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Seaweed Cultivation for Community Income in Indonesia

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Abstract

Objective : This study aims to analyze the effect of seaweed cultivation on people's income in Ponrang 2 Hamlet, Tirowali Village, Ponrang District, Luwu Regency.
Design/methodology/approach:The type of research used is a quantitative type.
Findings: The results of this study indicate that seaweed cultivation has an influence on people's income, namely a Tcount value of 33,700 and a T table of 2,037 or 33,700 > 2,037 and a significant income value of 0.000 <0.05 (H0 is rejected and H1 is accepted).
Originality: The research conducted is the result of previous research references.
Limitations/research implications: There are several limitations encountered and can be a lesson for future researchers to further refine their research because this research itself certainly has deficiencies that need to be continuously improved in further research, including: the number of respondents which is only 34 people is of course still very lacking. to describe the actual situation, and the research location was only focused on Dusun Ponrang 2, which is only one of many other hamlets that also practice seaweed cultivation.
Practical & Social Implications: To increase income, farmers must continue to gain knowledge to develop their experience on how to market and empower seaweed so that in the future they can be more advanced and able to compete in the agricultural sector, especially seaweed cultivation. In this case the income of the Ponrang 2 Hamlet community can increase every year so that it can prosper the seaweed cultivators.

Keywords

Seaweed, Cultivation, Income, Community, Blue Economy,

INTRODUCTION

Indonesia as an archipelagic country has marine and coastal fishery potential covering an area of 26 hectares. In addition to catching fish, coastal waters are also used for marine aquaculture. Increased aquaculture production is a mainstay for realizing this vision. The main production of aquaculture with the aim of increasing production includes seaweed products.(Trinanda, 2017). The main production of aquaculture with the aim of increasing production includes seaweed products.

Seaweed is one of the leading commodities of aquaculture which is a mainstay in increasing production, increasing the regional economy and welfare of coastal communities.Akrim et al., 2019). The development of seaweed cultivation synergistically and simulatively is part of the vision and mission of building a working cabinet to encourage the sea to become the nation's economic resource in the future. "We will always improve the quality and quantity of seaweed production and support the sea as our front yard, our future and as a source of foreign exchange to drive the nation's economy," said the Director General of Aquaculture, slametsoebjakto, on the sidelines. inauguration of the seaweed tissue culture laboratory, at the Lombok Mariculture Fisheries Center (BPBL).

Seaweed cultivation is a form of community empowerment that is supported by several factors. First, the cultivation area is quite large compared to the length of the coastline. Second, pollution-free waters allow products to be accepted by markets that are

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sensitive to heavy metal content. Market players often make heavy metal content the main requirement for trading seaweed, especially those used as raw materials for the food and cosmetic industries. Therefore, seaweed products originating from Maluku are in great demand as substitutes for products from other regions. Third, seaweed cultivation can be cultivated en masse without requiring special handling. Fourth, the demand for products is always in large quantities and high prices. Price is a determinant for the community to cultivate seaweed.(Hamid, 2012).

Demand for seaweed continues to increase, both domestic and foreign needs. The need for seaweed is expected to continue to increase along with the increasing demand for industries such as food, pharmaceuticals, cosmetics, and others. The development of seaweed provides a more tangible impact and can spur development towards changing people's living standards(Sujana et al., 2020). Therefore the Government of South Sulawesi prioritizes seaweed production as a livelihood that can be developed simply by coastal/marine communities.

Tirowali Village is a coastal village where most of the people work at sea, one of which is seaweed cultivation. Tirowali Village has four hamlets, namely: Ponrang 1 Hamlet, Ponrang 2 Hamlet, Lumi Hamlet, and Mappideceng Hamlet. Ponrang Hamlet is located to the west, Lumi Hamlet is located to the east, and Mappideceng stretches along the Bone Bay route to the north. The people in Tirowali village have long been familiar with seaweed cultivation, until now the number of seaweed farmers in Tirowali village has continued to increase due to rising seaweed prices. The community of seaweed cultivators in Tirowali village continues to grow and try to increase their seaweed production.

The benefits of seaweed cultivation in Tirowali Village are felt by the community, especially seaweed farmers and seaweed traders. The seaweed that has been dried by the farmers is purchased by small traders in Tirowali village, then these traders will transport the seaweed to the SRG seaweed warehouse in Makassar. Not only that, the benefits of seaweed cultivation can also be felt by housewives and teenagers/children. Where housewives and teenagers/girls use it by participating in the seaweed nursery process and boys use it by cleaning the seaweed ropes that have been used.

The effect of seaweed cultivation on people's income can be seen from the income of seaweed farmers.

Table 1
Names of Farmers in Ponrang 2 Hamlet, Tirowali Village

NO	Farmer Name	Harvest income
1	Hardi	Rp. 5,000,000
2	With pleasure	Rp. 5,500,000
3	Suardi	Rp. 6,500,000
4	Husaima	Rp. 8,000,000
5	Aswadi	Rp. 6,000,000
6	soldier	Rp. 5,000,000
7	Hamdan	Rp. 10,000,000
8	Alamsyaputra	Rp. 5,000,000
9	Lost	Rp. 5,000,000
10	Mulli	Rp. 10,000,000
11	Aprianto	Rp. 6,000,000
12	Rahul	Rp. 7,500,000
13	Saprianto	Rp. 5,000,000
14	From S	Rp. 5,500,000
15	breath	Rp. 9,000,000
16	Ardi	Rp. 5,000,000
17	Arman	Rp. 9,000,000
18	Burnt ashes	Rp. 5,000,000
19	Sair	Rp. 4,000,000
20	gucca	Rp. 9,000,000
21	Rahman	Rp. 12,000,000
22	Fadli	Rp. 5,000,000
23	Hasan	Rp. 6,000,000
24	Sahar	Rp. 5,000,000
25	waiter	Rp. 7,000,000
26	Herman	Rp. 9,000,000
27	Ardiansya	Rp. 8,000,000
28	Sahrul	Rp. 2,900,000
29	Sultan	Rp. 5,000,000
30	Ikbal	Rp. 3,000,000
31	Flute	Rp. 5,000,000
32	say	Rp. 4,500,000
33	Dervish	Rp. 7,500,000
34	Bayyang	Rp. 2,800,000
35	Amri	Rp. 5,000,000
36	Maspati	Rp. 3,000,000
37	Arlis	Rp. 5,000,000
38	Haerul	Rp. 4,000,000
39	Mamanur	Rp. 5,000,000
40	Jefri	Rp. 5,000,000
41	Rusmin	Rp. 5,500,000
42	Akbar	Rp. 5,000,000
43	Adi	Rp. 6,000,000
44	Moses	Rp. 6,000,000
45	Yahya	Rp. 3,000,000
46	henry	Rp. 4,600,000
47	Akkir	Rp. 5,000,000
48	Solomon	Rp. 5,000,000
49	Eddie	Rp. 8,000,000
50	Sapar	Rp. 15,000,000
51	With Nai	Rp. 10,000,000
52	Muh. Nur Ikbal	Rp. 4,000,000

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Source: secondary data from BalaiUsunPonrang 2

LITERATURE REVIEW

Based on the results of the search, several studies have been identified that have been conducted previously and are considered similar to the problem to be studied but have a different problem focus in this study. These studies include the following:

1. Henro Priyono Putra (2019) in his research entitled "The Effect of Seaweed Cultivation on the Income of Seaweed Farmers in Lakawali Village, Malili District, East Luwu Regency". Henro Priyono Putra aims to determine the effect of seaweed cultivation on the income of seaweed farmers in Lakawali Village, Malili District. East Luwu Regency. The type of research used is a quantitative type. The data source used is primary data obtained through questionnaire statements. Data were processed using SPSS N.20 and analyzed using simple regression. The results of his research showed that seaweed cultivation had an influence on the income of seaweed farmers, namely the T-count value of 4.334 and the T-table of 2.048 or 4.334 > 2.048 and a significant income value of 0.000 <0. 05 (H 0 rejected and H 1 accepted). So that seaweed cultivation has a significant effect on the income of seaweed farmers.(Son, 2019)
   The equations in this study both use quantitative research and the influencing variable is seaweed cultivation. The difference in this study lies in the location of the research and the number of samples used as well as the variables that are affected where in Henro Priyono Putra's research the variable that is affected is the income of seaweed farmers which is different from the research that will be carried out. by the variable it influences, namely people's income.
2. Adhaniar (2019) in his research entitled "The Effect of the Seaweed Cultivation Business Development Model on Community Income in Pangasa Hamlet, Kec. East Sinjai. Adhaniar's research objective was to determine the effect of the seaweed cultivation business development model on community income in Pangasa Hamlet, East Sinjai District. This study was included in a quantitative study with a survey approach. interviews and documentation While data analysis used cost analysis, profit analysis, T test and simple linear regression test with the help of the SPSS 20 application. The results of this study indicate that the effect of the seaweed cultivation business development model on people's income in Dusun Pangasa Kec.Timur Sinjai shows that the development of seaweed cultivation business has a significant effect on people's income in Dusun Pangasa Kec. East Sinjai where t count is 2.205 > t table is 2.101 then Ho is rejected and Ha is accepted, which means that the development model variable for seaweed cultivation has a significant effect on people's income in Pangasa Hamlet, Kec. East Sinjai 101 then Ho is rejected and Ha is accepted, which means that the variable model for seaweed cultivation business development has a significant effect on people's income in Pangasa Hamlet, Kec. East Sinjai 101 then Ho is rejected and Ha is accepted, which means that the variable model for seaweed cultivation business development has a significant effect on people's income in Pangasa Hamlet, Kec. East Sinjai(Nabir & Adhaniar, 2020).
   The similarity of this research lies in the type of research that uses quantitative methods and the variable it influences, namely people's income. The difference in this study lies in the location, the number of samples used and the variables that influence it.
3. Cakra Iswahyu (2015) in his research entitled "Analysis of Income Levels of Seaweed Cultivating Farmers in Bantaeng Regency". workers on the income of seaweed cultivators in Bantaeng Regency, (3) knowing the effect of land area on the income of seaweed cultivators in Bantaeng Regency. The results of this study indicate that the capital variable has a significant positive effect on the income level of seaweed cultivators in Bantaeng Regency, the working days variable has a significant

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positive effect on the income level of seaweed cultivators in Bantaeng Regency, and the land area variable also has a significant positive effect on the income level of grass cultivators sea in Bantaeng Regency.(Hamid & Thursday, 2012)

The difference in this research lies in the problem to be studied, and the purpose of the research is different from what will be carried out. The similarity of this research lies in the type of research that uses quantitative methods.

4. Rahmi Purnomowati (2015) in her research entitled "The Influence of Development of Seaweed Cultivation on the Welfare of the East Coast Communities of the East Coast of Lombok Island, NTB Province (Case Study of Pamongkong Village-Keruak Regency)". Rahmi Purnomowati's research objective was to determine seaweed cultivation activities carried out by communities on the east coast of the island of Lombok, namely in Pemongkong Village - Keruak sub-district, East Lombok district, NTB Province and to determine the effect of seaweed cultivation on community welfare activities. The research location was determined by purposive sampling consisting of primary data and secondary data. The number of respondents is 60 people searched using the slovin formula. It can be concluded that seaweed farmers and fishermen are local residents who have the biggest role in managing the coastal area of Pemongkong Village – Keruak District, East Lombok Regency, NTB Province. Economically, seaweed cultivation agribusiness activities are profitable. the income of people who cultivate seaweed is higher when compared to people who do not cultivate seaweed, this greatly affects the welfare of coastal communities which is higher(Purnomowati, 2015).

   The similarities in this study lie in the variables that influence it, namely seaweed cultivation. The difference in this study lies in the location and the variables it influences. Where in Rahmi Purnomowati's research the variable it influences is people's welfare, in contrast to the research that will be conducted, the variable it influences is people's income.

5. Djusdil Akrim, et al (2019) in his research entitled "Development of Seaweed Cultivation in Improving the Economy of Coastal Communities in Indonesia". The research objective of Djusdil Akrim, et al is to provide an overview of seaweed cultivation in improving the economy of coastal communities. Based on the results of theoretical studies from various research results on seaweed cultivation in Indonesia. Several things make seaweed cultivation very attractive to coastal communities, namely the technical aspects of seaweed cultivation are relatively easy with a short maintenance time, while from an economic aspect this business is very profitable because the investment and production costs are relatively cheap. So it can be concluded from the results of this study that there is a tendency for people to cultivate seaweed which is still far from the concept of sustainable management. This can be seen from the behavior of the community in managing seaweed which still ignores the surrounding environmental factors, this is certainly contrary to the concept of integrated coastal area conservation(Akrim et al., 2019).

Theoretical basis

1. seaweed cultivation

a. Planting

Cultivation is an attempt to utilize something (Dwi Adi 2001).

Cultivation activities are maintenance activities to reproduce (reproduction), grow (growth) and improve the quality of aquatic biota so that profits are obtained (BSE Team, 2013).

Cultivation is a useful and fruitful business, in which humans combine science and technology in processing aquatic resources and fish resources for the purpose of maintaining, enlarging and growing aquatic organisms in a controlled manner so that a system is used to produce something under artificial

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conditions. Burhanuddin, et al., 2018).

According to PP RI Number 18 of 2010, cultivation is an activity to develop and utilize vegetable resources and is carried out by humans by utilizing capital, technology or other resources to produce products that are better able to meet human needs.

According to Sunjian, cultivation is agriculture carried out by the community, both individually and with the aim of obtaining results that can meet their basic needs.

According to Chairun Hanum, cultivation is a step to be able to produce food and other agro-industrial products by utilizing plant resources, and making food crops and plantation crops as objects of cultivation (Fun Tani, 2022). Based on the several definitions above, it can be concluded that cultivation is an effort that carried out by the community to improve the quality of aquatic biota in utilizing existing resources so as to produce products that are able to better meet human needs.

b. Seaweed

Seaweed is a potential commodity and can be used as a mainstay in efforts to develop small and medium enterprises which are often referred to as Small and Medium Enterprises (SMEs) (Priono, 2013).

Sea rumout (seaweed) is a type of macroalgae, a biomass-forming multicellular organism that is commonly found in intertidal or brackish areas with sufficient sunlight and attaches to substrates in photic or benthic areas in the sea. Seaweed is a eukaryotic and complex organism, but does not have the specialization of structure and reproduction as in plants that live on land. Seaweed is a primitive plant that does not have true leaves, stems and roots (Kasanah, 2019).

Seaweed is one of the leading commodities from the Ministry of Maritime Affairs and Fisheries to be developed to support the community's economy (Estu Nugroho, et al., 2015).

Seaweed is a type of marine organism that can be processed and used as a basic ingredient in the manufacture of various cosmetic or food products (Muh Ismail Z, et al, 2018).

So it can be concluded that seaweed is one of the leading biological assets of the Ministry of Maritime Affairs and Fisheries which can be processed as a basic ingredient for making various cosmetics and various food products that can support the people's economy.

Seaweed cultivation is a business carried out by the community by utilizing underwater natural resources to maintain and cultivate seaweed so as to produce high-value products.

c. Seaweed type

Seaweed is very popular in the world of commerce which in science is known as algae or commonly called "algae". Seaweed, is actually an algae that belongs to a group of low-level plants known as thallophyta that live in the sea. Seaweed, is actually an algae that belongs to a group of low-level plants or called Thallophyta that live in the sea. Seaweed as a fishery commodity is the main source of agar, alginate and carrageenan which are widely used in various industries. Side grasses are known in four classes grouped based on their pigment content, namely (Andi Parenrengi, et al., 2012):

a. Green algae (Chlorophyceae)
b. Blue algae (Cyanophyceae)
c. Brown algae (Phaeophyceae)
d. Red gangan (Rhodophyceae)

Red and brown algae are the main ruddy side dishes that have important economic value in Indonesia. examples are the genera euhcheuma, kappapchycus, hypnea, and gracilaria from the red algae class, and sargasum from the brown algae class. Eucheuma,

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kappahychus, and hypnea produce primary metabolites of a hydrocolloid compound called carrageenan; Gracilaria produces a hydrocolloid compound called agar; while sargassum produces a hydrocolloid compound called alginate; Based on the content it produces, carrageenan-producing side grasses are called carrageenophyta, agar-producing grasses are called agarophyta and algiat-producing grasses are called alginophyta.

Based on the type of seaweed that was successfully cultivated and developed well at the cultivator level, K. Alvaesil, E. Denticulatum reared in coastal waters (side dish), and G. Verrucosa reared in ponds.

2. Community income

a. income

Income is often referred to as income. Revenue is the income or addition of company assets or debt repayment (or a combination of both) from the delivery or production of goods, service delivery or other activities which are the main activities of business entities (Hamonangan Siallagan., 2020).

Revenue is income that arises from the normal activities of an entity and is known by different names, such as sales, fees, interest, dividends, royalties and rent.

According to Diana and Setiawati (2017: 361) states that "revenue is the gross inflow of economic benefits arising from the normal activities of an entity during a period if the inflow results in an increase in equity that does not come from investment contributions". Meanwhile, according to Martani, et al (2016: 204) explains that "revenue is income derived from the normal activities of an entity and refers to different terms such as sales (sales), service revenue (fees), interest (interest), dividends (dividends) , and royalties (royalties).

Income is the amount of income received by residents for achievements during a certain period, either daily, weekly, monthly or yearly (Sukirno, Sadono, 2000).

Based on some of the definitions above, it can be concluded that income is the income of a person or community that is obtained from the delivery or production of goods, delivery of services or other activities.

b. Factors affecting income

According to Boediono, the factors that affect income are as follows:

1. The number of factors of production owned comes from this year's savings and inheritance or grants.
2. The price per unit of each factor of production, this price is determined by supply and demand in the market for these factors of production
3. The results of the activities of family members as side workers (Boediono., 2002).

Farming income, especially seaweed, can be influenced by several factors, including: (1) Capital; (2) Labor; (3) Social factors include work experience and technology. Capital, a very important factor in farming is buying seeds, production equipment. A business needs to continuously develop a business that connects the tools, materials and services used in production to obtain sales results (Nugraha., 2011).

c. Public

Society is a collection of people who live together in a place with certain rules (Dwi Adi et al., 2001). Society is a number of humans in a broad sense and related by a culture that they consider the same (KBBI, 2022).

Society is a group of individuals who have common interests and have a distinctive culture and institutions. Society can also be understood as a group of people who are organized because they have the same goal (Dede Maryani, et al., 2019).

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Society is a group of people who live side by side with all their culture and personality. Therefore we need a set of rules and norms so that people can live in harmony (Purwaningsih).

So it can be concluded that society is a group of people who live together in an area with all the culture and rules to achieve a common goal.

Community income is the amount of income earned by individuals for services or work within a predetermined time limit, either in the form of goods or money.

RESEARCH METHODS

This type of research used in research is quantitative research. Quantitative research is systematic scientific research about parts and phenomena and their relationships. The aim of quantitative research is to develop and apply mathematical models, theories and/or hypotheses related to natural phenomena.(Dr. Sudaryono, 2018). Process measurement is an important part of quantitative research. Determination of the sample refers to Slovin's theory with the formula:

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{52}{1 + 52(0,1)^2}$$

$$n = 34\ orang$$

information:
n = sample size
N = population size
e = error rate

The above solutions resulted in a total sample of 34 people in this study.

RESULTS AND DISCUSSION

Results

Characteristics

Respondents in this study are customersseaweed farmers in Tirowali Village, Ponrang Districtnamely as many as 34 respondents. The characteristics of the respondents included in this study included gender, age/age of the respondents, and education. From the survey results obtained data on the characteristics of the respondents as follows:

Table 2
Characteristics of Respondents Based on Gender

Gender	Frequency (person)	presentation
Man	34	100%
Woman	0	0%
Amount	34	100%

Source: Tirowali village statistical secondary data

Table 3
Characteristics of Respondents by Age

Age (years)	Frequency (person)	Percentage (%)
20-35	14	41%
35-50	12	35%
51-65	8	24%
Amount	34	100%

Source: Tirowali village statistical secondary data

Table 4
Characteristics of Respondents Based on Education

Level of education	Frequency (person)	Presentation (%)
SD	10	29%
JUNIOR HIGH SCHOOL	14	41%
SENIOR HIGH SCHOOL	10	29%
Amount	34	100%

Source: Tirowali village statistical secondary data

Validity test

Following are the results of the validity test of the effect of seaweed cultivation variables on people's income, the number used in measuring the validity test is 34 samples. The criteria used in determining the validity of the statements used in this study were the level of confidence = 95% (α = 5%), the degree of greatness (df) = n-2 = 34-2 = 32 , obtained r table = 0.349 (at the level significant α) = 0.05, then the questionnaire items are declared valid.

Basis for decision making:

a) If the value of Rcount>Rtable then the questionnaire is declared valid

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b) If the value of Rcount <Rtable then the questionnaire is declared invalid

Test the validity of the questionnaire in this study can be seen in the following table:

Table 5
Seaweed Cultivation Variable Validity Test

VARIABLE	ITEMS	r-count	r-table	Ket.
SEAWEED CULTIVATION (X)	X.1	0.519	0.349	LEGITIMATE
	X.2	0.704	0.349	LEGITIMATE
	X.3	0.597	0.349	LEGITIMATE
	X.4	0.664	0.349	LEGITIMATE
	X.5	0.660	0.349	LEGITIMATE
	X.6	0.669	0.349	LEGITIMATE
	X.7	0.560	0.349	LEGITIMATE
	X.8	0.411	0.349	LEGITIMATE
	X.9	0.595	0.349	LEGITIMATE
	X. 10	0.569	0.349	LEGITIMATE

Source: data processed with SPSS 24, 2022

Table 6
Income Variable Validity Test

VARIABLE	ITEMS	r-count	r-table	Ket.
COMMUNITY INCOME (Y)	Y. 1	0.591	0.349	LEGITIMATE
	Y.2	0.644	0.349	LEGITIMATE
	Y.3	0.597	0.349	LEGITIMATE
	Y.4	0.703	0.349	LEGITIMATE
	Y.5	0.509	0.349	LEGITIMATE
	Y.6	0.461	0.349	LEGITIMATE
	Y.7	0.606	0.349	LEGITIMATE
	Y. 8	0.607	0.349	LEGITIMATE
	Y.9	0.486	0.349	LEGITIMATE
	Y.10	0.509	0.349	LEGITIMATE

Source: data processed with SPSS 24, 2022

Based on this, the results of the study show that all independent variables (x) and dependent variables (y) so that the table is quite large above r-table = 0.349, it can be used as a measurement and research variable.

Trust test

The results of the reliability test of variables X and Y in this study can be seen in the table below:

Table 7
Reliability Test Results
Reliability Statistics

Alpha Cronbach	N of Items
.790	10

Reliability Statistics

Alpha Cronbach	N of Items
.761	10

Source: processed spss results, 2022

Based on the table above, it can be concluded that all research instruments with 2 variables, namely seaweed cultivation and community income, are considered reliable because they have Cronbach Alpha values between 0.70-0.90 where the Cronbach Alpha values obtained are 0.790 and 0.761, which means they have high reliability. tall. .

Simple Linear Regression Test

Table 8
Simple Linear Regression Analysis
coefficients

Model		Nonstandard coefficients B	Nonstandard coefficients std. Error	Standard Coefficient Betas	Q	Sig.
1	(Constant)	1942	1,161		1672	.104
	Seaweed Cultivation	.948	.028	.986	33,700	.000

A. Dependent Variable: people's income

Source: data processed using SPSS. 2022

In the constant table (a) is 1.942, while the value of seaweed cultivation (b) is 0.948, so the Regression Equation is as follows:

Y=a + bx

Y=1.942 + 0.948x

The constant of 1.942 means that if there is no seaweed cultivation value, the income value is 1.942. The regression coefficient of the seaweed cultivation variable (X) is positive 0.948. so that it can be said that the direction of the influence of variable X on Y is positive. This means that for every 1

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addition of seaweed cultivation value, the income value is 0.948.

Hypothesis test

T test

The t test was conducted to determine the effect of each or some of the independent variables (seaweed cultivation) on the dependent variable (community income).(Nabir & Adhaniar, 2020).

Table 10
Test Results t

coefficients

Model		Nonstandard coefficients B	Nonstandard coefficients std. Error	Standard Coefficient Betas	Q	Sig.
1	(Constant)	1942	1,161		1672	.104
	seaweed cultivation	.948	.028	.986	33,700	.000

A. Dependent Variable: people's income

Source: data processed using SPSS. 2022

Based on the table above, it can be seen that the sig value of the influence of X on Y is 0.000 <0.05 and the t value is 33.700 > 2.037, so it can be concluded that H0 is rejected and H1 is accepted. So it can be concluded that seaweed cultivation has a significant effect on people's income.

Determination Coefficient Test

Table 11
Summary models

Model	R	R square	Customized R Square	std. Estimation Error
1	.986a	.973	.972	.81498

A. Predictors: (Constant), seaweed cultivation

Source: data processed using SPSS. 2022

Based on the table above, the coefficient of determination (R2) is 0.973, meaning that the effect of the independent variable on the dependent variable is 97.3%.

Discussion

In the analytical research carried out in determining the extent of the influence of seaweed cultivation on people's income. In addition, this study aims to answer the formulation of the problem that the author has described in accordance with the survey by distributing questionnaires that are arranged directly to the community which is the criterion with a total sample of 34 people where the data is processed using the SPSS version 24 program. This program is used to facilitate researchers in processing research data.

Based on the test results above, the effect of the seaweed cultivation variable (X) on people's income (Y) was obtained ttable of 2.037 and tcount of 33,700, meaning tcount>ttable with a significant value of 0.000 <0.05. From these results it can be concluded that H0 is rejected. This shows that there is a significant influence between the seaweed cultivation variable (X) on the community income variable (Y) in Ponrang 2 Hamlet, Tirowali Village, Ponrang District, Luwu Regency.

Based on the results of the validity test, 10 valid questionnaire items were obtained from seaweed cultivation (X) and 10 valid questionnaire items from the community income variable (Y) were given to 34 respondents in Ponrang 2 Hamlet, Tirowali Village, Ponrang District. Luwu Regency. Furthermore, from the results of data processing obtained rcount of 0.00 and with a significant level of 5%. Because rcount> rtable, the questionnaire is reliable.

From the test results of the coefficient of determination it can be explained that the R value is 0.973 or 97.3%. This means that the ability of the independent variables in this study affects the dependent variable by 97.3% while the rest can be explained by variables other than the independent variables in the study.

The results of the research above are in line with Nugraha's theory about the factors that affect farm income, especially seaweed. Based on the results of the research above, it is known that capital and labor in seaweed cultivation greatly affect people's income(Sujana et al., 2020).

The results of this study are in line with previous research conducted by

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(HenroPriyono Putra) showing that seaweed cultivation has an influence on the income of seaweed farmers, namely a Tcount value of 4.334 and a Ttable of 2.048 or 4.334 > 2.048 and a significant income value of 0.000 <0.05 (H0 is rejected and H1 is accepted). So that seaweed cultivation has a significant effect on the income of seaweed farmers.

Furthermore, according to (Adhaniar) it shows that the development of the seaweed cultivation business has a significant effect on people's income in Dusun PangasaKec. East Sinjai where tcount 2.205 > ttable 2.101 then Ho is rejected and Ha is accepted, which means that the model variable for seaweed cultivation business development has a significant effect on people's income in Dusun PangasaKec. East Sinjai.

Furthermore, it became a research supporter (CakraIswahyu) which showed that the capital variable had a significant positive effect on the income level of seaweed cultivating farmers in Bantaeng Regency, the working day variable had a significant positive effect on the income level of farmers. seaweed cultivators in Bantaeng Regency. Appropriateness can be seen in the factors that most influence people's income lies in the factors of labor and capital(Siew-Moi et al., 2017).

The findings in this study have several important implications, both for the community and seaweed farmers in Dusun Ponrang 2 in an effort to increase seaweed cultivation income.

To increase income, farmers must continue to gain knowledge to develop experience on how to market and empower seaweed so that in the future they can be more advanced and able to compete in the agricultural sector, especially in seaweed cultivation. In this case the income of the Ponrang 2 Hamlet community can increase every year so that it can prosper the seaweed cultivators.

Based on the researcher's direct experience in this research process, there are several limitations that were encountered and can be a lesson for future researchers to further refine their research because this research itself certainly has shortcomings that need to be continuously improved in further research, including: Number Of course, there are only 34 respondents who could not describe the actual situation, and the research location was only focused on Dusun Ponrang 2, which is only one of many other hamlets that also cultivate seaweed.

CONCLUSION

Based on the results of the research data analysis, it can be concluded that the data is seen from the value of tcount>ttable and a significant value <0.05 (H0 is rejected and H1 is accepted) so that the independent variable has a significant effect on the dependent variable. The output results obtained a Tcount value of 33,700 and a Ttable of 2,037 or 33,700 > 2,037 and a significant income value of 0.000 <0.05 (H0 was rejected and H1 was accepted). So it can be concluded that seaweed cultivation has a significant effect on people's income. the magnitude of the influence of seaweed cultivation on people's income can be seen from the coefficient of determination which is equal to 97.3% while the rest is influenced by other variables outside this regression model.

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