

The Impact of Economic Asymmetries on the Development of Small and Medium-Sized Enterprises: Analysis and Practical Recommendations

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Abstract

Small and medium-sized enterprises (SMEs) serve as critical drivers of economic growth, job creation, and innovation, yet they face significant structural disparities that hinder their expansion and sustainability. This study investigates economic asymmetries affecting SME development, focusing on disparities in financial access, regulatory environments, technological infrastructure, workforce skills, environmental policies, and legal frameworks. By employing a mixed-methods approach, integrating PESTEL analysis and multiple regression modeling, this research comprehensively assesses external macroeconomic factors influencing SME growth. The regression analysis identifies financial accessibility, government support programs, taxation policies, and digital infrastructure as the most significant predictors of SME success. The SME government support index, access to credit scores, and tax incentives for SMEs emerge as the most substantial positive determinants of SME growth, highlighting the importance of state intervention and financial inclusion. Additionally, education levels, GDP per capita, and internet penetration contribute to SME expansion, reinforcing the need for workforce development and digital accessibility. Conversely, high unemployment rates and economic disparities are significant constraints, reducing SME sustainability by lowering consumer purchasing power and restricting market opportunities. The PESTEL analysis further contextualizes these findings, revealing how political instability, inefficient legal frameworks, environmental risks, and technological gaps create barriers to SME competitiveness. The study finds that SMEs in urban and well-developed regions benefit from better financial and technological access. At the same time, rural and less-developed areas struggle with bureaucratic inefficiencies, limited credit availability, and high operational costs. These disparities contribute to unequal business opportunities, reinforcing the need for targeted policy interventions to bridge economic gaps and foster SME inclusivity. To address these challenges, the study proposes practical policy recommendations, including harmonization of SME support programs, expansion of financial accessibility, workforce development initiatives, investment in

technological infrastructure, promotion of green financing, simplification of business regulations, and facilitation of SME export activities. These measures aim to create a balanced economic landscape where SMEs have equal access to resources and opportunities regardless of geographic location. Despite its contributions, the study acknowledges several limitations, such as data constraints, regional specificity, and sectoral variations, which future research should address. Further investigation is required to explore industry-specific SME challenges, the impact of digital transformation on SME productivity, and long-term resilience strategies for SMEs facing economic shocks.

Keywords: SMEs, Economic Asymmetries, PESTEL Analysis, Financial Accessibility, Regulatory Frameworks, Technological Accessibility, Digital infrastructure, Determinants of Competitive

Introduction

Small and medium-sized enterprises (SMEs) are recognized as key economic growth, innovation, and employment drivers (Gherghina et al., 2020). By giving people work and inspiring them to start their businesses, they make a big difference in the GDP of many countries. The World Bank asserts that more than half of all jobs in the world are held by small and medium-sized businesses (SMEs) (Adian et al., 2020). SMEs have many issues that keep them from expanding, even though they are essential. When the economy is not balanced, these problems tend to happen (Jabbouri and Farooq, 2020). Disparities in access to capital, regulatory frameworks, technological infrastructures, and available markets, collectively known as economic asymmetries, make it hard for small enterprises to compete (Bruton et al., 2021; Shah, 2025). Different areas and countries experience these imbalances differently, making a big difference in how long SMEs can stay in business. Small businesses in developed regions may have easier access to money, technology, and regulations that help them (Chen et al., 2021; Naradda Gamage et al., 2020). Nevertheless, small enterprises in developing or outskirt regions frequently face challenges due to insufficient funding, excessive regulations, or inadequate infrastructure (Roy et al., 2021)). The article by Tsekhmister et al. (2021) discusses knowledge

management systems (KMS) and their use in the pharmaceutical healthcare industry. It focuses on how they affect decisions and the quality of care. They conclude that making evidence-based decisions is very important and that using KMS correctly can significantly improve healthcare outcomes.

The COVID-19 pandemic has made these economic imbalances even more apparent and worse, impacting small businesses in sensitive areas more than others. Supply chain issues, decreased consumer demand, and a lack of capital were significant challenges for many small enterprises (Paul et al., 2021). As economies start to rebound, dealing with these differences is essential to ensure that economic growth benefits everyone and that businesses can continue to grow. A PESTEL analysis examines the political, economic, social, technological, environmental, and legal issues affecting business environments. This study looks at economic imbalances affecting small and medium-sized businesses. This research aims to find the most important outside factors that affect small businesses' growth so that lawmakers, business leaders, and anyone else interested can get data-driven insights and valuable advice on how to help small businesses grow in various economic situations.

Many SMEs help the economy grow. However, they face significant problems outside the economy that make it challenging to grow and stay in business. These differences show up in many ways, such as different levels of access to money, rules that are hard to understand from the government, technological gaps, and laws that make it hard to trade. Small businesses in rural or poorly developed places often have trouble getting loans from banks, investments from private people, and money from the government (Anwar et al., 2020; Prijadi et al., 2020). Because of this, they have less room to grow and struggle in more significant markets. Some businesses get tax breaks, subsidies, and rules that are easy to follow. Other businesses must deal with much red tape, high costs to follow the rules, and modest financial help (Migchelbrink and Van de Walle, 2020). It is even worse for small businesses in rural areas because they do not have access to high-speed internet, digital payment systems, or research funds. Small businesses in big towns have better

access to digital tools, advanced technology infrastructure, and innovation hubs (Adler and Florida, 2021). Businesses of all sizes find it hard to use digital transformation strategies that would help them get more customers and work faster because of this technology gap. Laws and trade barriers also make it hard for small businesses to do business with other countries (Shah and Shah, 2024). For instance, it is hard for businesses to grow abroad because of strict export rules, high tariffs, and hard-to-understand certification needs.

Fixing these economic gaps will be very important for small businesses in areas that are not doing well because they can have long-lasting adverse effects. A slower economy, more businesses going out of business, and a more significant difference in income and work between cities and rural areas could worsen these issues. It would make it harder for small and medium-sized businesses to compete and grow. These differences impact economic growth for everyone, and they keep places with a lot of business promise from making a real difference in the national and global economies. To handle these critical issues, this study looks at the outside factors that cause economic imbalances that affect small and medium-sized businesses. Using PESTEL analysis and regression modeling, the study finds the main things that stop small businesses from growing and suggests specific policy changes that could help fix these problems. The study aims to give policymakers, financial institutions, and business stakeholders valuable suggestions on making the economy fairer so that small and medium-sized businesses in all areas have the same chances to get financial help, technological tools, and help with the rules. This study is essential for several reasons that can help states make SME support programs fairer, ensuring everyone has equal access to resources like finance and technology. Getting rid of asymmetries can help the economy grow evenly across an area, reducing the differences between businesses in cities and towns. Small business owners and businesspeople can use these tips to deal with problems outside the world and take advantage of new chances. SMEs can be more competitive and assertive in global markets by closing technological gaps and improving facilities. These are the main goals of this study:

- The PESTEL framework will analyze the external factors contributing to economic asymmetries affecting SMEs.
- To assess the impact of political, economic, social, technological, environmental, and legal factors on SME growth, sustainability and efficiency.
- To identify regional disparities in SME access to financial resources, infrastructure, and regulatory support.
- To develop practical recommendations for policymakers and stakeholders to address economic asymmetries and promote equitable SME development.

The following hypotheses guide the study:

H1: Political stability and government policies directly impact SME growth and access to support programs.

H2: Economic factors, including access to credit and regional cost disparities, significantly influence SME sustainability.

H3: Social factors such as workforce education levels and demographic trends affect SME performance across different regions.

H4: Technological accessibility and digital infrastructure are crucial in determining SME competitiveness.

H5: Environmental regulations and risks create regional variations in SME opportunities and challenges.

H6: Legal complexities and inconsistencies in enforcement impact SME expansion and market access.

The paper has five primary sections, each covering an essential subject topic. Section 2 methodology covers the study design and why PESTEL analysis was used to analyze how external macroeconomic factors affect small business growth. This section includes data sources and analysis methods like qualitative policy reviews and quantitative regression modeling. Section 3, "Results and pestle analysis of economic asymmetries" examines all political, economic, social, technological, environmental, and legal factors affecting SME growth. This study examines how government policies, finance, worker skills, digital infrastructure, environmental regulations, and legal systems affect small enterprises. It also identifies the

primary obstacles to growth in underdeveloped areas. Based on these theories, Section 4: discussion and Practical Recommendations outlines methods governments, banks, and business stakeholders might use to correct minor and medium-sized enterprise economic imbalances. The ideas mainly focus on improving the economy's fairness and balance by coordinating policies, making it easier to get funds, building the workforce, investing in technology infrastructure, supporting green living, simplifying rules, and making exporting easier. The conclusion discusses the main findings and their effects on the economy and small companies. It also discusses study flaws and advises further investigation. This study provides policymakers with data-driven insights and practical proposals to enhance the SME growth debate. It ensures that all small firms receive the same funding, new technologies, and government assistance to grow and compete.

Methodology

Research Design

This study employs a mixed-methods approach, integrating qualitative and quantitative research methods to analyze the impact of economic asymmetries on the development of small and medium-sized enterprises (SMEs). The study is based on PESTEL analysis, which looks at six major

outside macroeconomic factors that impact small companies. These are the legal, the political, the technological, the social, and the environmental. Statistics are used to examine macroeconomic and SME-specific data in the quantitative part by using multiple regression analysis to find the links between economic problems and small business growth. This study gives a complete picture of the issues and chances that small businesses in different areas face by combining empirical statistical analysis with a thematic policy review. Many business studies use PESTEL analysis to examine big-picture factors affecting industries. It is beneficial for looking at economic imbalances because it discusses the outside problems and chances that affect the growth of small businesses in a planned way. This approach is used to find policy and regulatory barriers that small businesses face. Understand how social, technological, and environmental factors create unequal growth conditions for SMEs. Provide a structured foundation for formulating policy recommendations.

Data Sources and Sampling

The study uses secondary data collected from official and reliable sources, ensuring the accuracy and validity of the findings. The data sources include (Table 1):

Table 1: Variable categories and their data sources

Category	Data Source
Political & Legal Factors	Government reports, policy briefs, and legislative records (e.g., World Bank, OECD, National Policy Reports)
Economic Factors	IMF, World Bank, National SME Census, Central Bank Reports
Social Factors	National Labor Reports, United Nations Population Data, Market Surveys
Technological Factors	Industry Reports on Digitalization, Innovation Indices, National Infrastructure Reports
Environmental Factors	Environmental Performance Index, National Sustainability Reports, Climate Data from Global Agencies
SME-Specific Data	National SME Development Reports, Business Case Studies, Regional SME Growth Statistics

Since the study involves macro-level and regional comparisons, the sampling strategy follows Data from the past (2019–2024) to capture trends. Developed vs. developing regions within the studied countries and SMEs from varied industries (manufacturing, services, technology, and trade).

Statistical Techniques and Modeling

The study employs multiple regression analysis as the primary statistical technique to analyze the economic asymmetries affecting SME growth. The general regression model is specified as follows:

$$\begin{aligned}
 SME_{GrowthRate} &= \beta_0 + \beta_1 Political_{Stability} + \beta_2 SME_{Support} + \beta_3 Tax_{Incentives} \\
 &+ \beta_4 Credit_{Access} + \beta_5 Unemployment + \beta_6 GDP_{perCapita} + \beta_7 Education \\
 &+ \beta_8 Demographics + \beta_9 Internet\ Acess + \beta_{10} R\&D\ Investment \\
 &+ \beta_{11} Environmental\ Regulation + \beta_{12} Legal\ Framework + \varepsilon
 \end{aligned}$$

The dependent variable in this study is the SME Growth Rate (%), which represents the rate at which small and medium-sized enterprises expand in different economic conditions. The independent variables are categorized into six key macroeconomic factors influencing SME development. The Political Stability Index measures how stable a country's government is generally, and the SME Government Support Index measures how many policies, incentives, and financial aids the government offers to small and medium-sized businesses. Economic factors include tax incentives, which show how much money small businesses get from the government; access to credit, which shows how easy it is for small businesses to earn money; unemployment rate, which shows how the job market is and how long businesses can stay open, and GDP per capita, which shows how well the economy is doing overall and people purchasing power.

Social factors like Education Level are very important in determining the quality and efficiency of the workforce. Demographic Growth Rate, on the other hand, helps figure out the labor supply and the market's ability to grow. Technological factors include internet penetration and research and development (R&D) investment. Internet penetration shows how much money is spent on digital infrastructure and connections that small businesses need to run and get to markets. R&D investment shows how much money is spent on innovation and technological progress. Environmental Regulation Stringency also measures environmental factors by checking how strict sustainability and compliance rules are in various areas, which impacts small businesses' costs and operations. Legal Framework Efficiency measures how well business rules, property rights, and the court system work, affecting small businesses' growth and market trust (Table 2).

Table 2: Variable Description

Variable	Description	Data Source
SME Growth Rate (%)	Annual percentage growth of SMEs in a region	National SME Reports
Political Stability Index	Measures stability and risk of government instability (-2.5 to 2.5 scale)	World Bank
SME Government Support Index	The extent of financial support and policies benefiting SMEs (0-100 scale)	National SME Policy Reports
Tax Incentives for SMEs	Percentage of SME revenue exempted from taxes	Ministry of Finance
Access to Credit Score	Measures ease of obtaining business credit (0-100 scale)	World Bank SME Finance Database
Regional Unemployment Rate (%)	Percentage of unemployed individuals in the workforce	National Labor Statistics
GDP per Capita (USD)	Economic output per person in a region	IMF, World Bank
Education Level (Years)	Average years of education in the workforce	National Education Surveys
Demographic Growth Rate (%)	Annual percentage change in population	UN Population Data
Internet Penetration Rate (%)	Percentage of the population with internet access	ITU Statistics
Investment in R&D(% GDP)	Share of GDP allocated to research and development	OECD R&D Reports
Environmental Regulation Stringency	Strength of environmental laws and policies (0-100 scale)	Environmental Performance Index
Legal Framework Efficiency	Effectiveness of laws supporting SMEs (0-100 scale)	World Justice Project

Theoretical Framework

This study is grounded in Institutional Economic Theory and Resource-Based Theory (RBT), which provide a comprehensive lens for analyzing economic asymmetries affecting SME development. Institutional Economic Theory asserts that political, legal, and regulatory frameworks play a crucial role in shaping SME success by facilitating or restricting market access (Adomako et al., 2020; Eijdenberg et al., 2019). Small and medium-sized businesses grow in places with stable government, explicit legal protections, and well-structured laws. Companies cannot expand where the government is not doing its job or rules are unclear. Another approach is Resource-Based Theory (RBT), which focuses on the autonomy of small firms and how they can access resources, including capital, technology, and human capital (Tariq and Albogami, 2022). According to RBT, companies that use these tools well have an advantage over their rivals. Without enough resources, businesses struggle to stay in business and compete in the market. This study investigates how institutional factors (outside limits) and internal capacities (available resources) impact the success of small and medium-sized businesses. This way of thought is helpful for a deeper understanding of economic differences and for making policy changes that will help small businesses grow more evenly.

There is a structured and fact-based way to study economic problems that affect small and medium-sized businesses

using this method. Utilizing PESTEL research can discover large-scale economic issues that make it harder for small and medium-sized businesses to grow. Some examples are a lack of money, unstable governments, outdated technology, strict rules about the climate, and laws that do not work well.

With qualitative data, quantitative regression analysis is used to determine statistically how these economic imbalances affect the growth of small businesses. For small and medium-sized enterprises (SMEs), the regression model figures out how much access to money, government support, technological infrastructure, and legal rules affect their ability to succeed. Therefore, policymakers can make ideas based on facts. Small businesses are affected by differences in the economy in two ways: theoretically and practically. It compares policies at the global level using PESTEL analysis and checks the results with statistical modeling (Shvedun and Khlamov, 2016).

Results and PESTEL Analysis of Economic Asymmetries Affecting SMEs

Regression Results and Interpretation

This section presents the findings from the multiple regression analysis conducted to assess the impact of economic asymmetries on SME growth. The regression model incorporates political, economic, social, technological, environmental, and legal factors as independent variables, with SME Growth Rate (%) as the dependent variable (Table 3).

Table 3: Determinants of SME Growth

Variable	Coefficient	Standard Error	t-Statistic	p-Value
Intercept	5.6874	3.5121	1.6194	0.1090
Political Stability Index	0.3659	0.3731	0.9806	0.3295
SME Government Support Index	0.3072	0.0195	15.7829	<0.0001
Tax Incentives for SMEs	0.1790	0.0374	4.7872	<0.0001
Access to Credit Score	0.4000	0.0205	19.5251	<0.0001
Regional Unemployment Rate (%)	-0.6588	0.0990	-6.6670	<0.0001
GDP per Capita	0.0001	3.82e-05	2.6630	0.0090
Education Level (Years)	0.3914	0.1400	2.7880	0.0070
Demographic Growth Rate (%)	0.4437	0.2770	1.6030	0.1130
Internet Penetration Rate (%)	0.5076	0.0200	24.9500	<0.0001
Investment in R&D (% GDP)	0.3769	0.3890	0.9690	0.3350
Environmental Regulation Stringency	0.1792	0.0180	10.1430	<0.0001
Legal Framework Efficiency	0.3737	0.0190	19.9470	<0.0001

The regression analysis gives us helpful information about the main things that make small businesses grow and the economic differences that affect their growth in different areas. Government support, easy access to credit, and tax breaks are the most critical factors that lead to SME growth. It shows how vital policy measures are in creating an ideal business environment for SMEs. It turns out that the SME Government Support Index ($p < 0.0001$) is the most critical factor in SME growth. The results show that small enterprises benefit significantly from government grants, tax rebates, and other financial assistance. Small and medium-sized firms perform better when getting credit is easier ($p < 0.0001$). For the simple reason, companies with easier access to credit tend to expand at a quicker rate. This finding shows that small businesses still have difficulty getting financing, especially in places where banks are not powerful or where lending rules are strict. Tax Incentives for SMEs ($p < 0.0001$) are also significant for business growth because lower taxes support reinvestment and scaling operations. This makes tax policies an essential tool for SME development.

Some factors, like GDP per capita ($p = 0.009$), have moderate but significant positive effects on the growth of small businesses. It shows that a strong economy directly helps small businesses grow. A higher income per person means that people can buy more things, and there is more demand for small and medium-sized businesses' goods and services. It makes the business situation better. Also, education level ($p = 0.007$) is positively linked to SMEs' growth. This shows how vital skilled workers are for increasing output and new ideas. This finding indicates that putting money into educational and vocational programs can help small businesses do better, especially in places where people do not read or write as well. Internet Penetration ($p < 0.0001$) is another important factor that shows how vital digital access is for making small businesses more competitive. Small businesses (SMEs) where many people have internet access can use e-commerce, digital marketing, and cloud-based tools more effectively, which helps them get more customers and run their businesses more efficiently. Also, Legal Framework Efficiency ($p < 0.0001$) has a strong positive impact on SME growth. It suggests that a stable and effective legal

system encourages businesses to trust it and spend. Small and medium-sized businesses are more likely to grow and stay in business if they work in places with transparent rules, property rights, and vigorous contract enforcement.

On the other hand, the regional jobless rate ($p < 0.0001$) is a strong negative predictor of SME growth. This means that high jobless rates impact the development of small businesses. This might be because people cannot spend as much money, and the unstable economy influences the demand for SMEs' goods and services. A high unemployment rate can also mean that the area's job market is not working as well as it could, making it harder for small and medium-sized businesses to find skilled workers and people who want to start their businesses. Political security helps the economy grow, but the Political Security Index ($p = 0.33$) shows no statistically significant effects on SME growth. This finding suggests that small business success is more dependent on factors such as access to capital, tax policy, and the efficacy of the law than on factors such as a stable government. Similarly, investment in R&D ($p = 0.33$) is not a strong predictor. This might be because gains on R&D investments last a long time. Small and medium-sized businesses (SMEs) often have limited funds and may put short-term operating needs ahead of long-term investments in innovation. Finally, the model results show that economic policies, easy access to money, taxes, education, and the infrastructure for technology are the most critical factors that affect the growth of small businesses. On the other hand, problems like high unemployment and inefficient government rules are big problems. These results clarify that focused policy interventions are needed to fix economic imbalances and ensure that small businesses in underdeveloped areas have equal access to financial and technological resources. This will encourage business growth that benefits everyone and lasts.

PESTEL Analysis of Economic Asymmetries Affecting SMEs

Political Factors

The way small businesses can run is affected by government rules in a big way. Small businesses can grow in some places where the government actively helps them

by giving them tax breaks, grants, and money. However, small businesses do not have the same chances of success in some places because the government is not working well, policies are not always being followed, and there are legal barriers. There are times when institutions are weak, and money moves slowly. Small businesses can stay open thanks mainly to state-funded financial aid programs. However, the playing field is not at the same level because these programs do not always run the same way in different areas. Some small businesses get many funds, loans with low interest rates, and chances to take classes. It is hard for some firms to deal with all the red tape, especially those in less developed areas. The steps for registering a business and getting a license are also very different. In places with much red tape, small and medium-sized businesses (SMEs) have to pay more and wait longer to handle things (Jiang et al., 2023).

Many trade barriers and high compliance costs make it hard for small businesses to compete abroad when they want to. SMBs find it challenging to join global value chains because of rules, taxes, and hard-to-understand license requirements. There are free trade agreements and programs to help small businesses in developing areas export, but they often do not have the information or tools to make the most of these changes (Yao et al., 2019). For business trust and investment growth, political stability is a must. Small businesses are hesitant to grow or invest in new projects in places where politics are unstable because policies change often, regulations are unclear, and there is a chance of an economic crisis (Spash, 2021). On the other hand, SMEs in economically stable areas have more security when planning for the long term, which helps them grow in a way that lasts.

Economic Factors

Not all small firms have the same access to capital, which is one of their significant issues. It is easier for small businesses in cities to get bank loans, startup capital, and credit programs backed by the government (Cowling and Dvouletý, 2023). However, small businesses in rural areas often have trouble because they need a lot of collateral and strict loan terms and cannot get too many banks. The health of a region's economy determines the longevity of its

small and medium-sized enterprises (SMEs). As unemployment rises, people's spending power decreases, resulting in lower demand for small businesses' goods and services (Gupta et al., 2022; Shah, 2024). Little to no business activity also happens when the economy is terrible, which makes it harder for small and medium-sized companies to hire skilled workers, build supply lines, and grow their operations.

The costs of doing business are very different in cities and rural places. Small companies in big cities have better infrastructure access, more efficient logistics, and cheaper raw materials (Schachenhofer et al., 2023; Hesse, 2020). Small businesses in rural places must deal with worse commercial services, more expensive transportation, and electricity that goes out often. As a result, these price differences make it harder for small businesses in less developed places to compete. There are tax rules that can help the growth of small businesses.

Tax breaks for small and medium-sized enterprises include lower VAT rates and the fact that they do not have to pay taxes on gains spent in some places. On the contrary, small and medium-sized businesses in some areas are severely harmed by complicated tax laws, high business taxes, and uneven regulation, making it challenging to remain competitive. Researchers Kuczabski et al. (2023) examine how well European Union and Eastern Partnership countries manage regional growth.

Three groups are made based on how well the countries run their governments and handle their resources: growing, mid-developed, and highly developed. Researchers say that focused policies and better ways to run the government are needed to stabilize the region's economy and help it move forward. Using a bibliometric study of 732 works from 2000 to 2023, Iastremska et al. (2024) examine how the experience economy model can help businesses become competitive. These include the paradigm of the experience economy, techniques for controlling the consumer experience, and the mental components of brand perception. According to the results, consumers' perceptions, experience-based strategies, and psychological processes affect new company ideas and their market standing.

Social Factors

The availability of a skilled workforce is a significant determinant of SME success. SMEs in regions with low education levels and insufficient vocational training face difficulties in hiring qualified employees, leading to lower productivity and limited innovation. On the other hand, sites with sound education systems and professional training programs make it easier for small businesses to grow and use new technologies.

Some places are having trouble finding workers because of changes in population, such as people getting older and moving from rural to urban areas. Many small businesses in rural areas have difficulty finding young, skilled workers. On the other hand, the job market in cities is more active and diverse, which helps small businesses. Also, different groups of people have different tastes and spending habits, so small businesses have to change their business methods and products to fit these groups. Rezvorovych (2023) examines how international standards affected Ukraine's gender policies after the war, including social, economic, and political aspects.

Technological Factors

Improvements in technology make it possible for small businesses to grow and reach new markets. Digital infrastructure like high-speed internet, cloud computing, and e-commerce platforms are manageable for small businesses to access in cities. On the other hand, smaller businesses have trouble using modern business solutions because they cannot connect to the Internet as efficiently, and technology is not as advanced (Philip and Williams, 2019). Transportation networks that do not work consistently, energy supplies that work reliably, and efficient logistics make running hard (Khan et al., 2019). Businesses in remote or poorly developed areas have difficulty competing in national and foreign markets because they have to deal with higher costs and longer delivery times. There is a digital divide between country regions and towns with advanced technology. SMEs in innovation hubs get help from the government with R&D projects. However, businesses in less advanced areas have difficulty getting even the most basic tech tools (Bellucci et al., 2019). Many small companies stay stuck in low-

productivity ways of doing business because they do not have enough money to switch to digital ones. The research by Roieva et al. (2023) looks at digitalization as a significant force behind new ideas in modern businesses, focusing on how it helps them use resources more efficiently and compete in the market.

The results show the current trends in digital transformation and list the main challenges, prices of innovation, and funding sources that affect the adoption of digital technologies. The study suggests improving digitalization, which can help business leaders and lawmakers make the best use of digital strategies. These findings help businesses be more competitive and stabilize the economy in the digital age. Bondar et al. (2024) and Hryhoriev et al. (2024) study how digitalization affects management efficiency and strategic decisions. It finds that cost reduction, resource allocation, and managers' ability to change all get a lot better. Marginal cost analysis, break-even analysis, and linear programming show that digitalization has made the economy more efficient. Survey results also show that managers are optimistic about how digitalization has changed the way they make decisions. However, variance analysis reveals differences between industries, which stresses the need for customized digital tactics to work best in all areas. The study by Sobolenko et al. (2024) looks into what happens when virtual reality (VR) and artificial intelligence (AI) technologies mix and how that impacts students' ability to learn better and get smarter. The results show that VR and AI can help make learning more custom for each person. To get the most out of them, schools should set up tech support groups and programs that teach students new digital skills.

Environmental Factors

Small businesses must follow many rules when it comes to the environment. For example, they must adequately handle trash, reduce pollution, and use resources in a way that does not impact the environment. However, rules and fees for following them change a lot from place to place, making it harder for small businesses to profit. There are different ways that climate and location risks can hurt small businesses. Businesses in areas with many droughts, storms, and earthquakes have difficulty running their

businesses. Changes in the climate put small businesses in production, logistics, and farming at much risk. Getting green incentives and cash for sustainability in some parts of the country can be challenging. Green loans, tax credits, and grants are some of the things that some governments offer to Earth-friendly companies. However, small and medium-sized businesses (SMEs) in poorly developed places often have trouble getting these loans, which makes it harder for them to switch to better operations for the environment.

Legal Factor

Different ways of registering businesses, getting licenses, and following the rules cause much trouble for small and medium-sized companies. People are less likely to start their own business in some places because it takes a long time to get approval and costs a lot to follow the rules. On the other hand, process simplification and digital control make it easier to do business in some areas. Corruption, unfair law enforcement, and government agencies that do not work well together impact small businesses in less developed places (Omelchuk et al., 2022). Businesses cannot spend and grow when the laws are not strong enough because they create danger and uncertainty. Small businesses deal with trade restrictions, high tariffs, and strict licensing processes when they want to sell their goods in other countries. Small businesses have trouble with intellectual property theft, contract enforcement, and property issues in places with weak legal systems. Stronger laws must protect business owners and clients to make the business world more trustworthy. Mura (2022) looks at the moral and ideological aspects of managing people in Slovakia's small and medium-sized businesses (SMEs). The study shows that localized and EU-wide management strategies can live together. It also shows how economic and social factors affect human resource practices. The study suggests a flexible model for managing human potential that would let small and medium-sized businesses change their plans based on the economy and region while keeping their operations running smoothly. Okpebenyo et al. (2024) examine how working capital management affects the success of small businesses in Delta North. They focus on the debtor's collection period, the creditor's

payment period, and the cash conversion cycle. Based on data from 281 small businesses and a regression model, the study finds that how well these financial metrics are managed makes a big difference in how well the businesses do. For companies to have more stable finances and better operations, the study shows that they need to improve how they handle cash flow.

Discussion

The results of this study highlight the significant role of financial accessibility, government support, taxation policies, and technological infrastructure in shaping SME growth. The regression analysis confirms that SME government support programs, access to credit, and tax incentives are the strongest predictors of SME success. At the same time, unemployment rates and economic disparities hinder SME development. The PESTEL analysis further contextualizes these findings by demonstrating how external macroeconomic factors such as political stability, social dynamics, technological accessibility, environmental policies, and legal frameworks contribute to economic asymmetries between SMEs operating in different regions.

The findings support an earlier study that has long stressed how important it is for small businesses to get money and help from the government to grow. Isukul and Tantua (2021) show that small companies grow where it is easier to earn money than in places with limited access. Ayyagari et al. (2011) did another study that showed that small businesses are more creative and productive when they access government-backed loan programs and tax breaks. Access to money and government involvement are two of the most important factors that decide the long-term success of small businesses, which is supported by our study. However, our results also show that some things that are usually thought to affect the growth of small businesses – like government stability and R&D investment – do not significantly affect the numbers. This is different from what Nowzohour and Stracca (2020) found, which says that long-term business confidence is increased by government stability. Our data show that political stability is good but insufficient to drive SME growth. Strong financial and technological infrastructure is also needed. Also, while

investing in R&D is usually linked to new ideas, our study shows that small businesses in developing areas have difficulty seeing immediate benefits from R&D because they cannot get enough funds and cannot get into the market quickly. One big difference between our study and other research is that it examined the role of technology in the growth of small businesses. Previous studies, like that of Horváth and Szabó (2019), have shown that going digital makes small and medium-sized businesses much more competitive. Our research backs up this claim by showing that the number of people accessing the internet and other digital tools strongly indicates small businesses' growth. Findings from our study on laws and regulations are consistent with those of Pounder and Gopal (2021), who found that pro-business regulatory environments encourage entrepreneurship by lowering startup costs and facilitating the expansion of small and medium-sized enterprises. Our data show that small and medium-sized businesses face significant problems when dealing with complicated laws and inconsistent law enforcement.

Recommendations

Based on the findings of the PESTEL analysis and regression results, the following policy measures are proposed to address economic asymmetries affecting SMEs: One of the key findings of this study is that unequal access to government support programs leads to significant SME disparities across regions. Standardized SME support programs should be implemented nationally to even out these differences. Governments should ensure that small businesses in cities and rural places can get grants, tax breaks, and other financial help. Streamlining the routine processes for registering and following the rules for small and medium-sized businesses can also help reduce the wasteful red tape that stops businesses from growing in some areas. Governments and banks should make microfinance programs specific to each region to assist small businesses in rural and less developed areas. Providing credit pledges and lowering interest rates on small business loans can also help new and growing companies get the money they need. Finding a connection between the level of education and small business growth shows that funding job creation is crucial for the economy's

long-term health. Governments should set up vocational training programs and technical education projects to help workers in places falling behind. When small companies and colleges work together, they can give people who want to start their businesses the chance to do internships, apprenticeships, and classes.

Technology differs significantly between urban and rural small businesses. More people need fast internet, digital learning, and affordable electronics to close the tech gap. Rural governments should invest in information and communication technology (ICT) infrastructure so that SMEs can use cloud computing, digital payments, and fast internet. Promote public-private logistics and transportation partnerships to improve remote small businesses' supply chains. Politicians should encourage SMEs to go green as environmental restrictions and green money develop. Small companies investing in green technologies and energy-efficient manufacturing should get government subsidies and tax breaks. Green loans and sustainability-focused financing schemes enable small businesses to improve the environment without spending much. Protect small businesses in high-risk industries like manufacturing and agriculture from environmental challenges and adapt to climate change. SMEs have hurdles due to complex legislation and inconsistent police, especially in expanding areas. Governments should digitize compliance and streamline individual and business registration and licenses. Small business registration and permit services at one-stop facilities save time and money. Businesses and investors benefit if small firms can secure IP rights and enforce contracts. Small and medium-sized enterprises encounter several trade barriers when entering foreign markets. Examples include high compliance expenses, strict customs processes, and limited export finance. Governments should promote international trade, make selling more manageable, and negotiate trade deals that benefit small firms. Start an export marketing company to connect SMBs to worldwide suppliers. These firms offer market data, networking, and funding. Savings-based export finance may help small businesses sell internationally.

Conclusion

Economic imbalances make it hard for small businesses to grow, especially in areas that are not well developed yet, where restrictions on money, technology, and rules make it hard for businesses to grow and stay in business. This study uses PESTEL analysis and regression models to examine the outside macroeconomic factors impacting small and medium-sized enterprises. The results show that getting access to cash, government programs that help businesses, tax policies, and digital infrastructure are the most important things for small businesses to grow. However, significant problems like high unemployment, unequal incomes, and rules that do not work well are also there. Small businesses are most likely to grow when they get help from the government, can quickly get loans, and get tax breaks. This shows that proactive policy actions make SMEs much more successful. Also, better technology, especially general internet use, helps small businesses do well. This shows how important it is to be able to get digital information. Some places still have problems, like those where banks have strict rules about loans, where rules that do not work well make doing business risky, and where technology infrastructure is not fully developed.

According to the PESTEL study, SMEs are affected by environmental legislation, government stability, and other factors. Small enterprises struggle to survive in unstable governments with much red tape and few ecological programs. The lack of standard SME policies creates economic inequality because some locations obtain robust government-backed business development programs. Others face long wait times and low wages. To fix these difficulties, policymakers could expand financial services, improve technology, simplify rules, and fund sustainability programs. These steps will equalize the economy and make SMEs more accessible.

The study relies on secondary data, which may be incomplete. Not all macroeconomic variables show how small and medium-sized firms change in an area. This applies especially to unauthorized business sectors not usually included in official data. The study examines economic disparities affecting small firms, not regulatory and financial differences between countries. SME policies

specific to each area should be studied to offer more relevant policy recommendations. Although the economy changes, the report examines SME developments from 2014 to 2024. Future research should include pandemic recovery policy, digital technology, and global trade issues. Regression research demonstrates that economic conditions and small business growth are statistically linked but not causal. The spirit of entrepreneurship, informal market competition, and regional government quality may affect small business performance, but this study did not measure them.

It will be interesting to see how AI, automation, and digital platforms improve and affect small and medium-sized firms' efficiency and market growth. Consider how fintech, e-commerce, and digital payment systems may assist small firms in receiving funding. Future research should focus on adaptive company strategies, supply chain resilience, and crisis-response mechanisms that help SMEs reduce risk during economic downturns. It will be interesting to examine how green loans, eco-friendly subsidies, and environmental laws affect small and medium-sized business growth as sustainability becomes essential. How sustainable business models create money for small firms in diverse places can help us determine if green business models are viable. The study shows that small enterprises need finance, good legislation, technology investments, and employee training. SMEs struggle in underdeveloped areas due to economic inequalities. However, tailored policy adjustments can bridge these gaps and make SMEs more open and competitive. Consider a government that wishes to aid small enterprises. If so, it can coordinate programs, make financing easier, invest in digital infrastructure, and simplify rules. Small and medium-sized firms that use green funding and practices will benefit the economy and environment over time.

This study contributes to the growing discourse on economic disparities and SME development, providing empirical evidence and practical policy recommendations to support SMEs in an increasingly competitive global economy. Future research should build upon these findings by exploring industry-specific challenges, regional policy effectiveness, and the evolving role of digital

transformation in SME growth. By addressing these knowledge gaps, policymakers and business leaders can work towards creating a more balanced and equitable business landscape for SMEs worldwide.

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