

INNOVATION AND QUALITY OF BUSINESS SCALE BASED ON BLUE ECONOMY IN THE COASTAL AREA OF BILATO, INDONESIA

Muhammad Fuad Alamsyah^{1*}, Andi Subhan², Muhammad Iqbal Jafar³, Arifuddin⁴,
Muhammad Ali Fikri⁵

Received 12.10.2024.

Sent to review 22.10.2024.

Accepted 19.02.2025.

Original article



¹ Universitas Ichsan Gorontalo,
Faculty of Economic, Department of
Economic, Indonesia

² Universitas Ichsan Gorontalo, Faculty
of Social Sciences, Department of
Communication Sciences, Indonesia

³ Universitas Ichsan Gorontalo,
Faculty of Agriculture, Department of
Agriculture, Indonesia

⁴ Universitas Ichsan Gorontalo,
Faculty of Engineering, Department of
Architectural Engineering, Indonesia

⁵ Universitas Ahmad Dahlan,
Faculty of Economics and Business,
Department of Management, Indonesia

Corresponding Author:

Muhammad Fuad Alamsyah

Email: fuad88384@gmail.com

JEL Classification: D01, D19, M21,
030

Doi: 10.2478/eoik-2025-0007

UDK: 502.211:349.6(594)

ABSTRACT

This study thoroughly examines and analyzes the potential of small and medium-sized enterprises (SMEs) involved in Nike fish (Ikan Nike) in the Bilato coastal area of Indonesia. Several aspects are used as indicators to assess the extent of this potential, including innovation, scale quality, and the application of the blue economy concept. The methodology employed is qualitative, also known as interpretative research, naturalistic research, or phenomenological research. The results of this study indicate a significant and positive improvement among the SMEs involved in Nike fish, particularly in terms of innovation, which encompasses product innovation, sales media innovation, and environmental innovation. Additionally, there has been notable development in scale quality, as evidenced by increases in income, sales, and business profits. Furthermore, the SMEs participating in the Nike fish group consistently implement the blue economy concept as a means of ensuring sustainability and balance in preserving the environment in the Bilato coastal area. This approach not only enhances economic value but also contributes to social and ecological benefits.

Keywords: *SME Actors, Nike Fish, Innovation, Business Scale, Blue Economy*

1. INTRODUCTION

Innovation in the business world has a very important role (A. Distanont, O. Khongmalai, 2020) in maintaining consistency and business continuity. Innovation is a key factor in ensuring that a business can continue to exist and survive in increasingly fierce competition. As time goes by, every business actor is required to be able to adapt, advance, and develop. Not only that, one of the factors for the success of a business also lies in the quality of its business scale (Moeuf, Alexandre et al., 2019). The quality of a good business scale serves as a barometer of business success in building its business paradigm (Tian et al., 2024).

Innovation and the quality of business scale are two important factors in building a strong and resilient business. With innovation, a business will continue to grow and develop (Bashir,

Makhmoor et al., 2017), as innovation will be able to create, develop or increase the value of a product, service, or process to a business model that has never existed before. There are many aspects of a business that can be improved through the innovation process such as product innovation, marketing innovation and business model innovation (Saeed Najafi-Tavani, 2018). In terms of the quality of the business scale, what needs to be considered is the paradigm of the business in running its business prospects (Sabir et al., 2024). Quality business prospects are reflected in the large amount of income earned, profits owned, increasing sales and the achievement of welfare for stakeholders (Timah, et al., 2021) in the business.

One of the business actors that are required to continually innovate is the group of SMEs involved in Nike fish. These Nike fish SMEs are micro, small, and medium enterprises located in Gorontalo Province, Indonesia. They are among the few businesses that continue to uphold the local wisdom of the Gorontalo community. Currently, the number of Nike fish SMEs is decreasing, despite the fact that Nike fish culinary products have a high demand, whether consumed fresh or processed into other products.

Nike fish has now become a culinary object that is very popular and favored by both local and foreign tourists who visit Gorontalo. This condition is a blessing for Nike fish SME actors in Gorontalo. With such great potential, Nike fish SME actors must quickly adapt by continuing to innovate and improve the quality of their business scale to survive and not disappoint consumers.

The enormous potential of Nike fish (Sahami and Habibie, 2021) is also a source of income for the region. This is very important for the progress and improvement of the welfare of the people in the Gorontalo area. The potential of Nike fish should be directed towards an industrialization process that can maintain business sustainability while still paying attention to the balance and sustainability of the waters. This concept is known as the blue economy concept. The Blue Economy Concept (Spalding, Mark J., 2016) was developed to address the challenges of the world economic system, which tends to be exploitative and harms the environment through exploitation beyond the capacity or carrying capacity of nature.

In light of the above phenomenon, this study aims to analyze and further explore the impact of innovation and scale quality based on the blue economy on SMEs involved in Nike fish located in the Bilato coastal area, Gorontalo Regency. Innovation and scale quality play an inseparable role in the success of Nike fish SMEs. Several aspects of innovation that should be developed by these SMEs include product innovation, marketing strategies, and business models. Similarly, in terms of scale quality, SMEs need to enhance their competitiveness in terms of income, sales, and business profits. If these goals are fully achieved, the SMEs' aspirations to progress and develop will be realized. This research contributes to the field of knowledge in the following aspects: Application of Blue Economy Theory: Providing empirical evidence on the implementation of blue economy principles in the context of fishery MSMEs (Micro, Small, and Medium Enterprises); Business Model Development: Formulating innovative business models that can be applied by MSMEs in coastal areas; Social-Economic Impact: Analyzing the impact of innovation enhancement on the welfare of local communities.

2. LITERATURE REVIEW

2.1. INNOVATION

Innovation is a new idea in a product produced (Mastilo et al., 2024) by a company that leads to improved results. Product innovation is also a way for companies to master market demand, and to survive in carrying out their business to meet competitiveness and be able to adapt to devel-

opments that occur (Siska and Laily, 2023). Innovation can be seen as a manifestation of creativity in a product or service that can be utilized (Setyaningrum and Muafi, 2022). According to Rosenfeld (in Sutarno, 2012: 132), innovation is the transformation of knowledge into new products, processes and services – the act of using something new. On the other hand, according to Partners in the same book and on the same page, innovation is the successful exploitation of a new idea or, in other words, the mobilization of knowledge, technological skills and experience to create new products, processes and services.

In the business world, innovation is a very important aspect (Ramdani et al., 2019). With innovation, a business can create added value for a product or service offered (Jia, 2024). This added value gives consumers the impression that the product or service offered has higher quality compared to other products or services.

For Nike fish SME actors, innovation can be achieved in several ways, such as carrying out a product innovation process. Based on the results of observations of Nike fish SME actors on the Bilato coast, so far, they have only made two types of Nike fish processed products, namely Nike crackers and Nike kriuk. This has been done for years without any innovation. As a result, the range of Nike fish processed products has become less varied and tends to be boring.

Through an intense and structured mentoring process, involving the support and cooperation of the local village, SME actors in the Bilato coastal area have begun to implement innovation in processing Nike fish products. Some of the newly introduced products by Nike fish SME actors on the Bilato coast are Nike meatballs, Nike fried meatballs, Nike nuggets, and Nike katsu nuggets. The innovation carried out by the SME actors will further increase the added value of Nike fish-processed products on the Bilato coast.

2. 2. QUALITY OF BUSINESS SCALE

The quality of the business scale is a benchmark for a business based on the amount of income and business assets. If income or sales are increasing, it is certain that the size of the business is also growing (Shafira, 2023). A business is considered to be of high quality (Puška et al., 2023) if the business can consistently maintain the image of its products. Belanová (2014) states that a high quality business environment creates conditions for long-term sustainable economic growth, and is a basic prerequisite for business development and the growth of a country's competitiveness on an international scale.

The quality of the business environment, which is an essential basis for SME development, is determined by various external and internal factors that generally act with different levels of intensity and in mutual connection (Civelek M. et al., 2016). A high quality business environment is a prerequisite for the long-term competitiveness and growth of every market economy (Gajović, 2024). In its broadest sense, the business environment reflects the quality of economic conditions and the preconditions for the economic activities of enterprises (Sun, and Xu, 2024).

As Nike fish SME actors located in the Bilato coastal area, Gorontalo district, the actors have not yet fully maximized the quality of their business scale. This can be seen from various business quality indicators such as income, sales and business profits. If these indicators are optimized by Nike fish SME actors, the benefits that will be obtained will be even greater, providing a significant positive impact on the progress of the processed fish product business.

2. 3. SME_s (SMALL AND MEDIUM ENTERPRISES)

SMEs (Small and Medium Enterprises) play a significant role in addressing various economic interests in national development, particularly in creating new businesses and job opportunities (Siringoringo and Yunus, 2022). SMEs, commonly referred to as small and medium en-

terprises, relates to businesses established by individuals with a maximum net worth of Rp. 200,000,000.00 (excluding land and buildings) (Susilowati, 2020).

According to the Law of the Republic of Indonesia, No. 20 of 2008, Article 1, concerning SMEs, micro-enterprises are defined as productive businesses owned by individuals or individual business entities that have the characteristics of micro-enterprises as regulated in the Act in question (Rahmawati & Pudyaningrat, 2022).

On the one hand, an advantage of SMEs over large companies is their ability to adapt faster, as they have fewer rigid processes and hierarchies. On the other hand, MSMEs still face different difficulties and are therefore the targets of government support and incentive programs (Carvalho et al., 2018; Inoue & Yamaguchi, 2017; Radicic et al., 2016).

Nike fish SME actors in the Bilato coastal area consist of two groups, namely the SME group owned by Mrs. Lian and the group owned by Mr. Andika. The Nike fish processed product group owned by Mrs. Lian was formed in 2017, while the SME group owned by Mr. Andika was formed in 2019. Both SME groups focus on processing Nike fish into food products that have higher economic value. The existence of these groups greatly helps the local village government in absorbing employment, increasing local revenue (PAD) and, no less importantly, preserving local wisdom values and introducing Nike fish as one of the potential marine resources owned by Gorontalo.

2. 4. BLUE ECONOMY

The Blue Economy is an economic development concept that focuses on the sustainable use of marine resources to improve human welfare and maintain environmental sustainability (Surya et al., 2022). In recent years, the term Blue Economy (BE) has become a concept closely related to maritime resources and developed economies in the oceans. Its growing expansion and the emerging needs of a circular economy (CE) herald challenges in both new and established treatments and materials (Martínez-Vázquez et al., 2021).

Most management research on the blue economy is based on a sustainable development perspective. Keen et al. (2018) designed a conceptual framework for the blue economy that can be used to assess sustainable marine management. Sarker et al. (2018) also developed a management framework for blue growth, emphasizing that it requires joint efforts to promote blue growth and achieve sustainable development goals (SDGs). Howard (2018) had an in-depth discussion on the role of stakeholders in sustainable development. The convergence of the blue economy and marine ecosystem is closely linked to blue growth (Häyhä and Franzese, 2014; Lillebø et al., 2017).

“Blue Economy” is a policy tool or means to drive economic growth and create jobs. Focused on revitalizing the economy, marine industrial activities include construction, transportation, mineral resources development, shipbuilding, communication cable laying, pharmaceutical enterprises, equipment deployment, sustainable energy from waves and currents, seaside leisure tourism, and fisheries and aquaculture. In addition to traditional marine development activities, marine-oriented information and science sectors are playing an increasingly stronger role in boosting blue economy development (Lu Wenhai et al., 2019).

As one of the areas included in the Tomini Bay maritime area, Bilato sub-district has abundant marine natural resources. The large potential of Tomini Bay clearly has a positive impact on the surrounding community. Most of the community, especially those on the Bilato coast, utilize it by working as fishermen. This is inseparable from the large potential of the marine wealth of Tomini Bay. Based on data from the Fisheries Port Information Center, the fish catch in Tomini Bay during 2024 was 804.81 tons. This amount is estimated to be worth Rp. 9,752,485,300

from 164 sailing ships (statistik.kkp.go.id, 2024). The magnitude of this potential must be supported by human resources (HR) and good management by the local community, so that it can become a source of income for the local community and create a dynamic balance between resources and the environment.

2.5. NIKE FISH

Nike fish is a typical commodity found in Gorontalo which has important economic value and is commonly favored by the local community as a foodstuff due to its good taste and distinction. It belongs to an amphidromous goby group in the postlarva to juvenile stage ([Sahami & Habibie, 2020](#)). Nike fish are typically small, measuring 2 to 5 centimeters (cm) in size, and found seasonally in the waters of Tomini Bay, Gorontalo City, usually at the end of the lunar cycle until the new one begins ([Sahami et al., 2023](#)).

Nike (local name) is a designation for a goby fish group in the post-larval to juvenile stages that seasonally appear in Gorontalo Bay waters, usually in the last quarter moon phase towards the new moon ([Sahami et al., 2020](#)). Nike is a group of *Awaous* sp. Recent studies have revealed that Nike fish are composed of the species *Sicyopterus logfiles*, *S. pregnant*, *S. cynocephalus*, *Belobranchus Segura*, and *Bunaka gynoids* ([Pasisingi et al., 2020](#)). Nike fish continue to be actively harvested and consumed, reflecting the substantial efforts devoted to their usage. The data collected on Nike fish production in Gorontalo City between 2020 and 2021 showed a consistent decline in production, supporting the hypothesis of this study that all dimensions of sustainability (ecological, economic, social, technological, and ethical) concerning the use of Nike fish resources have a less-than-sustainable status.

Based on the results of observations, it was found that the best quality of Nike fish is in the Bilato coastal area. This area is included in the area passed by Tomini Bay. The quality of Nike fish in the Bilato coastal area, compared to other places, cannot be separated from environmental factors. The low level of waste pollution in the Bilato area makes the quality of fisheries in the area one of the best. This can be proven from the aroma of Nike fish, which is not fishy compared to other areas. The color of Nike fish from the Bilato coast also appears brighter and fresher than the color of Nike fish in other areas. Most of the content of Nike fish is water (about 70 percent) and protein (16 percent). In addition, Nike fish also contains calcium and phosphorus, which are good for growth. These are some of the reasons why processed Nike fish products are very popular in the Gorontalo community.

2. 6. NEW RESEARCH IDEAS

This research seeks to highlight the differences intended to support the accuracy of the study, thereby preventing excessive misinterpretation among readers. The new concepts or ideas discovered in this research, which distinguish it from other studies, are as follows:

- Development of Sustainable Harvesting Technology
- Innovation in Processing and Product Diversification
- Digital Marketing and E-Commerce
- Training and Community Empowerment
- Partnerships with Research Institutions and Government
- Sustainable Supply Chain System
- Certification and Quality Standards
- Environmental Awareness Programs
- Financing Innovations for MSMEs

By implementing these ideas and concepts, it is hoped that MSME actors in the Bilato coastal area will be able to enhance innovation, product quality, and the sustainability of their businesses.

3. METHOD

This research is a study that applies qualitative methods. Qualitative methods are in-depth and careful study methods of all forms of reliable facts on a particular problem in order to create a solution (Hill Way, 1964). Qualitative research uses a naturalistic approach that seeks to understand phenomena in context-specific settings, such as “real-world settings (where) the researcher does not attempt to manipulate the phenomenon of interest (Patton, 2001).

Qualitative research is also called interpretative research, naturalistic research or phenomenological research. The qualitative approach emphasizes the meaning, reasoning, and definition of a particular situation (within a particular context) and examines various aspects related to everyday life. The qualitative approach also focuses on the process rather than the end result (Rukin, 2019).

This research method is carried out in three stages. The first stage is to analyze and identify factors that are indicators of increasing innovation of Nike fish SME actors based on the blue economy in the Bilato coastal area. The second stage is to analyze and identify factors that are indicators of increasing the quality of the business scale of Nike fish SME actors based on the blue economy in the Bilato coastal area. The third stage is to carry out and implement the results of the analysis and identification results obtained in increasing innovation and the quality of the business scale of Nike fish SME actors based on the blue economy in the Bilato coastal area.

The targeted research results in this study are an increase in terms of innovation and the quality of the business scale of Nike fish SME actors based on the blue economy. The increase in innovation and the quality of the business scale will later be seen from various SME performance indicators such as increasing business profits, increasing sales volume, market expansion, product quality, turnover, and the quality of human resources of Nike fish SME actors.

To achieve the research objectives, this research process goes through several stages as follows:

3. 1. STAGE 1: CONDUCTING OBSERVATIONS, COLLECTING DATA AND FGD

This research began with direct observation at the research location in the coastal area of Bilato village. This was done to be able to clearly and definitely identify the problems that occurred. During the observation, the researcher conducted an interview process with Nike fish SME actors in the coastal area of Bilato village. The results of this interview process will later be followed up in more detail by conducting a Focus Group Discussion (FGD) involving experts or parties who have the capacity to provide suggestions and ideas to improve the results of this study.

3. 2. STAGE 2: IDENTIFYING, STUDYING, PROCESSING AND ANALYZING DATA

At this stage, the researchers will conduct the processes of identification, testing, processing and data analysis. These stages are carried out to obtain effective and efficient formulations and solutions for improving innovation and the quality of business scale based on the blue economy among Nike fish SME actors in the Bilato coastal area, Gorontalo district.

3. 3. DATA ANALYSIS

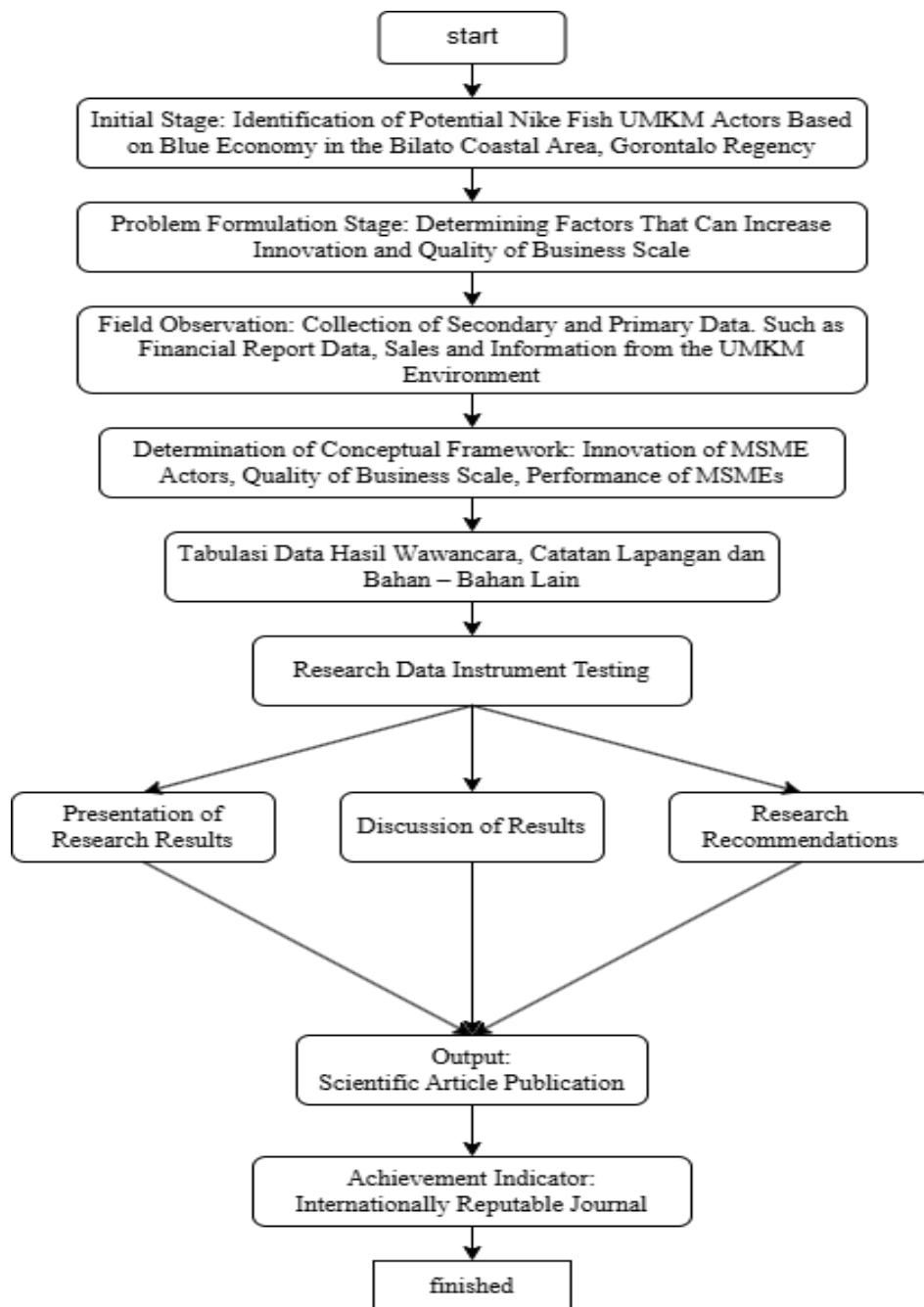
The data analysis process in this research was carried out using qualitative data analysis methods. This qualitative data analysis was carried out by systematically searching and compiling data obtained from interviews, field notes and other materials so that it can be understood and comprehended by others. Qualitative data processing will be carried out in three stages, namely

data reduction, data presentation and data verification. The results of the entire data processing will lead to conclusions that will be used as recommendations for various parties to be followed up, so that the objectives of this study can be achieved and provide benefits to Nike fish SME actors in the coastal area of Bilato, Gorontalo Regency.

3. 4. RESEARCH FLOW

To obtain maximum results and ensure consistent alignment with the objectives of this study, a research flow diagram has been created within the National Competitive Fundamental Research scheme as a guideline for achieving the desired results or targets. The following is the research flow diagram:

Figure 1. Research Flowchart



Source: Elaborated by the author

4. RESULT

4. 1. NIKE FISH SME GROUP INNOVATION

4. 1. 1. PRODUCT INNOVATION

The Nike fish SME group in the Bilato coastal area has been producing processed Nike fish to be processed into other products that have quality and economic added value. This SME group processes Nike fish into crackers and Nike kriuk (Crispy). This processed product has been maintained for years since 2017 until now. This condition has ultimately led to boredom within the community. Many people complain because the same products have been offered for years, hoping for additional or alternative processed products so that the community has more choices. This Nike fish SME group has been running its business since 2017. This processed product has been widely known by the people in the coastal areas of Bilato and the city of Gorontalo. Although the products sold by this Nike fish SME group appear simple, they are rare and difficult to find in Gorontalo. This is because not many people are interested in running a Nike fish processing business. This condition is an opportunity for this SME group to become a pioneer of Nike fish processed product SMEs in Gorontalo province.

To continue to exist and survive, they must be consistent and continue to strive so that the quality of the Nike fish processed products they have is maintained properly. One way to remain consistent in maintaining product quality is by innovating products. This product innovation is carried out to meet the needs and desires of consumers so that there is an interest in buying the products.

Specifically for Nike fish processed products, several types of additional products can be introduced to increase public interest, such as Nike meatballs, fried Nike meatballs, Nike nuggets and Nike katsu. This kind of product diversification innovation has not been undertaken by this SME group since 2017. This is what will be maximized to increase and expand the market share of Nike fish processed products.

The mentoring and training process carried out for the Nike fish SME group since May 2023 has slowly changed their mindset. Currently, the Nike fish SME group located in the Bilato coastal area has begun to innovate by diversifying its Nike fish processed products. The result of the Nike fish processed product innovation, successfully made and produced after undergoing a five-month training and mentoring process, is the development of four new products: Nike meatballs, fried Nike meatballs, Nike nuggets and Nike katsu.

4. 1. 2. INNOVATION

In the current era of globalization, it is undeniable and inevitable that technological progress plays a crucial role in supporting daily human activities. Technological progress can accelerate and improve the quality and quantity of a product. However, the Nike fish SME group located on the coast of Bilato has not yet fully optimized the use of technology to support the sale of their products.

The sales media that have been used by Mrs. Lian and Mr. Andika are limited to WhatsApp (WA) and Facebook (FB). However, the Nike fish SME group does not use these platforms consistently. They rarely use these media to promote the processed Nike fish products they offer. The inconsistency and less than optimal efforts made by the Nike fish SME group in promoting their products through technological media have resulted in sales of the Nike fish SME group's products being limited to the Bilato coastal area and the city of Gorontalo.

To further maximize the number of sales and the appeal of Nike fish processed products, it is necessary for the Nike fish processed product SME group to carry out intense and widespread

promotions. This can be achieved by creating new innovations and utilizing social media platforms such as Instagram and Tiktok. By doing so, the sales of these processed products can reach a wider community, not only in the Gorontalo area but also in other areas, such as Central Sulawesi, North Sulawesi and even South Sulawesi. Currently, the Nike fish SME group in the Bilato coastal area also has an Instagram account and a TikTok account to help promote the advantages and potential of Nike fish and its processed products.

4. 1. 3. ENVIRONMENTAL INNOVATION (WASTE RECYCLING)

Based on observations made in the coastal area of Bilato, one of the issues raised by Nike fish SME actors is related to water pollution due to garbage and waste in some parts of Bilato's coastal waters. This seawater pollution is found in Pelehu and Taula'a villages, which suffer the worst impacts. This condition negatively impacts Nike fish SME actors because seawater pollution due to garbage and waste affects both the quantity and quality of Nike fish.

The Nike fish SME group often experiences this issue, where the quantity of Nike fish caught is sometimes small due to murky seawater full of garbage. In terms of quality, polluted seawater inhibits fish growth and affects the survival of Nike fish. The Nike fish SME group has stated that, so far, there has been no concrete solution from the local government to overcome this problem. This is what sometimes becomes an obstacle for the Nike fish SME group, and they hope for a solution that can help minimize seawater pollution in the coastal area of Bilato.

To minimize this issue, one of the solutions carried out by the local community and the apparatus in the village is an environmental innovation movement in the form of a waste management strategy in the Bilato coastal area. This strategy is carried out by involving residents to actively participate in maintaining the environment around the Bilato coast. This waste management strategy is in the form of "waste recycling" activities, which are aimed at preserving sustainability on the Bilato coast. Several activities have been carried out by the SME group and the local community related to waste recycling, such as using used bottles as plant pots and collecting plastic packaging for craft materials. Although these activities are not yet widespread and significant, what the SME group and the local community are doing reflects their concern for the environment in the Bilato coastal area.

4.2. BUSINESS SCALE OF NIKE FISH SME GROUP

4.2.1. TOTAL ASSETS

In running the Nike fish processed product business, this SME group must have necessary resources to help the operational process of the business being run. These resources include equipment and supplies that are essential for producing Nike fish processed products. This SME group, in producing Nike fish processed products, requires equipment such as stoves, gas, frying pans, spatulas, basins, banana leaves, pans, tampah/niru, knives, electric blenders, scales and cutting boards.

The ingredients used by the Nike fish SME group in producing its processed products include Nike fish, tapioca flour, water, and other spices (garlic, MSG, salt, sugar, eggs and baking soda). With the equipment and ingredients, the Nike fish SME group can produce healthy and high-quality Nike fish processed products, making them known to the wider community, not only on the coast of Bilato but also in the city of Gorontalo.

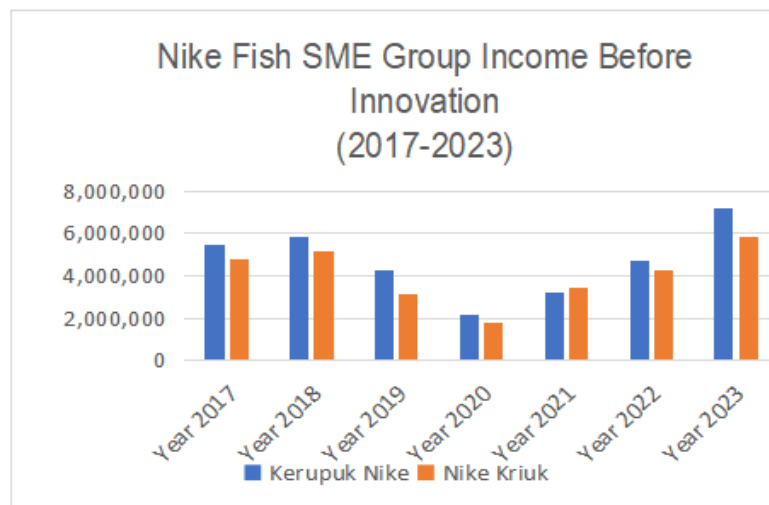
Based on observations made, the total nominal assets owned by Mrs. Lian's group in carrying out operational activities in producing Nike fish processed products are valued at IDR 4,250,000 (Four Million Two Hundred and Fifty Thousand Rupiah). As for Mr. Andika's group, the total nominal assets currently owned are valued at IDR 6,700,000 (Six Million Seven Hundred Thousand Rupiah).

4. 2. 2. TOTAL INCOME

The Nike fish SME group has been running this Nike fish processed product business for eight years, since 2017 until now. Initially, this Nike fish processed product business only offered two products, namely Nike crackers and Nike kriuk. These two products are included in the category before innovation, as these products are the initial products that have been maintained by the Nike fish SMEs group until now, before the innovation of new Nike fish processed products.

Based on the results of initial interviews conducted with the Nike fish SME group, the income or earnings obtained by the group from 2017 to 2023 have fluctuated. The following is a presentation of the development of Nike fish processed product income from 2017 to 2023.

Chart 1. Income of the Nike Fish SME Group Before Innovation (2017-2023)



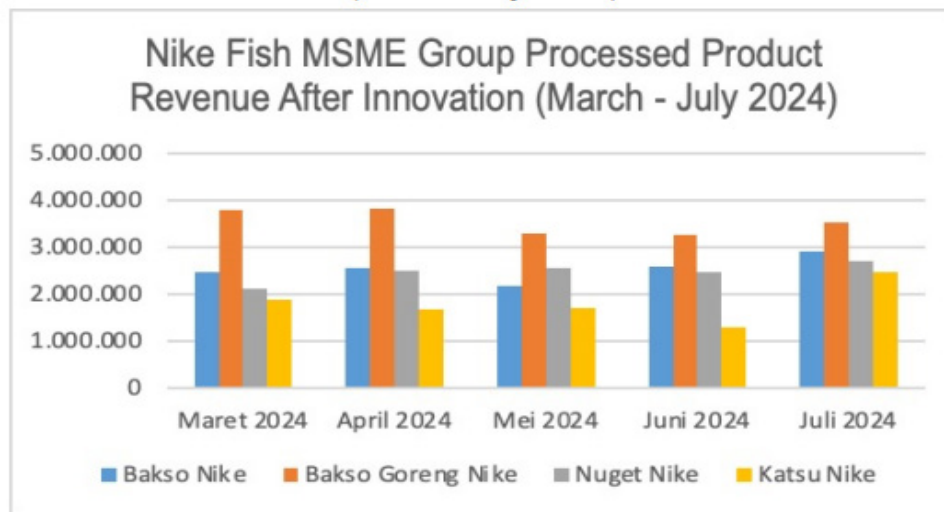
Source: Created by the researchers

Based on the graph above, it can be observed that during the last eight years, the sales of Nike fish processed products by the SME group on the Bilato coast have continued to fluctuate. Of the two processed products sold, it can be seen that the average sales of Nike crackers are still higher than the sales of Nike kriuk. These results also provide information that people still prefer Nike cracker products to Nike kriuk.

Based on the results obtained, it can be observed that the lowest income was recorded in 2020. This was due to the Covid-19 pandemic, which required everyone to reduce activities outside the home and maintain physical distance from others. This had a negative impact on the sales of Nike fish processed products, where at that time fishermen and Nike fish traders found it difficult to do activities outside the home. The highest income obtained by the SME group occurred in 2023, where, from the results of observations, the average income from Nike processed products during 2023 was IDR 7,200,000 (seven million two hundred thousand rupiah). This income was obtained due to the high level of product sales in 2023. This is inseparable from the consistent efforts of the Nike fish SME group to continue to provide high-quality processed products.

The level of income obtained by the Nike fish SME group on the Bilato coast after product innovation was carried out on Nike fish processed products from March to July 2024 can be seen in the graph below.

Chart 2. Income of Nike Fish SME Group After Innovation
(March-July 2024)



Source: Survey results

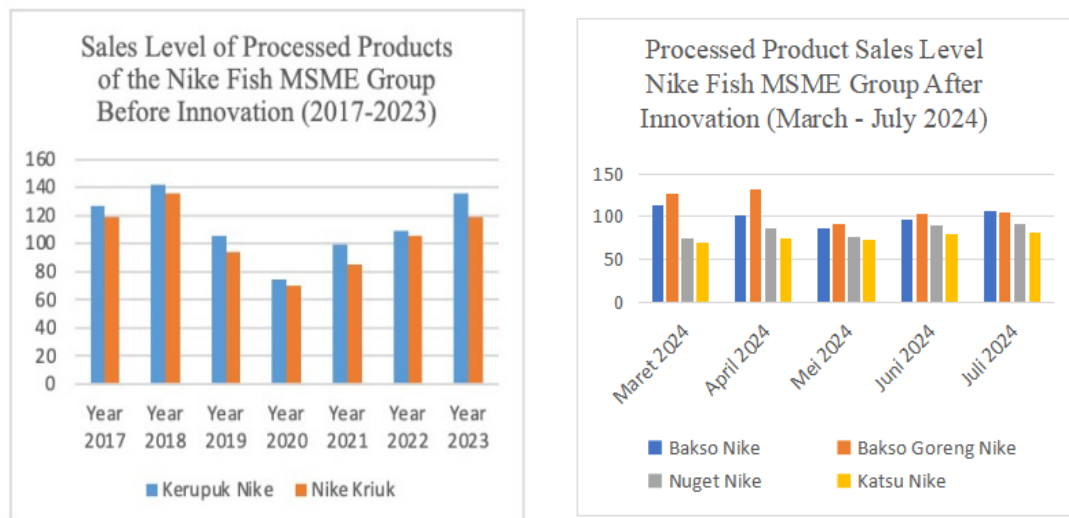
Based on the graph above, it can be seen that the observation period began in early 2024. This period was taken because it was during this period that the Nike fish SME group first tried to innovate Nike fish processed products and sell them to the wider community. The latest Nike fish processed product innovation consists of four new variants: Nike meatballs, Nike fried meatballs, Nike nuggets and Nike katsu. This processed product innovation has also received a very positive response from the community. Since being sold from March 2024 to July 2024, there has been strong enthusiasm for Nike fish processed products. Among the four latest Nike fish processed product variants, it was found that sales of Nike fried meatball products were the highest compared to the other innovative products. It can be concluded that Nike fried meatball products are widely loved and favored by the public.

4. 2. 3. SALES VOLUME

Nike fish is found in Gorontalo, which makes this processed product unique, rare and particularly appealing to the people of Gorontalo. One aspect that makes this processed product very popular with the people of Gorontalo is that Nike Fish is considered one of the icons of the province of Gorontalo. Not only that, Nike fish is rich in protein, calcium and phosphorus, which are essential for growth. In addition, the price of Nike fish is very affordable compared to the price of other types of fish.

With the many benefits and advantages of Nike fish, it is not surprising that every time Nike fish is available, people are always enthusiastic to buy it directly. This enthusiasm is reflected in the sales of Nike fish processed products. Sales of Nike fish processed products by the SME group from 2017 to 2023, before the innovation was carried out, experienced a fairly good increase. This sales level can be seen from a large number of Nike fish processed products, both Nike crackers and Nike kriuk, which are sold each year.

Chart 3. Sales Level of Nike Fish SME Group Processed Products
Before Innovation and After Innovation



Source: Survey results

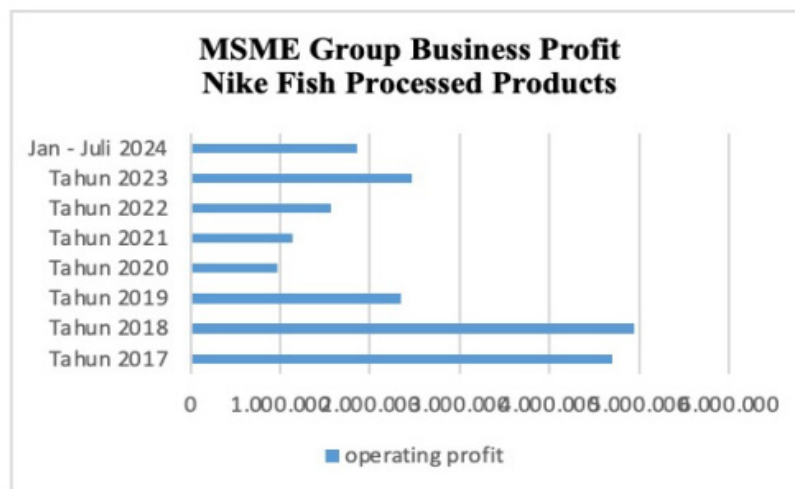
Based on the sales level data above, it can be seen that, in general, the sales level of processed products by the Nike fish SME group from 2017 to 2023, before the innovation, fluctuated for Nike crackers and Nike kriuk products. The highest sales level for both products was obtained in 2018. This was due to the high demand for Nike fish processed products that year, coupled with the high price of Nike fish processed products on the market. The lowest sales level of Nike crackers and Nike kriuk occurred in 2020. This was due to Covid-19 which occurred at that time and made almost all business sectors experience difficult times. However, from 2021 to 2023, the sales level of Nike fish processed products began to gradually experience a significant increase.

Meanwhile, the sales level of Nike fish processed products after the product innovation was implemented in 2024 showed that the highest average sales level occurred in April 2024. This is inseparable from the public's curiosity in trying the latest product innovations. This enthusiasm has led to a significant increase in orders for Nike fish processed products, providing great benefits for the Nike fish SME group. Among the four Nike fish processed innovation products, the highest average sales were obtained by fried Nike meatball products. The high sales of this fried Nike meatball innovation product, apart from its savory taste, are also due to its taste which is well-suited to the preferences of the public, especially children aged 5 (five) to 10 (ten) years. Overall, with this product innovation, the sales level of the SME group has increased, and the public now has many other alternatives when choosing Nike fish processed products that are not only good in taste but also healthy, safe and halal for everyone.

4. 2. 4. OPERATING PROFIT

One of the main goals and targets in running a business is to gain profit. This is also the basis for the consistency of the Nike fish SME group in running the Nike fish processed product business. Having been in this industry for a long time, the group has experienced both ups and downs in running the Nike fish processing business. Thanks to their consistent efforts, the Nike fish product processing business has managed to survive until now. One indicator that is proof of the consistency of the business is their ability to generate profit for 3 (three) consecutive years after Covid-19, from 2021 to mid-July 2024.

Chart 4. Profit of Nike Fish SME Group Products



Source: Survey results

Based on the data above, it can be seen that the business profit of the Nike fish processed product SME group has increased significantly after Covid-19. As for 2024 up until July, the profit results have been quite satisfactory, and it is expected that, by the end of the year, the results will surpass those in previous years. This success can be attributed to the consistency of the Nike fish SME in maintaining the availability of Nike fish processed products for sale and enjoyment by the wider community. This consistency makes the Nike fish SME group well-known to the wider community, so people who need Nike fish processed products will definitely come and buy them from the SME group. In fact, many of the people who buy Nike fish processed products come from government agencies in the Bilato sub-district as well as from the Gorontalo district government.

4.3. IMPLEMENTATION OF BLUE ECONOMY IN THE BILATO COASTAL AREA

The Bilato area is one of the areas in Gorontalo district located within the Tomini Bay area. This area has huge potential related to its marine resources. Tomini Bay is the largest bay in Indonesia with a water area of $\pm 137,700 \text{ km}^2$, and a coastline of $\pm 1,350 \text{ km}$. The bay is rich in fishery resources, endemic coral reefs, vast mangroves and abundant coastal resources. With all the potential it has, it is the obligation of the people in the Bilato coastal area to ensure the long-term sustainability of Tomini Bay. One effort that can be done is to apply the Blue Economy concept. The blue economy is an action rooted in the comprehensive development of the community's economy (Lillebø et al., 2017), which has the ultimate goal of achieving national development as a whole. The development approach based on the blue economy will synergize with the implementation of the triple-track strategy, namely the pro-growth program, pro-poor (poverty alleviation), pro-job (labor absorption) and pro-environment (environmental preservation). The concept of the blue economy emphasizes the importance of viewing sustainable development from the perspective of entities that apply economic instruments to support it in the given economic and social realities (Bogusz, M., 2021).

One of the efforts made by the Bilato coastal community to maintain sustainability and protect ecosystems in the area is by implementing the concept of "zero waste". The concept of zero waste is based on the belief that waste is a potential resource that is valuable to be utilized, not a problem to be solved. This concept encourages a shift from a one-way or linear cycle of resource use and disposal to a closed or circular material flow (Elgizawy, S. M. et al., 2016).

The concept of “zero waste” is implemented by the Pelehu village community as part of their environmental preservation efforts. The activities carried out include cleaning the area around the Pelehu coast from both organic and non-organic waste. These activities are routinely carried out during national or international events, such as Indonesian Independence Day, Gorontalo Regency Anniversary, National Waste Awareness Day and World Waste Day. The essence of sustainable development is achieving synergy between the goals and fields of each. Waste management is closely related to the environment, but also to the economy and society.

5. DISCUSSION

This study aims to analyze the concept of enhancing innovation and quality at the scale of micro, small, and medium enterprises (SMEs) in the Nike fish sector based on blue economy principles in the Bilato coastal area, Indonesia. The results of the research presented above indicate that there are several actions that need to be taken and planned to improve the quality of existing SMEs. This research certainly requires extensive thought and in-depth analysis, which have been formulated as follows:

1. **Relevance of Blue Economy in the Context of SMEs:** The blue economy is highly relevant to the development of MSMEs in the Nike fish sector, considering that the Bilato coastal area possesses abundant marine resources. The application of blue economy principles focuses not only on economic growth but also on environmental preservation. Research shows that SMEs adopting this model can enhance their competitiveness and business sustainability. This makes the study particularly relevant to the situation on the ground, as Nike fish is only found along the Bilato coast, which is not the case in other regions of Gorontalo Province. Therefore, if these resources are utilized and managed with good innovation and quality, the researchers believe that the SME operators in this area will experience significant economic improvement.
2. **Innovation in Processing and Marketing:** Innovation is a key factor in enhancing the quality and competitiveness of Nike fish products. This study found that SME operators who diversify their products, such as processing Nike fish into ready-to-eat products or snacks, successfully attract new consumers. Additionally, the use of information technology in marketing, such as social media and e-commerce, has shown significant improvement in market access. Comparing this with several previous research findings indicates that the existing SMEs have not undergone innovation, leading to stagnation and a failure to enhance the local economy. Processing Nike fish into economic products is highly promising; in fact, Nike fish can be preserved as food for months. Thus, it is very practical and helps reduce escalating production costs, allowing for increased economic circulation and improving the welfare of the communities involved in its production.
3. **Product Quality and Standardization:** Product quality is a primary challenge for SME operators. This study emphasizes the importance of standardization in the production and processing processes. By applying strict quality standards, SMEs can enhance consumer trust. The research also indicates that product certification, such as organic or sustainable certification, can provide significant added value in attracting customers in both local and international markets. In this context, the products refer to ready-to-eat foods like crackers and snacks, which are already widely marketed. Therefore, product standardization is essential to ensure they can compete with other SME products.
4. **Training and Capacity Development:** The research results indicate that training for SME operators related to cultivation, processing, and marketing techniques significantly influences product quality improvement. Training programs involving experts and experienced practitioners can provide the new knowledge and skills necessary for inno-

vation. Support from the government and private institutions in providing access to this training is crucial.

5. **Challenges Faced:** Despite the many potentials, SME operators still face various challenges, including limited capital, lack of access to modern technology, and the impacts of climate change. This study identifies that the lack of awareness regarding sustainable practices also hampers the development of SMEs. Therefore, collaborative efforts between the government, academics, and the private sector are needed to address these challenges.

The enhancement of innovation and quality at the scale of SME operators in the Nike fish sector in the Bilato coastal area, through a blue economy approach, has shown positive results. By adopting sustainable practices, diversifying products, and improving quality, SME operators can not only increase profits but also contribute to environmental preservation. This study suggests the necessity of cross-sector collaboration to promote sustainable SME development and improve the welfare of local communities. Based on this discussion, it is recommended that SME operators, the government, and other stakeholders collaboratively formulate strategies and policies that effectively support the implementation of the blue economy. Additionally, it is important to continue conducting research and evaluations to understand ongoing dynamics and adjust strategies as needed. This discussion can serve as a foundation for further research on blue economy-based SME development in other coastal areas. Furthermore, the government plays a crucial role in creating an environment that supports the growth of SMEs. Research indicates that policies encouraging investment in infrastructure, access to financing, and incentives for sustainable practices can enhance SME performance. Government programs that support innovation and research can also strengthen the competitiveness of SME operators.

6. CONCLUSION

The objective of this research is to enhance innovation and scale quality based on the blue economy among SMEs involved in Nike fish in the Bilato coastal area of Indonesia. The findings indicate that the innovation aspect within the SME group has experienced significant development. Various efforts to improve innovation have been made by the Nike fish SMEs, such as expanding their product line from initially producing only two products—Nike crackers and crispy Nike—to now including four additional products: Nike meatballs, fried Nike meatballs, Nike nuggets, and Nike katsu.

The conclusion of this research shows that the Nike fish SMEs in the Bilato coastal area possess strong potential for business development. This study identifies a significant increase in product innovation, sales media, and sustainable environmental practices. Furthermore, there has been positive growth in scale quality, evident from increases in income, sales, and profits. The implementation of the blue economy concept by these SMEs also contributes to environmental sustainability, creating a balance between economic, social, and ecological aspects. Thus, the Nike fish SMEs play a crucial role not only in the local economy but also in efforts to preserve the environment in the coastal area.

The application of the blue economy in this study demonstrates that Nike fish SMEs in Bilato actively implement sustainable practices that support environmental conservation. These SMEs routinely apply blue economy concepts as part of their business strategy, which not only enhances their economic potential but also maintains ecosystem balance. This is reflected in the innovations introduced, including product innovation and environmentally friendly practices, ultimately providing added value from economic, social, and ecological perspectives. Therefore, the blue economy serves as a vital foundation for the sustainability and growth of SMEs in the region.

REFERENCES

- A. Distanont, O. Khongmalai. (2020). The role of innovation in creating a competitive advantage. *Ka-setsart Journal of Social Sciences* 41, 15–21. <https://doi.org/10.1016/j.kjss.2018.07.009>
- Alexandre Moeuf, Samir Lamouri, Robert Pellerin, Simon Tamayo-Giraldo, Estefania Tobon-Valencia and Romain Eburdy. (2019). Identification of critical success factors, risks and opportunities of Industry 4.0 in SMEs. 1384-1400. <https://doi.org/10.1080/00207543.2019.1636323>
- Bogusz, M., Matysik-Pejas, R., Krasnodębski, A.; Dziekański, P. (2021). The Concept of Zero Waste in the Context of Supporting Environmental Protection by Consumers. *Energies*. 14, 5964. <https://doi.org/10.3390/en14185964>
- Belanová, K. (2014). Komparácia kvality podnikateľského prostredia v krajinách Vyšehradskej štvorky s osobitným akcentom na dostupnosť fi nančných zdrojov. *Biatec*, No. 1, 12 – 17. https://sekarl.euba.sk/arl-eu/sk/detail-eu_un_cat-0181898-Komparacia-kvality_podnikatelskeho-prostredia-v-krajinach-Vysehradskej-stvorky-s-osobitnym-akcentom/?disprec=1&iset=1
- Civelek, M., Ključnikov, A., Dobrovič, J., Hudáková, M. (2016). A model of measurement of the quality of business environment in SME segment. *Journal of International Studies*, 9(2), 90-102. <https://doi.org/10.14254/2071-8330.2016/9-2/6>
- Carvalho, G. D. G., Carvalho, H. G., Cardoso, H. H. R., & Gonçalves, A. D. (2018). Assessing a micro and small businesses innovation support programme in Brazil: The local innovation agents programme. *Journal of International Development*, 30(6), 1064–1068. <https://doi.org/10.1002/jid.3387>
- Elgizawy, S. M., El-Haggar, S. M. and Nassar, K. (2016). Approaching Sustainability of Construction and Demolition Waste Using Zero Waste Concept. *Low Carbon Economy*, 7, 1-11. <http://dx.doi.org/10.4236/lce.2016.71001>
- Femy, M. Sahami, Sitty Ainsyah Habibie. (2021). Diversity of species in making up Nike fish schools and a new record of Eleotris melanosoma in Tomini Paguyaman Bay, Gorontalo, Indonesia. *Biodiversity*, 22(12), 5459-5467. ISSN: 1412-033X E-ISSN: 2085-4722. <https://doi.org/10.13057/biodiv/d221229>
- Gajović, A. (2024). Digitalization of the European Green Deal (egd) and Sustainable Development Goals (sdg) - a factor in empowering sustainable local projects: A review of literature and potential achievements. *Collection of papers new economy*, 2, 129–146. <https://doi.org/10.61432/CPNE0201129g>
- Howard, B. C. (2018). Blue growth: stakeholder perspectives. *Mar. Policy* 87, 375–377. <https://doi.org/10.1016/j.marpol.2017.11.002>
- Häyhä, T., and Franzese, P. P. (2014). Ecosystem services assessment: a review under an ecological-economic and systems perspective. *Ecol. Modell.* 289, 124–132. <https://doi.org/10.1016/j.ecolmodel.2014.07.002>
- Inoue, H., & Yamaguchi, E. (2017). Evaluation of the small business innovation research program in Japan. *Sage Open*, 7(1), 9. <https://doi.org/10.1177/2158244017690791>
- Jia, N. (2024). How Does Organisational Politics Impact Innovative Work Behaviour? The Mediating Role of Knowledge Sharing. *Journal of Organizations, Technology and Entrepreneurship*, 2(1), 52-64. <https://doi.org/10.56578/jote020105>
- Keen, M. R., Schwarz, A. M., and Wini-Simeon, L. (2018). Towards defining the Blue Economy: practical lessons from pacific ocean governance. *Mar. Policy* 88, 333–341. <https://doi.org/10.1016/j.marpol.2017.03.002>
- Lillebø, A. I., Pita, C., Garcia Rodrigues, J., Ramos, S., and Villasante, S. (2017). How can marine ecosystem services support the blue growth agenda? *Mar. Policy* 81, 132–142. <https://doi.org/10.1016/j.marpol.2017.03.008>
- Mastilo, Z., Štilić, A., Gligović, D., Puška, A. (2024). Assessing the banking sector of Bosnia and Herzegovina: An analysis of financial indicators through the MEREC and MARCOS meth-

- ods. *Journal of Central Banking Theory and Practice*, 13(1), 167–197. <https://doi.org/10.2478/jcbtp-2024-0008>
- Pasisingi, N., Olii, A. H. (2023). Fishermen and nike fishing in Gorontalo Bay, Gulf of Tomini (Indonesia). *Jurnal Sumberdaya Akuatik Indopasifik*. 7(3): 239-252. <https://doi.org/10.46252/jsai-fpik-unipa.2023.Vol.7.No.3.267>
- Puška, A., Božanić, D., Mastilo, Z., & Pamučar, D. (2023). Extension of MEREC-CRADIS methods with double normalization-case study selection of electric cars. *Soft Computing*, 27(11), 7097-7113. <https://doi.org/10.1007/s00500-023-08054-7>
- Radicic, D., Pugh, G., Hollanders, H., Wintjes, R., & Fairburn, J. (2016). The impact of innovation support programs on small and medium enterprises innovation in traditional manufacturing industries: An evaluation for seven European Union regions. *Environment and Planning C: Government and Policy*, 34(8), 1425–1452. <https://doi.org/10.1177/0263774x15621759>
- Reitz, A., Neves, A. A. S., O'Rourke, E., Mannarini, G., Pearlman, J., Tinker, J., Horsburgh, K. J., Lehodey, P., Pouliquen, S., Dale, T., Peng, Z. and Yufeng, Y. (2019). Successful Blue Economy Examples With an Emphasis on International Perspectives. *Front. Mar. Sci.* 6:261. <https://doi.org/10.3389/fmars.2019.00261>
- Sabir, R. A., Nazim, A.T., Khanlar, V.H. (2024). The assessment of the role of Social Innovations in improving welfare in Azerbaijan. *Collection of papers new economy*, 2, 97-115. <https://doi.org/10.61432/CPNE0201097a>
- Saeed Najafi-Tavani, Zhaleh Najafi-Tavani, Peter Naudé, Pejvak Oghazi, Elham Zeynaloo. (2018). How collaborative innovation networks affect new product performance. *Product innovation capability, process innovation capability, and absorptive capacity, Industrial Marketing Management*, 73, 193-205, ISSN 0019-8501. <https://doi.org/10.1016/j.indmarman.2018.02.009>
- Sahami, F. M., Habibie, S. A. (2020). Exploration of adult phase of nike fish to maintain its sustainability in Gorontalo Bay waters, Indonesia. *AACL Bioflux*. 13(5): 2859-2867. <http://www.bioflux.com.ro/docs/2020.2859-2867.pdf>
- Sahami, F. M., Hamzah, S. N., Habibie, S. A. (2023). Lengthweight relationship of nine species of the nike fish school (post-larva Gobioidae) in Gorontalo Bay waters, Indonesia. *AACL Bioflux*. 16(4): 2402-2408. <http://www.bioflux.com.ro/docs/2023.2402-2408.pdf>
- Sarker, S., Bhuyan, M. A. H., and Rahman, M. M. (2018). From science to action: exploring the potentials of Blue Economy for enhancing economic sustainability in Bangladesh. *Ocean Coast. Manag.* 157, 180–192. <https://doi.org/10.1016/j.ocecoaman.2018.03.001>
- Setyaningrum, R. P., & Muafi, M. (2022). The Effect of Creativity and Innovative Behavior On Competitive Advantage in Womenpreneur. *SA Journal of Human Resource Management*, 20, 1–9. <https://doi.org/10.4102/sajhrm.v20i0.2069>
- Shafira Kurniawati. (2023). The Influence of Business Scale, Human Resource Quality and SMEs Players' Perceptions on the Preparation of Financial Reports. *Jira*, 1. 12(5). <https://jurnalmahasiswa.stiesia.ac.id/index.php/jira/article/view/5208>
- Siska Vivi Anggraeni, Laily Muzdalifah. (2023). The Role of Trust in Digital Technology in Mediating Between Creativity and Innovative Behavior Towards Competitive Advantage Studies in The Coastal Area of Sedati Sub-district. *Management Studies and Entrepreneurship Journal*, 4(4), 4279-4289. <http://journal.yrpiiku.com/index.php/msej>
- Siringoringo, E. D. M., & Yunus, M. (2022). Analysis of Tourism Village Revitalization by Optimizing Creative Economy Through Digital-Based SMES in Sigapiton Village. *Jurnal Ekobistek*. 11(3), 246-251. <https://doi.org/10.33395/owner.v6i4.1135>
- Spalding, Mark J. (2016). The New Blue Economy: the Future of Sustainability, *Journal of Ocean and Coastal Economics*, 2(2), Article 8. <https://doi.org/10.15351/2373-8456.1052>
- Sun, Z. & Xu, H. (2024). Research on the Training Mode of Innovative and Practical High-End Talents Based on the OBE Concept. *Education Science and Management*, 2(2), 61-78. <https://doi.org/10.56578/esm020201>

- Surya Bakti, Lukman Nuzul Hakim. (2022). Blue Economy and Strategic Leadership: Driving Sustainable Development in Indonesia. *Kalianda Halok Gagas*, 1. 7(1). <https://doi.org/10.52655/khg.v7i1.88>
- Sutarno. (2012). Miscellaneous Business Management. *Yogyakarta: Graha Ilmu*. <https://inlislite.uin-suska.ac.id/opac/detail-opac?id=10354>
- Tian, Y. L., Liang, W., Li, B. (2024). Safety Monitoring Technologies for the Water Resources Allocation Project in the Pearl River Delta: Challenges and Innovations. *Journal of Civil and Hydraulic Engineering*, 2(3), 185-196. <https://doi.org/10.56578/jche020305>
- Timah, B. P., & Chukwu, G. J. (2021). Corporate Taxation and Stakeholders' Welfare of Selected Manufacturing Companies in Nigeria. *International Journal of Academic Research in Business and Social Sciences*, 11(2), 13–26. <https://doi.org/10.6007/IJARAFMS/v11-i2/9894>
- Wenhai, Lu et al. 2019. Successful Blue Economy Examples with an Emphasis on International Perspectives. *Frontiers in Marine Science* 6(JUN): 1–14. <https://doi.org/10.3389/fmars.2019.00261>