2018 concluded that the inflation rate has a significant effect on fluctuations on the Amman Stock Exchange (Al-Rimawi & Kaddumi, 2021). The same conclusion is found in the results of a study on the Amman Stock Exchange with data from 1991 to 2020, concluding that the inflation rate causes a decline in stock prices (Alzoubi, 2022). The results of research on the Indonesian stock market with data from 1996 to 2020 also concluded that the inflation rate has an effect on stock prices (Sia et al., 2023). The results of research on the Indian stock market during the 2009–2019 period concluded that the inflation rate had a negative effect on the stock market indices (Keswani et al., 2024), but the results of research in Malaysia and Japan from 2015 to 2020 conclude that the inflation rate has no effect on the capital market indices (Gunawan & Bawono, 2021).

Several results of the study show that there is a difference between the results of the study, so we re-examine the effect of inflation rate on the capital market indices with the hypothesis:

*H2: There is an effect of the inflation rate on the stock price indices.*

### 2.3. The relationship between income inequality and internet rates (MT)

The development of the internet has resulted in significant transformations in various aspects of life, including in the fields of economics and income distribution.

1. Increased access to information and opportunity: the internet offers greater access to information and opportunities for communities, including previously marginalized groups. This can contribute to increased skills and knowledge, which in turn has an impact on increased income (Kharisma, 2022).
2. Ease of entrepreneurship: the internet provides people with the opportunity to start and grow their own businesses at a lower cost compared to traditional methods (Houngbonon et al., 2022).
3. Increased market efficiency: the internet provides a means for more efficient trading and transactions, lowering costs and expanding market reach. This can provide benefits for producers and consumers to potentially increase revenue (Alsharari, 2021).

The influence of the internet on income inequality cannot be considered as a stand-alone factor; for this reason, government policies and regulations, affordability, and market access need to be studied in order to overcome income inequality in the digital era. The results show that service-related and socio-economic factors have the greatest influence on broadband demand. The increase in tariff diversity provided a significant boost to broadband adoption (Haucap et al., 2016). Economic policies can be directed at increasing the use of information and communication technology (ICT); in addition, flexibility in tariffs will facilitate access to technological resources (Yunga et al., 2022). Based on these discussions, we hypothesize:

*H3: There is an effect of internet tariffs on income inequality.*

### 2.4. The relationship between income inequality and internet network quality (IIB)

Research examining the relationship between income inequality and the quality of internet networks concluded: research in the 2015–2019 period in Indonesia showed that improving the quality of mobile phones had a significant effect on decreasing income inequality (Kartiasih et al., 2023). A high-quality network will increase average income and reduce income inequality (Houngbonon & Liang, 2018). Other studies also concluded that access to broadband internet has an impact on reducing income inequality (Afzal et al., 2022). However, other research states that improving the quality of ICT does not have an impact on increasing income inequality (Dzator et al., 2023;

Njangang et al., 2022). Other research argues that there are two sides to the impact of ICT, namely that low adoption rates will affect increasing income inequality to a certain point; on the contrary, higher ICT adoption plays a role in reducing income inequality (Patria & Erumban, 2020).

*H4: There is an effect of internet network quality on income inequality.*

### 2.5. The relationship between income inequality and the quality of internet regulation (RQ)

The results of a study in 42 regions in Africa between 1996 and 2020 concluded that ICT can increase income distribution, but unfortunately, this has been stalled due to government regulations that contribute to widening the income inequality gap (Dossou et al., 2023). Another study examined the effects of the quality of governance, economic growth, and income inequality in Vietnam during the period 2006–2017. The findings concluded that improving the quality of government regulations will encourage economic growth and reduce income inequality between provinces. On the contrary, economic growth will improve the quality of government regulations, but will increase income inequality between provinces. This suggests that governments and public administration executives need to have a comprehensive view to evaluate and predict macro policies (Hung et al., 2020). Meanwhile, the results of research in 50 US states between 1997 and 2015 show that increased regulation will have an impact on income distribution, thereby exacerbating income inequality. The results of the statistical test showed a 0.5% increase in income inequality on the Gini coefficient due to a 10% increase in government regulations (Chambers & O'Reilly, 2022).

*H5: There is an effect of regulatory quality on income inequality.*

### 2.6. The relationship between income inequality and internet network security (SEI)

Policies should emphasize the potential outcomes that the Internet of Things can provide and motivate transparency and disclosure regarding the use of personal data, more effective practices, and regulations related to privacy and security (van Deursen et al., 2021). Cybersecurity behavior plays a crucial role in preventing the loss of individual digital assets and also in ensuring the security of important online activities always carried out (Dodel & Mesch, 2018). The vulnerability of internet network security to cyber-attacks can have a huge impact on people's finances (Alzubaidi, 2021), and further piracy and the use of technology for internet crime can cause serious financial and economic impacts on society (Yaacoub et al., 2022). These things are also suspected to affect the rise of income inequality. Society has shifted from an offline business model to an online model, thus increasing cross-border e-commerce (Zhu, 2026), but the advancement of digital business models must be accompanied by good regulations to improve results (Siriyotha & Lekcharoen, 2025), so that the use of technological advances in the online trade and shopping sector can increase customer satisfaction and attract more enthusiasts (Asanprakit & Kraiwanit, 2023).

Based on these discussions, we hypothesize:

*H6: There is an effect of internet network security on income inequality.*

### 2.7. The relationship between income inequality and the existence of online markets (IS)

Digital trade exports drive up average salaries and reduce the number of companies that provide low wages (Zhou & Yuan, 2024). By utilizing instrumental variable methodology in regression analysis, it can be proven that internet use has a greater effect on annual income growth for employees in urban areas than in rural areas (Qin et al., 2023). Based on this, we hypothesize:

*H7: There is an effect of the existence of an online market on income inequality.*

## 3. RESEARCH METHODOLOGY

To determine the influence of online market growth, internet tariffs, internet network quality, internet network security, and internet regulation level on income inequality, this study uses a multivariate regression analysis equation model, namely:

$$I_i = A_i + \beta_{i1}F_1 + \beta_{i2}F_2 + \ldots + b_{in}F_n + \varepsilon_i \quad (1)$$

where:

- $I$: income inequality;
- $A$: constant;
- $F1$, $F2$: systematic factors;
- $\beta$: sensitivity asset;
- $\varepsilon$: error term.

### 3.1. Model specifications

The research models that can be formed are as follows:

*Model 1*

$$SPIG = \gamma_0 + \gamma_1 IIQ_{it} + \gamma_2 INFR_{it} + \varepsilon_{it} \quad (2)$$

*Model 2*

$$IIQ = \delta_0 + \delta_1 MT_{it} + \delta_2 IIB_{it} + \delta_3 RQ_{it} + \delta_4 SEI_{it} + \delta_5 IS_{it} + \mu_{it} \quad (3)$$

where:

- $\gamma_0$, $\delta_0$: intercept;
- $\gamma_1$, $\gamma_2$, $\delta_1$, $\delta_2$, $\delta_3$, $\delta_4$, $\delta_5$: coefficients;
- *SPIG*: share price indices growth;
- *INFR*: inflation rate;
- *IIQ*: income inequality;
- *MT*: mobile tariffs;
- *IIB*: international internet bandwidth;
- *RQ*: regulatory quality;
- *SEI*: secure internet server;

- *IS*: internet shopping;
- *i*: cross section data;
- *t*: time series data;
- $\varepsilon$, $\mu$: term of error.

### 3.2. Data and measurement

This study uses an explanatory method to answer the purpose of the research, which is to explain the relationship between capital market indices growth, income inequality, inflation rate, mobile tariffs, international internet bandwidth, regulatory quality, secure internet server, and internet shopping.

The results of this study provide input to policymakers in regional countries on what factors should be considered in order to reduce income inequality.

The population in this study includes all available data related to the variables studied in the Asian region. The sample used was taken using random sampling techniques, namely, data from 2020 to 2024 from China, Indonesia, Japan, the Republic of Korea, Malaysia, the Philippines, and Thailand.

The data used in this study are secondary data. The data type is panel data. The data collection techniques used to obtain secondary data are tracing and processing data from https://networkreadiness index.org/, https://www.investing.com, and https://www.bbvaresearch.com.

This study uses an approach that improves previous studies, namely by measuring the yearly growth of the stock price indices for each country that is sampled. The reason is that Indonesia has a very high unit price compared to other countries; for example, one Malaysian ringgit equals 4000 rupiah. The stock price indices are greatly influenced by the price unit in each country, so if you directly use the stock price indices to process statistics with panel data can cause bias. By using the share price indices growth, the large difference is believed to be overcome.

This study uses a multivariate regression equation model with panel data. The data panel is tested to determine if the common effect model, fixed effect model, or random effect model is the best fit. The definition of variable measurements in this study can be seen in Table 1.

**Table 1.** Variable measurement definition

| *No.* | *Variable* | *Measurement* | *Sources* |
|---|---|---|---|
| 1 | Share price indices growth | The growth of the stock price indices every year. | https://www.investing.com |
| 2 | Inflation rate | Inflation rate according to BBVAresearch indicator. | https://www.bbvaresearch.com |
| 3 | Income inequality | Indices by indicators NRI. | https://networkreadinessindex.org/ |
| 4 | Mobile tariffs | Indices by indicators NRI. | https://networkreadinessindex.org/ |
| 5 | International internet bandwidth | Indices by indicators NRI. | https://networkreadinessindex.org/ |
| 6 | Regulatory quality | Indices by indicators NRI. | https://networkreadinessindex.org/ |
| 7 | Secure internet server | Indices by indicators NRI. | https://networkreadinessindex.org/ |

*Source: Authors' elaboration.*

This study uses generalized least squares (GLS) to process panel data. Another alternative if the amount of data obtained is much larger, it can also use spatial seemingly unrelated regression (spatial SUR). Spatial SUR is used to analyze several interconnected dependent variables distributed across geographic areas or countries simultaneously.

## 4. RESULTS

### 4.1. Lagrange multiplier effects

The Lagrange multiplier effects is used to determine which model is more accurate between common effect and random effect. The common effect model is more appropriate than other models when p-value > 0.05. However, if it is not fulfilled, then the random effect model is more appropriate than other models. The test results show that for both models, the more appropriate is the random effect model.

**Table 2.** Lagrange multiplier tests for random effects

| *Test summary* | *Cross-section* | *Time* | *Both* |
|---|---|---|---|
| **Equation (2)** | | | |
| Breusch-Pagan | 0.005494 | 31.48682 | 31.49231 |
| p-value | -0.9409 | 0 | 0 |
| **Equation (3)** | | | |
| Breusch-Pagan | 83.08237 | 1.997534 | 85.07991 |
| p-value | 0 | -0.1576 | 0 |

*Source: Authors' elaboration.*

### 4.2. Chow test

The Chow test is used to determine which model is more accurate between common effect and fixed effect. The common effect model is more appropriate than other models when p-value > 0.05. However, if it is not fulfilled, then the fixed effect model is more appropriate than other models. The results of Chow's test show that for Model 1 the more appropriate is the fixed effect model, while for Model 2 the more appropriate is the common effect model.

**Table 3.** Redundant fixed effects tests

| *Effects test* | *Statistic* | *d.f.* | *Prob.* |
|---|---|---|---|
| **Equation (2)** | | | |
| Cross-section F | 0.713765 | (6.32) | 0.6411 |
| Cross-section Chi-square | 5.275285 | 6 | 0.509 |
| **Equation (3)** | | | |
| Cross-section F | 66.597509 | (6.29) | 0 |
| Cross-section Chi-square | 113.114122 | 6 | 0 |

*Source: Authors' elaboration.*

### 4.3. Hausman test

The Hausman test is used to determine which model is more accurate between random effects and fixed effects. The random effect model is more appropriate than other models when p-value > 0.05. However, if it is not fulfilled, then the fixed effect model is more appropriate than other models.

The test results show that for both models, the more appropriate is the random effect model.

**Table 4.** Correlated random effects: Hausman test

| *Test summary* | *Chi-sq. statistic* | *Chi-sq. d.f.* | *Prob.* |
|---|---|---|---|
| **Equation (2)** | | | |
| Cross-section random | 0.804535 | 3 | 0.8484 |
| **Equation (3)** | | | |
| Cross-section random | 5.903777 | 6 | 0.4341 |

*Source: Authors' elaboration.*

### 4.4. Results of multivariate regression analysis

The higher the *IIQ* number means that the income gap is decreasing or in other words moving towards income equality.

**Table 5.** Multivariate regression results

| *Variable* | *Coefficient* | *Prob.* |
|---|---|---|
| **Equation (2)** | | |
| *C* | -0.498299 | 0.0277 |
| *IIQ* | 0.008136 | 0.0138 |
| *INFR* | 0.125215 | 0.1042 |
| *INFR*IIQ* | -0.002005 | 0.0777 |
| R-squared | 0.192366 | |
| Adjusted R-squared | 0.128606 | |
| F-statistic | 3.017011 | |
| Prob (F-statistic) | 0.041633 | |
| **Equation (3)** | | |
| *C* | -4.99154 | 0.6548 |
| *MT* | 0.099874 | 0.0073 |
| *IIB* | 0.478918 | 0.0014 |
| *RQ* | 0.939867 | 0.0001 |
| *IIB*RQ* | -0.010195 | 0.0003 |
| *SEI* | 0.217392 | 0.0003 |
| *IS* | 0.107357 | 0 |
| R-squared | 0.531246 | |
| Adjusted R-squared | 0.450888 | |
| F-statistic | 6.610992 | |
| Prob (F-statistic) | 0.000098 | |

*Note: Dependent variable: SPIG. Method: Panel EGLS (cross-section random effects). Periods included: 6. Cross-sections included: 7. Swamy and Arora estimator of component variances.*
*Source: Authors' elaboration.*

## 5. DISCUSSION

The results of the multivariate regression analysis for equation Model 1 show that *SPIG* is positively and significantly influenced by *IIQ*. This means that a decrease in the level of income inequality will increase the growth of capital market indices, and conversely, an increase in income inequality will decrease the growth of capital market indices. Therefore, the *H1* hypothesis, which states that there is an effect of income inequality on the stock price indices, is proven. These findings are supported by conclusions from Askarzadeh (2024), Blau et al. (2021), Isojärvi and Jerow (2024), and Markiewicz and Raciborski (2022). The results of multivariate regression analysis for equation Model 1 also showed that *SPIG* was not significantly affected by the inflation rate. Therefore, the *H2* hypothesis that there is an influence of the inflation rate on the stock price indices is not proven, this finding is supported by the conclusions of Gunawan and Bawono (2021).

The results of multivariate regression analysis for equation Model 2 show that *MT* has a positive and significant influence on the increase in *IIQ*. This means that the higher the *MT* will cause the *IIQ* to increase. Therefore, the *H3* hypothesis that *MT* has a positive and significant effect on *IIQ* is proven. These results are supported by the conclusion that increasing tariff diversity provides a significant boost to broadband adoption (Haucap et al., 2016; Yunga et al., 2022).

*IIB* has a significant influence on the increase in *IIQ*; therefore, *H4*, stating that there is an influence of internet network quality on income inequality, is proven. These findings are supported by the conclusions of Afzal et al. (2022), Houngbonon and Liang (2018), and Kartiasih et al. (2023).

Furthermore, *RQ* has a positive and significant influence on the increase in *IIQ*. This means that the higher the *RQ*, will cause the *IIQ* to increase. Therefore, the *H5* hypothesis that there is an effect of regulatory quality on income inequality is proven; these findings are in line with the conclusions of Chambers and O'Reilly (2022) and Hung et al. (2020).

While *RQ* that moderates *IIB* has a negative and significant influence on the increase in *IIQ*, these findings are similar to the conclusions of Dossou et al. (2023). Variable *RQ* that moderates *IIB* has a negative and significant influence on the increase in *IIQ*. The explanation is as follows:

- Restrictions that are implemented, such as network neutrality or data localization requirements, can deter investment in infrastructure and innovation, as well as create barriers for service providers to operate efficiently. In addition, restrictions on virtual private network (VPN) traffic or bandwidth throttling by internet service providers (ISPs) can also slow down data transfer speeds.
- Because international internet bandwidth involves relationships with other countries, the rules on how strict regulations on internet bandwidth may be different, so that increasing the strictness of regulations in one country will have a negative impact on the competitiveness of that country with other countries.
- Network neutrality: stringent regulations regarding network neutrality can hinder an ISP's ability to manage data traffic and invest in network improvements. Without flexibility in traffic management, ISPs may have difficulty in overcoming network congestion and ensuring optimal performance, especially for traffic that requires high bandwidth.
- Data localization requirements: data localization requirements, which require data to be stored within national borders, can increase operational costs and complexity for global ISPs. This can hinder investment in infrastructure and innovation, which can ultimately affect overall bandwidth performance.
- VPN and bandwidth restrictions: some ISPs impose restrictions on VPN traffic or limit bandwidth for certain services. This can lead to slowing down internet speeds, especially for users who rely on VPNs to access content or services that are restricted in their region.
- Impact on investment: excessive or unclear regulation can reduce investors' interest in investing in internet infrastructure, including international networks. A lack of investment can hinder the overall increase in capacity and bandwidth speed.
- Operator limitations: tightly regulated network operators will face challenges in competing

with digital service providers that are less bound by regulations, especially in terms of innovation and efficiency. This can lead to an imbalance in the internet ecosystem and impact overall performance.

*SEI* has a significant influence on increasing *IIQ*. Therefore, *H6*, which states that internet network security influences income inequality, is proven. This finding aligns with the conclusions of Alzubaidi (2021), Dodel and Mesch (2018), van Deursen et al. (2021), and Yaacoub et al. (2022). *IS* has a positive and significant influence on increasing *IIQ*. This means that higher *IS* will lead to higher *IIQ*. Therefore, hypothesis *H7*, which states that *IS* has a positive and significant influence on *IIQ*, is confirmed. This finding is supported by the conclusions of Qin et al. (2023) and Zhou and Yuan (2024). The significant and positive F-statistic indicates that *MT*, *IIB*, *RQ*, *SEI*, *IS*, and *IIB*, moderated by *RQ*, simultaneously have a significant influence on *IIQ*. Likewise, a significant and positive F-statistic indicates that *IIQ*, *INFR*, and *IIQ* moderated by *INFR* simultaneously have a significant effect on *SPIG*. This indicates that all these variables are important and should be considered by investors and stakeholders in the Asian countries included in this study population.

## 6. CONCLUSION

Although stock indices in Asia have grown rapidly, there are still countries that are categorized as the poorest countries in Asia, which leads to income inequality, which is treated as a phenomenon in this study. According to several studies conducted over the past five years in the context of globalization and technological change, trade, regulation, and mobile internet are the most discussed factors that affect income inequality.

This research was carried out to explain the influence of income inequality on capital market developments in the Asian region and provide input to stakeholders on what should be done to overcome income inequality.

The results of this study prove the importance of a country narrowing the gap in income inequality to increase the growth of the stock price indices. An increase in income inequality indices means that the income gap of the community is reduced; on the other hand, a decrease in the income inequality indices means that the income gap of the community has increased.

The narrowing of the income gap means that the distribution of income becomes more even. Low- and middle-income groups receive a larger share of income. With that extra income, they will spend more on everyday goods and services. Companies on the stock exchange, especially in the consumer goods sector, such as retail, food and beverages, automotive, and other consumptive goods, will experience an increase in turnover and revenue. Evenly distributed consumption tends to lead to a more stable and sustainable model of economic growth, thereby reducing the risk of extreme economic volatility. This stable economic growth is one of the fundamental macroeconomic conditions that support the rise in the stock price indices. Extreme inequality can lead to social tensions and political instability, which can distort the investment climate. A more stable environment attracts more investors.

There are many ways to narrow income inequality, and this study examines one of the ways, which is by improving the quality of the internet network by improving international internet bandwidth services, setting mobile tariffs that are beneficial for both users and internet providers, implementing good regulatory quality, and improving secure internet servers, so that internet shopping can grow rapidly. Strict regulations in people's lives can be explained as the existence of firmness in enforcing legal rules, both in trade, services, price regulations, and tax rules, but it should be noted that regulations that are too strict on international internet bandwidth will reduce the income inequality indices.

Improving the quality of regulation that regulates international internet bandwidth can hinder the improvement of income inequality. This could happen because overly restrictive policy measures, such as data localization requirements and strict net neutrality rules, create obstacles for service providers to operate efficiently. Over-regulation not only increases operational costs and technical complexity but also reduces the attractiveness of investing in digital infrastructure; as a result, a country can lose its digital competitiveness at the global level and fail to reduce income inequality. The ideal regulatory quality of the internet in the short term is to increase foreign direct investment opportunities through legal transparency to attract investors, and in the long term is to strengthen the sovereignty and privacy of infrastructure to ensure national security, and finally reduce foreign dependence.

The novelty of this study is to prove that there is a relationship between the growth of the stock price indices in Asia and the improvement of the quality of internet services and the quality of regulation mediated by the reduction of the income inequality gap. The government should implement policies that support start-ups, such as a tax system that favors an effective copyright protection program, especially for start-up business actors who use the internet. The protection of public data that is often hijacked by malicious hackers also needs special attention; the government needs to invest more seriously in building a firewall for data protection. This is also to support the increase in stock price indices, because there have been many startup stories that have then managed to enter the capital market and become one of the high-prospect companies.

As explained in the conclusion, the narrowing of income inequality will have a positive impact on the increase in stock market indices. To address income inequality, collaboration between various stakeholders, including governments, communities, and the private sector, is essential, one of which is to improve the quality of education, skills, and access to resources. The government should invest in education and training to improve the quality of human resources. The government needs to ensure that all levels of society have equal access to economic resources, such as mobile internet, which has high speeds. The quality of the internet, large bandwidth, and fair tariffs will support the improvement of the quality and skills of

the community because education and training can be enjoyed by everyone wherever they can be connected to the internet. Distance, time, and place are no longer obstacles to improving the quality of education and the dissemination of knowledge.

Empowering communities and micro, small, and medium enterprises (MSMEs) through internet shopping will increase the turnover of MSMEs. There will also be an increase in digital literacy where MSMEs will gain knowledge about online marketing, digital business management, and product innovation, which are very important in the modern economic era. Digital platforms enable efficient and cost-effective ways for MSMEs to promote products, strengthen brand image, and communicate directly with customers through social media and online shopping features. Online business models can significantly reduce various operational costs, such as space rental costs, expensive traditional marketing, and administrative costs.

The results of this study are important and relevant to the current situation and future research because a good internet network has become the backbone of the economy of many countries in improving their economies. Transactions in the form of online, such as services, products, or stock trading through the internet network, have become normal and also important for the world community, but behind all of that, there is a great danger that threatens society, namely when the internet network is used for fraud, extortion, data leakage, and other crimes, as has recently occurred. For this reason, an agreement between countries is needed to make a good regulation that regulates the use of the internet, but with an important emphasis that democracy and freedom of public opinion must still be prioritized.

Although spatial SUR can be used to improve the accuracy of model estimates by capturing spillover effects and spatial heterogeneity that cannot be explained by GLS, the limitations of the amount of data provided by each country vary, and some countries are completely closed in terms of providing the necessary data.

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