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# Analyzing Index of Economic Freedom in Indonesia using Tableau

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**Abstract.** This research discusses the challenges faced by Indonesia in achieving optimal economic freedom. The main objective of this research is to identify the factors influencing the decline in Indonesia's economic freedom score and propose solutions to address these issues. The research method involves literature review to understand the theoretical context and data collection from reliable sources such as https://www.heritage.org/index/ to analyze economic freedom data from 2000 to 2023. The data is then prepared and analyzed using Python and Tableau to gain in-depth insights. The main findings of this research are that excessive regulation, weak property rights protection, lack of government efficiency, as well as corruption and economic crimes are the main factors influencing Indonesia's economic freedom. The proposed solutions include policy reforms, improving property rights protection, government efficiency, and stricter law enforcement. By adopting these solutions, Indonesia is expected to overcome the challenges in achieving better economic freedom, which in turn will contribute to sustainable and inclusive economic growth.

**Keywords:** Data Visualization, Economic Freedom, Economic Freedom Index, Indonesia, Tableau.

## 1. Introduction

Economic freedom is a concept that reflects the level of autonomy possessed by individuals and economic entities in conducting economic activities without excessive interference from the government or other institutions (Coleman, 2021). This concept is based on the belief that with the knowledge and incentives they have, individuals and economic entities can make economic decisions that are optimal for their own interests (Maslennikov et al., 2022). Measuring a country's level of economic freedom is done through the Index of Economic Freedom (IEF) (Dialga & Vallée, 2021), which includes crucial parameters such as freedom of business, freedom of regulation, freedom of trade, and protection of property rights (Panikarova et al., 2020). High levels of economic freedom are closely associated with higher economic growth, job creation, poverty reduction, improved living standards, and national competitiveness (Bergh & Bjørnskov, 2019). In its implementation, economic freedom gives individuals the freedom to start a business without complicated licensing barriers, giving freedom to individuals to start a business, and giving freedom to individuals to start a business, entrepreneurs to set product prices without government interference, and give investors the freedom to invest in the sectors and countries of their choice (Nowicki & Kucharski, 2022). In addition, economic freedom allows individuals to work anywhere and earn a salary based on their

skills. However, not all countries have a high level of economic freedom, one example is Indonesia (Choudhary & Saharia, 2023).

Indonesia's IEF declined in 2023 compared to the previous year, falling from 64.4 to 63.5 points (The Heritage Foundation, 2023). This drop causes Indonesia to drop two places to 60th out of 184 countries. Most of the factors that led to this decline were related to the rule of law, particularly discrimination and incompatibility (Freedom House, 2023). Instances of discrimination, both in terms of gender and ethnicity, have raised concerns about the state's commitment to equal protection under the law (Ardhanariswari et al., 2021). These discriminatory practices extend to the political landscape, where, despite women enjoying full political rights and the implementation of gender quotas, there is a substantial gender gap in representation (Muharam et al., 2023). With women holding only 20.87 per cent of the seats in the House of Representatives (DPR), addressing this disparity is important to realize gender equality in political leadership. Ethnic minorities, particularly the Chinese community, also face barriers in their political participation (Kusnandar, 2022). The underrepresentation of Chinese individuals is reflected in the failure of parties with ethnic Chinese leaders, such as the Indonesian Solidarity Party (PSI) with 1.89 percent of voters, and the Indonesian Unity Party (Perindo) with 2.68 percent in the April 2019 election (General Election Commission, 2019). Addressing these issues is important to foster a more inclusive and representative political landscape. These actions contribute to the broader erosion of equal protection and raise concerns about the fairness and inclusiveness of Indonesia's political system.

In addition, challenges in addressing criminal issues, including problems with the justice system, corruption, and the overall effectiveness of law enforcement, also contribute to Indonesia's low IEF score (Freedom House, 2023). The justice system has faced criticism for arbitrary arrests and detentions, particularly targeting protesters and activists suspected of separatism (Amnesty International Indonesia, 2022). Protections against forced confessions are reportedly ineffective, and there have been cases where defendants, including those facing the death penalty, were denied proper access to legal counsel. The legal framework's response to alleged separatist activities, such as the designation of Papuan separatists as terrorists under the 2018 anti-terrorism law in 2021, has raised concerns about the potential for prolonged detention without formal charges (Firmansyah et al., 2022). The overall effectiveness of law enforcement is also affected by the justice system's lenient treatment of military personnel accused of crimes against civilians. These systemic problems not only undermine the country's legal framework but also erode confidence in its ability to uphold justice and maintain a just and equal society (Hamzani et al., 2020).

This issue is critical for Indonesia to address comprehensively with a focus on improving regulatory clarity, ensuring fiscal stability, and strengthening law enforcement mechanisms (National Development Planning Agency, 2022). Economic freedom needs to be improved to attract investment, promote sustainable economic growth, and improve the overall welfare of the population (H. Limanseto, 2017). To understand the development of economic freedom in Indonesia, the use of data visualization is required using Tableau, a powerful data visualization tool, as visualizations help to see year-on-year observations of Indonesia's economic freedom index, show how parameters contribute to the overall IEF score, compare Indonesia's IEF score with other countries, and predict the future trajectory of Indonesia's IEF score. Tableau allows the creation of interactive and dynamic dashboards that can effectively present trends in Indonesia's economic freedom index and its contributing factors (Tableau, 2024). Tableau's ability to integrate multiple data sets allows for a detailed breakdown of the impact of each parameter on the overall IEF score (K. Morton, 2024). This visualization tool also provides an intuitive and accessible way to interpret complex information. Through Tableau's user-friendly interface, the Ministry of Economy, Ministry of Finance, and Ministry of Law in Indonesia can easily identify which sectors are declining and evaluate improvement strategies. Thus, data visualization becomes an effective tool not only to understand

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the overall trend of economic freedom but also to highlight specific elements that require further attention to help the government to take targeted actions to improve the business climate and legal protection in Indonesia.

# 2. Literature Review

### 2.1. Economic Freedom

The concept of economic freedom is defined as the degree of autonomy that individuals and economic entities have in making economic decisions without excessive interference from the government or other institutions (Ciftci & Durusu-Ciftci, 2022). It contains several key elements that reflect the main aspects of economic freedom, namely:

#### 1. Rule of Law

The rule of law is the foundation for sustainable economic freedom (Mahmutovic & Alhamoudi, 2024). This includes the protection of property rights, which provides assurance to individuals and economic entities that their assets will be protected from arbitrary action or confiscation by others. Strong government integrity is also important in creating a stable and trustworthy environment for economic actors. In addition, judicial effectiveness ensures that economic conflicts can be resolved fairly and efficiently, providing the legal certainty necessary for investment and economic growth.

#### 2. Government Size

An excessively large government can be an impediment to economic freedom (Nurhayati & Hamzah, 2020). Excessive government spending can cause fiscal pressures that potentially harm the private sector. Similarly, heavy tax burdens can inhibit motivation to produce and invest. The fiscal health of the government, including the sustainability of budget deficits and public debt, is also crucial for maintaining long-term economic stability.

### 3. Regulatory Efficiency

Efficient regulation creates an environment conducive to economic growth. Business freedom provides space for innovation and creativity, as well as facilitates the establishment and development of businesses without excessive obstacles. Balanced labor freedom, which considers both workers' rights and flexibility for employers, is also necessary to create a dynamic labor market. Meanwhile, monetary freedom allows monetary authorities to regulate currency and interest rates in a way that supports economic stability and growth.

#### 4. Open Markets

Open markets create opportunities for individuals and economic entities to participate in trade and investment without unnecessary barriers. Trade freedom allows access to global markets, enhancing competitiveness and efficiency in resource allocation. Meanwhile, investment freedom and financial freedom provide access to the capital and financial services needed for business growth and expansion.

Economic freedom plays a vital role in creating a nation's prosperity and well-being. By upholding the rule of law, streamlining government size, making regulations more effective, and opening markets, a country can create an environment conducive to economic growth for its citizens. Every nation should continually strive to improve and enhance its economic freedom. Wise policies and ongoing reforms can create opportunities for all individuals and economic entities to thrive and achieve shared prosperity.

### 2.2. Index of Economic Freedom

The Index of Economic Freedom (IEF) is a measurement tool used to evaluate the level of economic freedom in a country (Ausloos & Bronlet, 2022). By using parameters such as the rule of law, government

size, regulatory efficiency, and open markets, the IEF provides a comprehensive view of a country's economic conditions. The analysis generated by the IEF not only provides a current snapshot of the economic situation but also allows for monitoring changes over time. The use of the IEF is not limited to measuring the level of economic freedom but also includes in-depth analysis of factors influencing a country's economic performance. The parameters measured in the IEF serve to assess how the rule of law contributes to economic stability. Similarly, with government size, where a balanced role of government can provide impetus for sustainable economic growth.

One of the main advantages of the IEF is its ability to provide a better understanding of the challenges and opportunities facing a country in achieving economic freedom. By identifying areas that require improvement, the IEF can serve as a guide for governments and other stakeholders in designing more effective policies to enhance the business and investment climate. This guidance includes steps such as legal reforms, changes in fiscal policy, and efforts to improve transparency and accountability in economic regulation. Additionally, the IEF also serves as a useful tool in comparing economic performance between different countries. By comparing IEF scores between countries, we can identify the relative strengths and weaknesses of each country in creating an environment conducive to economic growth. This provides valuable insights for countries to learn from each other and implement best practices in efforts to enhance their own economic freedom. The IEF is not just a measurement tool but also a valuable source of information and guidance for policymakers, researchers, and the general public in understanding and improving a country's economic conditions.

### 2.3. The Impact of Economic Freedom Level

The level of economic freedom has significant impacts on various aspects of a country's economic life (Shkiotov, 2022). High economic freedom indicates faster economic growth (Gakpa & Kouadio, 2023). When individuals and economic entities have the freedom to innovate, do business, and invest without excessive government interference, they tend to be more productive and efficient in resource utilization. This, in turn, fosters sustainable economic growth due to increased production and income. Moreover, economic freedom also plays a role in job creation. When the business environment becomes more market-friendly, more companies tend to grow and employ more workers. Innovation and business growth driven by economic freedom can also create demand for new skills, thereby increasing job opportunities for individuals.

Poverty reduction is also an impact of high economic freedom levels (Sultana et al., 2022). Through increased economic growth and job creation, individuals have greater opportunities to increase their income and lift themselves out of poverty. Furthermore, economic freedom can also encourage the adoption of more inclusive social policies, such as better education and health programs, which can help reduce social and economic disparities (Rapsikevicius et al., 2021). With stable economic growth, poverty reduction, and job creation, society as a whole can enjoy greater access to goods and services, including education, healthcare, housing, and better infrastructure. This ultimately enhances the quality of life and general welfare.

In 2023, Indonesia had a lower IEF score compared to 2022. This decline in score sends negative signals regarding potential investment, economic growth, and overall societal welfare. It indicates the need for improvements in the business environment and economic policies to ensure that the country can fully harness the potential of economic freedom to achieve sustainable growth and enhance the welfare of the entire population.

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#### 2.4. Data visualization

Data visualization is a technique used to transform data into visual forms that are easier to understand (Sudipa et al., 2023). This process involves steps such as data collection, processing, and presentation through various types of graphs, diagrams, and plots. One of the initial steps in data visualization is selecting the appropriate type of visual for the type of data to be presented and its analysis objectives. Commonly used types of visuals include line graphs, bar charts, pie charts, histograms, heatmaps, scatter plots, and maps (Lavanya et al., 2023). Each type of visual serves different purposes depending on the characteristics of the data, such as whether the data is categorical or continuous, and the analysis objectives, such as revealing patterns, trends, distributions, or relationships between variables. In data visualization, there are important design elements such as color usage, scale, labels, and annotations. Colors can be used to differentiate categories or highlight important information, but they should be used carefully to avoid misleading or confusing the audience. Proper scale is also important to ensure that the data is presented with accurate proportionality. Additionally, data visualization can involve techniques such as data aggregation, subsetting, and adding interactivity. Data aggregation can be used to simplify complex data into a more concise and understandable form, while data subsetting can help highlight relevant parts or display comparisons between different data groups (Cohen et al., 2022). Furthermore, interactivity can add an additional dimension to visualization by allowing users to explore the data directly.

Through effective data visualization, complex information can be presented clearly and easily understood. This helps users identify patterns, trends, anomalies, and hidden relationships in the data. Additionally, data visualization enables users to make better decisions based on a better understanding of the data they have, as well as facilitating various findings and insights with others. Thus, data visualization is not just a tool for understanding data, but also a highly useful tool in supporting better decision-making and impact

#### 2.5. Tableau

Tableau is a revolutionary software platform that provides users from various backgrounds with the ability to visualize data intuitively and effectively (Batt et al., 2020). With advanced features and a user-friendly interface, Tableau facilitates the process of data exploration, analysis, and presentation in an engaging and easily understandable manner. Deep data exploration with Tableau allows users to delve into their data in detail, uncover unexpected insights, and better understand the relationships between various variables through various intuitive visualization features such as interactive charts, dynamic maps, and customizable dashboards. Data presentations become more engaging with Tableau due to the flexibility in creating unique and interactive visualizations, allowing the audience to be more actively involved in the presentation. Additionally, Tableau's real-time analysis capabilities provide users with the ability to track changes in data as they occur and take immediate action as needed, which is invaluable in dynamic business situations. Tableau's strong collaboration features allow team members to share their visualizations and findings, discuss, and collaborate directly within the context of data visualization, thus enhancing team efficiency and ensuring that all team members have access to the same information. By combining powerful visualization capabilities with an intuitive user interface and advanced features. Tableau becomes a highly useful tool for professionals in various fields, not only helping them understand data but also enhancing their ability to analyze information better, make more timely decisions, and collaborate with teams effectively (Beard & Aghassibake, 2021).

### 2.6. Previous Research

The study (Jordaan, 2023) titled "Economic freedom, post materialism and economic growth" fills the

literature gap by exploring the impact of social values, especially post-materialism, on the framework of economic freedom and economic growth. Focusing on two main dimensions, namely economic freedom (as measured by the Fraser economic freedom index) and post-materialism, the author utilizes instrumental variable estimation techniques in a three-stage least squares framework. The main findings show that economic freedom, specifically through its components, makes a significant positive contribution to economic growth, while post-materialism has an adverse direct impact. However, a positive indirect impact of post-materialism through its influence on the institutional framework of economic freedom is also identified. In the discussion of implications, this study highlights the importance of considering social values in designing inclusive and responsive economic policies. The findings provide new insights for policy designers and researchers in understanding the complexity of the relationship between post-materialism, economic freedom, and economic growth, as well as how social values shape the conditions

for economic freedom and its impact on economic growth.

The results of research (Rapsikevicius et al., 2021) entitled "The Impact of Economic Freedom on Economic and Environmental Performance: Evidence from European Countries" discusses the impact of the EU Green Deal on economic transformation as well as the debate between free markets and market regulation in economic and environmental performance. With a focus on European countries, the article's framework considers the relationship between economic freedom and economic and environmental performance, filling a gap in the literature by introducing the concept of an optimal level of economic freedom. While previous findings are mixed, the new concept provides clearer direction in detailing the relationship between economic freedom and economic and environmental outcomes, as well as contributing original empirical evidence and detailing the targets of necessary structural reforms. A discussion on the relevance of the findings for the development of better economic policies highlights the practical benefits of this research, especially for policymakers in designing more efficient and appropriate economic policies.

The study (Pandey et al., 2023) entitled "The Value of Economic Freedom in Cross-Border Mergers" discusses the impact of economic freedom in the merger and acquisition (M&A) process globally. Focusing on 6159 takeover deals from 56 different countries and foreign targets from 130 countries, this study aims to understand how economic freedom affects the performance and economic effects of M&A and whether differences in economic freedom can benefit acquirers and targets. Using an institutional theory perspective, this study examines differences in institutional quality measured as economic freedom advantage, and its impact on parties involved in cross-border M&A. The findings show that acquiring firms with economic freedom advantage over their targets experience higher short- and long-term abnormal returns, while the level of economic freedom in the target country relative to the acquiring country positively affects the target's shareholder wealth effect and merger premium. These results contribute to institutional theory and highlight the importance of economic freedom gains in cross-border M&A, providing a deeper understanding of the mechanisms behind the process. The relevant part of this study highlights the importance of economic freedom advantages in enhancing performance and positive economic effects in cross-border M&A, complementing institutional theory and providing new insights into the dynamics of M&A.

Research (Syahril et al., 2023) entitled "Implementation of Business Intelligence to Analyze Popular Destination Data for Bali in 2022 Using Tableau Public Application", reviewed the importance of data management in business, especially in the context of tourism in Bali, Indonesia, by proposing a Business Intelligence (BI) approach to provide effective information. Through data analysis using Tableau Public software, this study evaluated the tourist attractions in Bali by utilizing Google reviews and Google Maps rankings. The results show that Bali has a reputation as one of the top tourist destinations in the world, with the insights gained from this analysis having the potential to contribute to tourism promotion, destination

management, and strategic decision-making in Bali's tourism industry. The findings and methods of this research are also relevant to the context of economic freedom in Indonesia, offering inspiration for analyzing economic data using BI tools such as Tableau.

The research (Novany et al., 2023) entitled "Visualization Analysis of Covid-19 Development Data Using Tableau Big Data with Forecasting Method" aims to explain the benefits of data analysis in Big Data visualization in optimizing the handling of active Covid-19 cases in North Sumatra. By using data on the development of Covid-19 cases from the official website https://covid19.sumutprov.go.id/, this research utilizes the Tableau data analysis tool to create a Covid-19 data dashboard and conduct predictions (forecasting) to obtain an overview of the development of the Covid-19 database situation in the region. The results of the data visualization analysis, especially in the form of management charts, provide a quick understanding of the development of the case Covid-19 in North Sumatra, while future predictions provide insight into the development of active cases. The findings can be used as a basis for decision-making and policy-making, especially by health agencies, and the discussion of this research includes the practical implications of the analysis results in supporting decision-making and policy-making. The relevance of this research to other research contexts is in the application of data analysis and Big Data visualization in handling Covid-19 cases, which can provide inspiration and guidance for analyzing economic data, especially in the context of economic freedom in Indonesia.

The study (Saputra et al., 2022) entitled "The Effect of Information and Communication Technology (ICT) and Economic Freedom on Human Development in the ASEAN Country Region in 2014-2019" aims to analyze the classification of the Human Development Index (HDI), Information and Communication Technology (ICT), and IEF in the ASEAN country region in the 2014-2019 period. Using combined time series and panel data from 2014-2019, as well as cross-section data from 10 ASEAN countries, this study involves classification analysis of HDI, ICT, and IEF using Klassen typology. The main findings show that ICT and Economic Freedom have positive and significant effects on Human Development in the ASEAN region during the same period. The discussion of this study includes interpretations of the key findings that support the positive relationship between ICT, Economic Freedom, and Human Development in the ASEAN region. The discussion in the study also details the specific impact of each factor on human development, providing insights on how these factors can be enhanced to improve the human development index in ASEAN countries. The relevance of this research to other studies lies in the basis of analysis related to human development index and its influencing factors in ASEAN countries. The analytical methods and findings generated can provide inspiration and reference to analyze the economic freedom index and other economic factors in the context of economic freedom in Indonesia.

Research (Kuncoro, 2022) with the title "Analysis of UMN Student Graduation Timeliness Using Supervised Learning Method" highlights the problem of late graduation of students at UMN (Universitas Multimedia Nusantara) during the 2018-2020 period. Although education is considered crucial in life, there are still many students who cannot graduate on time. This research aims to identify the factors that affect student graduation lateness in UMN by using the CRISP-DM framework as the basis for the approach. By utilizing tools and methods such as SQLYog, RapidMiner, and Tableau, this research analyzes the data to find an overview of the factors that affect the on-time graduation or tardiness of students at UMN. Through predictive algorithms such as Naive Bayes and logistic regression, this research provides indications or predictions regarding a student graduating on time. The discussion in this study details the implications of the findings on the causes of late graduation and potential solutions that can be implemented by the university to improve the on-time graduation rate. In conclusion, this research is relevant as it provides a foundation for understanding the factors that influence student graduation, and can inspire the development of approaches and tools for analyzing economic data in the context of economic freedom in Indonesia.

Research (Oetama et al., 2020) entitled "Geospatial Cluster Patterns of Drug Crime Exploration in DKI Jakarta" reviews the lack of geospatial visualization related to crime in Jakarta, especially in the context of drug problems. In Jakarta, which is the largest city in Indonesia, the high crime rate has not been supported by adequate visualization to understand the distribution of crime, especially related to drugs. This research uses a geospatial visualization framework to identify crime patterns in Jakarta by utilizing a clustering model to group crime data into three crime level categories. K-means algorithm is used in Tableau platform to build the clustering model. The research findings provide visualizations depicting high-crime areas in Jakarta, the main crimes that occur, and the types of crimes that are common in these areas. In addition, the research also revealed additional information on the type of crime, age attributable, and distribution of crime. The discussion highlights the importance of geospatial visualization in understanding and addressing the crime problem in Jakarta, as well as the practical implications for the Jakarta Provincial Government in designing crime reduction strategies. The relevance of this research to your own lies in the foundation it provides for geospatial understanding of crime, as well as inspiration in developing clustering models in economic data visualization in the context of economic freedom in Indonesia.

Through a review of previous studies, it can be concluded that the complexity of the interaction between social values, economic freedom, and technological development has a significant impact on various aspects of people's lives. These findings include the influence of post-materialism on economic growth, the balance between economic freedom and environmental protection, the use of Business Intelligence in the tourism sector, and the impact of data visualization on pandemic management. This research, inspired by these findings, aims to further contribute to understanding the complex dynamics between economic, social and technological factors in a more specific context. By bringing these elements together, this research is expected to provide deep insights to support decision-making and policy planning in various sectors, becoming the next step in scientific exploration to support sustainable development and a holistic understanding of the dynamics of contemporary society.

# 3. Research Methodology



Fig. 1: Research Methodology Flowchart

Figure 1 above shows the stages carried out in this research to solve the problem, starting from problem identification to drawing conclusions from the analysis results. The research flow is as follows:

#### 3.1 Problem Identification

This stage involves information gathering and analysis to identify the root of the problem. The problem identification in this research starts with the phenomenon related to economic problems in Indonesia. This low level of economic freedom creates serious challenges and has the potential to adversely affect society, businesses and government agencies in Indonesia.

### 3.2 Literature Study

The literature study is a stage that aims to understand the context and theoretical framework related to economic freedom. Previous research was conducted by identifying and analyzing international and national journal articles from trusted sources such as Scopus, SINTA (Science and Technology Index), and UMN (Universitas Multimedia Nusantara). The articles were taken to provide a strong theoretical foundation related to economic freedom and its impact on economic growth and socio-political aspects of a country. In addition, the journal articles also provide guidance in creating data visualizations.

### 3.3 Data Collection

The data collection stage is a step in the research process where researchers collect the necessary information. stage was carried out by accessing data https://www.heritage.org/index/. The data covers the time period from 2000 to 2023, and focuses on Indonesia. The data includes parameters such as freedom of business, regulation, trade, and property rights protection. Other countries are also included as comparators to provide context and enable comparisons of Indonesia's performance with similar countries or with similar economic characteristics. This data will be used to analyze the changes in Indonesia's IEF score over time and identify the factors that influence these changes. In addition, the comparison with other countries will help in understanding Indonesia's relative position in the global scenario.

### 3.4 Data Preparation

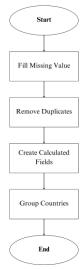


Fig. 2: Data Preparation Flowchart

Figure 2 shows the flow of the data preparation stage. This stage starts with collecting, checking and cleaning the data to ensure its quality and credibility. The first step is to ensure that the data collected has a consistent format and structure. Once the data is collected, the cleaning process is performed using Python, including handling missing values, duplicate detection, and other anomaly countermeasures that may affect the analysis results. Checking for null values in the data is essential as a large number of null values indicates a lack of information in the dataset. Modifications are made to remove null values, meaning that any rows or columns that have null values are removed so that the remaining data contains only complete entries. This step improves data quality and analysis reliability. After data cleaning in Python, a new Calculated Field was created in Tableau to calculate aspects of economic freedom such as Rule of Law, Government Size, Regulatory Efficiency, and Open Markets. In addition, Southeast Asian (ASEAN) countries were grouped to facilitate visualization in data analysis related to economic freedom scores in the region.

#### 3.5 Data Visualization

This stage presents information in an intuitive and engaging way through graphs, charts, and interactive visualizations using Tableau. Once the data is prepared, Tableau is used to easily make decisions by presenting patterns, trends, and insights from the data that has been collected. The data visualizations conducted aim to observe Indonesia's IEF development from year to year, show how parameters contribute to the overall IEF score, compare Indonesia's IEF score with other countries, and predict Indonesia's IEF score in the future. These visualizations will be displayed clearly through a dashboard using Tableau Public.

# 4. Result and Discussion

### 4.1 Indonesia's Economic Freedom Overview

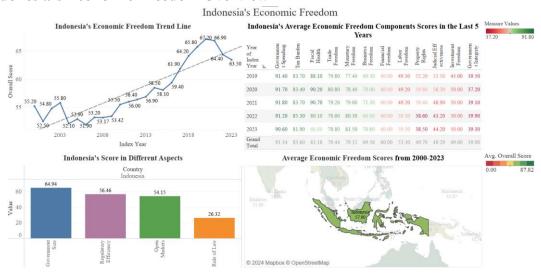


Fig. 3: Dashboard of Indonesia's Economic Freedom

Figure 3 displays a dashboard that provides an overview of Indonesia's economic freedom. First, there is a line graph that shows a positive trend in Indonesia's economic freedom over time. This shows that in general, Indonesia's economic climate has been improving over the time span. However, there is a slight decline in 2022 compared to the previous year. Indonesia's economic freedom score ranges from 52 to 67,

indicating variations in the level of economic freedom over the period. Significant improvements were seen from 2008 to 2018, demonstrating the success of improvement efforts in terms of regulation, policy and economic infrastructure. During the time span from 2000 to 2023, economic freedom in Indonesia underwent significant changes. In 2006, there was a decline in economic freedom, caused by government policies that further regulated business activities or the impact of an unstable global economic situation. In contrast, the period from 2016 to 2020 recorded a continuous increase until it reached the peak of the trend. This was in line with Indonesia's inflation, which declined every year until 2021, creating conditions conducive to increased economic freedom (Dihni, 2022). Despite reaching its peak in 2020, thereafter there was a slight decline in the value of economic freedom. This decline was triggered by the Covid-19 pandemic that shook the domestic economy, forcing the government to make policy adjustments for economic recovery and stabilization (Bank Indonesia, 2020). The phenomenon of fluctuations in Indonesia's economic freedom score reflects the complex interactions between economic policies, internal factors, and global conditions affecting the country.

Next, there is a table that displays the score of Indonesia's economic freedom components in the last 5 years from 2019 to 2023. This table provides an overview of how each component of economic freedom, such as fiscal policy, regulation, and market freedom, has contributed to the overall score. Based on the analysis conducted, it can be concluded that the component that needs attention is Government Integrity, as it has the lowest average score of 39.00. This affects aspects of the next visualization, which provides an overview of Indonesia's scores in various aspects of economic freedom, such as government size, regulatory efficiency, open markets, and rule of law in the form of bar charts. The graphs provide a more detailed insight into which areas have developed well and which still require improvement. The low rule of law score of 26.32, reveals serious challenges in the application of law and justice in Indonesia. The significant legal uncertainty indicated by this low score could hamper investor confidence, social order and overall economic growth. Therefore, the government needs to undertake deeper legal reforms and improvements to the judicial system to ensure a strong rule of law.

Lastly, there is a visualization of a map showing Indonesia's average IEF score from 2000 to 2023. The map visualizes a comparison of Indonesia's IEF scores with neighboring countries in the Asia-Pacific region from 2000 to 2023. Among these countries, Indonesia, despite having an average score of 57.90, is in a better position than some of its neighbors but still far behind Australia, which has an excellent economic freedom level with a score of 80.28. This indicates that although there has been progress in enhancing economic freedom in Indonesia, further efforts are needed to reach higher standards. Regionally, India has an average score of 53.58, which is below Indonesia in terms of economic freedom. Meanwhile, Bangladesh and Burma, with scores in the mid-40s, specifically 45.72 and 47.77, respectively, show a lack of economic freedom accuracy compared to Indonesia. These scores reflect assessments of various factors, including trade policies, fiscal freedom, efficient governance, and property rights protection. For Indonesia, this score reflects the extent to which its economic policies and practices contribute to sustainable growth. With a deeper understanding of its regional position, the government and policymakers can formulate more sophisticated strategies to strengthen economic freedom and encourage inclusive and sustainable growth.

### 4.2 Global Economic Freedom

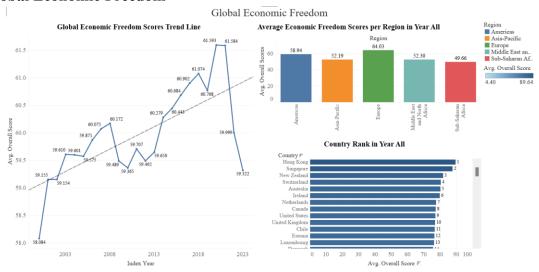


Fig. 4: Dashboard of Global Economic Freedom

Figure 4 is a visualization dashboard that provides a comprehensive view of global economic freedom. The trend graph of the global economic freedom score shows fluctuations in the Economic Freedom Index score from 2000 to 2023, reflecting the evolution of the global economy and the factors affecting it. The fluctuations with the lowest score in 2000, reaching 58.08, and the highest peak in 2020, with the score reaching 61.59, show the large variations in the level of economic freedom in different countries over more than two decades. The most striking trend from the graph is the significant decline after reaching the highest peak score, reflecting changes in global economic conditions that impact the level of economic freedom in different countries, including Indonesia. This shows that Indonesia's decline in economic freedom was also influenced by unfavorable global conditions, namely the economic recession. The global economic recession in the year of the decline in economic freedom was caused by several factors: the Covid-19 pandemic, the Russia-Ukraine war, and the decline in global demand (Guénette et al., 2022). The emergence of the Covid-19 pandemic drastically changed the global economic landscape with devastating effects. The quarantine measures and restrictions imposed by many countries to combat the spread of the virus led to a significant decline in economic activity. Sectors such as tourism, hospitality and transportation were hit hard due to reduced demand and mobility. In addition, the war between Russia and Ukraine also put additional pressure on the global economy. The conflict disrupted energy supplies, resulted in geopolitical uncertainty, and undermined investor confidence, all of which contributed to the decline in economic activity. Finally, the decline in global demand due to economic uncertainty and political turmoil also played an important role in creating recessionary conditions. The decline in consumer and investor confidence led to a decline in investment and consumption, which in turn slowed overall economic growth.

The average economic freedom score per region chart aims to compare economic freedom scores between regions of the world. The Americas stand out with a score of 58.94, supported by economic policies that favor innovation, investment, and free trade, as well as strong financial institutions and good infrastructure. Asia-Pacific and Middle East Asia and northern Africa are in the middle with scores of 52.19 and 52.30 respectively. Although the Asia-Pacific region has rapid economic growth, some countries are still faced with challenges of complex regulation, corruption and political instability. Europe shows a high level of economic freedom with a score of 64.03, supported by the adoption of free market economic principles and strong economic integration between EU member states. Meanwhile, Sub-Saharan Africa

has the lowest score of 49.66, influenced by factors such as corruption, lack of infrastructure, political instability, and lack of policies that support investment and free trade. This analysis provides a clear view of the economic dynamics in different regions and a better understanding of the factors affecting the level of economic freedom in each of them.

On the other hand, the overall economic freedom ranking chart reveals the top five countries in economic freedom from 2000-2023, showing how they create a business environment conducive to economic growth and prosperity. Hong Kong leads with a score of 89.64, confirming its position as a global financial center with a very liberal business environment. This is mainly driven by low government regulation, low taxes, and an efficient legal system that supports economic activity. In second place is Singapore with a score of 87.82, demonstrating the same commitment to economic freedom with state-of-the-art infrastructure, transparent regulation, and easy access to global markets. New Zealand ranked third with a score of 81.93, known for its fair taxation system, open trade policies, and strong property protection, all of which promote steady economic growth. Switzerland, ranked fourth with a score of 80.46, stands out with its financial stability, efficient regulation, and strong innovation within the financial sector. Finally, Australia, ranked fifth with a score of 80.28, has a conducive business environment with advanced infrastructure, a clear regulatory system, and progressive trade policies. This chart shows that these five countries have succeeded in creating a business-friendly climate, encouraging investment, sustainable economic growth, and prosperity for their citizens.

### 4.3 Government Integrity in Indonesia

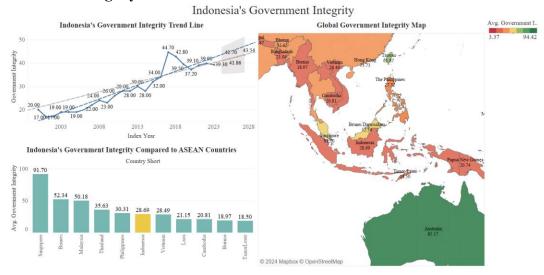


Fig. 5: Dashboard of Government Integrity in Indonesia

Figure 5 displays a dashboard that provides an overview of the components of Government Integrity Indonesia. First, there is a line graph that displays the trend of Indonesia's government integrity over time. It can be seen that there has been a gradual increase in government integrity scores since the beginning of the observation period in 2000. This increase continued until it reached its peak in 2017, signaling significant progress in public confidence in government integrity. However, there is a drastic change after reaching this peak, where there is a sharp decline in the value of government integrity until 2023. One of the reasons for this decline is the increase in corruption cases committed by government officials. In 2018, the number of corruption offenses in the government reached 200, which is twice as many as the previous year (Setiawan & Jesaja, 2022). Corruption within the government can impede economic freedom by

blocking capital flows, worsening the business climate, and undermining investor confidence. When corruption is rampant, the economic decision process is not based on actual economic needs, but rather on personal or group interests. Despite the decline, the long-term trend analysis shows that there was an increase in the government integrity score from the beginning of the 2000 period until 2023, indicating that despite annual fluctuations, there is overall progress in strengthening government integrity in Indonesia. This suggests the need for continuous monitoring of government integrity in the future. Starting from 2024, there are estimates shown by the dotted line also indicating a consistent increase. Based on these estimates, the value of Government Integrity in Indonesia is expected to continue to increase until it reaches its peak in 2027. This positive forecast reflects the continuous efforts and commitment in improving government integrity in Indonesia.

Furthermore, there is a comparison of Indonesia's government integrity with other ASEAN countries. The graph provides an overview of how well Indonesia performs in maintaining the integrity of its government compared to its neighbors in the ASEAN region. Singapore takes the top spot with a very high score, indicating an excellent level of government integrity. On the other hand, Indonesia is ranked 6th, indicating that there are challenges faced in terms of government integrity. An overview of the components of government integrity can be seen in the global map that shows the government integrity score with color details, to provide how well Indonesia maintains its integrity on a global scale. It can be seen that Indonesia has a faded red symbol, which indicates that Indonesia's Government Integrity score is low compared to other countries. There are other countries in the ASEAN region that also have low scores, such as Vietnam, Laos, Cambodia, Burma, and Timor Leste, which shows that the issue of government integrity is not a challenge unique to Indonesia, but also a regional problem. However, Indonesia has the potential to continue improving its government integrity through policy reforms, stronger law enforcement, and efforts to increase transparency and accountability in governance. This dashboard provides a comprehensive understanding of the status and development of Indonesia's government integrity in a local and global context, and provides a comparison with other countries.

#### 4.4 Comparison of Rule of Law between Indonesia and Singapore



Fig. 6: Dashboard of Comparison of Rule of Law between Indonesia and Singapore

The Rule of Law Comparison Dashboard in Figure 6 provides an in-depth look at the fundamental differences in law and governance between Indonesia and Singapore. Singapore was chosen for comparison

as it ranks second in economic freedom, and is a neighboring country of Indonesia. The bar graph displaying the Economic Freedom scores shows significant differences between the two countries in three aspects of Rule of Law. Singapore consistently scores higher than Indonesia in all aspects, showing substantial gaps in intellectual property rights protection, efficiency of the judicial system, and integrity of government. The trend line for the period 2019 to 2023 provides additional perspective, illustrating changes in key aspects of Rule of Law in both countries. The data shows that Indonesia experienced a slight decline in all aspects. Meanwhile, Singapore remains in a much better position than Indonesia in these aspects. Singapore has significant levels of excellence in all aspects. Although Singapore also experienced a sharp decline in judicial effectiveness, it remains ahead of Indonesia in this regard. Analysis of the data indicates that while

Indonesia has improved in some areas, it still lags far behind Singapore in terms of Rule of Law.

Singapore has a strict, transparent, and efficient legal system, where strict law enforcement, compliance with the law, and the independence of the judicial system are the cornerstones. Law enforcement institutions such as the Corrupt Practices Investigation Bureau have strong authority to crack down on corruption cases (Afiftania et al., 2021). In addition, an independent and fair judicial system, judges selected based on their integrity and independence, and a high level of public compliance with the law, create a stable and safe environment for business and investment. On the other hand, Indonesia still faces challenges in strengthening its legal system, including issues of corruption, uneven law enforcement, and low public trust in the justice system. Indonesia needs to take strategic steps such as strengthening law enforcement institutions, increasing transparency and accountability, investing in legal education, fighting corruption, and improving compliance with the law. By adopting these principles, Indonesia can improve its legal system towards a path more similar to Singapore's, supporting sustainable economic growth, social stability, and justice.

### 5. Conclusion

By 2023, Indonesia experienced a significant decline in its economic freedom score, illustrating serious challenges in its efforts to achieve sustainable and inclusive economic growth. This research has identified several factors contributing to this decline and proposed solutions that can be adopted by the government to improve the situation. Through careful literature review and data collection, it has been revealed that over-regulation, weak protection of property rights, and lack of government efficiency are some of the main factors affecting Indonesia's economic freedom. The increase in corruption and economic crime is also a major cause of the decline in the economic freedom score. To address these issues, a number of solutions have been proposed. First, policy reforms need to be made to strengthen business freedom and reduce burdensome regulations. Property rights protection also needs to be improved through an improved legal system and more effective law enforcement. In addition, efforts need to be made to improve government efficiency by strengthening law enforcement agencies, increasing transparency, and reducing the level of corruption within the bureaucracy. The Ministry of Economy can formulate policies that support economic freedom, improve the investment climate, facilitate private sector growth, and encourage innovation in the digital economy. The Ministry of Finance needs to increase transparency in state financial management, including budget management and tax collection, as well as improve accountability and reduce corruption to gain the trust of the Indonesian people. The Ministry of Law should strengthen the judicial system and law enforcement to ensure the protection of property rights, fairness in the settlement of business disputes, and fair and strict enforcement of laws against economic offenses. By taking appropriate measures and adopting the suggested solutions, it is hoped that Indonesia can overcome the challenges in achieving greater economic freedom. As such, the country will be able to make a positive contribution to national economic growth and the overall welfare of society.

# References

Afiftania, L. A., Mahmudah, N., & Putri, F. H. (2021). Diferensiasi Hukum bagi Penyedia Layanan Over The Top (Studi Perbandingan Indonesia dengan Singapura). *Perspektif Hukum*, 21(1), 79-98. https://perspektif-hukum.hangtuah.ac.id/index.php/jurnal/article/view/19

Amnesty International Indonesia. (2022). Silencing Voices, Suppressing Criticism: The Decline in Indonesia's Civil Liberties. Retrieved 2024, from https://www.amnesty.org/en/wp-content/uploads/2022/10/ASA2160132022ENGLISH.pdf

Ardhanariswari, R., Haryanto, T., & Supriyanto. (2021, September). Jurnal Dinamika Hukum. *Gender Equality in Politics: Study on The Indonesian Constitutional Court's Decisions on Judicial Review Related to Women's Political Participation*, 21(21), 1-10. https://doi.org/10.20884/1.jdh.2021.21.3.2844

Ausloos, M., & Bronlet, P. (2022). Economic freedom: The top, the bottom, and the reality. i. 1997–2007. *Entropy*, 24(1). https://doi.org/10.3390/e24010038

Badan Perencanaan Pembangunan Nasional. (2022). *Indonesia Open Government Partnership National Action Plan*. Open Government Indonesia. Retrieved March 10, 2024, from https://ogi.bappenas.go.id/assets/img/renaksi/Indonesia Action-Plan 2023-2024 EN.pdf

Bank Indonesia. (2020). Bauran Kebijakan Bank Indonesia Tahun 2021: Mendorong Pemulihan Ekonomi Nasional, Menjaga Stabilitas. Bank Indonesia. Retrieved May 13, 2024, from https://www.bi.go.id/id/publikasi/laporan/Documents/5 LPI2021 BAB3.pdf

Batt, S., Grealis, T., Harmon, O., & Tomolonis, P. (2020). Learning Tableau: A data visualization tool. *The Journal of Economic Education*, 51(4), 317-328. https://doi.org/10.1080/00220485.2020.1804503

Beard, L., & Aghassibake, N. (2021). Tableau (version 2020.3). *Journal of the Medical Library Association*, 109(1), 159-161. https://doi.org/10.5195/jmla.2021.1135

Bergh, A., & Bjørnskov, C. (2019). Does Economic Freedom Boost Growth for Everyone? *Research Institute of Industrial Economics*. https://www.ifn.se/wfiles/wp/wp1276.pdf

Choudhary, P. K., & Saharia, P. (2023). Global income inequality and measuring values with the world values survey. *Journal of Social and Economic Development*, 25(1), 103-122. https://doi.org/10.1007/s40847-022-00187-z

Ciftci, C., & Durusu-Ciftci, D. (2022). Economic freedom, foreign direct investment, and economic growth: The role of sub-components of freedom. *Journal of International Trade and Economic Development*, 31(2), 233–254. https://doi.org/10.1080/09638199.2021.1962392

Cohen, M. C., Zhang, R., & Jiao, K. (2022). Data Aggregation and Demand Prediction. *Operations Research*, 70(5), 2597–2618. https://doi.org/10.1287/opre.2022.2301

Coleman, T. E. (2021). Reflecting on the role and impact of the constitutional value of ubuntu on the concept of contractual freedom and autonomy in South Africa. *Potchefstroom Electronic Law Journal*, *24*, 1-68. https://doi.org/10.17159/1727-3781/2021/V24I0A8727

Dialga, I., & Vallée, T. (2021). The index of economic freedom: methodological matters. *Studies in Economics and Finance*, 38(3), 529-561. https://doi.org/10.1108/SEF-07-2015-0181

Dihni, V. A. (2022, June 30). *Inflasi Tahunan RI Capai 4,35% di Juni 2022, Tertinggi dalam 5 Tahun Terakhir*. Databoks. Retrieved May 13, 2024, from https://databoks.katadata.co.id/datapublish/2022/07/01/inflasi-tahunan-ri-capai-435-di-juni-2022-tertinggi-dalam-5-tahun-terakhir

Firmansyah, M. Z., S. Prianto, & M. Bilney. (2022, May 11). *Collaboration Strategy in the Penta-Helix Concept: Deradicalization Program for Terrorist Separatism Groups in Papua*, 4, 1-15. https://scholarhub.ui.ac.id/cgi/viewcontent.cgi?article=1065&context=jts

Freedom House. (2023). *Indonesia: Freedom in the World 2023 Country Report*. Freedom House. Retrieved March 10, 2024, from https://freedomhouse.org/country/indonesia/freedom-world/2023#CL

Gakpa, L. L., & Kouadio, H. K. (2023). Effect of demographic transition on economic growth: does economic freedom matter? Evidence from ECOWAS countries. *Journal for Studies in Economics and Econometrics*, 47(3), 199–222. https://doi.org/10.1080/03796205.2023.2201892

Guénette, J. D., Kose, M. A., & Sugawara, N. (2022, September). Is a Global Recession Imminent? Equitable Growth, Finance, and Institutions Policy Note No. 4. https://www.worldbank.org/en/research/brief/global-recession

Hamzani, A. I., Asmarudin, S. I., K. Rahayu, & H. Aravik. (2020). Law Enforcement Problems and Impacts of the Law Development in Indonesia. 24, 1-10. https://repository.upstegal.ac.id/2926/4/Artikel%20Law%20Enfrcement.pdf

The Heritage Foundation. (2023). *Index of Economic Freedom: Indonesia*. The Heritage Foundation. Retrieved March 10, 2024, from https://www.heritage.org/index/pages/country-pages/indonesia

H. Limanseto. (2022, March 17). Investasi Berkelanjutan Menjadi Sarana yang Signifikan untuk Mendorong Pemulihan Ekonomi Serta Mendukung Pencapaian Target SDGs. Kementrian Koordinator Bidang Perekonomian Republik Indonesia. Retrieved March 10, 2024, from https://ekon.go.id/publikasi/detail/3936/investasi-berkelanjutan-menjadi-sarana-yang-signifikan-untuk-mendorong-pemulihan-ekonomi-serta-mendukung-pencapaian-target-sdgs.

Jordaan, J. A. (2023). Economic freedom, post materialism and economic growth. *Social Sciences and Humanities Open*, 7(1). https://doi.org/10.1016/j.ssaho.2023.100416

K. Morton. (2024). *Data Blending: Dynamic Workload Driven Data Integration in Tableau*. https://www.tableau.com/learn/whitepapers/dynamic-data-blending.

Komisi Pemilihan Umum. (2019). *Hasil Hitung Suara Legislatif DPR RI 2019*. Info Publik Pemilu 2019. Retrieved 2024, from https://pemilu2019.kpu.go.id/#/dprri/hitung-suara/

Kuncoro, C. P. (2022). Analysis Of UMN Student Graduation Timeliness Using Supervised Learning Method. *International Journal of New Media Technology*, 8(2), 89-95. https://doi.org/10.31937/ijnmt.v8i2.2366

Kusnandar, V. B. (2022, Juni). *Jumlah Anggota DPR RI Perempuan pada Pemilu Legislatif*. Tren Jumlah Anggota DPR RI Perempuan Kian Meningkat. Retrieved 2024, from https://databoks.katadata.co.id/datapublish/2022/06/20/tren-jumlah-anggota-dpr-ri-perempuan-kian-meningkat.

Lavanya, A., Sindhuja, S., Gaurav, L., & Ali, W. (2023). Comprehensive Review of Data Visualization Tools: Features, Strengths, and Weaknesses. *International Journal of Computer Engineering in Research Trends*, 10(1), 10-20. https://doi.org/10.22362/ijcert/2023/v10/i01/v10i0102

Mahmutovic, A., & Alhamoudi, A. (2024). Understanding the Relationship between the Rule of Law and Sustainable Development. *Access to Justice in Eastern Europe*, 7(1), 170-197. https://doi.org/10.33327/AJEE-18-7.1-a000102

Maslennikov, V. V., Larionov, A. V., & Gagarina, M. A. (2022). Factors of Formation of Financial behavior Types of Economic Entities. *Finance: Theory and Practice*, 26(2), 88-103. https://doi.org/10.26794/2587-5671-2022-26-2-88-103

Muharam, R. S., Pradhanawati, A., Fitriyah, & Supratiwi. (2023). Otoritas J. Ilmu Pemerintahan. "Fulfillment of Women's Political Rights through Mainstreaming Gender Quotas in Election Supervisory Board, 13, 1-15. https://journal.unismuh.ac.id/index.php/Otoritas/article/view/12691

Novany, A. A., Hartama, D., Lubis, M. R., Tambunan, H. S., & Syajidan, I. (2023). Analisa Visualisasi Data Perkembangan Covid-19 Menggunakan Tableau Big Data Dengan Metode Forecasting. *In Prosiding Seminar Nasional Teknologi Komputer dan Sains*, *1*(1), 631-639. https://prosiding.seminars.id/prosainteks/article/view/211

Nowicki, H. E., & Kucharski, K. (2022). Proportionality of interfering with economic freedom in the context of state control of economic activity. *Studia Iuridica Toruniensia*. https://www.semanticscholar.org/paper/Proportionality-of-interfering-with-economic-in-the-Nowicki-Kucharski/5096786139e664b551350c36dc48e9563bc4f166

Nurhayati, N., & Hamzah, A. (2020). Pengaruh Pertumbuhan Ekonomi Dan Ukuran Pemerintah Daerah Terhadap Kinerja Keuangan Pemerintah Daerah. *Jurnal Akutansi dan Manajemen*, *1*(1), 22-34. https://journal.uniku.ac.id/index.php/jeam/article/view/3926

Oetama, R., Heng, T. T., & Tjahjana, D. (2020). Sebuah Pola Cluster Geospatial Eksplorasi Kejahatan Narkoba di DKI Jakarta. *Ultima InfoSys : Jurnal Ilmu Sistem Informasi*, 11(1), 57-62. https://doi.org/10.31937/si.v9i1.1514

Pandey, V., Steigner, T., & Sutton, N. K. (2023). The value of economic freedom in cross-border mergers. *International Review of Economics and Finance*, *86*, 540–563. https://doi.org/10.1016/j.iref.2023.04.002

Panikarova, S., Vlasov, M., & Draskovic, M. (2020). Relationsheep between social business entrepreneurship and business freedom: An evidence from the Russian. *Montenegrin Journal of Economics*, 16(3), 123-135. https://doi.org/10.14254/1800-5845/2020.16-3.10

Rapsikevicius, J., Bruneckiene, J., Lukauskas, M., & Mikalonis, S. (2021). The impact of economic freedom on economic and environmental performance: evidence from european countries. *Sustainability (Switzerland)*, 13(4), 1–20. https://doi.org/10.3390/su13042380

Saputra, R. A., Nuryadin, D., & Winarti, A. S. (2022). Pengaruh Teknologi Informasi dan Komunikasi (TIK) dan Kebebasan Ekonomi Terhadap Pembangunan Manusia di Kawasan Negara Asean Tahun 2014-2019. SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan, 1(10), 2107–2120. https://doi.org/10.54443/sibatik.v1i10.308

Setiawan, I., & Jesaja, C. P. (2022). Analisis Perilaku Korupsi Aparatur Pemerintah Di Indonesia (Studi pada Pengelolaan Bantuan Sosial Di Era Pandemi Covid-19). *Jurnal Media Birokasi*, 4(2), 33-50. https://ejournal.ipdn.ac.id/JMB/article/download/2744/1356/

Shkiotov, S. V. (2022). The Impact of the Level of Economic Freedom on the Socio-Economic Development of National Economies: the Eurasian Economic Union Countries. *Journal of Regional and International Competitiveness*, 3(2), 34–41. https://doi.org/10.52957/27821927 2022 2 34

Sudipa, I. G. I., Sarasvananda, I. B. G., Hartatik, Prayitno, H., Putra, I. N. T. A., Darmawan, R., & Atmodjo, D. (2023). *Teknik Visualisasi Data*. PT. Sonpedia Publishing Indonesia. https://www.mendeley.com/catalogue/4c54bfb6-10a8-377d-be4f-a3c4d2229615/

Sultana, N., Rahman, M. M., & Khanam, R. (2022). The effect of the informal sector on sustainable development: Evidence from developing countries. *Business Strategy and Development*, *5*(4), 437–451. https://doi.org/10.1002/bsd2.217

Syahril, A., Erizal, E., & Hasan, F. N. (2023). Implementasi Business Intelligence untuk Menganalisis Data Tujuan Populer Untuk Bali Tahun 2022 menggunakan Aplikasi Tableau Public. *Kesatria: Jurnal Penerapan Sistem Informasi (Komputer dan Manajemen)*, 4(4), 852-859. https://tunasbangsa.ac.id/pkm/index.php/kesatria/article/view/235

Tableau. (2024). *Create a Dashboard*. Tableau Help. Retrieved March 10, 2024, from https://help.tableau.com/current/pro/desktop/en-us/dashboards\_create.htm