

## ENTREPRENEURSHIP OF SEAWEED BUSINESSPEOPLE AND IT'S EFFECT ON THEIR INCOME IN SOUTHEAST SULAWESI COASTAL AREA, INDONESIA

DZULFIKRI AZIS<sup>1</sup>, ABD AZIS MUTHALIB<sup>2</sup>, IRFANDY AZIS<sup>3</sup> and PASRUN ADAM<sup>4</sup>

<sup>1</sup>Study Program of Management, Universitas Muhammadiyah, Kendari, Indonesia.

<sup>2</sup>Department of Economics, Universitas Halu Oleo, Kendari, Indonesia.

<sup>3</sup>Department of Accounting, Universitas Borneo Tarakan, Tarakan, Indonesia.

<sup>4</sup>Department of Mathematics, Universitas Halu Oleo, Kendari

**DOI 10.5281/zenodo.6555875**

### **Abstract**

*This research is conducted in the Southeast Sulawesi coastal area, aiming at discovering the entrepreneurship of seaweed businesspeople and its effect on income they earn. The research population comprises all businesspeople (fisher/farmers) of seaweed in the Southeast Sulawesi coastal area. Due to time and fund reasons, this research takes samples from several districts representing the existing population characteristics. This research uses both secondary and primary data. The findings show that the entrepreneurship of seaweed farmers in Southeast Sulawesi coastal area is good. Besides, they show that entrepreneurship of seaweed farmers has a positive and significant effect on the revenue or income they get. These mean that the better entrepreneurship of seaweed farmers results in higher revenue.*

**Keywords:** Entrepreneurship, income, coastal area, seaweed businesspeople, simple linear regression model.

**JEL classification:** C21, I130, I1320, M210

### **1. INTRODUCTION**

Entrepreneurship typically means working for oneself (self-employment), and an entrepreneur is an individual who runs a little scope enterprise (Archana, 2020). Entrepreneurship basically holds important rule in the nation's economy both in increasing increasing people's income or wealth and economy capacity and (Rani and Rao, 2007; Chalifa and Dhiaf, 2016; Fosis et al., 2017) economy growth, job vacancy extension, and income generalization mean a lot for economy growth.

Clelland and David (1961) and Alma (2007) conveyed that the urge to reach success is an important vision, not only to determine one's success but also a nation's success in completing development. He also adds whether a nation is succeed in development or not depends on the amount of people who have vision to succeed. Moreover, Clelland and David (1961) and Asramoen (2005) conveyed that a nation will reach prosperity level if it has at

least 2 percent of entrepreneurship level from the total population. Based on that opinion, it can be summed up that the role of entrepreneurship in economy growth especially in people's prosperity increase is very important. Any entrepreneur spirit will give impact to the income increase and people prosperity which in the next step will lower down poverty level.

According to Schumpeter (1911) and Arsad (2010), the main factor which caused economic development is innovation process and the person involve is the innovator and entrepreneurs. Economy development in a nation only can be achieved with innovation of entrepreneurs. The economy development can be marked as escalation of people's total output.

Research on entrepreneurship impact towards income escalation especially on seaweed businesspeople in Southeast Sulawesi coastal area has never been done. However, some research has been carried out on the impact of entrepreneurship towards business performance for instance; Baheri (2011) found out that entrepreneurship variables do not have significant effect towards micro business. On the other hand, Muthalib (2014) found out that entrepreneurship has positive impact and significant effect towards micro business, where one of the indicators from business process is income and business revenue escalation. In another research, Muthalib et al. (2015) found out that entrepreneurship motivation has positive and significant impact on business process in culinary industry. Meanwhile, Anisah (2010) found out that entrepreneurship does not have direct impact on business process, but it directly capable on increasing competition superiority. The research also reveals the gap among theories from Covin and Slevin (1991), Miller (1982), Navahandi and Malekzadeh (1993), Lee and Lim (2009), and Zahra and Garvis (2000), which is entrepreneurship orientation gives contribution and impact towards business process.

Based on above explanation, this research is crucial to be done in order to: (1) find out entrepreneurship of seaweed businesspeople and (2) reveal and analyze the impact of entrepreneurship towards income increasing.

## **2. LITERATURE REVIEW**

Nuryadi et al., (2019) stated that seaweed cultivators generally have many limitations, especially in terms of the quality of human resources as they are mostly old, low-educated, and only reliant on experience in running their business. Muthalib et al. (2019) carried out a study in Tinanggea District, South Konawe Regency, and illustrated that the problems experienced by seaweed business actors are low in entrepreneurial spirit, lack of policy support from the local government and limited capital.

The various limitations possessed by seaweed cultivators certainly require the attention of various parties so that they become more competitive and get more significant benefits and profits from the business they do. Nuryadi et al. (2019) emphasized that seaweed business must be developed based on agribusiness principles. They also argued that it is necessary to strengthen seaweed cultivators' position, simplify the seaweed marketing chain, provide capital, train, and coach seaweed cultivators by involving universities and government. Furthermore, according to them, there is a need to improve business efficiency and

productivity and expand business partnerships. Partnership and cooperation are necessary for fishery commodity-based businesses because fishery products are generally seasonal (Defra 2006; Setthasakko, 2007). Vorst (2004) states that every business is positioned in a network layer and involves at least one supply chain so that parallel processes can occur at once. Competitiveness needs to be increased by promoting products produced by agro-industries, both domestically and abroad, improving product quality, encouraging banks to facilitate access to capital, and improving infrastructure development (Natalia and Nurozy, 2012).

Pandelaki (2012) states that there are three priority strategies recommended as efforts to develop seaweed cultivation, namely making the role of the government or related institutions effective in fostering and developing human resources, increasing business capital sources, and procuring market partnership cooperation patterns. Apart from this, it is necessary to improve the cultivation skills of farmers. Skills are expertise that is acquired by the workforce and are the capital for the workforce because with which achievements are created (Bhattacharya and Gibson 2005; Brink and Woerd 2004). According to Asthon et al. (2008) and Defra (2006), workforce skills are an essential indicator in the social aspect, and they have a real effect on the performance of a business. Soekartawi (2001) argues that one of the factors influencing the success of agro-industry is human resource quality.

Enhancing the quality of seaweed farmers is also the government's responsibility because labor absorption is an indicator that reflects the social benefits of the existence of seaweed farming for the community (Brink and Woerd 2004; Glavic and Krajn 2003). Moreover, the government must ensure that fisheries business does lead to environmental degradation due to waste pollution. The higher the volume of waste, the higher the potential for pollution to the environment (Glavic and Lukman 2007; Ardebili and Boussabaine 2007; Halog and Chain 2006).

### **3. RESEARCH METHOD**

This research was took place in Southeast Sulawesi coastal area with specification area in seaweed production center. The population of the research is all business persons (fisherman/farmer) of seaweed in the Southeast Sulawesi coastal area. Considering the limited time and fund, this research took samples in some districts which assumed to represent the characteristic of the existed population.

There are two districts chosen for the sample which are Lembo and Wawolesea Districts. Samples unit will be taken from each chosen district as much as 25 seaweed businesspeople (fisherman/farmer) as purposive sampling. So, number of respondents is  $N = 50$ . Sample unit drawing is based on some criteria, which are: (1) Seaweed business as the main family income, (2) have running the seaweed business for at least 3 years, (3) willing to share information related with the research theme. Data collection is done through observation, delivering questionnaire, and documentation study.

The collected data from the field will be analyzed using descriptive statistics analysis technique, and inferential statistics. Descriptive statistics analysis is used to find out

entrepreneurship of seaweed businesspeople. Meanwhile, inferential statistics test is used as simple linear regression model to find out entrepreneurship impact on income. The simple linear regression model which states the relationship between the entrepreneurship of seaweed businesspeople (ESB) and their income (INC) is as follows:

$$INC_i = \alpha + \beta ESB_i + u_i$$

Where  $\alpha$  and  $\beta$  are the regression parameters that must be estimated, and  $u_i$  is the error of the regression equation where  $i$  states the respondent to  $i$  with  $i=1, 2, \dots, 50$ . The parameter  $\alpha$  is the intercept (constant), and parameter  $\beta$  is the multiplier coefficient of the entrepreneurship of seaweed businesspeople against their income.

## 4. RESULTS AND DISCUSSION

### 4.1 Entrepreneurship of Seaweed Businesspeople

Entrepreneurship referred in this research is the ability to think creative, act innovatively and productive, thus the subject is able to run the business aiming at income increase. The entrepreneurship of seaweed businesspeople is the exogen variable which may influence his income. This variable is not measured directly, and thus, it needs measure indicators which are: entrepreneur attitude, entrepreneur motivation, entrepreneur competency, and personality value.

The research result reveals that in general, entrepreneurship of seaweed businesspeople is considered good. However, there are still other two indicators which have not yet optimal such as entrepreneurship motivation and competency. The average score obtained from the result of seaweed businesspeople respondent perception in the research area is 4.02. This means that entrepreneurship of seaweed businesspeople in the research area is considered good. The result is supported with the answer percentage of the majority respondent which is 57.05% states agree and 23.24% states absolutely agree.

### 4.2 The income of seaweed businesspeople

The income of seaweed businesspeople counted in this research is net income that they earn in a year. This income is accumulation of earning from every harvest time. Each year, seaweed businesspeople can harvest the seaweed for around 4-5 times. The net income referred is the net earning seaweed businesspeople get after reduced other expenses including investment reduce cost.

From the research, the net income data which respondent earned are ranging variously from 12.000.000 to 52.000.000 rupiah each year. In detail, there are 21 respondents (42.00 percent) earn income around 32.000.000 to 42.000.000 rupiah each year. The next is 15 respondents (30.00 percent) earn income around 12.000.000 – 22.000.000 rupiah each year. The last 7 respondents (14.00 percent) earn income around 22.000.000 – 32.000.000 rupiah each year and 42.000.000 – 52.000.000 each year. This result is in line with that of Nuryadi et al. (2017), which states that seaweed cultivation in South Konawe Regency earned a profit of IDR 6.194.916 per hectare every harvest season or IDR 24.779.000 per hectare annually.

#### 4.3 The impact of entrepreneurship on income

To find out the impact of entrepreneurship of seaweed businesspeople toward the income, simple linear regression method is used. Analysis result can be seen in Table 1.

**Table 1: The estimation result of simple linear regression model with dependent variable: INC**

Indipendent Variable and Constant	Regression Coefficient	P-value
Constant	-3.002**	0.071
ESB	0.762*	0.000
R Square : 0.581		
Corelation coefficient (R) : 0.762 : 0,762		

Notes: \*, \*\* significant 1%, 10%

Source: Own processing

Based on the estimation results as shown in Table 1, the regression equation can be summed up as follows:

$$ESB = -3.002 + 0.762INC$$

where  $Y$  is income of seaweed businesspeople and  $X$  is entrepreneurship of seaweed businesspeople.

Furthemore, the result of hypothesis test using the P-value criteria shows that coefficient of entrepreneurship of seaweed businesspeople variable (ESB) is positively significant and significantly influence the income of seaweed businesspeople (INC). This shows that the better entrepreneurship that they have means the higher income to get.

The value of correlation coefficient ( $R$ ) is 0.762 shows that the closeness of the direct relationship between entrepreneurship of seaweed businesspeople (ESB) variable towards the income of seaweed businesspeople (INC) is as much as 0.762. Statistically, this relationship is considered as strong. Thus, regression model from the research can be considered as a fit model and can be used as a good probe model which explains the influence of entrepreneurship towards the seaweed businesspeople income in Southeast Sulawesi coastal area. Furthermore, the coefficient of determination of 0.581 means that entrepreneurship of seaweed entrepreneurs contributes 58.1% while the remaining comes from other factors that are not included in the simple linear regression model.

This study's result is identical to that of Syarifuddin and Jahi (2017), which reveals that most of the seaweed farmers' characteristics have a significant relationship with entrepreneurial competence, which influences the production and their income. Firman (2019) states that the variables of technology, capital, work experience, and price affect 94.8% of seaweed farmers' income. The role of entrepreneurship in increasing the income of seaweed cultivators, of course, still requires institutional positions enhancement. Seaweed farmers need a forum either in the form of a cooperative or another type of organization as a place to gather in carrying out seaweed farming activities so that they can solve problems together concerning input, production techniques, marketing, or market information (Hamid, 2012).

## 5. CONCLUSION AND SUGGESTION

### 5.1 Conclusion

- (1). In general, entrepreneurship of seaweed businesspeople in Southeast Sulawesi coastal area is considered good. However, there are still some entrepreneur indicators which needs to be optimally upgraded which are the competency and motivation of entrepreneurship.
- (2). Entrepreneur of Seaweed businesspeople significantly and positively influences toward income. This shows that the better entrepreneurship of seaweed businesspeople makes the income is also higher.

### 5.2 Suggestion

- (1). Entrepreneurship training is required to increase the motivation and competency in entrepreneurship of seaweed businesspeople.
- (2). The government role to facilitate the entrepreneurship training is definitely needed as a form of government responsibility in empowering citizen especially in the coastal area.

## REFERENCES

1. Anton, S. G., & Onofrei, M. 2016. Publik Policies to Suport Entrepreneurship and SMEs Evidences from Romania. *Transylvanian Review of Administrative Sciences*, 47(E), 5-19
2. Ardebili, A. V., & Boussabaine, A. H. 2007. Application of Fuzzy Techniques to Develop An Assessment Framework for Building Design Eco-drivers. *Building and Environment*, 42(11), 3785–3800.
3. Alma, B. 2007. *Entrepreneurship, Growing Entrepreneurial Soul for Students and Society*. Bandung: Alfabeta.
4. Anisah, H. 2010. *The Role of Baniar Culture in Enhancing Competitive Performance and Excellence through Islamic Entrepreneurship and Strategy: Study of Small Medium Industry of Precious Gems in Martapura South Kalimantan* [Unpublished Ph.D Thesis]. Malang: PPS Universitas Brawijaya.
5. Archana, T. S. 2020. Entrepreneurs Drives in Innovative Economic Development. *Test Engineering and Management*, May-June 2020, 7863- 7867.

6. Arsyad, L. 2010. *Economic Development*. Yogyakarta: UPP STIM YKPN.
7. Asramoen, P. M., 2005. *Entrepreneurship*. Jakarta: Alfabet.
8. Ashton, D., Sung, J., Raddon, A., and Riordan, T., 2008. Challenging the myths about learning and training in small and medium-sized enterprises: implications for public policy. *Wworking Paper*. Geneva: International Labour Office, 1-65.
9. Baheri. 2011. *The Influence of Islamic Values on the Performance of Micro Enterprises through Entrepreneurship (Study in Kendari City, Southeast Sulawesi Province)*[Unpublished Ph.D Thesis]. Malang: PPS Universitas Brawijaya.
10. Bhattacharya, M., and Gibson, D. E., 2005. The effects of flexibility in employee skills, employee behaviours and human resource practices on firm performance. *Journal of Management*, 31(4), 1-19.
11. Brink, T. W. M. V., & Woerd, F. V. 2004. Industry specific sustainability benchmarks: an ECSF pilot bridging corporate sustainability with social responsible investments. *Journal of Business Ethics*, 55,187-203.
12. Clelland, M., & David, C. 1961. *The achieving society*. New York: Notrand Company Inc.
13. Covin, J. G., & Slevin, D. P. 1991. A Conceptual Model of Entrepreneurship as Firm Behavior. *Entrepreneurship Theory and Practice*, 23, 47-63.
14. Defra. 2006. *Food Industry Sustainability Strategy*. London: Department for Environment, Food and Rural Affairs.
15. Firman, H. 2019. Faktor-Faktor Yang Berpengaruh Terhadap Pendapatan Petani Rumput Laut Di Desa Tirowali Kecamatan Ponrang. *Jurnal Ekonomi Pembangunan STIE Muhammadiyah Palopo*, 5(1), 14-22.
16. Fosic, I. , Kristic, J., & Trusik, A. 2017. Motivational Factors: Drivers, behind Women Entrepreneurs'Decision to Start an Entrepreneurial Venture in Croatia. *Scientific Annals of Economics and Business*, 64(3), 339-357.
17. Glavic, P., & Krajnc, D. 2003. Indicators of Sustainable Production. *Clean Technologies Environmental Policy*, 5, 279-288.
18. Glavic, P., & Lukman, R. 2007. Review of Sustainability Terms and Their Definitions. *Journal of Cleaner Production*, 15, 1875-1885.
19. Khalifa, A. H., & Dhiaf, M. M. 2020. The Impact of Entrepreneur Education on Enterpreneurial Intention: The UAE Context. *Polish Journal of Management Studies*, 14(1), 119-128.
20. Miller, D., & Friesen, P. H. 1982. Innovation in Conservative and Entrepreneurial Firms: Two Models of Strategic Momentum. *Strategic Management Journal*, 3, 1-25.
21. Muthalib, A. A. 2014. *The Effect of Entrepreneurship on Poverty Reduction through Improving the Performance of Micro Enterprises: Studies in the Food Industry in Southeast Sulawesi* [Unpublished Ph.D Thesis]. Kendari: PPS Universitas Halu Oleo.
22. Muthalib, A. A., Nur, M., & Yulianti. 2015. The Effect of Entrepreneurial Motivation on Business Performance in the Culinary Industrial Sector. *The International Journal of Engineering and Science*, 4(1), 35-40.

23. Muthalib A. A., Maharani, S. Y., Hajar, I., Saenong, Z., & Syamsul. 2017. The Effect of Entrepreneurship on Poverty Reduction. *International Journal of Management and Science*, 3(2), 119-123.
  24. Muthalib, A. A., Putera, A., Rumbia, W. A., Adam, P., Nuryadi, A. M., Wawo A. B., & Nur M. 2019. An empowerment model of seaweed farmers in coastal area of Southeast Sulawesi, Indonesia. *AACL Bioflux*, 12(6), 2252-2260.
  25. Nahavandi, A., & Malekzadeh, A. R. 1993. Leader Style in Strategy and Organizational Performance: An Integrative Framework. *Journal of Management Studies*, 30, 405–25.
  26. Natalia, D., & Nurozy. 2012. Kinerja Daya Saing Produk Perikanan Indonesia di Pasar Global. *Buletin Ilmiah Litbang Perdagangan*. 6(1), 69-88.
  27. Nuryadi, A. M., Sara, L., Rianda, L., Bafadal, A., Muthalib, A. A., Hartati, Nur, M., & Rosmalah, S. 2017. Agrobusiness of Seaweeds in South Konawe. *AACL Bioflux*, 9(5), 499-506.
  28. Nuryadi, A. M., Sara, L., Rianda, L., & Bafadal, A. 2019. A model for developing seaweed agribusiness in South Konawe, Southeast Sulawesi, Indonesia. *AACL Bioflux*, 12(5), 1718-1725.
  29. Pandakaki, L. 2012. Strategies for developing seaweed farming at Nain Island in North Minahasa. *Journal Tropicana Fisheries and Marine Affairs*, 8(2), 52-57.
  30. Rani, S. B., and Rao, K. D. 2007. Perspectives on Women Entrepreneurship. *ICFAI Journal of Entrepreneurship Development*, 4(4), 16-27.
  31. Schumpeter, J. .A. 1911. *The Theory of Economic Development*. Cambridge: Harvard University Press.
  32. Syarifuddin, S., & Jahi, A. 2007. Hubungan Karakteristik Individu dengan Kompetensi Wirausaha Petani Rumput Laut di Sulawesi Selatan. *Jurnal Penyuluhan*, 3(1), 35-44.
  33. Lee, S., & Lim, S. 2009. Entrepreneurial Orientation and the Performance of Service Business. *Service Business*, 3, 1-13.
  34. Setthasakko, W. 2007. Determinants of corporate sustainability: Thai frozen seafood processors. *British Food Journal*, 109(2), 155-168.
  35. Soekarawi. 2001. *Pengantar Agroindustri*. Jakarta: PT Raja Grafindo Persada.
  36. Vorst, J. G. A. J. 2004. *Suply Chain Management: theory and practice*. Hoofdstuk: Elsevier.
  37. Wicklund., & Sepherd, D. 2005. Entrepreneurial Orientation and Small Business performance: A Configurational Approach. *Journal of Business Venturing*, 20(1), 71-91.
  38. Zahra, S. A., and Garvis, D. M., 2000. Entrepreneurship and Firms Performance: The Moderating Effect of International Environmental Hostility. *Journal of Business Venturing*, 15(5), 469-492.
- Anton, S. G., and Onofrei, M., 2016. Publik Policies to Suport Entrepreneurship and SMEs Evidences from Romania. *Transylvanian Review of Administrative Sciences*, 47(E), 5-19