VULNERABLE TO SUSTAINABLE ECONOMY OF COASTAL COMMUNITY IN NORTH MINAHASA

Rinny Cherill Rantung
Faculty of Economics and Business, Klabat University
rinnyrantung@unklab.ac.id

Abraham Leslie Petir Lelengboto
Faculty of Economics and Business, Klabat University
abraham.r@unklab.ac.id

Abstract

Governments throughout countries in the world have developed many sustainability programs, but the development of sustainability initiatives may have an impact only when measured on a regional basis. The economic division between different islands and geographical zones in Indonesia is still evident which needs to be considered. This study aims to explore the challenging factors that the vulnerable community in North Minahasa are facing to have economy sustainability. This study uses both qualitative and quantitative approaches. A qualitative technique with in-depth interview of 59 villagers to uncover the variables needed for the questionnaire, after that, the transcription was examined using the content analysis technique, then transformed into survey questions. A valid questionnaire was given to 200 respondents and the respondent was selected by an enumerator conveniently from 2 Villages in North Minahasa which are Tiwoho, Budo. Financial Management Skill is the challenging factor contributes most to a sustainable economy in North Minahasa Region. Market Accessibility is the second factor that need to be considerate. Compare between income Financial Management skills, Business Condition, Financial Risk tolerance, Financial Accessibility, Entrepreneurial Mindset, and Financial Usability has a significant difference between income. The higher their income, they tend to have better financial skills.

Keywords: Coastal Community, Sustainability Economy, Financial Management Skill, Market Accessibility.

INTRODUCTION AND LITERATURE REVIEW

The impact of the Covid 19 outbreak on poverty in Indonesia, according to Suryahadi et al. (2020), will infect at least 1.2 million people. Furthermore, the economic impact is projected to be significant, with growth predictions for 2020 falling from 5% to between 4.2 and 4.7 percent. According to their report, under the mildest COVID-19 impact of 4.2 percent economic growth, the poverty rate will rise from 9.2 percent in September 2019 to 9.7 percent by the end of 2020. As a result, Indonesia needs to expand its social security programs to assist both new and current impoverished people. In response to this circumstance, existing government programs have been amended to include a social assistance component, such as the village fund, which now includes a budget for residents to receive unconditional cash transfers. In addition, the shock could have impacted one's ability to satisfy credit obligations. Furthermore, the Financial Services Authority has previously eased credit restructuring and interest payment subsidy requirements. However,

Suryahadi et al.(2020) concluded that more research is needed to assess the impact of economic growth programs at the provincial and district levels, especially in developing countries.

Governments throughout countries in the world have developed many sustainability programs, but the development of sustainability initiatives may have an impact only when measured on a regional basis (Mascarenhas et al., 2010). Likewise, the local community must also be involved in analyzing the challenges of sustainability on regional scales. The regional scale refers to the geographical distribution of economic growth or even the distribution of economic growth across different regions. Two of the most important prerequisites for developing national integration are regional economic interconnectivity and some amount of regional balance in economic development (Rochwulaningsih et al., 2019).

Uniquely, In Indonesia, the economic integration has a social as well as a regional dimension, the social aspect referring to an equitable distribution of production factors between the rich and the poor, and the regional aspect referring to the geographic distribution of economic growth across the various regions. Further, as a large archipelagic state, Indonesia's key economic integration concerns are balancing economic inequities between wealthy and poor, as well as between developed and emerging regions. The economic division between different islands and geographical zones in Indonesia is still evident which needs to be considered (Rochwulaningsih et al., 2019).

A study by Surya et al., (2021) found that to build a sustainable economy, the community needs to be empowered with knowledge and skills on developing economic enterprises to increase their income and resilience. Resilience elements according to Glaser et al (2018) are access to market and finance. Accordingly, Noerhidajati et al. (2021) found that ownership of financial instruments has a significant effect on household financial vulnerability. On one hand, the development of markets and market access were considered as a key to a sustainable economy of a coastal community (Stacey et al., 2021). Further said that savings will increase liquidity and reduce the gap between income and expenditure. Providing the community, the ability to diversify business opportunities, including tourism-based business and non-tourism business education and training, is necessary to increase their resilience and lead them to a sustainable economy (Lasso & Dahles, 2018).

Some of the sustainable economy programs were held to increase economic opportunities for local communities in the coastal area for the increased inclusive, mutually beneficial economic development resulting from greater, more equitable employability & productivity in maritime tourism in Indonesia. North Minahasa has been blessed by the initiative of the ILO for a community development (Skills for Prosperity) project that provides informal training and education for the local coastal community to improve their productivity. However, are those programs gives impact for the coastal communities, still need to be study in further. Some of the projects according to Essen et al. (2013) did not sufficiently analyse the sustainability livelihood activities of the communities in coastal areas. Furthermore, the analysis of a sustainable economic of a community need to be emphasized more than just a program or intervention. In addition, Suryadi et.al (2020) suggest that the communities need assistance and guidance in conducting their business activities by giving them not a formal education but skills that necessary for long-term productivity

Based on the background above, our research will be focusing on the factors that contributes to a sustainable economy of the coastal area community in the North Minahasa Region. Specifically, to answer the following question: 1) What are the factors that contributes to a sustainable economy of the community in the North Minahasa Coastal area? 2) How strong are

those factors contributing to a sustainable economy in the region? And 3) Are there any significant differences when compared between Villages, Gender, and Income of the coastal area's community?   The findings of this study might also help to develop the local economy in the North Minahasa region, as well as the government's economic development strategy, other stakeholders' understanding of how to assist the vulnerable local community in reaching a sustainable economy.

METHODOLOGY

In this research we will be using both qualitative and quantitative approaches. A qualitative technique to find the variables needed for the questionnaire, and then all the variables gathered from the interviewed session will be sorted into components using a quantitative approach. We were doing the in-depth interview to 50 villagers in Coastal area of North Minahasa, the interview needs to ascertain the item variables. The conversation was taped and transcribed for getting the item variables need for the questionnaire. After that, the transcription will be examine using the content analysis technique. After the In-depth interviews there were 57 item variables, which transformed into survey questions and validated by pilot testing. Then continued with further testing for reliability and construct validity using Cronbach's Alpha test. The reliability coefficient more than .70, Cronbach's Alpha is considered reliable. The item-reminder coefficient was less than.30 were eliminated, resulting 32 items utilized in the questionnaire.

A valid questionnaire then was given to respondents, the respondent was selected by an enumerator conveniently from 2 Villages which are Tiwoho, Budo. There are no specific criteria of the villagers, but the enumerator will be focusing on those who run a business.

In answering the first and the second research questions, exploratory factor analysis with principal factor extraction were use. The Kaiser-Meyer-Olkin (KMO) overall measure of sampling adequacy with a .05 level of significance will be considerate. In answering the third research question, we used t-test analysis with STATA software in running the data analysis with the cut-off value $p > 0.05$ which means there are no significant differences between gender and income. The questionaire were distributed in Tiwoho and Budo with a total 299 respondets 201 from Tiwoho and 98 from Budo.

RESULTS AND DISCUSSION

In answering the research questions of what are the Challenging factors to a household sustainable economy for the community in North Minahasa Coastal area? And how strong are those Challenging factors contributing to a sustainable economy in the region? An exploratory factor analysis was performed using SPSS. The result shows that the value of KMO is .877 which is greater than 0.5 and Bartlett's test of sphericity $p = 0.000 <0.05$ means the factor analysis is appropriate for the data.

5 Factors were extracted. However, one factor consists of very low factor loading making that factor undesirable were not included in further analysis. It makes only 5 factors with a measure of internal consistency are well defined as shown by the reliability score of Cronbach's Alpha that is more than 0.6. Those Challenging factors that contribute to a sustainable economy of the community in North Minahasa shown in table 1 are (1) Household Financing Skills, (2) Business Network, (3) Entrepreneurial Mind Set, (4) Personal Risk Tolerance, (5) Banking Awareness.

Table 1
Cronbach's Alpha measure of internal consistency

Factor	Name of the Factor	Cronbach's Alpha Measure of internal consistency
Factor 1	Household Financing Skills	0.913
Factor 2	Business Network	0.739
Factor 3	Entrepreneurial Mind Set	0.732
Factor 4	Personal Risk Tolerance	0.700
Factor 5	Banking Awareness	0.689

Those 5 Factors explained 57.84 percent of the variance that build the Challenging factors of a sustainable economy in the coastal area of North Minahasa. As shown in Table 2 Factor that accounts for the most variance is factor 1 which is Household Financing Skills (30.07%) with an Eigenvalue of 9.32 while the factor that accounts for the least variance is factor 5 which is Banking Awareness (4.94%).

Table 2
Loading Variables

Component	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Initial Eigenvalue Total	9.32	2.74	2.48	1.85	1.53
% Variance	30.07	8.85	8.00	5.97	4.94
Cumulative %	30.07	38.92	46.93	52.90	57.84

According to the Loading of variables on each factor is shown in Table 3. All the variables are grouped by the size of factor loading for interpretation purposes. Any factor loading that has a value below 0.4 is removed as suggested by Field (2005) substantial loading is above 0.4. As shown in Table 3, the set aside some money for seed capital ($r = .821$) and doing bookkeeping to record all the spending ($r = .735$) have the highest loading for factor 1. Those results are indicating that households Financing Skills is the factor that contributes to a sustainable economy. According Erlando et al. (2020) economic opportunities and improvement can only be reached when people could manage their financing activities planning and savings, for productive purposes such as investing in education or expanding a micro small, and medium business.

Social Media helps a lot the growth of my business ($r = .749$) and the Village enterprise is helping my business to developed ($r = .637$) are the variables that have the highest loading for factor 2. This indicates networking through social media, and with other business especially village

enterprise are the factors that contributes to a sustainable economy of vulnerable community. According to Rochwulaningsih et al., (2019) connectivity infrastructure are the factors that contributes to community economic development. In addition to that, Stacy et al., (2021) mentioned about poorly regulated market makes the coastal community more vulnerable in terms of economy. In other words, business network is very much needed to sustain the economy of coastal community particularly in North Minahasa.

Variables of transportation or distribution (r = .730) and difficulties in acquired raw materials (r = .721) are the highest loading for factor 3. This is a challenge for the community to set an efficient and effective supply chain or logistic network to improve their capacity to acquire raw materials and distribute their products to the market. According to (Stacey et al., 2021) the development of market and market access are also the factors that need to be considered to reach a sustainable economy. Furthermore, when the market is poorly regulated might have a negative impact on community welfare. Accordingly, coastal infrastructure and connectivity are factors that contribute to community economic development (Rochwulaningsih et al., 2019).

Prefer to take loans from other institution/person rather than bank loans (r =.786), hesitated to take bank loan, for a collateral (r =.763), and the fear of not being able to pay the installment (r = .746) are the item variables that build factor 3. According to Erlando et al., (2020) access to formal financial services such as making payments, receiving, saving, and borrowing money are recognized as financial accessibility factors that contribute to reducing the vulnerability as well as increasing the community resilience to achieve a sustainable economy.

The item variables that have the highest factor loading for factor 4 is that they have the business idea but still thinking to start a business (r =.832), the other variables is that they have no idea to start a business (r=.826), just want to be government officials or employees (r=.597) and fear of loss to run a business (r =.518). Willingness to run business and take the risks are productive society, and productive society enhance business innovation and growth. On the same perspective, productivity also boost the adaptability toward uncertain economic changes (Suryadi et al. 2020). Further, business skills and training are also needed to increase their knowledge and capacity to run their business and increase their family income. Hence, they could sustain their economy.

Prefer to save money in banks due the security issue (r =.774) and would rather choose to save money in the bank (r =.802) are the item variables that build factor 5. Banking penetration and utilization of financial services such as credit and debit are essential for stabilize the economic growth of a community.

Tabel 3
Loading Factor on Each Variable

		Factor Loading
Factor 1	**Household financing Skills**	
Q6	Saya menyisihkan sejumlah uang untuk ditabung]	.633
Q7	Saya Menabung untuk tujuan pengembangan usaha]	.671
Q11	Saya menyisihkan sejumlah uang untuk modal usaha]	.821
Q14	Saya lebih suka menggunakan uang sendiri untuk modal usaha dari pada ambil pinjaman]	.706
Q15	Saya membuat perencanaan keuangan untuk kebutuhan rumah tangga]	.731
Q16	Saya membuat pencatatan untuk setiap pengeluaran usaha saya]	.735
Q17	Saya membuat perencanaan keuangan untuk kebutuhan pengembangan usaha]	.687
Q18	Saya melakukan penjualan sampai di luar desa tempat tinggal saya]	.628
Q23	Saya sulit mengembangkan usaha karena bahan baku yang sulit dijangkau]	.662
Q27	Menurut saya meminjam uang di bank itu mudah]	.514
Factor 2	**Business Network**	
Q24	Saya tidak sanggup membayar tenaga kerja untuk membantu usaha saya]	.553
Q25	Sosial media sangat membantu saya dalam menjalankan usaha saya]	.749
Q26	Bumdes memiliki peranan penting dalam pengembangan usaha saya]	.637
Factor 3	**Personal Risk Tolerance**	
Q29	Saya lebih memilih meminjam di lembaga keuangan lain, daripada meminjam di bank]	.786
Q30	Saya tidak mau meminjam uang dari bank Jika harus menjaminkan sertifikat tanah/rumah]	.763
Q31	Saya tidak meminjam uang di bank karena takut tidak bisa mengembalikannya]	.749
Factor 4	**Entrepreneurial Mind Set**	
Q1	Saya tidak menjalankan usaha karena saya tidak punya ide mengenai usaha apa yang harus	.719
Q2	Saya memiliki ide usaha namun belum memulai usaha.]	.832
Q3	saya lebih memilih menjadi pegawai]	.597
Q4	Saya belum menjalankan usaha karena takut rugi]	.518
Factor 5	**Banking Awareness**	
Q5	Saya merasa manabung di bank lebih aman di bandingkan menabung di tempat lain.]	.774
Q8	Saya lebih memilih untuk menabung di bank dari pada di tempat lain]	.802

LIMITATION AND IMPLICATION

This study was funded by ILO (International Labour Organization) which aim to the development of local community economic sustainability. ILO has given the community some training on financial education, start a green business and some other training for vulnerable coastal community in North Minahasa particularly in Budo and Tiwoho. This study was done only for the village that have training intervention. Thus, for the future this study might be also done in the other village that has no intervention yet. Some other study might see the impact of the training to a wider coverage area in North Minahasa, or can be apply some places other than North Minahasa, and made a comparison between villages. There are still many study that might be done to help vulnerable coastal community to be a sustainable community.

CONCLUSION

The factors that contribute to the vulnerable coastal community in North Minahasa to reach a sustainable economy are Household financing skills, Business Network, Personal risk tolerance, Entrepreneurial Mindset, Banking Awareness. Those 5 factors contribute at least 57.84% of the factors that contributes to a sustainable economy of the coastal community in North Minahasa. Household financing skills are the factor that contributes the most to a sustainable economy in the coastal community, and the second factor is Business Network. The factor that contributes the least is Banking Awareness. Therefore, Community assistance and mentoring are required to reach sustainable economy. The mentoring and assistance not only for their business to growth, but also how to realize their potentials and how to engage more capital not only financial but also social, natural, and human capital. However, this needed additional assistance in terms of the use of natural resources, so there will be sustainable community not only economic sustainability but also environmental sustainability. The exploration for new business ideas in tourism business and non-tourism business are needed in North Minahasa region. Therefore, the business growth must be strictly monitored by local government and the village partnering institution, and there is a high need for the government to regulate the resource's conservation and protection to reach better equity and sustainability of the community's welfare. Furthermore, the role of banking also is important in supporting the communities by providing financial resources and financial training to increase the community banking awareness. The local government supported by other stakeholders need to create business environment and build network among villagers' businesses, to support the vulnerable local community be more sustainable in terms on their economy.

BIBLIOGRAPHY

Glaser, M., Plass-Johnson, J. G., Ferse, S. C. A., Neil, M., Satari, D. Y., Teichberg, M., & Reuter, H. (2018). Breaking Resilience for a Sustainable Future: Thoughts for the Anthropocene. *Frontiers in Marine Science*, *5*, 34. https://doi.org/10.3389/fmars.2018.00034

Mascarenhas, A., Coelho, P., Subtil, E., & Ramos, T. B. (2010). The role of common local indicators in regional sustainability assessment. *Ecological Indicators*, *10*(3), 646–656. https://doi.org/10.1016/j.ecolind.2009.11.003

Noerhidajati, S., Purwoko, A. B., Werdaningtyas, H., Kamil, A. I., & Dartanto, T. (2021). Household financial vulnerability in Indonesia: Measurement and determinants. *Economic Modelling*, *96*, 433–444. https://doi.org/10.1016/j.econmod.2020.03.028

Rochwulaningsih, Y., Sulistiyono, S. T., Masruroh, N. N., & Maulany, N. N. (2019). Marine policy basis of Indonesia as a maritime state: The importance of integrated economy. *Marine Policy*, *108*, 103602. https://doi.org/10.1016/j.marpol.2019.103602

Stacey, N., Gibson, E., Loneragan, N. R., Warren, C., Wiryawan, B., Adhuri, D. S., Steenbergen, D. J., & Fitriana, R. (2021). Developing sustainable small-scale fisheries livelihoods in Indonesia: Trends, enabling and constraining factors, and future opportunities. *Marine Policy*, *132*, 104654. https://doi.org/10.1016/j.marpol.2021.104654

Surya, B., Suriani, S., Menne, F., Abubakar, H., Idris, M., Rasyidi, E. S., & Remmang, H. (2021). Community Empowerment and Utilization of Renewable Energy: Entrepreneurial Perspective for Community Resilience Based on Sustainable Management of Slum Settlements in Makassar City, Indonesia. *Sustainability*, *13*(6), 3178. https://doi.org/10.3390/su13063178

Suryadi, A., Budimansyah, D., Solehuddin, M., Shantini, Y., & Yunus, D. (2020). Microcredit Provision, Lifelong Learning, and Productivity of Poor Women in Indonesian Villages. *Adult Education Quarterly*, *70*(4), 360–376. https://doi.org/10.1177/0741713620918525

Suryahadi, A., Al Izzati, R., & Suryadarma, D. (2020). *Estimating The Impact Of Covid-19 Outbreak On Poverty*. *56*(2), 175–192. https://doi.org/10.1080/00074918.2020.1779390

von Essen, L.-M., Ferse, S. C. A., Glaser, M., & Kunzmann, A. (2013). Attitudes and perceptions of villagers toward community-based mariculture in Minahasa, North Sulawesi, Indonesia. *Ocean & Coastal Management*, *73*, 101–112. https://doi.org/10.1016/j.ocecoaman.2012.12.012