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Synergy model and financial bookkeeping administration through technopreneurship education: does it impact on increasing the competitiveness of MSMEs?

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ABSTRACT

This synergy model refers to collaboration between technology and business expertise in the context of technopreneurship education. A modern approach through technopreneurship education can help MSMEs adopt an effective financial bookkeeping system, including the use of technology in carrying. This research aims to determine and analyze the synergy and administration model of financial bookkeeping through technopreneurship education which has an impact on increasing the competitiveness of Micro, Small and Medium Enterprises (MSMEs). This research was carried out at the Culinary Food MSMEs located in Gowa Regency and Makassar City, South Sulawesi Province. The data analysis method in this research uses qualitative data analysis. This research method aims to get general answers about cause and effect by analyzing the factors that cause phenomena in the concepts raised in this research. Data collection was carried out by distributing questionnaires and interviews with informants from Micro, Small and Medium Enterprises (MSMEs). The steps in qualitative analysis techniques start from data reduction, data presentation and drawing conclusions. The research results show that the synergy model that was designed has a positive impact, but the synergy model through technopreneurship education is less effective in being implemented by MSMEs so that the competitiveness of MSMEs is not optimal. Apart from that, MSMEs tend to carry out financial administration manually and irregularly so that bookkeeping administration through technopreneurship does not have an impact on increasing competitiveness. Meanwhile, technopreneurship education is very useful and has an impact, but the competitiveness of MSMEs has not fully increased.



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Introduction

In the era of globalization and advances in information technology, Micro, Small and Medium Enterprises (MSMEs) play an important role in a country's economy. Some examples of MSME conditions that can encourage the Indonesian economy are that MSMEs are able to absorb the largest workforce, 97% of the total workforce in Indonesia is in the MSME sector. Most people rely on income as business actors or workers in the MSME sector (Fajar, 2020). However, MSMEs often experience a decline in performance and MSMEs are less able to compete in the global market, this is due to many factors, challenges and problems, namely technology

in business, the second problem is limited financial resources such as business capital, access to working capital, the third problem is that MSMEs find it difficult to prepare financial reports, and the final problem of limited human resources. Some people may have overlooked the importance of technopreneurship and its development in the digital economy especially involving globalization of economic. While most people might have read and understand about entrepreneurship but new technologies have nurtured the rise of technopreneurs in order to, and sustain in the global competitiveness as well as to equip oneself with latest technological knowledge, Technopreneurship is linked with digital era and there is no limitation in creating big impact for the society. It gives new motivation to economics transformation (Alias et al. 2020).

Regarding the financial aspect, many MSME players still use traditional and irregular financial reports (not in accordance with applicable standards) (Apandi et al. 2023), because the majority of MSME players do not have knowledge about financial reports (Farina and Opti 2019) and financial bookkeeping administration is less regular in terms of recording expenditure and income transactions. Small and Medium Enterprises (SMEs) find it difficult to financial record what happens in their business operations. These difficulties relate to activities and the assessment of the results obtained in each business (Dinnullah and Fayeldi 2017) , Especially if measurements and assessments have to be carried out on activities that occur in business activities. Recording is carried out only by calculating the difference between money coming in and money going out, without looking at the expenditure of that money for or from the allocation of business or non-business activities. (Winarno et al. 2020). Most Small and Medium Enterprises (SMEs) only count the assets they own as limited to the cash they hold. They don't understand that the meaning of assets is broader than just cash.(Putra and Kurniawati 2012) .

To overcome various problems that occur in MSMEs, a synergy model was designed and implemented which can increase the competitiveness of MSMEs. Synergy can be interpreted as cooperative activities carried out to obtain maximum results by connecting several different roles, even though they are interrelated. This synergy model refers to collaboration between technology and business expertise in the context of technopreneurship education. Based on the results of this study, entrepreneurship education and technopreneurship literacy are very important to start teaching and given, not only in one particular department but need to be taught in all departments, because with entrepreneurship education and technopreneurship literacy can increase self efficacy and ultimately can contribute to entrepreneurial interest (Nasruddin et al. 2023). This involves integrating technical skills with business insight to create innovative solutions in MSME financial management. Good financial bookkeeping is the key to managing MSME finances efficiently. A modern approach through technopreneurship education can help MSMEs adopt effective bookkeeping systems, including the use of technology such as accounting software and financial applications.

In the current era of globalization, MSMEs must be able to adapt to face global challenges and increasingly fierce competition, such as increasing product innovation, developing human resources and technology, and expanding marketing areas. This can increase the selling value of the MSME products produced, so that they can compete with foreign products. The development of the business and industrial world in the presence of economic globalization has increased sharply (Petricevic and Teece 2019). Various products produced are demanded to be able to meet the needs and desires of consumers. Economic globalization and the information age are encouraging industries to use competent human resources and good financial resources, as well entrepreneurial spirit.

For MSMEs who want to achieve success, developing entrepreneurship through MSMEs could be the right step. The government and related institutions have provided a lot of support in the form of training, financial access and market access for MSMEs. However, there needs to be a joint effort from various parties to overcome these challenges. One important step is to increase financial in financial bookkeeping administration and technological literacy among MSME players, as well as educating the public about the importance of entrepreneurship as a promising career choice. Research (Sedyastuti 2018) state that increasing competitiveness requires synergy between the role of government as policy maker and accompanying institutions, especially microfinance institutions to facilitate access to credit and expand marketing information networks.

Previous research conducted by (Priyati et al. 2017) states that technopreneurs have a positive and significant effect on increasing business competitiveness. Meanwhile, (Adiningrat and Warda 2023) states that the intensity model based on technopreneurship-is very practical for MSME to use and the intensity model has a very effective level of effectiveness in entrepreneurship so that it can increase the turnover of culinary UMKM typical of Makassar City. Based on the conditions and problems that occur, efforts are needed to increase the competitiveness of MSMEs through a synergy model and financial bookkeeping administration with an understanding of technopreneurship. This is the basis for conducting research to find out and analyze models of synergy and financial bookkeeping administration through technopreneurship education which have an impact

on increasing competitiveness. According to the results of previous research, there has been no research related to Synergy Model and Financial Bookkeeping Administration Through Technopreneurship Education: Does it Impact on Increasing the Competitiveness of MSMEs? which was carried out by Lecturers at the Faculty of Economics and Business, Muhammadiyah University of Makassar, so that the research results can fill gaps in existing literature and increase knowledge for readers.

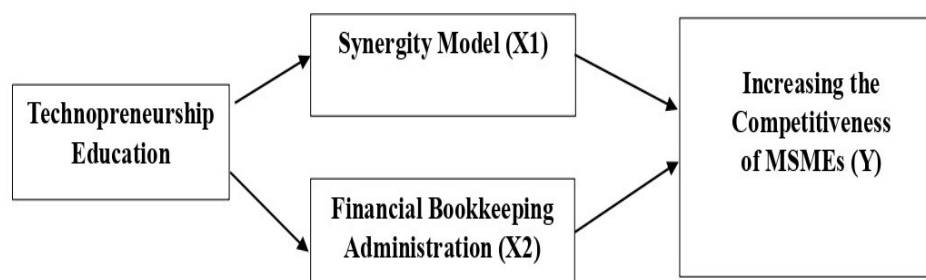


Figure 1. Conceptual Framework

Method

This research took place at the Culinary Food MSMEs located in Gowa Regency and Makassar City, South Sulawesi Province and this research was carried out for approximately 2 months. The sample collection method was carried out by random sampling. The number of samples is 5 MSMEs and the number of informants is 15 people. The criteria for sampling or informants are MSMEs in the Food sub sector, MSMEs with a strategic location, prices that are affordable to consumers, experienced employees who have worked for at least 1 year or more in the business, friendly towards customers, and very simple MSMEs. The data collection technique was carried out by giving questionnaires and interviews to informant sources from MSME owners or representatives to determine the problems faced, especially in increasing their competitiveness, and MSMEs which were in the very simple category. Interview techniques are carried out with informants with a minimum duration of 60 minutes - 120 minutes regarding the topic that has been researched. with an average interview time of 70 min.

The data analysis method in this research uses qualitative data analysis. Qualitative research methods are research methods based on philosophy that are used to research scientific conditions (experiments) where the researcher is the instrument, data collection techniques and qualitative analysis place more emphasis on meaning (Sugiyono. (2018). Qualitative is research that is descriptive and tends to use in-depth analysis. Process and meaning (subject perspective) are more emphasized in qualitative research. The theoretical basis is used as a guide so that the research focus is in accordance with the facts in the field. So qualitative characteristics and characteristics in principle rely more on descriptive aspects of data obtained from the field. Apart from that, qualitative characteristics are more directed towards natural characteristics and data analysis is more in-depth towards the meanings behind what seems real. The description of a qualitative event is characterized by a deductive process that focuses more on emphasizing the meanings of each event. (Kaharuddin 2021).

Results and Discussions

This research was conducted on Micro, Small and Medium Enterprises (MSMEs), totaling 4 types of MSMEs and 15 people who were informants in the research. Regarding the type and number of informants, it can be seen in table 1 as follows.

Table 1. General Description of Informant

Type of MSMEs	Amount of Informant	Percentage
MSMEs ;		
Fried Chicken MSMEs	4	26,7%
Yellow Rice MSMEs	3	20%
Meatball MSMEs	3	20%
Grillen Chicken MSMEs	3	20%
Coto Makassar MSMEs	2	13,3%
Total	15	100%

Source: Processed data, 2024

Based on table 1 above, it shows that the highest number of informants in Fried chicken MSMEs was 4 people or 26,7%.

Table 2. General Description of Informant

Characteristics	Amount	Percentage
Gender		
Man	7	46,7%
Woman	8	53,3%
Total	15	100%
Age		
15 to 30	3	20%
30 to 40	5	33,3%
41 to 50	7	46,7%
Total	15	100%
Last education		
SMP	4	26,7%
SMA	9	60%
S1	2	13,3%
Total	15	100%
Length of work		
1-5 years	8	53,3%
6-10 years	4	26,7%
11-15 years	3	20%
Total	15	100%

Source: Processed data, 2024

Based on table 2 above, it shows that The total number of respondents was 15 people with a description of the distribution of various characteristics, namely the number of informants according to gender, dominated by women 8 people or 53.3% . Based on age, the highest number of informants was between 41-50 years old, 7 people or 46.7% of the total 15 people. The number of informants based on their last education was dominated by high school with 9 people or 60%. Meanwhile, the highest number of informants based on work period between 1-5 years was 8 people or 53.3%.

Table 3. Use of Synergy Model

Type of Synergy Model	Percentage	Criteria
Opportunities	70,66 %	Less effective
Human resources	60 %	Less Effective
Products	65,33 %	Less Effective
Marketing	80 %	Quite Effective
Sales	70 %	Less Effective
Rata-Rata	70 %	Less Effective

Source: Processed data, 2024

Based on table 3 above, it shows that the highest synergy model, namely marketing at 80%, is categorized as quite effective. This means that the synergy model through marketing is more dominant in priority for MSMEs in Gowak Regency because a strong marketing strategy can help MSMEs introduce products and sell their products to increase income and business growth.

Table 4. Use of Financial Bookkeeping Administration

Type of Bookkeeping	Amount of MSMEs	Percentage
Bookkeeping		
Manual Bookkeeping	11	73%
Technological Bookkeeping	4	27%
Total	15	100%

Source: Processed data, 2024

Based on table 4 above, it shows that Micro, Small and Medium Enterprises (MSMEs) carry out manual financial bookkeeping administration of 11 MSMEs or 73% and technological financial bookkeeping administration of 4 MSME or 27%. This means that MSMEs manually record income and expenditure transactions. than a computerized system.



Figure 1. Survey, Observation, Distribution of Questionnaires and Interviews to Fried Chicken MSME Actors, District. Gowa

Based on the results of an interview with one of the MSMEs named Mr. Ridwan on March 27, 2024, he stated that:

"We record manually because the costs are quite high. It requires costs to buy equipment and supplies such as maintaining paper, pens, computers, financial applications and other equipment that is difficult to afford."

The statement from the interview above means that high costs are the main obstacle in adopting more modern technology or financial recording systems. This shows that MSMEs face limited financial resources to invest in more sophisticated equipment and technology. Mr. Ridwan realizes that there are great benefits in improving efficient financial recording and management through technology, but it is hampered by financial factors.



Figure 2. Socialization, Interview Questionnaire to Parties Gowa Regency yellow rice MSMEs

Based on the results of an interview with one of the MSMEs named Mrs Nur Aini on April 22, 2024, he stated that

"We record manually due to limited human resources, and we feel comfortable with manual bookkeeping, but we also usually experience problems in terms of irregular record keeping."

The statement from the interview above means that MSMEs often have a limited team. This makes financial record keeping more difficult as the job is carried out by several people or even just one person, which can lead to burnout. MSMEs experience irregularities in recording which can result in difficulties in monitoring cash flow, payments or receipts, which in turn can affect business decision making.



Figure 3. Documentation after conducting research on MSMEs

Based on the results of an interview with one of the MSMEs named Mrs. Eny on April 22, 2024 he stated that

"Sometimes we record and sometimes we don't record because we usually don't understand financial bookkeeping."

The statement from the interview above means that a lack of understanding about financial bookkeeping is a reason for not keeping records regularly. This shows the need for assistance to MSMEs in terms of increasing financial literacy.



Figure 4. Distribution of Questionnaires and Interviews of Chicken MSMEs at Aroma Daeng Cendrawasih, Makassar City

Based on the results of an interview with one of the MSMEs named Mr. Hamdan as an Aroma Daeng Employee on April 23, 2024, he stated that

"In our business, we use marketing technology to sell products, while financial bookkeeping is done through an application but is not yet optimal. The obstacle is the large deductions (admin fees) and there are still too many customers using payment via the application"

This statement means that Aroma Daeng has utilized marketing technology to increase sales of their products by using social media, digital advertising, and e-commerce platforms. They have also adopted an application for financial bookkeeping. However, the use of this application has not been optimal, and they face obstacles in the form of high administration costs from the payment platform. In addition, although many customers make payments through the application, the additional costs of this service add to the operational burden. Therefore, although technology has helped increase efficiency and market reach, high administration costs and the dominance of payments through applications are the main challenges that Aroma Daeng must overcome in order to maximize business profits and efficiency.



Figure 5. Distribution of Questionnaires and Interviews of Chicken MSMEs at Galqi Chicken, Makassar City

Based on the results of an interview with one of the MSMEs named Mrs. Fina Fandi Winata as an Employee of Galqi Chicken on April 23, 2024, stated that:

"Accuracy and development of competence in managing business finances technologically through adequate training and learning so that the business can grow rapidly"

This statement means that in order to achieve rapid business development, financial management carried out carefully and competently is very important. The ability to manage finances that continues to be improved through adequate training and learning. The use of technology, such as accounting software and financial management applications, is very important because it can help in monitoring, analyzing, and managing finances more efficiently and accurately. With careful and competent financial management, and supported by technology, businesses can ensure efficient use of resources, identify investment opportunities, and reduce financial risks, so that businesses can grow rapidly.



Figure 6. Distribution of Questionnaires and Interviews at UMKM Coto Warung Nur, Makassar City

Based on the results of an interview with one of the MSMEs named Mr. Nur as the Owner of the Coto Warung Nur MSME on April 23, 2024, he stated that:

"I think I use the manual financial administration bookkeeping method because I am used to it. In addition, there are several other reasons, such as the cost and difficulty in adopting new technology and never having participated in financial bookkeeping training via the application".

This statement means that a Coto Makassar Business owner tends to choose the manual financial administration bookkeeping method because of internalized habits, as well as considerations regarding the costs and challenges in adopting new technology. Old habits provide convenience and efficiency that are difficult to replace, while the initial investment and training required for new technology are often considered obstacles that are not comparable to the benefits obtained, and have not participated in free training in financial bookkeeping via technology.



Figure 7. Distribution of Questionnaires and Interviews at Coto Nandar UMKM Makassar City

Based on the results of an interview with one of the UMKM named Mr. Amiluddin as the Owner of Coto Nandar UMKM on April 23, 2024, stated that:

"The use of financial technology in our place of business is inadequate because human resources and funds are limited for application use"

This statement means that our business is experiencing obstacles in adopting financial technology due to limited human resources and funds. Although this technology has the potential to increase efficiency and financial management, we have not been able to implement it optimally. The lack of skilled workers and adequate budget are the main obstacles to the use of more sophisticated financial applications.



Figure 8. Distribution of Questionnaires and Interviews at Bakso UMKM in Makassar City

Based on the results of an interview with one of the UMKM named Mrs. Putri as the Owner of Bakso Bakar on April 23, she stated that:

"We usually do manual recording and sometimes we don't do recording, we don't understand optimally about finance and entrepreneurship to manage a business by utilizing technology, both in terms of sales and financial bookkeeping"

This statement means that the difficulty in managing their business is because they rely on manual recording or often don't record at all. They also don't understand effective ways to manage finances and aspects of entrepreneurship. In addition, they have not utilized technology optimally in the sales and financial bookkeeping processes. Therefore, there is an urgent need to improve their understanding of financial management and entrepreneurship, as well as to adopt technology that can improve their business recording and management systems.



Figure 9. Distribution of Questionnaires and Interviews at Pallubasa UMKM in Makassar City

Based on the results of an interview with one of the UMKM named Mrs. Liliana as the Owner of Pallubasa Unta on April 23, 2024, stated that

"I still apply manual financial recording in my business because the limited knowledge of employees in the workplace is still minimal in terms of financial applications, so it is difficult for us to control our business finances. So we need training in the use of technology to manage finances properly".

This statement means that the challenges faced in integrating financial technology into business processes, which is an important part of technopreneurship. The use of manual financial recording shows limitations in technological knowledge among employees, which results in difficulties in controlling business finances. To overcome this problem, training is needed in the use of technology for financial management. By adopting technology and providing adequate training, businesses can improve efficiency, accuracy, and effectiveness in financial management, as well as utilize technological innovation to achieve competitive advantage.

The Synergy Model Through Technopreneurship Has an Impact on Increasing the Competitiveness of MSMEs

The synergy model has been designed with various aspects, namely opportunities, provision of human resources, products, marketing and sales. The synergy model through technopreneurship education is carried out in stages that include opportunities, provision of human resources, products, marketing and sales which can significantly have a positive but not yet optimal impact on increasing the competitiveness of Micro, Small and Medium Enterprises (MSMEs) but is not yet optimal. This can show that the synergy model is less effective in being implemented by MSMEs so that MSMEs' competitiveness is not optimal.

In the opportunity aspect, the technopreneurship education provided provides opportunities for MSMEs. However, MSMEs are less effective in exploiting opportunities in a strong understanding of the latest technology and how to apply it in their business. In the aspect of providing human resources that is less effective, it shows that the process of recruiting, developing or managing human resources in MSMEs is running well but is not yet optimal because human resources have not yet mastered the use of technology in financial management and business management for business growth. Then in the product aspect, technopreneurship education helps MSMEs produce products or services that are more innovative and competitive. However, MSMEs are less effective in developing product and service innovations to attract consumer attention.

The marketing aspect of technopreneurship runs quite effectively. However, attention needs to be paid to continuing to strengthen marketing strategies that can optimize market penetration. Currently, MSMEs utilize the latest technology in marketing products to increase online presence and visibility. MSME strategies in terms of effective digital marketing are content marketing and marketing on social media (Instagram, Facebook, WhatsApp and Gojek). Digital marketing plays a key role in technopreneurship strategies for MSMEs today. Although there has been good progress in utilizing the latest technology such as content marketing and social media. However, the use of online marketing was found to be not optimal due to limited human resources in running the information technology. Meanwhile, the sales aspect was less effective, indicating that the sales team experienced challenges in achieving sales targets or maintaining relationships with customers optimally

Thus it is concluded that although the marketing aspect has been implemented quite effectively, the sales target has not been achieved and is less effective. Apart from that, the relationship or collaboration between human resources (HR) and the sales team is not going well. There are problems such as a lack of understanding

of the sales team's needs in terms of HR, and a lack of support needed from HR to achieve sales targets. This can result in decreased sales performance and decreased income due to a lack of required resources or skills.

The results of this research are in accordance with research (Agussalim et al. 2021) which shows that the synergy model design with the highest level of practicality is resources and marketing. The synergy model is very practical to use for actors who are just starting a business or are already running a business. Business is critical to increasing employment and economic growth. The synergy model in business development is very well applied in entrepreneurial life. Then, (Hilmi and Marjulin 2023) states that The results of this study show that using Digital Marketing in marketing its products can expand the market to increase the sales turnover of MSMEs, so increasing sales will increase company profits.

Furthermore, (Febriyanto, Nasuredin, and Rashid 2023) states that obtained proactiveness, opportunity, and customer intensity have a direct effect on business performance, while the other four variables, namely innovation focused, calculated risk-taking, resource leveraging, and value creation, have no significant effect on business performance. Apart from that, research conducted by (Pamungkas et al. 2024) , The results of the analysis show significant differences between MSMEs in Indonesia and Malaysia, especially in organizational governance and understanding of entrepreneurship. MSMEs in Malaysia show a higher level of maturity in implementing good governance and have a deep understanding of entrepreneurship. However, in the use of technology, both tend to be balanced, showing the same challenges and opportunities related to technology. This research provides a strong basis for increasing the competitiveness and sustainability of MSMEs in the era of digital transformation, by providing recommendations based on comparisons between Indonesia and Malaysia.

Leadership has a positive and significant effect on the performance, and Competence has a positive and significant effect on performance. (Arniati and Arsal 2023). Meanwhile, (Imelda and Silip 2023) states that human resource competence has a significant positive effect on competitive advantage and innovation, but innovation has a positive but not significant effect on competitive advantage. HR competence and innovation variables affect the variation of data on competitive advantage variables by 0.91 or 91%, the remaining 9% is influenced by other factors.

Financial Bookkeeping Administration Through Technopreneurship Has an Impact on Increasing the Competitiveness of MSMEs

To overcome the obstacles faced by MSMEs, implementing a technopreneurship approach in education can provide great benefits in understanding bookkeeping administration in more depth. Technopreneurship integrates technological skills with an entrepreneurial spirit, which is directly relevant to bookkeeping administration in the modern business context. Based on the research results, it shows that financial bookkeeping administration through technopreneurship education does not have an impact on the competitiveness of Micro, Small and Medium Enterprises (MSMEs). This shows that MSME actors are less effective in using technology in carrying out financial bookkeeping administration. This means that the lower the use of technology in financial bookkeeping administration, the competitiveness of MSMEs will decrease

The lack of use of this technology in financial bookkeeping administration shows that Micro, Small and Medium Enterprises are more dominant in carrying out financial bookkeeping manually rather than computerized due to several factors, namely 1). Implementation cost issues; Implementing a computerized system requires significant initial investment in software, hardware, and employee training. MSMEs may not have sufficient budget to adopt this technology. 2). Limited human resources; MSMEs may have limited human resources skilled in information technology. 3). Simple and small scale; MSME businesses generally have a smaller operational scale and relatively simple financial processes. Therefore, the manual bookkeeping process can still be considered quite efficient. Apart from that, another factor is that MSME players and employees predominantly have high school backgrounds and have less time working, around 1-5 years, so these limited education and length of work can affect their understanding of the basic concepts and principles in more complex financial administration

Providing MSMEs with an in-depth understanding of bookkeeping administration through technopreneurship education can have quite a good impact even though it is not yet optimal. This is due to factors namely 1). Knowledge gaps; on in-depth knowledge of bookkeeping administration may not be a top priority. MSMEs focus more on product development rather than technology-based administrative aspects, 2). Lack of sources human resources skilled in mastery of information technology. 3). Simple and small scale; MSME businesses generally have a smaller operational scale and relatively simple financial processes. Therefore, the manual bookkeeping process can still be considered quite efficient.

Providing MSMEs with an in-depth understanding of bookkeeping administration through technopreneurship education can have quite a good impact even though it is not yet optimal. This is due to factors namely 1). Knowledge gaps; on in-depth knowledge of bookkeeping administration may not be a top priority. MSMEs focus more on product development rather than technology-based administrative aspects, 2). Lack of resources; MSMEs have limited resources to provide sufficient training or depth in bookkeeping administration.

According to (Arniati et al. 2021) states that by learning bookkeeping, entrepreneurs' knowledge increases in making financial reports so that their motivation increases in working to obtain maximum income. Whereas, Training and mentoring what (Maris et al. 2022) has done can make simple bookkeeping and compile these financial statements increase the awareness of MSME actors for the importance of information generated by financial statements. as the basis for decision making and preparing business strategies to achieve sustainable business. Furthermore, (Mukhibad and Anisykurlillah 2018) conclude that so far, MSMEs have not separated company assets from personal assets. Apart from that, the calculation of the cost of production has not been carried out properly, so MSMEs really need material for calculating the cost of production. Based on the evaluation, MSMEs have increased their ability to prepare financial reports simply, namely by recording cash income and expenditure transactions (using only cash basis transactions).

This research does not match the research (Yakob et al. 2021), The result showed Multiple regression results prove that financial literacy has a positive and significant impact on SMEs' performance. Managers/owners with financial literacy skills understand business-related financial concepts, including debt, savings, takaful, insurance, and investment, which ensure the good performance of their business.

Technopreneurship Education to Increase the Competitiveness of MSMEs

Based on research results, it shows that technopreneurship education has an impact but the competitiveness of MSMEs has not fully increased. This shows that MSME players still do not use technology in their business activities due to a lack of knowledge and skills in their human resources. This means that the lower the understanding of the use of technology in business activities, the competitiveness of MSMEs decreases. The role of technopreneurship learning with an ethnopedagogic approach to improve entrepreneurial skills (Perwita and Hadi 2023). The technopreneurship approach carried out in a participatory manner with SMEs including increasing the quantity and quality of production, product innovation, management competence, sales and distribution of products through effective use of technology so that ashitaba as a superior product based on local wisdom is able to compete globally (Kusumawardhany et al. 2019).

According to (Kariyani and Meitriana 2022), research prove that (1) there is a partially significant influence between levels education, and capital on the competitiveness of micro, small and businesses medium-sized (UMKM) in Sawan District. Meanwhile, technology has no effect on the competitiveness of micro, small and medium enterprises (MSMEs) in Sawan District, (2) there is a significant simultaneous influence between the level of education, capital and technology on the competitiveness of micro, small and medium enterprises (MSMEs) in Sawan District, (3) the magnitude of the influence of the level of education, capital and technology on the competitiveness of MSMEs is 51.3% while 48.7% is influenced by other variables not tested in this study.

This research does not match the research (Agustina et al. 2020), The findings showed that technopreneurs had not been clearly identified in terms of number and line of business due to inadequate understanding, knowledge, and information for related agencies conducting data collection for MSMEs used in categorization. The lack of information related to the progress of science and technology hinders the development of facilities and infrastructure and does not support business progress.

Conclusions

Based on the results of the research and discussion previously presented, a conclusion can be drawn, namely that the synergy model is designed to have a positive impact, but the synergy model through technopreneurship education is less effective in being implemented by MSMEs so that MSMEs' competitiveness is not yet optimal. Apart from that, MSMEs tend to carry out financial administration manually and irregularly so that bookkeeping administration through technopreneurship does not have an impact on increasing competitiveness. Meanwhile, technopreneurship education is very useful and has an impact, but the competitiveness of MSMEs has not fully increased. This shows that MSME players still do not use technology in their business activities due to a lack of human resource skills and limited financial resources.

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