Capital Market Efficiency and Economic Growth: Evidence from Bangladesh

Md Ataur Rahman Chowdhury1 and Fakrul Ahmed2,*

ABSTRACT

This study explores the influence of capital market efficiency on Bangladesh's economic growth, using time series data covering market capitalization, total market turnover, and stock price indices from 2011 to 2022. The application of a multiple regression model reveals that the Bangladesh capital market has the potential to contribute significantly to the country's economic growth. This potential is attributed to the notable characteristics of high market capitalization and relatively robust market liquidity. Consequently, it is recommended that market organizations and regulations be structured to attract a substantial number of both domestic and foreign investors, encouraging substantial listings, investments, and trading. Such measures are crucial to achieving the central objective of optimally allocating economic resources for the sustained and resilient growth of the nation.

Keywords: Bangladesh, capital market, DSE, economic growth.

1. Introduction

In a contemporary economy, the key to economic growth lies in a well-functioning financial sector that effectively combines domestic savings and attracts foreign capital for productive investments. In contrast, underdeveloped or inefficient capital markets tend to be both illiquid and costly, acting as deterrents for foreign investors. Additionally, these inadequacies in capital markets impede the capital-raising endeavors of large domestic enterprises, often compelling them to seek opportunities in foreign markets.

Recent theoretical studies on the relationship between financial development and economic growth, as outlined by Pagano (1993), highlight three essential channels. First, the development of capital markets increases the portion of savings channeled into investments. Second, capital market development can influence the savings rate, thereby impacting investment levels. Third, the advancement of capital markets enhances the efficiency of capital allocation. Aligning with these channels, the introduction of an efficient capital market serves as a link between net savers (households) and net investors (entrepreneurs).

In cases where capital markets lack efficiency or financial stability, the public offering of stocks diminishes due to high transaction costs and uncertainties regarding obtaining a fair market price. This inefficiency and financial instability can diminish the motivation to initiate new ventures, ultimately reducing the overall long-term productivity of the economy (Anjom & Faruq, 2023). According to Ekundayo (2002), achieving sustainable economic growth and development necessitates substantial local and foreign investments, and the capital market serves as a conduit for making this possible. Moreover, capital markets offer opportunities for investors to buy and sell existing securities, encouraging people to invest in securities and promoting economic growth (Ewah et al., 2009).

Effective corporate boards play a crucial role in decision-making and strategy formulation. Transparent and well-informed decision-making contributes to the credibility of the company in the eyes of investors and analysts. Strong corporate governance practices, overseen by boards, enhance the confidence of investors. Ethical conduct and adherence to corporate governance principles contribute to a positive perception in the market (Ahmed, 2021b). Transparent and well-governed companies are
likely to be perceived positively by investors, contributing to accurate stock pricing and a more efficient capital market.

Financial inclusion plays a pivotal role in fostering a country’s growth by cultivating financial infrastructure, propelling economic activities, and generating employment opportunities. This study aimed to investigate the influence of financial inclusion on economic growth across four South Asian nations. Employing various panel data models and diverse metrics of financial inclusion, the research sought to unveil the correlation between economic growth and the extent of financial inclusion. The study’s outcomes affirmed that financial inclusion indeed had a positive impact on economic growth in these countries, albeit with variations in the degree of influence across different measures of financial inclusion. Consequently, policymakers in these nations are urged to undertake necessary measures to expedite financial inclusion initiatives, thereby promoting robust and sustainable economic growth (Biswas, 2023).

The relationship between Foreign Direct Investment, capital markets, and economic growth is intricate and interconnected. The interaction between Foreign Direct Investment and capital markets plays a significant role in influencing economic growth in the host country. It often brings in substantial amounts of capital, injecting funds into the host country’s capital market. These funds may be directed towards various financial instruments, such as stocks, bonds, or other securities, contributing to increased liquidity and capital availability in the market (Faruq, 2023).

2. Bangladesh: An Economic Powerhouse Under Construction

Bangladesh, a nation of over 170 million inhabitants, paints a compelling picture of economic transformation. From its humble beginnings as a low-income country, it has risen through the ranks to become a lower-middle-income economy as of 2023. The GDP growth exceeded 7% in recent years. Ambitious yet achievable, driven by the government’s focus on infrastructure development, export diversification, and foreign direct investment. Manufacturing sector contributing over 25% to GDP: Textiles remain a stalwart, while pharmaceuticals and technology are emerging powerhouses. Export surge exceeding 10% annually: Diversifying away from ready-made garments towards electronics, jute, and leather products, unlocking new market opportunities. Urban unemployment falling below 5% is a positive trend fueled by the booming garment industry and increasing service sector activity. A significant decline in rural poverty rating is attributed to agricultural advancements and microfinance initiatives, but challenges remain in ensuring equitable distribution of prosperity. The Government debt-to-GDP ratio is hovering around 50%, which is relatively manageable compared to regional peers, providing fiscal space for strategic investments. Improved tax administration and economic expansion are bolstering government coffers, enabling increased spending on education, healthcare, and social safety nets. The Foreign direct investment surpassing $6 billion in 2023 shows a sign of growing confidence in Bangladesh’s economic potential, attracted by its favorable demographics, competitive labor costs, and improving infrastructure.

Bangladesh’s journey is far from over. Building upon its impressive growth trajectory, the nation stands poised to achieve its middle-income dreams by 2030. The numbers speak for themselves, and with continued strategic reforms and investments, Bangladesh’s economic future shines bright.

3. Dhaka Stock Exchange: Bangladesh’s Economic Pulse

Towering over the bustling streets of Dhaka, the Dhaka Stock Exchange (DSE) stands as a beacon of Bangladesh’s economic aspirations. Established in 1954, it is the premier bourse in the country, playing a pivotal role in channeling investments, fostering business growth, and driving national prosperity.

The DSE’s journey mirrors Bangladesh’s own remarkable rise. From its humble beginnings with just a handful of companies, it has blossomed into a vibrant marketplace with over 370 listed securities, representing a diverse range of industries from pharmaceuticals and textiles to energy and telecommunications. The exchange’s trading volume has soared in recent years, surpassing $10 billion on multiple occasions and cementing its place as a key driver of Bangladesh’s economic engine.

The Dhaka Stock Exchange (DSE) hums with the rhythm of an expanding economy. Over 370 diverse companies pulsate within its veins, collectively valued at over $100 billion. Each year, billions flow through its arteries, surpassing $10 billion on record-breaking days. This growth, outpacing the nation’s GDP, fuels Bangladesh’s progress by creating jobs, boosting infrastructure, and empowering small businesses. Foreign investors, enticed by this dynamism, hold a 15% stake, contributing further to the market’s vibrancy. Looking ahead, derivatives and Islamic finance promise to add complexity and attract new players, solidifying the DSE’s role as a key driver of Bangladesh’s ascent towards a middle-income future.
The DSE offers a platform for both domestic and foreign investors to participate in Bangladesh’s economic growth story. A wide array of investment vehicles, including listed stocks, exchange-traded funds (ETFs), and bonds, cater to diverse risk appetites and investment goals. The exchange is committed to upholding international best practices in transparency, disclosure, and corporate governance, instilling confidence and attracting investments from across the globe. To keep pace with the ever-evolving financial landscape, the DSE has embraced cutting-edge technology. A state-of-the-art electronic trading platform ensures seamless and efficient order execution, while real-time market data keeps investors informed and empowered. The DSE also actively promotes financial literacy and investor education, fostering a robust and well-informed investment community.

The DSE’s impact extends far beyond the realm of numbers and charts. It serves as a catalyst for job creation, propels infrastructure development, and fuels the growth of small and medium-sized enterprises (SMEs). By channeling capital into productive sectors, the DSE plays a crucial role in alleviating poverty and driving inclusive economic growth. As Bangladesh charts its course towards becoming a middle-income economy by 2030, the DSE is poised to play an even more pivotal role. The exchange is actively exploring new avenues, such as derivatives trading and Islamic finance, to cater to the evolving needs of investors and contribute to the nation’s continued economic ascent. The Dhaka Stock Exchange is more than just a marketplace; it is a symbol of Bangladesh’s economic dynamism and its unwavering commitment to progress. As the nation strides towards a brighter future, the DSE is sure to remain at the forefront, pulsating with the rhythm of a growing economy and shaping the dreams of millions.

4. Literature Review

A substantial body of literature explores the pivotal role of capital markets in the economic growth of nations. The foundational contribution to understanding the interplay between financial and economic development came from Joseph Schumpeter (1912). He argued that financial development is a catalyst for economic growth, positing that financial markets play a vital role in fostering economic progress by funding entrepreneurs and directing capital toward projects with high returns.

The exploration of the connection between a country’s economic growth and its capital market has evolved significantly with the introduction of the Efficient Market Hypothesis (EMH) by Fama (1965). According to EMH, a capital market must operate efficiently to effectively contribute to a country’s economic growth and development. An efficient market builds public confidence, encouraging investors to invest their funds in securities with the expectation of future returns. Conversely, a speculative and irrational market may deter investment, hindering entrepreneurs from raising additional capital for expansion and adversely affecting a country’s economic growth. Therefore, capital market efficiency is considered a vital prerequisite for a country’s growth and development (Pramanik, 2020).

Ahmed (2021a) aims to assess the efficiency of the capital market by examining the randomness of return series within the Dhaka Stock Exchange in Bangladesh. The heightened volatility experienced in global capital markets due to the COVID-19 pandemic adds a distinctive element to the investigation. The study identifies a weak form of efficiency in Bangladesh’s capital market, focusing particularly on the run test, autocorrelation test, predictability of stock returns using the ARIMA model, the weekend effect anomaly, and momentum strategy investing. Results indicate that the hypothesis of randomness in stock returns is rejected based on random walk tests, assessments of return distribution normality, run tests, and various lags using ARIMA and momentum tests (Khan & Billah, 2023).

Mishra et al. (2010) investigate the influence of capital market efficiency on economic growth in India by analyzing time series data encompassing market capitalization, total market turnover, and stock price indices from the first quarter of 1991 to the first quarter of 2010. The application of a multiple regression model reveals that the Indian capital market possesses the potential to contribute significantly to the country’s economic growth. This positive impact is attributed to the substantial market capitalization and relatively high market liquidity observed. Consequently, the study suggests that market organizations and regulations should be designed to attract both domestic and foreign investors, encouraging substantial listings, investments, and trading.

Notably, the empirical financial economics literature lacks extensive research on the impact of capital market efficiency on the economic growth of a country. Moreover, studies addressing emerging market economies, such as Bangladesh, are notably scarce in the existing literature. Therefore, this paper represents a pioneering effort in this direction, aiming to fill the gap in understanding the relationship between capital market efficiency and economic growth, particularly in the context of an emerging market like Bangladesh.
TABLE I: VARIABLES

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Variable</th>
<th>Proxies</th>
<th>Hypothesis relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>Gross domestic product</td>
<td>Economic growth</td>
<td>N/A</td>
</tr>
<tr>
<td>MC</td>
<td>Market capitalization</td>
<td>Logarithm of market size</td>
<td>Positive</td>
</tr>
<tr>
<td>MT</td>
<td>Market turnover</td>
<td>Logarithm of daily stock trading data</td>
<td>Positive</td>
</tr>
<tr>
<td>SI</td>
<td>Stock index</td>
<td>Logarithm of DSEX</td>
<td>Positive</td>
</tr>
</tbody>
</table>

TABLE II: RESULTS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Estimate</th>
<th>Std. error</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC</td>
<td>0.170</td>
<td>0.0401</td>
<td>−1.747</td>
</tr>
<tr>
<td>MT</td>
<td>0.767</td>
<td>0.089</td>
<td>0.086</td>
</tr>
<tr>
<td>SI</td>
<td>0.875</td>
<td>0.337</td>
<td>2.593</td>
</tr>
</tbody>
</table>

5. DATA AND METHODOLOGY

The aim of this research is to assess the influence of capital market efficiency on Bangladesh’s economic growth. The analytical methodology employed in this study involves multiple regression analysis with Ordinary Least Square (OLS) estimation techniques. The selection of OLS is based on its capability to provide the Best Linear Unbiased Estimators, as discussed by Wannocott and Wonnocott (1972), Roy et al. (2023), and Nyong (1993). The study period spans from 2011 to 2022.

A capital market hums like a well-oiled machine when diverse factors are in perfect harmony. From the accurate pricing of assets like stocks and bonds to the ease of buying and selling them, every cog plays a role. Smooth information flows through the system and fuels informed decisions, while market size, measured by market capitalization and listed equities, reflects its capacity to handle resource allocation. Even the level of money circulating in the economy influences investor behavior and liquidity. To truly understand how these factors orchestrate growth, we turn to the Dhaka Stock Exchange (DSE), the undisputed maestro of Bangladesh’s capital market. Its widespread recognition, dominance within the country, and rich data trove make it the perfect case study for unraveling the intricate dance of efficiency and economic prosperity. The research equation is as follows:

\[ GDP_i = \beta_0 + \beta_1 MC_i + \beta_2 MT_i + \beta_3 SI_i + \epsilon_i \]  

Here, GDP is the real gross domestic product, MC is the stock market capitalization, MT is the total market turnover, and SI is the DSE General Index. All the time series are considered in their natural logarithms. All the quarterly data for the sample period have been collected from the DSE and Bangladesh bank databases. Table I gives an overview of the study variables and expected relationships.

6. RESULTS AND DISCUSSION

Table II displays the regression equation for the relationship between capital market efficiency and economic growth, along with the corresponding regression results. Notably, the constant term coefficient is 6.29, displaying a positive and statistically significant association. The coefficient for the logarithm of stock market capitalization is 0.17 and exhibits significance, indicating that a larger capital market size in the country has the potential to positively impact economic growth. Similarly, the coefficient for the logarithm of total market turnover is 0.767 and is statistically significant, suggesting that a streamlined and efficient process of buying and selling securities can contribute to Bangladesh’s economic growth.

Additionally, the coefficient for the logarithm of the DSE General index, while positive, does not attain statistical significance. Consequently, it can be inferred that the stock price index possesses limited explanatory power concerning the nation’s economic growth.

The adjusted R-squared value of 0.71 indicates that approximately 71% of the observed variation in the dependent variable, GDP, is collectively explained by the independent variables. This high R-squared value signifies that the model is a robust fit. The F-value of 105.61, coupled with a corresponding p-value of 0.02, underscores the overall validity and fitness of the model.

Through strong indicators like market capitalization and total market turnover, this study finds a clear link between capital market efficiency and economic growth in Bangladesh. A larger market size, reflected by high market capitalization, allows for improved capital mobilization and risk diversification across the economy (Agarwal, 2001). This ongoing rise in market capitalization in
Bangladesh is, therefore, expected to boost market efficiency and contribute to its economic growth. Similarly, the total value of shares traded, measured by total market turnover, is a key macroeconomic variable that promotes market efficiency and has the potential to fuel economic growth. This metric signifies market fairness, competitiveness, and overall efficiency.

Nonetheless, this research indicates that the Bangladeshi economy exhibits informational inefficiency, particularly evident in market returns based on stock price indices. Security prices fail to fully reflect all pertinent information regarding the intrinsic value of securities. This suggests that a significant portion of stock prices in the capital market may be either undervalued or overvalued. Informational inefficiency has the potential to lead to suboptimal portfolio allocation, causing a misallocation of economic resources and impeding economic growth.

Interestingly, this inefficiency can be viewed as an opportunity for generating excess profit, thereby fostering financial innovations. The introduction of financial innovations in the market has the potential to improve efficiency in risk allocation by disrupting links between origination and ownership. This can result in the creation of new securities that more precisely distribute risks among different investor classes. The upsurge in financial market innovation and expansion is anticipated to bring about efficiencies in capital allocation, decrease the cost of capital, and contribute to overall economic growth.

7. Conclusion

In summary, this research delves into the impact of capital market efficiency on Bangladesh’s economic growth by analyzing time series data on market capitalization, total market turnover, and stock price indices from Q1 2011 to Q4 2022. Results from the multiple regression model indicate that the Bangladesh capital market has the potential to significantly enhance the country’s economic growth, primarily driven by substantial market capitalization and liquidity. To promote sustained growth through optimal resource allocation, it is advisable for market entities and regulations to foster a substantial increase in both domestic and foreign investments, accompanied by significant listings, investments, and trading activities. Achieving this goal requires the establishment of a robust regulatory framework for the restructuring of inefficient financial institutions through measures like privatization or increased competition, including from foreign entities. Furthermore, addressing issues such as discriminatory taxes and financial repression, while promoting strong corporate governance and the adoption of sound accounting practices is imperative for ensuring the country’s long-term economic growth.

Conflict of Interest

The authors declare that they do not have any conflict of interest.

References


