Towards the Equitable Blue Economy: Quad Helix Innovation for Social Entrepreneurship

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ABSTRACT

Oceans are central to Indonesia's prosperity through economic activities, with more than 17,500 islands, 108,000 kilometers of coastline, and three-quarters of its territory at sea. Indonesia's ocean economy is worth over $256 billion annually, more than one quarter of the national economy. Being the source of food and livelihood to the substantial portion of population, oceans have potential to achieve major sustainable goals of eliminating hunger and poverty. Around five million of Indonesians fishermen live in coastal areas and rely on the ocean for incomes and nutrition, however, these communities are amongst the country's poorest. Although the blue economy policy has been launched in 2021 by the government which includes quota-based measured fishing and development of marine, and coastal fishery, we argue that addressing social benefits and equity for traditional fishermen, is necessary to design and implement as an integral part of the policy, alongside environmental and production concerns. This paper examines the significance of social entrepreneurship by cooperative to foster community development through further social value creation. The model theorizes community development processes namely, community support for co-operative, co-operative readiness, perceived benefit, and quad helix innovation. A concerted effort of quad helix innovation (academicians, industry, government and community) is crucial to work on cooperative development. It contributes to knowledge by illustrating the interactions between fishermen' social enterprises and intervention in the upstream value chain which enablers empowering lives of marginalized people.

Keywords: Co-operative Social Entrepreneurship, Blue Economy, Perceived Benefit, Quad Helix innovation

Introduction

... Perhaps love is like the ocean
Full of conflict, full of change
John Denver

Attention to ocean sustainability has grown steadily since the Earth Summit in 1992 and accelerated with the 2015 adoption of Sustainable Development Goal (SDG) 14: Life Below Water. The Blue Economy has been proposed as an ocean-based counterpart to the Green Economy development plan (Silver, Gray, Campbell, Fairbanks, & Gruby, 2015) to improve human well-being and social equity while achieving environmentally sustainable economic growth (UNEP, 2010). This distinguishes "Blue Economy" from the "Ocean Economy," which comprises any and all economic activity related to oceans. "Blue Economy," is the expansion of this Ocean Economy in a market economy sense with some implied observance of environmental sustainability (Park, Seo, Kildow, & Judith, 2014). The term is used in the discussion of how to best manage the exploitation of marine resources. In Indonesia since the early years (1957), the country has paid attention to the maritime economy as issued in the Djuanda Declaration. It stated that in building the nation and the economy, it must be based on the potential and sovereignty of the archipelagic state. The Declaration reiterated the identity of Indonesia. As the biggest archipelagic country, Indonesia has 17,508 islands which all of its regions rely on and are connected by sea. The Indonesian sea covers 65 percent of the total area of Indonesia with a total ocean area of about 6,400,000 km2. Oceans are central to Indonesia's prosperity, with 108,000 kilometres of coastline, Indonesia's ocean economy is worth over $256 billion annually, more than one quarter of the national economy. Being the source of food and livelihood to the substantial portion of population, oceans have potential to achieve major sustainable goals of eliminating hunger and poverty. However, around 5.23 million fishermen live in coastal areas and rely on the ocean for incomes and nutrition, and these communities are amongst the country's poorest. Similarly, most programs, which have gained recognition and increasingly engage in developing regions, remain focused on environmental sustainability, rather than social sustainability, equity or fairness (Teh et al., 2019). SME marine fisheries they are sometimes excluded from ocean development plans due to their low contribution to GNP (Symes, Phillipson, & Salmi, 2015).

For Blue economy to be a truly useful approach, we argue that social benefits and equity must be explicitly prioritized alongside environmental and economic concerns. Greening the Blue economy is necessary to achieve socially equitable blue economy. It is necessary to encourage the emergence of social entrepreneurship in a form of cooperative in Indonesia. The cooperative is expected to become a driver for the growth of entrepreneurs and cooperation so that the development of social entrepreneurs' activities must incorporate aspects of capital, technology, facilitation of marketing or promotion, legal protection, and incentives for the work of creative industries and the development of the business or institutional networks. Cooperative must encourage the development of businesses based on innovation, creativity, and science and technology (Rizal, Maulina, & Kostini, 2018). Traditionally, cooperatives emerge with a broad set of social, political and economic objectives (Burdín & Dean, 2012; Soboh, Oude Lansink, & Van Dijk, 2012). These objectives include self-help and grassroots participation to welfare and distribution, exploitation of economies of scale, and social control over resource allocation and mobilization (Lele, 1981)

As cooperatives solve local problems by mobilizing local resources (Wilkinson & Quarter, 1996), they are viewed as a tool for community development (Brennan, Spranger, Cantrell, & Kumaran, 2004). Similarly, other authors consider cooperative development as a strategy and

an important vehicle for creating further value in the society (Shahidullah & Islam, 2018). Dana and Dana (2008) see cooperative's roles more as entrepreneurial; a vehicle for collective entrepreneurship in which individual skills are integrated into a group, and that group's collective ability to innovate becomes greater than the sum of its parts. Collective entrepreneurship can offer a cooperative the opportunity to tap into individual talents and to harness the energy of the community"(Dana & Dana, 2008). This business notion has become a social movement in rebuilding social fabric, and healing and empowering lives of marginalized people (Restakis, 2010).

According to Indonesia Law Number 12 of 1967, Indonesian cooperatives are people's economic organizations with a social character and consist of people, an economic arrangements as joint efforts based on the principle of kinship. Cooperatives have goals for the benefit of their members, including improving welfare, providing needs, helping capital, and developing businesses. Coastal fishermen communities in outside Java island experience poverty, lower education level, unemployment, poor health and food insecurity. Consequently, economic and social conditions are dwindling in these communities. Co-operatives with a community development goal can catalyse growth and value creation in those societies. One of the value creation mechanisms is 'value chain intervention' (Webber & Labaste, 2009). A value chain encompasses all the activities or stages of value addition—from primary production to after sales services through which a business creates economic value (Kaplinsky, 2000). Value chain intervention offers the opportunity to enhance social impact of fisheries EAC (2013). One approach to value chain intervention is through quadruple helix innovation. Quadruple Helix model is a conceptual framework of collaboration between university, industry, and government and community (Hudani & Dhewanto, 2015). University and industry, each with their knowledge and infrastructures, provide a conducive and supportive environment where all forms of creativity can arise. In turn, governments assure the growth of this creativity through the provision of financial support, the regulatory system, and infrastructure that showcase the output of this creative process. With the support and collaboration of university, industry, and government, the community must continue innovating goods and services.

Focusing on community support for social entrepreneurship, is crucial to include community perceptions or perceived benefit by the community which are influenced by a range of factors that have been extensively explored in the literature such as the potential for economic gain, economic involvement, community attachment, their degree of involvement in the planning and decision-making process (Látková & Vogt, 2012). Moreover, a range of theories have been applied to the investigation of the effect of these factors, including social exchange theory (SET) (Látková & Vogt, 2012). Social exchange theory (SET) is a theoretical framework used to explain the perceptions of communities (Wang & Pfister, 2008). According to SET, if community or resident perceive the benefits of cooperative development, they will be inclined to support cooperative development (Andriotis, 2005). While, most studies using SET have been conducted in the context of tourism development, few studies have focused in the context of social entrepreneurship development in coastal fishermen village in developing world (Sharpley & Telfer, 2015).

Theoretical Framework

1. Quad helix innovation towards community support for cooperative development mediated by community perceived benefit

Kolehmainen et al. (2016), found the Quad helix (QH) approach to be useful for supporting knowledge-based development and innovativeness in rural and less-favoured regions. The QH approach is an extension of the triple helix (TH) model that emphasises the role of universities

in the knowledge economy (Borkowska & Osborne, 2018). According to the TH model, the best environments for innovation are created at the intersection of the helices, where different types of knowledge and institutional logics intermingle. The TH model (Etzkowitz & Leydesdorff, 2000) is used to describe both dynamic interaction between universities, companies, and public organisations and institutional continuity, as these helices consist of historical institutions with selection environments or rules. To fruitfully implement quadruple helix innovation processes, the specific forms such interactions might take are yet to be determined. Academia, government and business—the other three of the four subsystems of the quadruple helix—have already framed collaboration with society as *transdisciplinary*, *open science* and *deliberate democracy*, and *user-cantered innovation* respectively (Schütz, Heidingsfelder, & Schraudner, 2019).

Social value creation is the act of enhancing societies and communities to improve individuals' well-being. Social entrepreneurs are defined as individuals who start a new for-profit or non-profit venture with an aim to bring systematic social change through the development of new products, services, or solutions (Trivedi 2010). Social entrepreneurs can provide innovative and creative solutions to social problems. They take the initiative to solve major social issues and recommend new solutions to social problems. They do so by indulging in activities to change, educate, and train people and convince society to take responsibility for solving problems on their own. Communities and people in underdeveloped areas are facing health crises, hunger, and other developmental and economic problems. These problems are caused by the lack of governments' interest (WorldBank 2016) . The need for individuals who participate in the development of society and economy is evident. Such individuals can lead policymakers and academic researchers to be interested in investigating factors that affect entrepreneurial behavior and intention of individuals toward social development (Zulfiqar et al., 2019).

2. Community's' perceptions toward the impacts of cooperative development

Several previous studies have explored the perceived impacts of community development (Nicholas, Thapa, & Ko, 2009; Vareiro, Remoaldo, & Cadima Ribeiro, 2013). The value chain intervention, and a new way of doing social entrepreneurship, have a direct effect on communities (Sharpley & Telfer, 2015). These forces can result in changes to a community's values, behaviour patterns, lifestyles, and resident's quality of life (Hall & Page, 2014). Cooperative can exert a range of economic, social, and environmental effects on host communities. Positive economic effects include increasing family incomes, raising the standard of living, creating more jobs and employment opportunities, and improving tax revenues (Choi & Sirakaya, 2006). A range of factors affects residents' perceptions of tourism development. These factors have been extensively explored in previous studies (Látková & Vogt, 2012).

3. The potential moderating effect of Co-operative Readiness Level

Social entrepreneurial readiness among community depends on their ability to discover environmental opportunities and use their capabilities based on available resources. Carsrud and Brannback (2009) and Nga and Shamuganathan (2010) emphasize that social entrepreneurial readiness depends on the mindset of resident toward social values, social welfare, and entrepreneurial activities. According to Olugbola (2017), entrepreneurs are likely to have a positive mindset toward social entrepreneurial activities, especially if they feel that they are ready and able to serve society by creating a successful entrepreneurial venture. Various factors can influence the readiness of young people for entrepreneurial activities. Social entrepreneurial readiness among community in coastal area is created by analyzing and interpreting their society, environment, lifestyle, and social attachments (Coduras, Saiz-Alvarez, and Ruiz 2016). Resident can extract information by observing and discussing the

living conditions of other people. Educational and training institutions and institutional environments can play an essential role in encouraging entrepreneurship among community. According to the researchers, the link between perceived benefit and community support for social entrepreneurship offers the potential for expansion and the incorporation of new components. Scholars have incorporated various dimensions to describe the influence of cooperative readiness on action to boost the explanatory power of behavioral theories (Zulfiqar et al., 2019)

4. West Kupang villages

East Nusa Tenggara (Nusa Tenggara Timur – NTT) has Indonesia's third highest relative poverty rate (22.2 percent of the provincial population according to Central Statistics Bureau) after West Papua and Papua, largely because the majority of the population still lives a subsistence agricultural life-style. Health and education services remain limited outside the capital of Kupang. West Kupang is a sub-district in Kupang Regency, East Nusa Tenggara, Indonesia. This sub-district is approximately 49 Km from the capital city of Kupang Regency and 16 Km from Kupang City and is the westernmost sub-district. Its capital is in Batakte Village. Population around 20,155, with 4,092 households. West Kupang District consists of 2 (two) kelurahan and 10 (ten) villages: Batakte, Oenesu Bolok, Kuanheun, Lifuleo, Manulai I, Nitneo, Oematnunu, Oenaek, Sumlili, Tablolong and Tesabela. West Kupang is a beautiful, magical part of eastern Indonesia. Australia is just to the south and has a significant influence on the climate - and on the people. The following hypotheses have been developed based on this theoretical background and the results of previous studies:

H1. Quad helix innovation has a positive influence on the community perceived benefit.
H2. Community perceived benefit has a significant effect on the community support for cooperative
H3: Cooperative Readiness Level moderate the relationship between community perceived benefit and community support for cooperative

Methods

We employed a quantitative research design for this study, using a questionnaire with question-statements adapted from similar questionnaires as used in previous studies ((Nicholas et al., 2009)Wang & Pfister, 2008). Question-statements were answered on a 5-point Likert scale, with 1 referring to strongly disagree and 5 referring to strongly agree. Respondents were sampled from ten villages in West Kupang subdistrict. The population of these villages totaled 20,155, with 4,092 households. Using systematic sampling, we sampled the first of every three households, leading to the distribution of 273 questionnaires. From this sample, 250 questionnaires (92%) were returned as completed. We used G*Power to calculate the sample size. Based on a power of 0.95, we needed a sample size of 119 for model testing. Therefore, given that our sample size exceeds 250, the power value in this study exceeds 0.95.

This study used a single source respondent to generate the data about dependent as well as independent constructs, and therefore it is necessary to check for common method variance. We employed Harman's one-factor test to test for common method variance (CMV). According to (Podsakoff & Organ, 1986), CMV becomes problematic where a single latent factor might account for the majority of the explained variance. We also performed an un-rotated principal component analysis on all measurement items, finding that the first factor accounted for only 21.82% of the variance. Therefore, according to this method, CMV does not appear to be a problem in this study.

Result and analysis

1. Profile of the respondents

Table 1 shows that the number of male and female respondents was fairly even, with their being slightly more male respondents than female. Respondents were categorized into three age groups: 17–35 years (n = 110), 36–55 years (n = 80), and 56 years and above (n = 60). Most of the respondents had a secondary-level education (n = 140) or less (n = 43), while a smaller number had a diploma/certificate-level of education (n = 33). and degree (n = 13). Among the 250 respondents, 163 (65%) has occupation of full-time fishermen, part-time and additional part-time fishermen, while the rest (n = 88) worked in other businesses, such as agriculture (Tabel 1).

Model assessment using PLS-SEM

The assessment of a model using SmartPLS generally follows a two-step process including assessments of the measurement model and the structural model (Chin, 2010; Hair et al., 2011). This evaluation involves the assessment of the relationships between the variables and their associated dimensions. The assessment of the structural model is concerned with the relationships between variables (Chin, 2010; Hair et al.,2011).

Table 1 Profile of the respondent

		Frequency	Percentage
Gender	Female	110	44
	Male	140	56
Age	17 - 35	110	44
	36- 55	80	32
	56 and above	60	24
Education	No formal education	23	9
	Primary	43	17
	Secondary	140	56
	Certificate/diploma	33	13
	Degree	13	5
a full, part time and additional part time fisherman?	Yes	163	65
	No	88	35

Assessment of the measurement model

The measurement model used in this study was comprised of four constructs, each measured through four or more items. These constructs include quad helix innovation, perceived benefit of residence, cooperative readiness level of West Kupang residence, and support for cooperative development. Certain criteria for establishing construct validity and reliability must be met in order to evaluate the measurement model. The first criterion to be used to evaluate the outer model is outer loading, they are the estimated relationships in reflective measurement models (i.e., arrows from the latent variable to its indicators). They determine an item's absolute contribution to its assigned construct.As can be seen in the Fig 1 that most of the indicator loadings on their corresponding variables were higher than 0.7. Outer loading 0.7 or higher are considered highly satisfactory (Henseler, Ringle, & Sinkovics, 2009). Therefore, the research model has fulfilled the criteria of evaluation.

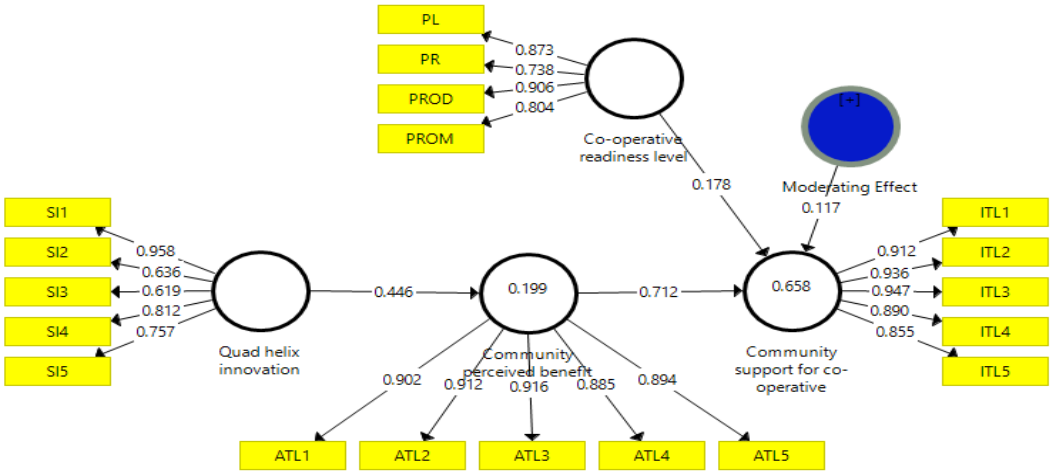

Figure 6 The Research Model

Second criterion is internal consistency measured by Cronbach Alpha (CA) and composite reliability (CR). Cronbach's alpha tests and composite reliability can both achieve internal consistency reliability. (Hair et al., 2014; Wilden et al., 2013). There are four variables in Table 2 that show the Cronbach's alpha value is more than or equal to 0.70, indicating that the model has internal consistency. As long as all four variables have a Composite Reliability (CR) value greater than 0.7, the measurement model is highly reliable (Chin, 1998). The third criterion is Convergent Validity occurs when a measure's correlation with another measurement of the same variable is positive. To test for convergent validity, the Average Variance Extracted (AVE) was employed to calculate the average variance retrieved from the data. AVE must be more than 0.50 in order to prove convergent validity (Joe F Hair Jr et al., 2014).

As can be seen in Table 2 the CAs and CRs for all of the variables in the measurement model exceeded 0.7. These results indicate that the measurement model presents acceptable reliability. Further, the AVEs of the variables should also be higher than 0.5 for their convergent validity to be considered highly reliable ((Chin, 1998); Chin, 2010; Hair et al., 2011).

Table 2. Assessment results of the measurement model.

	Cronbach's Alpha	Composite Reliability	AVE
Co-operative readiness level	0.852	0.900	0.693
Community perceived benefit	0.943	0.956	0.814
Community support for co-operative	0.947	0.959	0.825
Quad helix innovation	0.818	0.874	0.588

The fourth criterion for evaluating the measurement model is Discriminant Validity, which shows that the extent to which each variable is distinct from other constructs in the model (Chin, 2010; Joe F Hair Jr et al., 2014). To evaluate discriminant validity Fornell Larcker criterion is used. The square root of the AVE for each construct should be greater than the all of the correlations among the construct and the other constructs in the model (Chin, 2010; Hair et al., 2011; (Henseler, Ringle, & Sinkovics, 2009). Table 3 shows the square roots of the AVEs for the constructs along the diagonal and the correlations among the constructs.

Table 3 Result of discriminant validity

	Co-operative readiness level	Community perceived benefit	Community support for co-operative	Quad helix innovation
Co-operative readiness level	**0.833**			
Community perceived benefit	0.505	**0.902**		
Community support for co-operative	0.496	0.791	**0.908**	
Quad helix innovation	0.652	0.446	0.528	**0.767**

Note: The square root of AVEs shown diagonally in bold

As shown in Table 3 the square roots of the AVEs for the constructs along the diagonal and the correlations among the constructs, indicating that the model presents acceptable discriminant validity. Fornell-Larcker's criterion was established, providing evidence for the constructs' discriminant validity.

Assessment of the structural model

Each hypothesis is associated with a causal link in the structural model, which depicts relationships among constructs. To evaluate the structural model for research model, coefficient of determination (R^2), Collinearity concerns (VIF), path coefficient, and effect sizes (f^2) are all used to evaluating the structural model (Hair et al., 2014). The coefficient of determination (R^2) quantifies the variance of the dependent variable in relation to the change in the independent variable. The R^2 value is between 0 and 1, with a higher number indicating greater precision. R^2 values of 0.25, 0.5, or 0.75 can be interpreted as being small, moderate, or substantial for an endogenous variable (Joe F Hair et al., 2011).

Table 4 Result of discriminant validity

	R Square	R Square Adjusted
Community perceived benefit	0.199	0.188
Community support for co-operative	0.658	0.644

Table 4 shows the R square adjusted for Community perceived benefit is 0.188, and Community support for co-operative (0.644), indicating that the variance shared is small and moderate. The second criterion for evaluating structural models is the path coefficient, which indicates the association between two variables and ranges between -1.00 and 1.00.

Table 5 Result of discriminant validity

Path	Path coefficient (β).	VIF	f^2
Community perceived benefit → Community support for co-operative	0.712	1.350	1.099
Moderating Effect → Community support for co-operative	0.117	1.095	0.058
Quad helix innovation → community perceived benefit	0.446	1.000	0.248

Table 5 shows that path coefficient between community perceived benefit om community support for cooperative has a sizable effect (0.712). The smallest path coefficient is moderating effect of readiness level on community support for co-operative (0.117). A large effect was seen of Quad helix innovation on community perceived benefit (0.446). The third criterion in structural model evaluation is multicollinearity. The result in Table 5 indicates of no collinearity issues for research model, because all of the VIF value below 5 (Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014). The fourth criterion in structural model evaluation is the f^2 values, which assesses a predictor variable's comparative influence on an independent variable (Hair et al.,

2014). which ranging from .02, .15, and .35, correspondingly, indicate small, medium, and large effect sizes (Cohen, 1988). The results in Table 5 shows that large effect size, has been shown in the relationship between community perceived benefit and community support for co-operative (1.099). The small effect size is shown on the relationship between moderating effect on community support for co-operative. (0.058).

The final stage in data analysis was to use SmartPLS to validate the hypothesized associations by calculating the significance of the path coefficients using bootstrapping computations. The bootstrapping procedure determines the significance of path coefficients by calculating empirical t values that, if greater than the critical value, are regarded significant at a given likelihood of error (t distribution values). The following critical values were used in this investigation for one-tailed tests: 1.65 (significance level= 5%). (Hair et al., 2014). The hypothesis was evaluated using the bootstrapping procedure, which determines the importance of path coefficients by producing empirical t values that exceed the critical value (t distribution values). At a given margin of error (0.05), the coefficient is considered significant. Hair et al. (2014) suggest a bootstrap sample size of 5000. To determine the significance of path coefficients, the bootstrapping technique in SmartPLS3 was used. Using one tail, the t-value is 1.65 and the p-value is 0.05 (at = 5%), and upper and lower confident interval doesn't contain zero (Hair et al., 2014). As shown in Table 6, the effect of Community perceived benefit on Community support for co-operative is positive (0.712), with p-value of (0.001) smaller than 0.05 (at = 5%), and the confident interval bias corrected doesn't contain zero.

Table 6 Result of hypothesis testing

	Original Sample (O)	T Statistics	P Values	Confidence Interval Bias Corrected	
				5.0%	95.0%
Community perceived benefit → Community support for co-operative	0.712	7.894	0.000	0.553	0.854
Moderating Effect → Community support for co-operative	0.117	2.383	0.009	0.034	0.189
Quad helix innovation → Community perceived benefit	0.446	4.954	0.000	0.267	0.570

According to Hair Jr, Sarstedt, Ringle, and Gudergan (2017), the effect is significant; thus, H1 is supported. The effect of Quad helix innovation on Community perceived benefit is moderate, as showed by the path coefficient 0.446, and p-value 0.000, accordingly H2 is supported. The moderating effect of Moderating Effect on Community support for co-operative revealed that the effect is significant (0.117) and p value (0.000), respectively, show that there is an evidence to support H3.

Conclusion and Recommendation

The first research goal is to explore the direct impact of Quad helix innovation on Community perceived benefit. The result indicating that H1 was supported This means that there is a medium and significant direct influence of quad helix innovation towards community perceived benefit. The second objective of this study is to assess the impact of Community perceived benefit on Community support for co-operative. The result indicating that Community perceived benefit has a positive effect on Community support for co-operative. The third research goal is to examine whether co-operative readiness level has a moderating effect in the relationship between community perceived benefit and Community support for co-operative. The result indicates co-operative readiness level moderates the relationship between perceived benefit and community support for cooperative.

Implications and limitations of the study

In this study, we adapted framework for SET for first time in the cooperative literature. In addition, most previous studies into residents' perceptions have been undertaken in developed countries (Sharpley & Telfer, 2015). The results of an investigation in a poorest village in developing country may be significantly different from those in developed countries. The results of this study have some important practical implications for the authorities responsible for the management of West Kupang. Our results allude to the importance of perceived benefit in support of cooperative development. Therefore, local authorities should endeavour to improve the positive perceptions of residents. Improving the economic benefits to residents and involving them in the planning and management process would significantly enhance the positive perception of residents. However, the results of this study cannot be generalized beyond West Kupang due to the relatively small sample size. This should be considered another limitation of the present study.Therefore, for future reseearch we recommend to collect a large sample.

Acknowledgment

The authors would like to extend their appreciation to the Indonesia Ministry of Fishery and Maritime (KKP) for the research grant that make this paper possible.

References

Andriotis, K. (2005). Community groups' perceptions of and preferences for tourism development: Evidence from Crete. *Journal of Hospitality & Tourism Research, 29*(1), 67-90.

Borkowska, K., & Osborne, M. (2018). Locating the fourth helix: Rethinking the role of civil society in developing smart learning cities. *International Review of Education, 64*(3), 355-372.

Brennan, M. A., Spranger, M., Cantrell, R., & Kumaran, M. (2004). IFAS community development: Toward a consistent definition of community development. *University of Florida: IFAS Extension*.

Burdín, G., & Dean, A. (2012). Revisiting the objectives of worker-managed firms: An empirical assessment. *Economic Systems, 36*(1), 158-171.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research, 295*(2), 295-336.

Choi, H. C., & Sirakaya, E. (2006). Sustainability indicators for managing community tourism. *Tourism management, 27*(6), 1274-1289.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences–second edition. 12 Lawrence Erlbaum Associates Inc. *Hillsdale, New Jersey, 13*.

Dana, L.-P., & Dana, T. E. (2008). Collective entrepreneurship in a Mennonite community in Paraguay. *Latin American Business Review, 8*(4), 82-96.

Etzkowitz, H., & Leydesdorff, L. (2000). The dynamics of innovation: from National Systems and "Mode 2" to a Triple Helix of university–industry–government relations. *Research policy, 29*(2), 109-123.

Hair Jr, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2017). *Advanced issues in partial least squares structural equation modeling*: saGe publications.

Hall, C. M., & Page, S. J. (2014). *The geography of tourism and recreation: Environment, place and space*: Routledge.

Hamilton, K., & White, K. M. (2008). Extending the theory of planned behavior: the role of self and social influences in predicting adolescent regular moderate-to-vigorous physical activity. *Journal of Sport and Exercise Psychology, 30*(1), 56-74.

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing *New challenges to international marketing*: Emerald Group Publishing Limited.

Hudani, H., & Dhewanto, W. (2015). Quadruple Helix Collaboration Mapping for Fashion Economic Development in Bandung.

Kaplinsky, R. (2000). Globalisation and unequalisation: what can be learned from value chain analysis? *Journal of development studies, 37*(2), 117-146.

Kolehmainen, J., Irvine, J., Stewart, L., Karacsonyi, Z., Szabó, T., Alarinta, J., & Norberg, A. (2016). Quadruple helix, innovation and the knowledge-based development: Lessons from remote, rural and less-favoured regions. *Journal of the Knowledge Economy, 7*, 23-42.

Látková, P., & Vogt, C. A. (2012). Residents' attitudes toward existing and future tourism development in rural communities. *Journal of Travel Research, 51*(1), 50-67.
Lele, U. (1981). Co-operatives and the poor: A comparative perspective. *World Development, 9*(1), 55-72.
Nicholas, L. N., Thapa, B., & Ko, Y. J. (2009). RESIDENTS'PERSPECTIVES OF a world heritage site: The pitons management area, st. Lucia. *Annals of tourism research, 36*(3), 390-412.
Park, D., Seo, K., Kildow, D., & Judith, T. (2014). Rebuilding the classification system of the ocean economy. *Journal of Ocean and Coastal Economics, 2014*(1), 4.
Podsakoff, P. M., & Organ, D. W. (1986). Self-reports in organizational research: Problems and prospects. *Journal of management, 12*(4), 531-544.
Restakis, J. (2010). *Humanizing the Economy: Co-operatives in the Age of Capital*: New Society Publishers.
Rizal, M., Maulina, E., & Kostini, N. (2018). Fintech sebagai salah satu solusi pembiayaan bagi UMKM. *AdBispreneur: Jurnal Pemikiran dan Penelitian Administrasi Bisnis dan Kewirausahaan, 3*(2), 89-100.
Schütz, F., Heidingsfelder, M. L., & Schraudner, M. (2019). Co-shaping the future in quadruple helix innovation systems: uncovering public preferences toward participatory research and innovation. *She Ji: The Journal of Design, Economics, and Innovation, 5*(2), 128-146.
Shahidullah, A., & Islam, D. (2018). Social entrepreneurship by cooperative: examining value chain options of an indigenous fisherman's co-op. *International Journal of Entrepreneurship and Small Business, 35*(4), 598-615.
Sharpley, R., & Telfer, D. J. (2015). Tourism and development: Concepts and issues.
Silver, J. J., Gray, N. J., Campbell, L. M., Fairbanks, L. W., & Gruby, R. L. (2015). Blue economy and competing discourses in international oceans governance. *The Journal of Environment & Development, 24*(2), 135-160.
Soboh, R., Oude Lansink, A., & Van Dijk, G. (2012). Efficiency of cooperatives and investor owned firms revisited. *Journal of Agricultural Economics, 63*(1), 142-157.
Symes, D., Phillipson, J., & Salmi, P. (2015). E urope's Coastal Fisheries: Instability and the Impacts of Fisheries Policy. *Sociologia Ruralis, 55*(3), 245-257.
Teh, L. C., Caddell, R., Allison, E. H., Finkbeiner, E. M., Kittinger, J. N., Nakamura, K., & Ota, Y. (2019). The role of human rights in implementing socially responsible seafood. *PloS one, 14*(1), e0210241.
UNEP. (2010). Green Economy: Driving a Green Economy Through Public Finance and Fiscal Policy Reform: UNEP Nairobi.
Vareiro, L. M. d. C., Remoaldo, P. C., & Cadima Ribeiro, J. A. (2013). Residents' perceptions of tourism impacts in Guimarães (Portugal): a cluster analysis. *Current Issues in Tourism, 16*(6), 535-551.
Wang, Y., & Pfister, R. E. (2008). Residents' attitudes toward tourism and perceived personal benefits in a rural community. *Journal of Travel Research, 47*(1), 84-93.
Webber, C. M., & Labaste, P. (2009). *Building competitiveness in Africa's agriculture: a guide to value chain concepts and applications*: World Bank Publications.
Wilkinson, P., & Quarter, J. (1996). *Building a community-controlled economy: The Evangeline co-operative experience*: University of Toronto Press.
Zulfiqar, S., Nadeem, M. A., Khan, M. K., Anwar, M. A., Iqbal, M. B., & Asmi, F. (2019). Opportunity recognition behavior and readiness of youth for social entrepreneurship. *Entrepreneurship Research Journal, 11*(4), 20180201.