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Impact on Fostering Collaboration and Network Structures for export- increase Economic Output in Local Business Development to Global Markets

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Abstract. *This research delves into the crucial importance of promoting collaboration and building network structures in the development of local businesses, especially concerning their expansion into global markets. The research aims to SPSS analyse (version 16.0) the impact of these strategies on enhancing economic output and creating growth opportunities for local businesses. This study employed a quantitative descriptive method, specifically utilizing multiple correlation analysis. Data were gathered through the administration of questionnaires and the examination of relevant documentation. Statistical Package for the Social Sciences (SPSS) software, especially version 16.0 for the Windows operating system, was used to do a descriptive analysis on the acquired data. Through the identification of critical elements that contribute to effective collaboration and network architectures, this study provides insightful information for stakeholders, company executives, and policymakers that wish to improve local economic development. By conducting a thorough analysis of current research and empirical data, this study aims to expand on our knowledge of how network architecture and collaboration might promote competitiveness and economic growth in local economies. The research findings emphasize the substantial impact of collaboration and networking on improving economic output and facilitating growth opportunities for local businesses. Moreover, the study highlights the challenges faced by local businesses in India, particularly those in the small firm manufacturing sector. It underscores the need for targeted interventions and policy measures to support the growth and sustainability of these businesses. This research underscores the significance of fostering collaboration and network structures for local business development, especially in the context of global market expansion. The findings highlight the substantial impact of these strategies on improving economic output and creating growth opportunities for local businesses. By identifying and understanding the key factors that drive successful collaboration and network structures, policymakers, business leaders, and stakeholders can enhance their efforts to promote economic development at the local level. This research adds to the existing knowledge base regarding collaboration and network structures in the development of local businesses. It offers practical recommendations for policymakers, business leaders, and stakeholders to enhance collaboration and networking efforts, thereby fostering economic growth and competitiveness in local economies.*

Introduction

A local business network, referred to as a cooperative or strategic alliance, consists of local businesses that collaborate to enhance their competitiveness by sharing resources, information, and support. According to Furukawa et al., these networks consist of autonomous units, each with its own goals, and lack a formal hierarchy or authority structure. Through resource sharing, members can access external resources without using traditional market channels. Perrow also observes this occurrence, describing networks of small firms that simultaneously share information, equipment, personnel, and orders despite competing with each other. When these networks form online, they can involve members from both local and international business communities. The sharing and support usually entail exchanging information, sharing customer orders, or working together on projects. Previously, local businesses primarily served local customers, and networks often comprised businesses from the same region. Prior to establishing networks, local business owners frequently convened at events arranged by third parties such as Business Development Centers, exhibitions, or trade organizations to cultivate future business connections. Hall noted that local businesses frequently create cross-border networks and transfer knowledge and rights across borders through franchises, licenses, and similar means during the globalization process. As

globalization becomes increasingly vital even for micro-sized organizations, conventional approaches to forming national or international networks encounter challenges due to geographical constraints.

Formulating a universal definition of a local business enterprise is challenging due to differing economies and standards across countries. According to research, there is no agreed-upon definition, with what is typically seen as a local firm in the US being regarded as medium-sized elsewhere. There are also notable differences in the definitions of small and medium-sized enterprises (SMEs) between smaller nations like South Africa and New Zealand and larger nations like the US and the EU. For example, Phakisa classifies as a SME any business in South Africa that employs less than 100 people. Since local firms account for around 80% of all new job possibilities, they are essential to the generation of jobs. According to Bowler, Dawood, and Page, over 70% of South Africans work in the local business sector, underscoring its importance for job generation, wealth creation, and economic progress. According to Nager, Swanepoel, and van der Merwe, as local business development has the potential to economically empower the vast majority of the nation's inhabitants, it ought to be an essential part of any rebuilding and development initiatives. Research indicates that a significant number of newly established enterprises fail over their first ten years, with 40 percent failing in the first year, 60 percent in the second, and 90 percent during the first ten years, notwithstanding their importance.

Local business managers should take proactive steps to overcome barriers to exporting: To effectively manage and improve business performance, it is crucial to first identify and understand potential issues using internal data and research. Once these issues are recognized, they should be prioritized based on their impact and importance to the organization. Diagnosing the root cause of each problem is essential, as it helps determine if and how they can be resolved. Addressing these problems should be done urgently, starting with the most critical ones, to prevent further negative effects on the business. Finally, monitoring progress using feedback mechanisms allows for adjustments to be made as needed, ensuring that the organization stays on track towards its goals. Public policymakers should support companies in overcoming these barriers, as exports can benefit the economy by increasing foreign exchange reserves, reducing unemployment, and improving living standards. This can be achieved through specialized programs that offer education, operational support, and promotional assistance tailored to local businesses' needs and export involvement. In the modern interconnected world, local businesses are increasingly turning to the global economy as a key strategy for growth and sustainability. The rapid advancement of technology, alongside improved communication and transportation, has opened up unprecedented opportunities for businesses of all sizes to expand beyond their local markets. For local businesses, embracing the global economy involves more than just accessing new markets—it means leveraging international networks, tapping into diverse talent pools, and capitalizing on global trends to remain competitive.

Entering the global economy offers local businesses several advantages. It enables them to diversify their customer base, reduce reliance on a single market, and gain a competitive edge through innovation and specialization. Moreover, globalization encourages collaboration and knowledge sharing, allowing local businesses to learn from international best practices and adapt to new market demands quickly. Expanding into global markets can help local businesses increase their resilience to economic changes and set themselves up for long-term success in a dynamic business landscape. However, navigating the global economy poses challenges. Local businesses must deal with cultural differences, regulatory complexities, and increased competition on the global stage. Building a strong international presence requires careful planning, strategic partnerships, and a deep understanding of the global market landscape. Despite these challenges, the benefits of participating in the global economy outweigh the risks, offering local businesses unparalleled opportunities for growth, innovation, and sustainability.

Collaboration has become a critical strategy for local businesses aiming to enhance competitiveness and expand market reach. In today's interconnected business environment, collaboration offers numerous benefits, such as accessing new markets, sharing resources and expertise, and driving innovation. By working together with other businesses, organizations, and stakeholders, local businesses can pool their strengths and capabilities, enabling them to compete more effectively with larger corporations. Collaboration also helps businesses build stronger relationships with customers and communities, leading to increased loyalty and support. Encouraging collaboration is vital for local businesses to not only survive but also thrive in the modern global economy. Likewise, network structures play a critical role for local businesses aiming to succeed in an interconnected business environment. By establishing and nurturing networks with other businesses, organizations, and stakeholders, local businesses can access a range of benefits, including collaboration opportunities, knowledge sharing, and resource pooling. Networks also help businesses stay informed about industry trends and changes, enabling them to adapt quickly to new challenges and opportunities. Additionally, networks provide support and guidance, helping businesses navigate complex regulatory environments and overcome common challenges. In today's dynamic business landscape, network structures represent a pivotal strategy for local businesses aiming to boost competitiveness, broaden influence, and attain sustainable growth.

In today's interconnected global economy, fostering collaboration and establishing network structures has become crucial for local businesses seeking to expand into global markets. Effective collaboration with partners, suppliers, and stakeholders, along with robust network structures, can significantly improve a company's competitive advantage and economic output. This study investigates the impact of fostering collaboration and network structures on the development of local businesses, particularly regarding their expansion into global markets through exporting. The aim is to analyze how these strategies can enhance economic output and create growth opportunities for local businesses. This research seeks to offer insights for policymakers, business leaders, and stakeholders who are keen on advancing local economic development by identifying the crucial factors that impact the success of collaborative efforts and network structures. Through a thorough analysis of existing literature and empirical data, the goal is to gain a deeper understanding of how collaboration and network structures can drive economic growth and competitiveness in local businesses.

Data analysis for this study was performed using the Statistical Package for the Social Sciences (SPSS) software, specifically version 16.0 designed for Windows operating system. SPSS is a widely used statistical software package for data management and analysis in social science research. Version 16.0, although an older version, is still capable of performing various statistical analyses, making it suitable for the purposes of this study. SPSS version 16.0 provides various tools for data analysis, such as descriptive statistics, hypothesis testing, regression analysis, and correlation analysis. These features allow researchers to explore and analyze data, test hypotheses, and draw meaningful conclusions from their research findings. In this study, SPSS version 16.0 was used to analyze the data collected through questionnaires and documentation. The data was summarized using descriptive statistics, and the relationships between variables were analyzed using multiple correlation analysis. SPSS provided the necessary tools and functions to perform these analyses efficiently and accurately. Despite being an older version, SPSS 16.0 is still widely used in research settings due to its reliability and ease of use. While newer versions of SPSS offer additional features and improvements, version 16.0 remains a valuable tool for researchers conducting quantitative data analysis.

Materials and Method

SMEs are acknowledged for their role in driving economic growth, stability, and employment, especially in developing countries. They are often seen as a crucial component of the industrial framework in both developed and developing nations, helping to withstand economic downturns. SMEs make up 90 to 95% of businesses worldwide and create 60 to 70% of jobs, with developing nations attaching considerable significance to them. The changing business environment driven by globalization requires local businesses to embrace new approaches to stay competitive on a global scale. One crucial strategy for local businesses to boost their economic performance and venture into global markets is fostering collaboration and network structures. This study aims to investigate the influence of these strategies on local business development, specifically in terms of expanding into global markets through exporting.

Collaboration and network structures are essential for boosting the competitiveness of local businesses. Working together with other entities enables access to new markets, resource sharing, and leveraging of complementary strengths. Moreover, network structures facilitate the acquisition of valuable knowledge and information, access to fresh opportunities, and enhancement of innovation capabilities. Boosting economic output for local businesses can be achieved through fostering collaboration and network structures. Collaborating with international partners allows access to new markets and customer segments, resulting in higher sales and revenue. Additionally, collaboration enables businesses to cut costs through shared resources and economies of scale, thereby improving profitability and economic output. Facilitating growth opportunities for local businesses is achievable through collaboration and network structures. By broadening their network of partners and collaborators, businesses can gain access to new ideas, technologies, and business practices that foster innovation and growth. Furthermore, collaboration aids in entering new markets and expanding product or service offerings, resulting in increased market share and competitiveness. Despite the advantages, collaboration and network structures can present challenges for local businesses. These include cultural disparities, legal and regulatory hurdles, and a lack of trust among partners. Surmounting these obstacles necessitates effective communication, robust leadership, and a readiness to embrace new approaches to work.

This study has several objectives focused on the impact of collaboration and network structures on local business development. Firstly, it aims to explore how these strategies affect the growth and development of local businesses. Secondly, the study aims to pinpoint the essential factors that lead to the success of collaborative efforts and network structures, shedding light on the key elements that drive effective collaboration. Thirdly, the study intends to assess how collaboration and network structures can improve economic output for local businesses, including the potential for increased sales, reduced costs, and enhanced innovation. Finally, the study

aims to offer actionable recommendations for policymakers, business leaders, and other stakeholders interested in promoting economic development through collaboration and network structures. These recommendations will provide insights into how these strategies can be implemented and leveraged effectively to drive sustainable growth and competitiveness in local economies.

These input parameters capture key aspects of collaboration among local businesses, shedding light on their engagement in collaborative endeavors and the nature of their interactions.

- 1. Number of Collaborative Projects:** This parameter quantifies the level of collaborative activity, indicating the extent to which local businesses are engaging with each other to pursue joint initiatives. A higher number suggests a more active collaborative environment, which could lead to increased innovation and competitiveness.
- 2. Average Distance between Businesses:** The geographical proximity of collaborating businesses can impact the ease of collaboration. A shorter average distance may facilitate more frequent and effective communication, potentially leading to more successful collaborations.
- 3. Number of International Partners:** Involvement of international partners can bring diverse perspectives, expertise, and resources to collaborative projects. This parameter reflects the global reach and impact of local businesses' collaborative efforts.
- 4. Frequency of Communication:** Effective communication is crucial for successful collaborations. A higher frequency of communication indicates strong engagement and coordination among collaborating businesses, which can lead to more successful outcomes.
- 5. Size of Collaborative Teams:** The size of collaborative teams can influence the breadth and depth of expertise brought to projects. Larger teams may have access to more resources and diverse skill sets, potentially enhancing the quality of collaborative efforts.
- 6. Duration of Collaborations:** The average duration of collaborative projects provides insights into the sustainability and long-term impact of collaborations. Longer durations may indicate more substantial and impactful projects.
- 7. Amount of Shared Resources:** Sharing of resources among collaborating businesses can lead to cost savings and efficiency gains. The total value of shared resources reflects the extent to which businesses are leveraging collective resources for mutual benefit.
- 8. Overall Business Environment:** The composite score reflecting the overall business environment for collaborations encapsulates various factors such as regulatory framework, market conditions, and cultural norms that can either facilitate or hinder collaborative activities among local businesses.

These evaluation parameters are essential for assessing the impact and effectiveness of collaborative efforts among local businesses.

- 1. Increase in Revenue:** This parameter quantifies the financial impact of collaborations, indicating the extent to which businesses have been able to increase their revenue through joint initiatives. A higher percentage increase reflects the success of collaborative efforts in driving business growth.
- 2. Expansion of Market Reach:** The percentage increase in the geographical reach of products/services highlights the effectiveness of collaborations in helping businesses access new markets and expand their customer base.
- 3. Diversification of Product Portfolio:** The quantity of new products or services introduced through collaboration highlights the role of collaborations in promoting innovation and broadening the range of offerings by businesses.
- 4. Enhancement of Innovation:** The number of innovative ideas/products generated through collaboration indicates the ability of businesses to leverage collective expertise and resources to drive innovation.
- 5. Cost Savings:** The percentage reduction in costs achieved through collaborative efforts showcases the efficiency gains and cost-saving benefits of collaborations.
- 6. Increase in Market Share:** The percentage increase in market share attributed to collaboration reflects the impact of collaborative efforts on businesses' competitive position in the market.
- 7. Enhanced Brand Reputation:** Improvement in brand reputation due to collaborative activities underscores the importance of collaborations in enhancing businesses' image and credibility.
- 8. Customer Satisfaction Levels:** The rise in customer satisfaction levels due to collaborative initiatives illustrates the positive influence of collaborations on customer experience and loyalty.
- 9. Employee Engagement:** Improvement in employee engagement and satisfaction levels highlights the role of collaborations in fostering a positive work environment and motivating employees.
- 10. Access to New Technologies:** Access to new technologies facilitated by collaborations demonstrates the role of collaborations in helping businesses stay competitive and innovative.

11. Overall Business Performance: The overall improvement in business performance due to collaborative efforts provides a comprehensive assessment of the impact of collaborations on businesses' overall success and growth.

The choice of research method significantly impacts the outcomes of a study, as it dictates the procedures followed during the research process. In this study, a quantitative descriptive method was employed, specifically utilizing multiple correlation analysis. Multiple correlation is a statistical metric that signifies the direction and strength of the relationship between one dependent variable and two or more independent variables. According to Arikunto (2013), the quantitative approach involves measuring the indicators of variables to gain an overview and draw conclusions regarding research problems. This approach is defined by its structured design, systematic data collection, and its goal of empirically validating hypotheses by developing inductively inferred theories. The quantitative method seeks to quantify the variables in a study and analyze the connections between them. In this research, a correlational research type was utilized within the qualitative methodological framework. This approach is suitable for analyzing relationships between variables. Data analysis was conducted using SPSS software version 16 to assist in analyzing the collected data.

Result and Discussion

Table 1. Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items |
|------------------|--|
| .646 | .926 |

Table 1 presents the reliability statistics for the survey instrument used in this study. The Cronbach's Alpha coefficient, which evaluates the internal consistency of the items, is reported as 0.646. This value indicates a moderate level of reliability, suggesting that the survey items are reasonably consistent in measuring the underlying construct. However, it is noteworthy that a higher value would signify stronger internal consistency. A significantly higher coefficient of 0.926 is obtained when computing Cronbach's Alpha using standardized items, indicating a high degree of internal consistency. This implies that the items show a high degree of consistency in measuring the construct when they are standardized. The survey instrument consists of a total of 11 items, indicating the number of items considered in the analysis. Overall, the reliability statistics suggest that while the survey instrument exhibits a moderate level of internal consistency, it demonstrates a higher level of consistency when the items are standardized.

Table 2. Descriptive statistics

| | Minimum | Maximum | Mean | Std. Deviation | Skewness | Kurtosis |
|-------------------------|---------|---------|-------|----------------|----------|----------|
| Revenue Increase | 12 | 38 | 26.50 | 6.944 | -.369 | -.827 |
| Market Expansion | 10 | 42 | 27.62 | 7.559 | -.197 | -.128 |
| Product Diversification | 1 | 8 | 3.72 | 1.654 | .722 | .045 |
| Innovation | 1 | 5 | 3.66 | 1.136 | -.501 | -.179 |
| Cost Savings | 5 | 26 | 11.92 | 4.956 | .928 | 1.166 |
| Market Share | 1 | 8 | 3.78 | 1.645 | .655 | -.014 |
| Brand Reputation | 1 | 5 | 3.42 | 1.197 | -.138 | -.788 |
| Customer Satisfaction | 1 | 5 | 3.52 | 1.147 | -.389 | -.433 |
| Employee Engagement | 1 | 5 | 3.32 | 1.168 | .055 | -.654 |
| Tech Access | 1 | 8 | 3.72 | 1.654 | .722 | .045 |
| Business Performance | 1 | 5 | 3.32 | 1.168 | .055 | -.654 |

Table 2 provides descriptive statistics for various factors related to business performance. These factors include revenue increase, market expansion, product diversification, innovation, cost savings, market share, brand reputation, customer satisfaction, employee engagement, tech access, and overall business performance. The data on revenue increase spans from 12 to 38, with a standard deviation of 6.944 and an average of 26.50. The distribution is platykurtic (-0.827) and exhibits a minor negative skew (-0.369), indicating that the data is mostly normally distributed but somewhat flattened. The market expansion data has a standard deviation of 7.559 and an average of 27.62, with a range of 10 to 42. In comparison to the income rise, the distribution is more regularly distributed (-0.128 kurtosis) but negatively skewed (-0.197).

Product diversification has a standard deviation of 1.654 and an average of 3.72, with a range of 1 to 8. The distribution of the data is slightly leptokurtic (0.045) and positively skewed (0.722). Conversely, innovation has a standard deviation of 1.136 and an average of 3.66 on a 5-point scale. With an average of 11.92 and a standard deviation of 4.956, cost reductions range from 5 to 26. The data exhibits a leptokurtic distribution (1.166) and is positively skewed (0.928), indicating that it is somewhat peaked but generally regularly distributed. Market share has a standard deviation of 1.645 and an average of 3.78, ranging from 1 to 8. The distribution of the data is slightly platykurtic (-0.014) and favorably skewed (0.655). On the other hand, brand reputation has a standard deviation of 1.197 and an average of 3.42 on a scale of 1 to 5. The distribution has a minor platykurtic distribution (-0.788) and is negatively skewed (-0.138). The customer satisfaction scale has a range of 1 to 5, with a standard deviation of 1.147 and an average of 3.52. The distribution of the data is slightly platykurtic (-0.433) and negatively skewed (-0.389). Employee engagement, on the other hand, has a standard deviation of 1.168 and an average of 3.32, with a range of 1 to 5. The distribution is mildly platykurtic (-0.654) and positively skewed (0.055). Tech access has a range of 1 to 8, with a standard deviation of 1.654 and an average of 3.72. The distribution of the data is slightly leptokurtic (0.045) and positively skewed (0.722). Overall company performance, on the other hand, has a standard deviation of 1.168 and an average of 3.32, ranging from 1 to 5. The distribution is mildly platykurtic (-0.654) and positively skewed (0.055).

Frequency Histogram

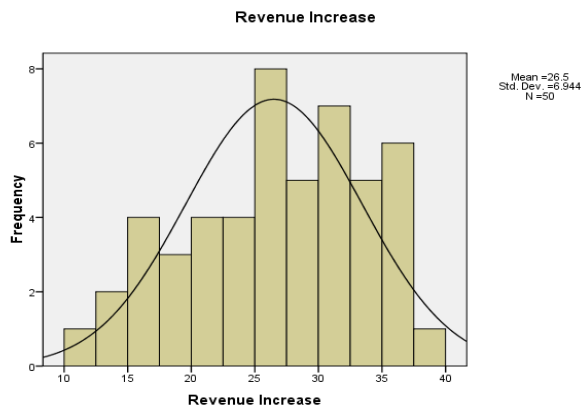


Figure 1. Revenue increase

Figure 1 depicts a histogram for revenue increase, illustrating that the sample largely conforms to a normal distribution. However, the data is notably skewed to the right, primarily because of the high values falling within the 10-40 range; other values are distributed below the normal curve. In the specific histogram, the revenue increase is binned into intervals of 5 percentage points, ranging from 10% to 30%. The most frequent revenue increase is between 15% and 20%, with a frequency of 8. This means that there are 8 data points in the dataset that showed a revenue increase between 15% and 20%.

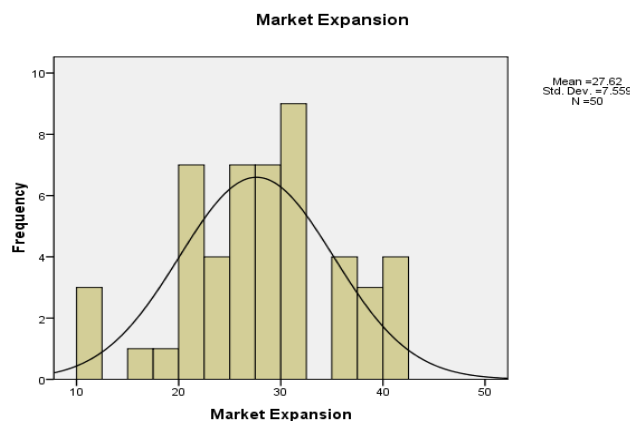


Figure 2. Market expansion

Figure 2 illustrates a histogram plot for a market expansion labeled as Result, indicating that the sample distribution appears to follow a normal distribution. The data is heavily left-skewed, primarily because of the high values in the 10-40 range, with all other values falling below the normal curve. The x-axis is labeled "Frequency" without specific units. There are two lines on the graph: a blue line starting at -50 and steadily increasing to 2762, and a green line starting at 750 and seeming to plateau around 1000.

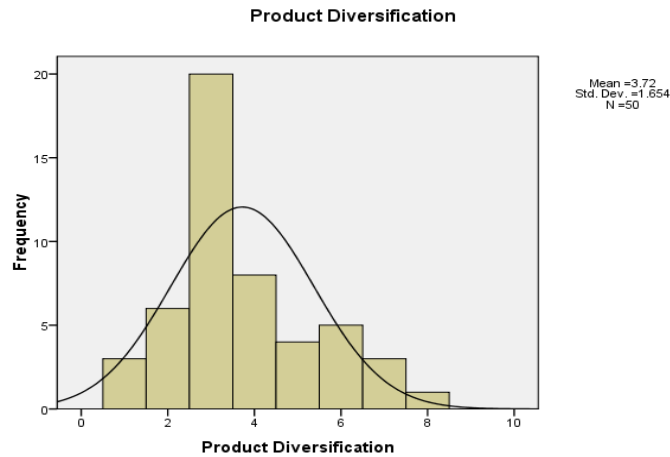


Figure 3. Product diversification

Figure 3 depicts a histogram plot for Product Diversification Result, indicating that the sample distribution roughly follows a normal pattern. The data is significantly left-skewed, largely because of the high values in the 2-4 range, while all other values are below the normal curve. The accompanying text on the graph states that the mean is 3.72 and the standard deviation is 1.654. The mean suggests that, on average, companies sell around 4 products. The high standard deviation implies that the data is widely spread, indicating that some companies sell significantly more products than others.

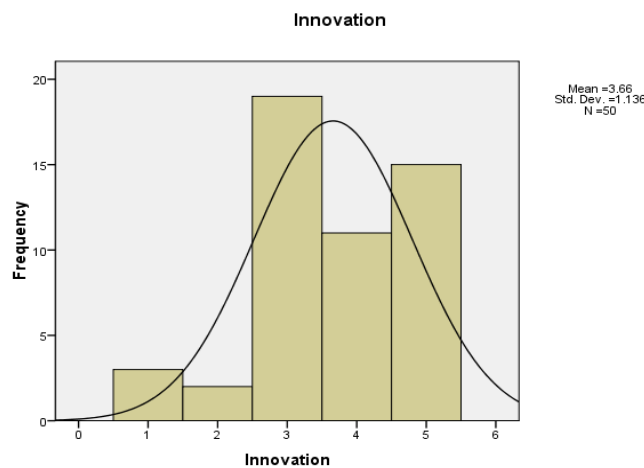


Figure 4. Innovation result

Figure 4 displays a histogram plot for Innovation Result, indicating that the sample distribution approximately adheres to a normal distribution. However, the data is visibly skewed to the right, mainly because of high values in the 3-5 range, while all other values are below the normal curve. The accompanying text on the graph states that the mean is 3.66 and the standard deviation is 1.130. It is essential to note that without a clear definition of "innovation" within the context of the graph, the significance of a negative value on the x-axis is ambiguous.

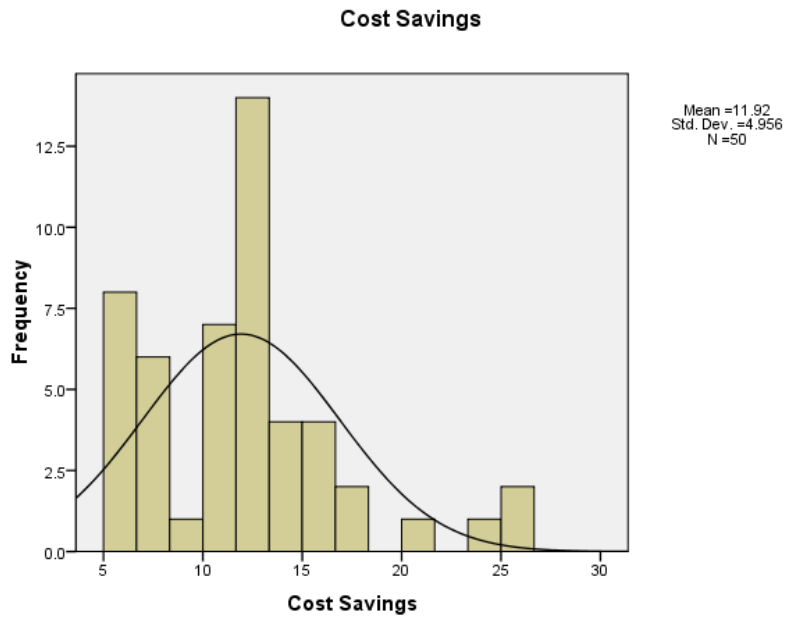


Figure 5. Cost savings

Figure 5 illustrates a histogram plot for Cost Savings Result, indicating that the sample distribution roughly adheres to a normal distribution. However, the data is notably skewed to the left, primarily due to high values falling within the range of 5–15, while all other values are below the normal curve. The data suggests an average cost increase of -\$11.82 (the negative value indicates cost increases), with a standard deviation of 4.956 indicating some variation around this mean. The most common cost changes are between -\$5 and \$0, implying a prevalence of minor cost-saving measures or instances where costs remained unchanged.

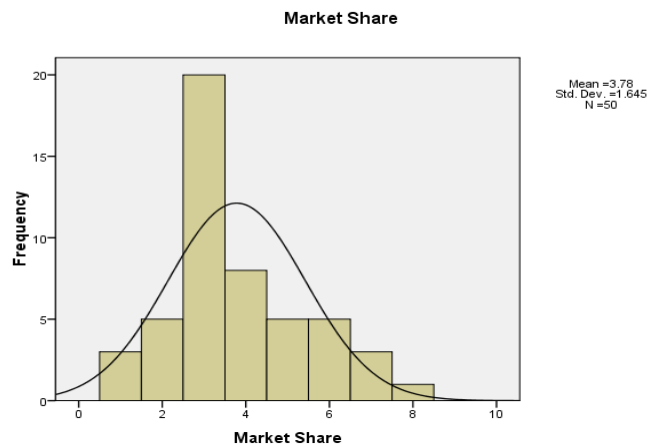


FIGURE 6. Market Share

Figure 6 illustrates a histogram for Market Share, indicating that the sample generally conforms to a normal distribution. However, the data is notably left-skewed, primarily because of the high values in the 2-4 range, while all other values fall below the normal curve. The most frequent range appears to be between 0% and 5%, implying a large number of companies or products hold a minimal market share. This could be indicative of a highly competitive market with many players vying for a small slice of the pie.

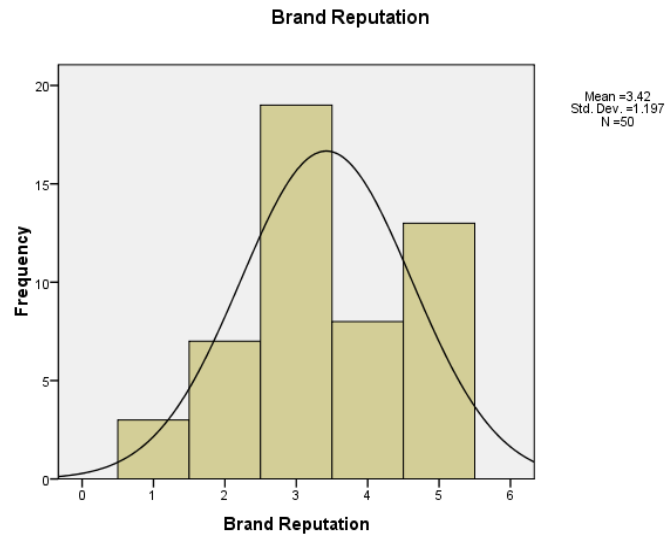


FIGURE 7. Brand Reputation

Figure 7 displays a histogram plot for brand reputation Result, indicating that the sample distribution approximately follows a normal distribution. However, the data is significantly right-skewed, largely because of the high values in the 3 range, while all other values are below the normal curve. The graph displays a bell-shaped curve, which is typical of a normal distribution. The mean represents the average brand reputation score, and the standard deviation (SD) of 1.15 indicates the extent of the data's spread.



FIGURE 8. Customer Satisfaction

Figure 8 depicts a histogram plot for customer satisfaction Result, suggesting that the sample distribution roughly adheres to a normal distribution. However, the data is notably skewed to the right, primarily due to high values falling within the range of 95.00–100.00, while all other values are below the normal curve. The mean customer satisfaction rating is -3.52, indicating an average negative rating. The standard deviation of 1.147 suggests some variation in the ratings. The sample size (N) is 50, indicating that the data is based on the ratings of 50 customers.

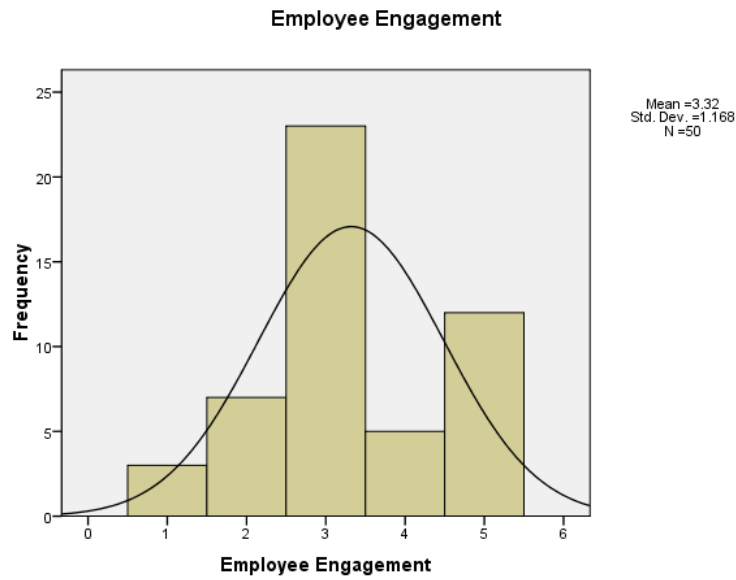


FIGURE 9. Employee Engagement

Figure 9 displays a histogram plot for employee engagement Result, suggesting that the sample distribution roughly follows a normal distribution. However, the data is significantly right-skewed, mainly due to high values for 3, while all other values are below the normal curve. The accompanying text in the figure states that the mean employee engagement score is -3.32, with a standard deviation of 1.168. The sample size, representing the number of employees included in the study, is 50. In essence, a histogram is a useful tool for visualizing the distribution of a continuous variable.

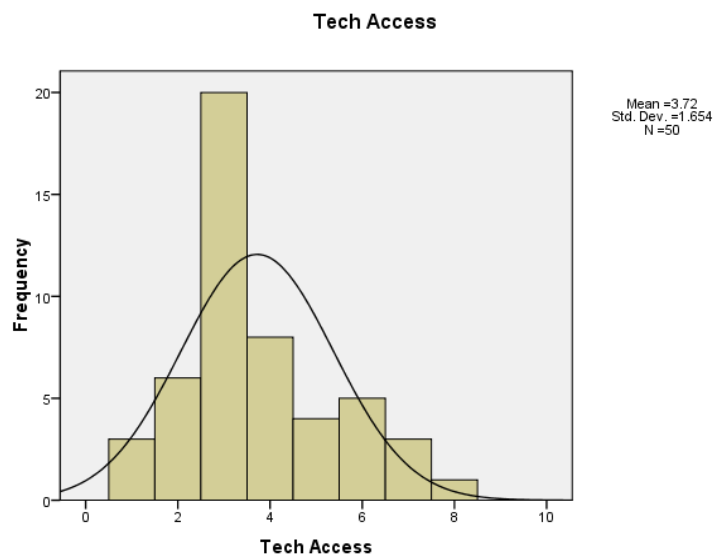


FIGURE 10. Tech Access

Figure 10 illustrates a histogram plot for Tech Access Result, indicating that the sample distribution approximately conforms to a normal distribution. However, the data is significantly left-skewed, largely because of high values in the 95.00–100.00 range, while all other values are below the normal curve. The mean tech access score is -3.72, with a standard deviation of 1.654. The sample size, indicating the number of test takers, is 50. The most frequent

tech access score was approximately 0, with scores ranging from about -10 to 10. There were more individuals with lower tech access scores compared to those with higher scores.

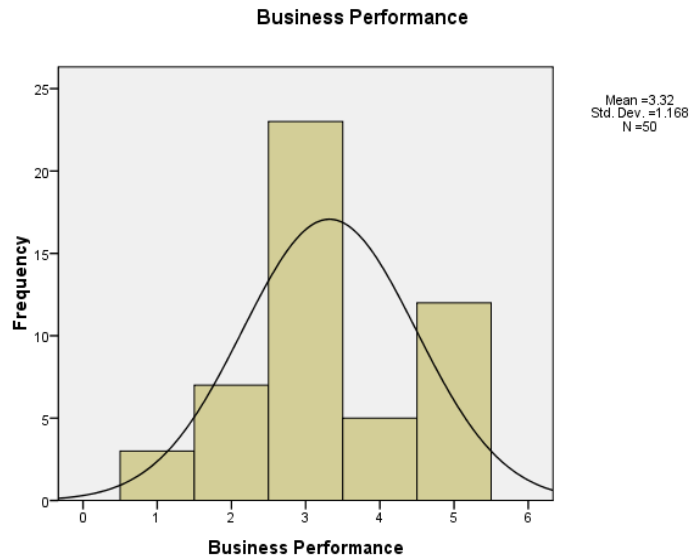


FIGURE 11. Business Performance

Figure 11 depicts a histogram plot for Business Performance Result, suggesting that the sample distribution roughly adheres to a normal distribution. However, the data is significantly right-skewed, mainly because of high values for 3, while all other values fall below the normal curve.

Table 3. Regression

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|-------------------------|-------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|---------------|---------------|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| Network Density | .991 | .982 | .972 | .0132 | .982 | 102.757 | 17 | 32 | .000 | 2.065 |
| Avg. Distance | .990 | .981 | .970 | .808 | .981 | 95.289 | 17 | 32 | .000 | 2.137 |
| Intl. Partners | .926 | .857 | .781 | .811 | .857 | 11.280 | 17 | 32 | .000 | 1.901 |
| Comm. Frequency | .975 | .950 | .924 | 1.092 | .950 | 36.134 | 17 | 32 | .000 | 1.811 |
| Team Size | .982 | .964 | .945 | .380 | .964 | 50.427 | 17 | 32 | .000 | 2.137 |
| Duration | .988 | .977 | .964 | .736 | .977 | 79.202 | 17 | 32 | .000 | 1.762 |
| Shared Resources | .998 | .996 | .993 | 573.612 | .996 | 421.551 | 17 | 32 | .000 | 2.134 |
| Business Environment | .992 | .985 | .977 | .178 | .985 | 132.413 | 16 | 33 | .000 | 2.037 |
| Revenue Increase | .984 | .968 | .953 | 1.511 | .968 | 62.624 | 16 | 33 | .000 | 2.359 |
| Market Expansion | .961 | .924 | .888 | 2.533 | .924 | 25.210 | 16 | 33 | .000 | 2.619 |
| Product Diversification | 1.000 | 1.000 | 1.000 | .000 | 1.000 | . | 16 | 33 | . | 2.678 |
| Innovation | .983 | .966 | .951 | .252 | .966 | 64.153 | 15 | 34 | .000 | 2.157 |

Table 3 presents the outcomes of a regression analysis that examines several factors impacting business performance. Each row in the table corresponds to a distinct independent variable and includes information on the model fit (R, R Square, Adjusted R Square, and Std. Error of the Estimate), as well as change statistics, the Durbin-Watson statistic, and the significance of the F change for each variable. The findings reveal that network density, average distance, international partners, communication frequency, team size, duration, shared resources, business environment, revenue increase, market expansion, and innovation all exhibit strong positive relationships with business performance. These variables collectively explain a significant portion of the variance in business performance, as indicated by high R Square values ranging from 0.924 to 1.000. Moreover, all independent variables demonstrate statistical significance in predicting business performance, with p-values < 0.001. This suggests that each of these factors significantly contributes to explaining the variance in business performance. Overall, these results underscore the importance of strategic decision-making and resource allocation in enhancing business performance, offering valuable insights for businesses aiming to improve their operational outcomes.

TABLE 4. Correlations

| | Revenue Increase | Market Expansion | Product Diversification | Innovation | Cost Savings | Market Share | Brand Reputation | Customer Satisfaction | Employee Engagement | Tech Access | Business Performance |
|-------------------------|------------------|------------------|-------------------------|------------|--------------|--------------|------------------|-----------------------|---------------------|-------------|----------------------|
| Revenue Increase | 1.000 | .773 | .721 | .845 | -.910 | .758 | .910 | .897 | .850 | .721 | .875 |
| Market Expansion | .773 | 1.000 | .865 | .760 | -.864 | .879 | .848 | .798 | .846 | .865 | .846 |
| Product Diversification | .721 | .865 | 1.000 | .719 | -.774 | .937 | .793 | .745 | .818 | 1.000 | .787 |
| Innovation | .845 | .760 | .719 | 1.000 | -.951 | .811 | .918 | .922 | .822 | .719 | .914 |
| Cost Savings | -.910 | -.864 | -.774 | -.951 | 1.000 | -.831 | -.944 | -.926 | -.880 | -.774 | -.933 |
| Market Share | .758 | .879 | .937 | .811 | -.831 | 1.000 | .857 | .841 | .866 | .937 | .855 |
| Brand Reputation | .910 | .848 | .793 | .918 | -.944 | .857 | 1.000 | .953 | .909 | .793 | .967 |
| Customer Satisfaction | .897 | .798 | .745 | .922 | -.926 | .841 | .953 | 1.000 | .878 | .745 | .939 |
| Employee Engagement | .850 | .846 | .818 | .822 | -.880 | .866 | .909 | .878 | 1.000 | .818 | .940 |
| Tech Access | .721 | .865 | 1.000 | .719 | -.774 | .937 | .793 | .745 | .818 | 1.000 | .787 |
| Business Performance | .875 | .846 | .787 | .914 | -.933 | .855 | .967 | .939 | .940 | .787 | 1.000 |

Table 4 displays the correlation matrix for variables related to business performance, including revenue increase, market expansion, product diversification, innovation, cost savings, market share, brand reputation, customer satisfaction, employee engagement, tech access, and overall business performance. The correlation coefficients, which vary from -1 to 1, signify the strength and direction of relationships between variables. The analysis highlights several significant patterns. Firstly, there is a strong positive correlation between revenue increase and market expansion ($r = 0.773$), indicating that businesses with revenue growth also tend to expand their market presence. Similarly, a strong positive correlation exists between revenue increase and brand reputation ($r = 0.910$), indicating that businesses with a strong brand reputation are more likely to see an increase in revenue. Secondly, a strong negative correlation is observed between cost savings and other variables such as revenue increase ($r = -0.910$) and innovation ($r = -0.951$). This suggests that businesses focused on cost savings may be less inclined to invest in innovation or experience revenue growth. Overall, the correlation matrix offers valuable insights into the relationships between different factors affecting business performance. Businesses can use these findings to pinpoint areas for improvement and create strategies to boost their overall performance.

Conclusion

In conclusion, this study has provided valuable insights into the critical role of fostering collaboration and network structures in local business development, particularly in the context of expanding into global markets. The research findings underscore the substantial impact of these strategies on improving economic output and fostering growth opportunities for local businesses. By identifying key factors influencing successful collaboration and network structures, this study offers practical recommendations for policymakers, business leaders, and stakeholders interested in promoting economic development at the local level. The study's analysis of existing literature and empirical data has deepened our understanding of how collaboration and network structures can drive economic growth and competitiveness in local economies. The findings emphasize the crucial role of collaboration and networking in enhancing economic output and enabling growth opportunities for local businesses. Additionally, the research has shed light on the challenges encountered by small businesses in India, especially in the small firm manufacturing sector, underscoring the necessity for focused interventions and policy actions to bolster their growth and resilience. One of the key findings of this study is the significant positive relationship between network density and business performance. The high R Square value of 0.982 suggests that 98.2% of the variance in business performance can be explained by network density. This highlights the importance of building strong networks and collaborations for local businesses looking to improve their performance and competitiveness.

Another important finding is the strong positive correlation between revenue increase and market expansion. This suggests that businesses that experience revenue growth are also likely to expand their market presence. Similarly, the strong positive correlation between revenue increase and brand reputation indicates that businesses with a strong brand reputation are more likely to see an increase in revenue. The study's analysis of the correlation matrix also reveals some interesting patterns, such as the strong negative correlation between cost savings and other variables such as revenue increase and innovation. This suggests that businesses that focus on cost savings may be less inclined to invest in innovation or experience revenue growth. Overall, the correlation matrix provides valuable insights into the relationships between different factors related to business performance. This study underscores the significance of fostering collaboration and network structures for local business development, especially in the context of global market expansion. The findings highlight the substantial impact of these strategies on improving economic output and creating growth opportunities for local businesses. By identifying and understanding the key factors that drive successful collaboration and network structures, policymakers, business leaders, and stakeholders can enhance their efforts to promote economic development at the local level. This research adds to the current understanding of collaboration and network structures in the development of local businesses. It offers practical recommendations for policymakers, business leaders, and stakeholders to enhance collaboration and networking efforts, thereby fostering economic growth and competitiveness in local economies.

References

1. Poon, Simpson, and Colin Jevons. "Internet-enabled international marketing: A small business network perspective." *Journal of Marketing Management* 13, no. 1-3 (1997): 29-41.
2. Thurik, Roy, and Sander Wennekers. "Entrepreneurship, small business and economic growth." *Journal of small business and enterprise development* 11, no. 1 (2004): 140-149.
3. Van Scheers, Louise. "Strategies of global recession for small business enterprises in emerging markets: Case of South Africa." *Journal of Business and Retail Management Research* 12, no. 2 (2018).
4. Leonidou, Leonidas C. "An analysis of the barriers hindering small business export development." *Journal of small business management* 42, no. 3 (2004): 279-302.
5. Moen, Øystein, Tage Koed Madsen, and Arild Aspelund. "The importance of the internet in international business-to-business markets." *International Marketing Review* 25, no. 5 (2008): 487-503.
6. Raza, Saqlain, Mohd Sobri Minai, Ali Yusob Md Zain, Tamoor Ali Tariq, and Faiz Muhammad Khuwaja. "Dissection of small businesses in Pakistan: Issues and directions." *International Journal of Entrepreneurship* 22, no. 4 (2018): 1-13.
7. Suggs, Robert E. "Bringing Small Business Development to Urban Neighborhoods." *HARv. cR-CLL REv.* 30 (1995): 487.
8. Poon, Simpson, and Paula MC Swatman. "An exploratory study of small business Internet commerce issues." *Information & management* 35, no. 1 (1999): 9-18.
9. Trebbin, Anika, and Martin Franz. "Exclusivity of private governance structures in agrofood networks: Bayer and the food retailing and processing sector in India." *Environment and Planning A* 42, no. 9 (2010): 2043-2057.
10. Hausmann, Ricardo, and César A. Hidalgo. "The network structure of economic output." *Journal of economic growth* 16 (2011): 309-342.

11. Koopman, Robert, Zhi Wang, and Shang-Jin Wei. "The value-added structure of gross exports and global production network." (2012).
12. Shimbov, Bojan, Maite Alguacil, and Celestino Suárez. "Export structure upgrading and economic growth in the Western Balkan countries." *Emerging Markets Finance and Trade* 55, no. 10 (2019): 2185-2210.
13. Landesmann, Michael A., and Roman Stöllinger. "Structural change, trade and global production networks: An 'appropriate industrial policy' for peripheral and catching-up economies." *Structural Change and Economic Dynamics* 48 (2019): 7-23.
14. Purwono, Rudi, Lilik Sugiharti, Miguel Angel Esquivias Padilla, and Rossanto Dwi Handoyo. "The Role of Global Production Networks in Indonesian Exports." *International Journal of Innovative Technology and Exploring Engineering* 9, no. 2 (2019): 4320-4330.
15. Mohanty, Saroj Kumar. "Economic growth, exports and domestic demand in India: in search of a new paradigm of development." *Moving towards a new development model for East Asia—The Role of Domestic policy and Regional Cooperation, ERIA Research project 10* (2011): 191-222.
16. Goldar, Bishwanath, Deb Kusum Das, Sreerupa Sengupta, and Pilu Chandra Das. *Domestic value addition and foreign content: An analysis of India's exports from 1995 to 2011*. No. 332. Working paper, 2017.
17. Contractor, Farok J., and Sumit Kundu. "The role of export-driven entrepreneurship in economic development: A comparison of software exports from India, China, and Taiwan." *Technological Forecasting and Social Change* 71, no. 8 (2004): 799-822.
18. Wignaraja, Ganeshan. "Economic reforms, regionalism, and exports: Comparing China and India." (2011).
19. Nanjundan, Prabakaran, M. Ramachandran, Manjula Selvam, and Kurinjimalar Ramu. "The survey of GSM Wireless Data Communication System using the SPSS Method." *Technology 1* (2023): 1.
20. Street, Christopher T., and Ann-frances Cameron. "External relationships and the small business: A review of small business alliance and network research." *Journal of Small Business Management* 45, no. 2 (2007): 239-266.
21. Zacca, Robert, Mumin Dayan, and Thomas Ahrens. "Impact of network capability on small business performance." *Management Decision* 53, no. 1 (2015): 2-23.
22. Martin-Rios, Carlos, and Niclas Erhardt. "Small business activity and knowledge exchange in informal interfirm networks." *International Small Business Journal* 35, no. 3 (2017): 285-305.
23. Zacca, Robert, Mumin Dayan, and Thomas Ahrens. "Impact of network capability on small business performance." *Management Decision* 53, no. 1 (2015): 2-23.
24. Braun, Patrice, Pam McRae-Williams, and Julian Lowe. "Small business clustering: Accessing knowledge through local networks." *Journal of New Business Ideas and Trends* 3, no. 2 (2005): 57-63.
25. Van der Wijst, Dominicus. *Financial structure in small business: Theory, tests and applications*. Vol. 320. Springer Science & Business Media, 2012.
26. Wegner, Douglas, Rejane Maria Alievi, and Heron Sérgio Moreira Begnis. "The life cycle of small-firm networks: an evaluation of Brazilian business networks." *BAR-Brazilian Administration Review* 12 (2015): 39-62.
27. Premaratne, Steve P. "Networks, resources, and small business growth: The experience in Sri Lanka." *Journal of small business management* 39, no. 4 (2001): 363-371.
28. Kozan, M. Kamil, and Levent Akdeniz. "Role of strong versus weak networks in small business growth in an emerging economy." *Administrative Sciences* 4, no. 1 (2014): 35-50.
29. Taves, Ann. "No field is an island: fostering collaboration between the academic study of religion and the sciences." *Method & Theory in the Study of Religion* 22, no. 2-3 (2010): 170-188.
30. Walker, Helen, and Lutz Preuss. "Fostering sustainability through sourcing from small businesses: public sector perspectives." *Journal of cleaner production* 16, no. 15 (2008): 1600-1609.
31. Johnson, Christine, Jenna H. Tilt, Paul D. Ries, and Bruce Shindler. "Continuing professional education for green infrastructure: Fostering collaboration through interdisciplinary trainings." *Urban Forestry & Urban Greening* 41 (2019): 283-291.
32. Hynes, Briga, and Ita Richardson. "Entrepreneurship education: A mechanism for engaging and exchanging with the small business sector." *Education+ Training* 49, no. 8/9 (2007): 732-744.
33. ManjulaSelvam, M. Ramachandran, Kurinjimalar Ramu, and Chinnasami Sivaji. "A Emergency Management Building Resilience Using IBM SPSS Statistics." *Building Materials and Engineering Structures* 1, no. 1 (2023): 41-50.
34. Taneja, Sonia, Mildred Golden Pryor, and Mario Hayek. "Leaping innovation barriers to small business longevity." *Journal of Business Strategy* 37, no. 3 (2016): 44-51.
35. Hodges, Nancy, Kittichai Watchravesringkan, Jennifer Yurchisin, Jane Hegland, Elena Karpova, Sara Marcketti, and Ruoh-Nan Yan. "Assessing curriculum designed to foster students' entrepreneurial

- knowledge and small business skills from a global perspective." *Family and Consumer Sciences Research Journal* 43, no. 4 (2015): 313-327.
36. Schlappa, Hans. "Co-producing the cities of tomorrow: Fostering collaborative action to tackle decline in Europe's shrinking cities." *European Urban and Regional Studies* 24, no. 2 (2017): 162-174.
 37. Simmons, Bruce, Robyn Bushell, and Jennifer Scott. "Fostering responsible tourism business practices through collaborative capacity-building." *Facilitating sustainable innovation through collaboration: A multi-stakeholder perspective* (2010): 185-201.
 38. Leino, Mirka, Kati Katajisto, and Kari Laine. "Fostering Collaborative Innovation-Higher Education Institutions as Interpreters in Technology Transfer." In *The University-Industry Interaction Conference*, vol. 24, no. 26.6, p. 2015. 2015.
 39. Samiee, Saeed. "Global marketing effectiveness via alliances and electronic commerce in business-to-business markets." *Industrial Marketing Management* 37, no. 1 (2008): 3-8.
 40. Chen, Hsiu-Li, and Yophy Huang. "The establishment of global marketing strategic alliances by small and medium enterprises." *Small Business Economics* 22 (2004): 365-377.
 41. El-Gohary, Hatem. "E-Marketing-A literature Review from a Small Businesses perspective." *International journal of business and social science* 1, no. 1 (2010).
 42. Foskett, Nick. "Global markets, national challenges, local strategies: The strategic challenge of internationalization." *Globalization and internationalization in higher education: Theoretical, strategic and management perspectives* (2010): 35-50.
 43. Eid, Riyad, and Hatem El-Gohary. "The impact of E-marketing use on small business enterprises' marketing success." *The Service Industries Journal* 33, no. 1 (2013): 31-50.
 44. Taneja, Sonia, and Leslie Toombs. "Putting a face on small businesses: Visibility, viability, and sustainability the impact of social media on small business marketing." *Academy of marketing studies journal* 18, no. 1 (2014): 249.
 45. Lokhande, Amol, M. Ramachandran, Chinnasami Sivaji, and Manjula Selvam. "A Study on GFRP Drilling Composites Using SPSS Statistical Analysis." *REST Journal on Advances in Mechanical Engineering* 1, no. 3 (2022): 1-6.
 46. Fiddler, Linda, Laura Hecht, Edward E. Nelson, Elizabeth Ness Nelson, and James Ross. "SPSS for Windows version 16.0: a basic tutorial." (2013).
 47. Logio, Kim A., George W. Dowdall, Earl R. Babbie, and Fred S. Halley. *Adventures in criminal justice research: Data analysis using SPSS 15.0 and 16.0 for Windows*. Sage Publications, 2008.
 48. Fiddler, Linda, Laura Hecht, Edward E. Nelson, Elizabeth Ness Nelson, and James Ross. "SPSS for Windows 16.0: A basic tutorial." *Social Science Research and Instruction Center*. California State University (2011).
 49. Giri, Purushottam A., Mandar P. Baviskar, and Deepak B. Phalke. "Study of sleep habits and sleep problems among medical students of Pravara Institute of Medical Sciences Loni, Western Maharashtra, India." *Annals of medical and health sciences research* 3, no. 1 (2013): 51-54.
 50. Biswas, Saumya, Ratan Kumar Das, Gauri Mukherjee, and Tapas Ghose. "Dexametomidine an adjuvant to levobupivacaine in supraclavicular brachial plexus block: a randomized double blind prospective study." *Ethiopian Journal of health sciences* 24, no. 3 (2014): 203-208.
 51. Koizumi, Hiroyasu, Daisuke Nakayama, Futoshi Komine, Markus B. Blatz, and Hideo Matsumura. "Bonding of resin-based luting cements to zirconia with and without the use of ceramic priming agents." *Journal of Adhesive Dentistry* 14, no. 4 (2012).
 52. Khalili, Narjes, Ziba Farajzadegan, Fariborz Mokarian, and Fatemeh Bahrami. "Coping strategies, quality of life and pain in women with breast cancer." *Iranian journal of nursing and midwifery research* 18, no. 2 (2013): 105-111.
 53. Doshi, Simit M., Pankaj Shah, Xiudong Lei, Amit Lahoti, and Abdulla K. Salahudeen. "Hyponatremia in hospitalized cancer patients and its impact on clinical outcomes." *American Journal of Kidney Diseases* 59, no. 2 (2012): 222-228.
 54. Murtiningsih, Muhammand, Muhammad Kristiawan, and Bukman Lian. "The correlation between supervision of headmaster and interpersonal communication with work ethos of the teacher." *European Journal of Education Studies* (2019).
 55. Feyissa, Anteneh M., William L. Woolverton, Jose J. Miguel-Hidalgo, Zhixia Wang, Patrick B. Kyle, Gregor Hasler, Craig A. Stockmeier, Abiye H. Iyo, and Beata Karolewicz. "Elevated level of metabotropic glutamate receptor 2/3 in the prefrontal cortex in major depression." *Progress in Neuro-Psychopharmacology and Biological Psychiatry* 34, no. 2 (2010): 279-283.