The Relationship between Social Capital, Human Capital, and the Level of Welfare of Farmers in Ponorogo, Indonesia

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Abstract

Community empowerment is one of the solutions to overcome the problem of poverty in an area. Community empowerment can be carried out by utilizing local potential and developing aspects and social capital. Based on the theory of the poverty circle, several factors cause poverty, including income levels, education levels, and the amount of consumption. Ponorogo Regency is one of the top 10 food support districts in East Java, with progress in the agricultural sector capable of supporting regional food security. However, many underprivileged residents have a poverty rate 2022 of 9.32% of the total population. Based on these facts, this study aims to reveal the relationship between social capital, education level, and income level in Ponorogo Regency. This study uses multiple linear regression analysis with independent variables (X_n), including the level of public education (X_1) and human capital (X_2), as well as the dependent variable (Y), namely the level of welfare of the people of Ponorogo Regency. The analysis results show that in Ponorogo Regency, there is a correlation between social capital and the level of education and community welfare. The level of social welfare is influenced by education and human capital. The higher the education level and human capital, the higher the social welfare and social capital formed. The development of social capital in networks at the educational level of Ponorogo Regency is very closely related, especially to participation in the religious field. Likewise, the relationship with norms on social capital in which the community has no tendency for a certain level of education related to the desire to implement applicable norms. However, participation in traditional activities has a closer relationship only at the elementary to secondary education level. The analysis results also show that the people of Ponorogo Regency with any income level have a close relationship with all elements of social capital, namely trust, social networks, and norms. Low-income people are associated with an increase in social class.

Keywords: Community Welfare, Education Level, Income Level, Human Resource, Social Capital

Abstrak

Pemberdayaan masyarakat merupakan salah satu solusi untuk mengatasi permasalahan kemiskinan di suatu wilayah. Pemberdayaan masyarakat dapat dilaksanakan melalui pemanfaatan potensi lokal serta pengembangan aspek dan modal sosial. Berdasarkan teori lingkaran kemiskinan dapat diketahui terdapat beberapa faktor yang menyebabkan kemiskinan di antaranya tingkat pendapatan, tingkat pendidikan, dan besarnya konsumsi (pengeluaran). Ponorogo sebagai 10 besar kabupaten pengangga pangan di Jawa Timur dengan kemajuan di sektor pertanian yang mampu menyangga ketahanan pangan wilayah, namun ditemukan banyak penduduk pra sejahtera dengan angka kemiskinan pada tahun 2022 sebesar 9,32% dari total penduduk. Berdasarkan fakta tersebut, penelitian ini bertujuan untuk mengungkap hubungan antara modal sosial, tingkat pendidikan, dan tingkat pendapatan di Kabupaten Ponorogo. Analisis yang dilakukan dalam penelitian ini adalah analisis regresi linear berganda dengan independen variabel (Xn) antara lain tingkat pendidikan masyarakat (X1) dan modal manusia Kabupaten Ponorogo (X2), serta dependen variabel (Y) yakni tingkat kesejahteraan masyarakat Kabupaten Ponorogo. Hasil analisis menunjukkan bahwa di Kabupaten Ponorogo terdapat korelasi antara modal sosial dengan tingkat pendidikan dan tingkat kesejahteraan masyarakat. Tingkat kesejahteraan masyarakat dipengaruhi oleh pendidikan (human

intellectual) (X1) dan modal manusia (X2). Semakin tinggi tingkat pendidikan/keterampilan/skill yang dimiliki oleh individu serta elemen modal manusia maka semakin tinggi pula kesejahteraan masyarakat dan modal sosial yang terbentuk. Pengembangan modal sosial berupa jaringan pada tingkat pendidikan Kabupaten Ponorogo berhubungan sangat erat terutama untuk berpartisipasi di bidang keagamaan. Begitu pula hubungannya dengan norma pada modal sosial yang mana masyarakat tidak ada kecenderungan tingkat pendidikan tertentu yang berkaitan dengan keinginan untuk melaksanakan norma yang berlaku, walaupun partisipasi akan kegiatan adat memiliki hubungan lebih erat hanya pada tingkat pendidikan dasar hingga menengah. Hasil analisis juga menunjukkan bahwa masyarakat Kabupaten Ponorogo dengan tingkat pendapatan apapun memiliki hubungan yang erat dengan seluruh elemen modal sosial yaitu kepercayaan, jaringan sosial, dan norma. Masyarakat berpenghasilan rendah dikaitkan dengan adanya peningkatan mosal sosial.

Kata kunci: Kesejahteraan Masyarakat, Modal Sosial, Tingkat Pendapatan, Tingkat Pendidikan, Sumber Daya Manusia

INTRODUCTION

Based on the latest data from the Indonesian Central Statistics Agency (*Badan Pusat Statistik/* BPS), the number of poor people in September 2022 was 26.36 million. This figure increased by 0.20 million people in March 2022. This problem can be overcome by carrying out empowerment based on the concept of, by, and for the community itself. These efforts are considered necessary so that people can still meet their economic, physical, and social needs and self-improvement (Subagyo & Legowo, 2021). Empowerment is one of the approaches in development that places the community as the main subject. This approach is carried out by carrying out transformations at the structural, cultural, and personal levels to improve people's lives (Zubaedi, 2013).

One way to carry out community empowerment is through utilizing local potential. Not only can local potential be developed through community empowerment, but social aspects can also be developed. One of the social aspects that can be developed through community empowerment activities is human capital management. Human capital management, or how the organization manages, recruits, retains, trains, and develops individual and group members (Suhairi et al., 2020). This is evidenced by studies that state that people with good human capital skills and experience are proven to be able to meet food needs and short- and long-term business strategies (Suhairi et al., 2020). Human capital or human capital consists of 3 aspects, one of which is intellectual capital and social capital. This aspect is the backbone of human resources which has the potential for innovation as long-term maintenance for improving the quality and welfare of individuals (Frick et al., 2008). Collective intellectual capital includes knowledge or educational capital that is embedded in individuals/society and how it relates to others or groups. Social capital is an important aspect related to community empowerment. Research on social capital has been carried out previously and succeeded in proving that elements of social capital play a role in overcoming common problems to achieve successful community empowerment in villages (Utami, 2020) (Aprilia et al., 2023; Prayitno et al., 2022). Another successful study has shown that elements of social capital can empower the economy of rural communities through new business opportunities. Similar research was also conducted by researchers in Ponorogo Regency (Nurami, 2012).

Ponorogo Regency is one of the regencies in East Java Province and is included in the top 10 food buffers in East Java. The agricultural sector in Ponorogo Regency is getting stronger. This is indicated by an increase in paddy fields of around 200 hectares to 35,100 hectares in 2022. Food security in Ponorogo Regency is getting stronger, marked by yearly rice production exceeding 400 thousand tons of dry-milled grain (GKG) (Dinas Kominfo, 2022). Another step taken by the Government of Ponorogo Regency to secure agricultural production, especially food crops, is to begin an inventory of agricultural land for food crops to be designated as Sustainable Food Agricultural Land (*Lahan Pertanian Pangan Berkelanjutan/* LP2B). The aim of this effort to provide food is to prevent people from being in a state of hunger or being overshadowed by the threat of

starvation. Hunger is synonymous with the inability of people to buy basic food needs. People's income is not enough to meet their daily needs, so people are categorized into poverty.

Based on the theory of the circle of poverty, it can be seen that several factors cause poverty, including income levels, education levels, and the amount of consumption (expenditure). Education is widely recognized as having a leading role in the instrument of economic growth. Therefore education is increasingly developed. This is done because education can improve welfare and reduce poverty (Susanto & Pangesti, 2019). Education is essential in reducing poverty in Indonesia and any country in the long run. Either indirectly through improving productivity and efficiency in general or directly through training people experiencing poverty in the skills needed to increase their productivity and, in turn, increase their income (Sembiring et al., 2023).

Individuals can meet their needs and maintain the knowledge and skills they have. It is proven by research shows that people at the higher education level can interact strongly and share knowledge in the institutions or groups they participate in (organizational capital) (Assa & Suwondo, 2018). The level of education can be used as an indicator to see the level of welfare of the population. The higher a person's level of education, the better the quality of his human resources. Education is the most essential factor that can get someone out of poverty. The link between poverty and education is enormous because education provides the ability to develop through the mastery of knowledge and skills (Susanto & Pangesti, 2019).

In addition, an increase in education can also be an effort to improve the quality of life because it is related to trust between farmers (Nancarrow et al., 2008). Education has been shown to significantly improve information-intensive sustainability practices or require training (Caswll et al., 2001). The lack of relevant information for farmers is an additional barrier to adopting sustainable agricultural practices (Rodriguez et al., 2009). This is because communities in settlements/neighborhoods with good levels of education and welfare can also significantly predict the attainment of good social capital (Nelson., 2019). This community provides social capital related to information and also social support. Community networks are important in compensating for the lack of information-related social capital.

Empowering farmers, especially in terms of education, is feasible because it has a positive relationship with the desired development outcomes, including increased food security (Mwololo et al., 2022). In addition, understanding the determinants of empowering farmers in agriculture is important in designing responsive policies and programs. Thus, this study aims to analyze the relationship between social capital and the quality of community resources as measured by education and welfare levels, especially regarding people's income in Ponorogo Regency.

RESEARCH METHOD

The data in this study were obtained through questionnaires and interviews with informants, namely representatives of each sub-sector, representatives of farmer groups, and representatives of the agriculture, food security, and fisheries services. The questionnaire was used to determine the income range of the respondents to measure the level of community welfare and the education level of the respondents to measure the quality of community resources. The questionnaire was also used to determine each element's social capital level in Ponorogo Regency.

Respondents in this study are people who work in the agricultural sub-sector, namely in agriculture, plantations, breeders, and fish cultivators. The number of research samples was obtained from 400 respondents spread across 21 sub-districts in Ponorogo Regency. The number of samples was obtained using the Slovin formula at a 95% confidence level and a tolerable error rate of 5%. A random sampling of farmers was carried out proportionally with formula (1).

$$n = \frac{N}{1+(N \ x \ MoE2)} \qquad (1)$$

Where n is the number of samples, N is the total population, and $MoE2$ is the maximum margin of error. The social capital used in this study consists of three sub-variables: Trust, Norms, and Social Networks. Each has indicators, as in Table 1.

Table 1. Variable, sub-variables, and indicators

Variable	Sub Variables	Indicators
Social Capital	Trust	The level of trust in fellow farmers
		The level of trust in the apparatus or government
		The level of trust in the chairman of the farmer group
		Level of trust in village religious leaders (example: religious leaders, ustadz, kyai, etc.)
		The level of trust in the Gapoktan institution
		The level of communication between farmers during the Covid 19 pandemic and after the pandemic is getting better.
	Norm	Obey the applicable group/government regulations (unwritten rules that have become a habit for farmer group members)
		Participation in traditional activities or events (for example: village cleaning, *ruwatan*, *slametan*, etc.). *Ruwatan* is a traditional ceremonial tradition that has been preserved and used by the community since ancient times until now. While *slametan* is a ritual tradition that most Javanese people are still preserving
	Social Network	Willingness to work together to achieve mutual success
		Participation in the village's religious activities (recitation, religious celebrations, etc.)
		Participation in village social activities (for example: village cleaning, social gathering, sports, etc.)
		The intensity in giving opinions during meetings with farmers/cadets
		Willingness to join a village group or community and its activities

The condition of social capital in Ponorogo Regency is measured using a scoring technique from the results of a questionnaire. Each indicator is made on a 1-5 scoring scale, then converted into a percentage. Whereas in knowing the level of community welfare, the method used is to calculate the frequency of answers and the percentage of respondents' answers and then obtain the mode for each parameter which is a description of the income (level of welfare) of the people of Ponorogo Regency. The same thing was also done to measure the education level of the people of Ponorogo Regency. Scoring information for each indicator in the questionnaire is presented in Table 2.

Table 2. Scoring of each indicator on the questionnaire

Score	Description
1	Strongly disagree
2	Don't agree
3	Simply agree
4	Agree
5	Strongly agree

The analysis carried out in this study is multiple linear regression analysis to determine whether there is an influence between the independent variable (X_n) on the dependent variable (Y), namely the effect of the level of community welfare (X_1) and the level of community education (X_2) on the social capital of the people of Ponorogo Regency. . The analysis in this study uses the Statistical Program for Social Science (SPSS) tool.

RESULTS AND DISCUSSION

Social Capital, Human Capital, and Development of Rural Human Data Resources

Social capital is considered a shared property that can generate positive externalities, such as facilitating institutional performance for mutual benefit, consisting of networks, norms, and social trust (B. R. D. Putnam, 1993). Many policies have been launched to increase social capital in overcoming various social problems through local activities (Qin & Fukuda, 2023). Much research has been done on social capital, including its impact on economic growth, health, and crime prevention. Social capital is one of the critical resources for individuals, collectives, and communities to prepare to respond to emergencies and enable people to recover from the effects of such disasters. (Aldrich, 2012). Increasing social capital can increase community resilience (Aldrich et al., 2018). Modal sosial memiliki komponen struktural dan kognitif (Sseguya et al., 2018). The structural component includes social networks and social participation in the network. In contrast, the cognitive component refers to trust in the network and the belief that social support is acceptable (Chriest & Niles, 2018). Types of measurement of social capital can be divided into two types: collecting data from individuals through questionnaires and specific questions about willingness to participate in community activities and other human interactions. This data type directly reflects an individual's social model at the individual level. Another way is to use statistical data that reflect the level of social capital at the aggregate level by describing the status of social capital at the macro level, for example, the number of voters and participation in associations (B. R. D. Putnam, 1993; Qin & Fukuda, 2023).

Human capital is an important component of SDG which has a fundamental impact on other goals, such as reducing poverty and inequality in improving health. Human capital, which is gained from work experience and skills, is considered an intangible asset that has a significant impact and can increase individual productivity and wages (Becker, 1993; Goldin, 2016). Production technology investment is equivalent to human capital to achieve sustainable agricultural development. Some experts argue that training contributes to the development of social capital, which can be linked to cooperative problem-solving to assist farmers in protecting their interests (Bingen et al., 2003). Opportunities for developing human capital and social capital will depend on the types of investment activities available to farmers. The concept of human capital is linked to the overarching concept of intellectual capital, which is defined as the level of knowledge available to an organization. It can be thought of as an intangible resource associated with people who, along with tangible resources (money and physical assets), comprise the market or the total value of a business. Bontis (1998) defines intangible resources as factors other than financial and physical assets that contribute to the value-generating process of a firm and are under its control.

Human capital includes skills, knowledge, abilities, potential, and physical condition (Baffoe & Matsuda, 2018; Zeng et al., 2021). Lack of human capital can be considered one of the important factors causing poverty in rural families (Zhao et al., 2019). Various studies have mentioned the importance of human capital and emphasized that the development of rural areas is only possible with human capital. An indicator that can be used to assess human capital is human resources (He & Ahmed, 2022), level of education (Jezeer et al., 2019), and training (Seufert et al., 2023). Education is of paramount importance for the formation of human capital and long-term living

standards. However, many children in poor households must work and indirectly be prevented from attending school (Chrisendo et al., 2022). The level of education can directly affect the level of family income, sources of income, and the choice of farmers' livelihood strategies (He & Ahmed, 2022). In farming households, children often contribute to the labor force on the family farm. This also applies in rural Indonesia.

The agricultural training program is a series of informal educational activities, both for the short and long term, which are prepared for individual or group farmers to achieve the stated goals (Gwivaha, 2015). In addition, agricultural training is a potentially effective method for disseminating relevant new technologies for increasing productivity and reducing poverty, particularly in rural areas (Nakano et al., 2018). Training in agriculture is designed to facilitate the transfer of knowledge or skills on specific agricultural issues that should benefit farmers (Stewart et al., 2015). Several studies have demonstrated the importance of training in attaining skills through human capital theory (Acemoglu & Autor, 2012). Thus, the conclusion that can be drawn is that it is possible to recognize human capital as a critical resource that enables increased income and efficiency in the economy (Barkhordari et al., 2019; Saniuk et al., 2022).

The development gap in urban and rural areas cannot be separated from the uneven demographic distribution and economic capacity, including infrastructure and information and communication technology gaps. Technological developments will challenge the running of government and the village economy (Manoby et al., 2021). The principles of village development include transparency, participation, service, accountability, and sustainability. Various factors involved in it, such as social, economic, cultural, and technological, interact in the development process (Cao et al., 2022).

Increasing community participation in village development activities is crucial to achieving effective and sustainable development. The strategy for rural development has been based on self-help ideas and community initiatives based on bottom-up planning (Ćurčić et al., 2021). Improving the quality of life of rural communities will be encouraged by supporting the regulation and preservation of cultural heritage and natural wealth through projects for the protection, conservation, and promotion of cultural values. Thus, the role of local government is also crucial for the development of rural areas as a whole because local institutions indirectly aim to promote and create an enabling environment for people to be innovative, creative, and productive (Khongsatjaviwat & Routray, 2015; Živojinović et al., 2019).

Figure 1. Administrative Map of Ponorogo Regency

Respondents Characteristics

This research was conducted in Ponorogo Regency, East Java Province. The area of Ponorogo Regency is 1,371.78 km2 or occupies about 3.5% of the total area of East Java Province. The scope of this research is 21 sub-districts in Ponorogo Regency, as shown in Figure 1. 400 research

respondents in Ponorogo Regency were spread across 21 sub-districts. The respondents consisted of 334 male residents and 66 female residents. They have various age ranges, starting from the educational age group, the productive age group, and the elderly group. The educational level of the respondents also varied, from not yet/not in school to Masters. Research respondents also have various income levels. Table 3 shows the diversity of respondents in this study.

Table 3. Respondents Characteristics

Characteristics	Total respondents
Gender	
Male	334
Female	66
Age	
Educational age group (0-14 years)	0
Working group (15-64 years)	359
Elderly group (> 65 years)	41
Last Education	
Not yet/not in school	76
Elementary School Equivalent	43
Middle School Equivalent	17
Equivalent High School	16
Bachelor	98
Masters	150
Occupation	
Farmer	299
Breeder	69
Fish Farmers	32
Participation in Farmer Groups	
Yes	282
No	118
Income based on regional minimum wage (UMR)	
>Rp 2.149.709,-	347
<Rp 2.149.709,-	53

Based on the table above, 89.75% of respondents are productive age population, namely 359 out of 400 respondents. Most of the respondents were male, namely around 83.5% of respondents. This is related to the livelihoods of research respondents who work in various sectors. In this case study, most respondents work in the agricultural sector and as landowners, 74%. In addition, to support these agricultural activities, respondents' participation in farmer groups is also significant in optimizing agricultural output and income. These farmer groups spread out in every village. Respondents of farmer groups are 70% of the total respondents. Farmers' knowledge of daily agricultural and food needs is also fundamental. The education level of the respondents has an even distribution from those who are not in school to the Masters level. Most of them are graduates of S1 and S2, namely 45.5%. This condition also affected the income earned by respondents, where 87% of respondents had an income of more than the regional minimum wage (*Upah Minimum Regional/* UMR) of Ponorogo Regency or more than IDR 2,149,709.-. However, 13% of respondents still have income below the minimum wage (UMR).

Correlation Analysis Results

This correlation test is used to identify the relationship between the level of education and society's social capital, which is social capital and the level of welfare. Education is divided into 5, namely PDK1 (Not in School/ Kindergarten), PDK2 (Elementary School), PDK3 (Junior High School), PDK4 (Senior High School), and PDK5 (higher than Senior High School). While the welfare aspect is expressed in the level of community income where PDP1 (income >UMR) and PDP2 (<UMR). This analysis was carried out using SPSS software by paying attention to the Pearson correlation value and the significance test. According to Sugiyono, the guidelines for interpreting the results of the correlation coefficient are as follows (Sugiyono, 2009):

- 0.00 – 0.019 : Very low
- 0.02 – 0.039 : Low
- 0.04 – 0.059 : Moderate
- 0.06 – 0.079 : Strong
- 0.08 – 0.100 : Very strong

Based on the guidelines above, the closer the data is to 0.1, the more valid the data is. Table 4 shows the results of the relationship between education and social capital in the Ponorogo Regency community.

Table 4. Education and Social Capital (Trust) of the Community of Ponorogo Regency

		K1	K2	K3	K4	K5	K6
PDK1	Pearson Correlation	.030	.014	.030	.020	.010	-.021
	Sig. (2-tailed)	.058	.086	.561	.696	.842	.684
PDK2	Pearson Correlation	.070	.051	.049	-.063	.090	.064
	Sig. (2-tailed)	.167	.313	.334	.218	.077	.207
PDK3	Pearson Correlation	.089	.091	-.001	.053	-.031	-.025
	Sig. (2-tailed)	.860	.706	.978	.297	.310	.625
PDK4	Pearson Correlation	.109*	.103*	-.063	-.018	.004	-.056
	Sig. (2-tailed)	.030	.012	.215	.729	.937	.275
PDK5	Pearson Correlation	.135**	.128*	.060	.085	.040	-.034
	Sig. (2-tailed)	.008	.011	.237	.094	.428	.505

Based on the table above, at the PDK1 to PDK3 education level, all aspects of public trust have a low to very low correlation coefficient where all significance values are <0.05 or indicate that there is no relationship. Meanwhile, at the PDK4 and PDK5 levels, there is a relationship based on the value of the correlation coefficient and significance, namely the aspects of trust in fellow farmers (K1) and trust in government officials (K2). This suggests that respondents in Ponorogo Regency with a higher level of education will find it easier to build trust with fellow farmers and the government.

Table 5. Education and Social Capital (Social Network) of Ponorogo Regency Communities

		J1	J2	J3	J4	J5
PDK1	Pearson Correlation	.013	.050	.011	-.039	.054
	Sig. (2-tailed)	.797	.326	.823	.444	.293
PDK2	Pearson Correlation	.060	.154**	.068	.126*	-.031
	Sig. (2-tailed)	.236	.002	.182	.013	.547
PDK3	Pearson Correlation	-.013	.131**	-.049	.010	.058
	Sig. (2-tailed)	.801	.010	.336	.852	.251
PDK4	Pearson Correlation	.060	.000	.075	.099	-.084

		J1	J2	J3	J4	J5
	Sig. (2-tailed)	.236	.993	.142	.051	.098
PDK5	Pearson Correlation	.091	.045	.100*	.068	.087
	Sig. (2-tailed)	.072	.377	.050	.178	.088

Respondents with elementary and junior high school education levels have a robust correlation coefficient and a significant relationship with willingness to participate in religious activities (J2). Most respondents who participated in religious activities in Ponorogo Regency were influenced or formed by respondents with elementary and junior high school levels of education. In contrast, other levels of education had little relationship. Social activities (J3) it is influenced by respondents with an education level > high school. Therefore, in general, it can be concluded that the relationship between educational level does not depend on the social network level.

Table 6. Education and Social Capital (Norma) of the Community of Ponorogo Regency

		N1	N2
PDK1	Pearson Correlation	.104*	.030
	Sig. (2-tailed)	.012**	.556
PDK2	Pearson Correlation	.166**	.133**
	Sig. (2-tailed)	.000	.008
PDK3	Pearson Correlation	.122**	.105*
	Sig. (2-tailed)	.002	.039
PDK4	Pearson Correlation	.100*	.003
	Sig. (2-tailed)	.014**	.946
PDK5	Pearson Correlation	.154**	.092
	Sig. (2-tailed)	.002	.071

Based on the table above, it states that at all levels of education, it has a solid correlation coefficient value and a good significance value (there is a relationship) with the obedience of respondents in carrying out applicable rules/norms to achieve togetherness (N1). This means that all levels of respondents' education influence each other's obedience to society in carrying out regulations that apply to both the government and groups. Meanwhile, the indicator of willingness to participate in traditional activities (N2) is influenced by people with PDK2 and PDK3 levels. This shows that the high level of education does not affect respondents' willingness to participate in the prevailing customary activities.

Table 7 Ponorogo Regency Social Capital and Community Welfare

		PDP1	PDP2
K1	Pearson Correlation	.319**	-.319**
	Sig. (2-tailed)	.000	.000
K2	Pearson Correlation	.309**	-.309**
	Sig. (2-tailed)	.000	.000
K3	Pearson Correlation	.008	-.008
	Sig. (2-tailed)	.881	.881
K4	Pearson Correlation	.274**	-.274**
	Sig. (2-tailed)	.000	.000
K5	Pearson Correlation	-.047	.047
	Sig. (2-tailed)	.353	.353
K6	Pearson Correlation	-.078	.078
	Sig. (2-tailed)	.126	.126

		PDP1	PDP2
J1	Pearson Correlation	.176**	-.176**
	Sig. (2-tailed)	.001	.001
J2	Pearson Correlation	.239**	-.239**
	Sig. (2-tailed)	.000	.000
J3	Pearson Correlation	.240**	-.240**
	Sig. (2-tailed)	.000	.000
J4	Pearson Correlation	.242**	-.242**
	Sig. (2-tailed)	.000	.000
J5	Pearson Correlation	.140**	-.140**
	Sig. (2-tailed)	.006	.006
N1	Pearson Correlation	.121**	.021
	Sig. (2-tailed)	.008	.679
N2	Pearson Correlation	.341**	-.341**
	Sig. (2-tailed)	.000	.000

Based on the table above states that there is a relationship between social capital indicators and the level of social welfare. Where indicators of trust that have a relationship with community welfare are trust in fellow farmers (K1), trust in the government (K2), and trust in farmer group leaders (K4) with a firm correlation coefficient value, this suggests that the higher the three indicators If it is formed in the social order of the Ponorogo Regency community, the higher the level of community welfare. In the indicators of social networks and norms, a solid correlation coefficient is obtained, which can be concluded that the stronger the networks and norms formed in the community structure of Ponorogo Regency, the higher the social welfare.

Discussion

Based on the results of the correlation analysis above, the relationship between elements of welfare (Y) is associated with each variable in education/skill/skill (human intellectual) (X1) and human capital (social capital) (X2). The following describes the correlation of each element of social capital with education and income.

The elements of social capital used in this study consist of Trust (K), Social Network (J), and Norms (N). The correlation between social capital and education using correlation analysis in SPSS produces the level of closeness of the relationship in each element of social capital. Social capital is connected with education level and income level, as in the literature using a multilevel logistics model. Communities with inter-community social capital are positively related to quality of life, in this case in the form of satisfaction in the level of educational income (Paarlberg et al., 2017). Elements of social capital trust in the correlation with the five classifications of education levels in Ponorogo District do not show a strong relationship. The correlation value is slightly higher and indicates a close relationship between people with a high level of education, where the level of education will align with the high level of trust that grows.

The higher the level of education (human intellectual) of the individual, the easier it is for the element of social capital in the form of trust to be formed. This is because people with higher levels of education spend a longer time studying, so social capital begins with social interaction in the educational community. In educational activities, a sense of trust and confidence is instilled in each individual, which builds social capital (Fadli, 2020). The trust between farmers and other sector actors, both the government and stakeholders, allows farmers to facilitate vertical and horizontal coordination, enabling innovation in sustainable agriculture (Kilelu et al., 2017). This study's findings align with previous studies (Aguilar-Gallegos et al., 2015) that diverse sources of knowledge and high frequency of interaction can increase the adoption of new technologies.

Environmentally friendly technologies developed and used by farmer groups in Ponorogo Regency include Integrated Crop Management (PTT). However, the technology adoption system is still weak due to the slow dissemination of new technologies and the development of existing technologies at the farm level. Sustainable agricultural development requires the application of Good Agricultural Practices (GAP), which emphasizes using low external inputs. Therefore, efforts that need to be taken by the government include counseling and outreach to GAP, especially in dryland areas (critical and DAS) conservation efforts both through government funds and community participation need to be carried out. This study provides further insight into the adoption process within farmer groups by demonstrating the importance of diverse sources of information and linking it to trust in information sources and the role of groups in building trusting relationships. (Aguilar-Gallegos et al., 2015; Ramirez et al., 2018). A lack of trust can make farmers less open to learning new ideas, indirectly complicating the decision-making process and reducing farmers' motivation to transform (Slijper et al., 2022).

The form of social networks at the educational level of Ponorogo Regency is very closely related, especially to participating in the religious field. In this case, no level of education shows a tendency towards social networks in Ponorogo Regency. Likewise, the relationship with norms on social capital in which the community does not tend to a certain level of education is related to the desire to implement applicable norms. However, participation in traditional activities has a closer relationship only at the elementary to secondary education level. This cannot be separated from educational activities at that level which still carry cultural values that can be accepted at a young age. People with this level of education are taught to maintain the prevailing norms and participate in activities (Huwaida, 2019). In contrast, the higher level gives more freedom at that level to form maturity.

This is also supported by the literature, which states that there is a significant interaction seen between the level of education and social capital, where the impact of higher social capital on reducing economic perceptions of inequality increases at higher levels of education (Imbulana Arachchi & Managi, 2023). The level of the economy is seen from the income the community generates. In addition, several studies have discussed how education can be embedded in survival, especially for farmers, including how social capital enables social learning through networks (Tregear & Cooper, 2016), transformative learning (Pahl-Wostl et al., 2013), normative, cognitive, and relational learning (Baird et al., 2014). This also leads indirectly to how education also contributes to the welfare of farmers. One form of non-formal education for farmers in Ponorogo Regency is the Association of Farmers Groups (Gapoktan). Non-formal education is an extension conducted by Field Agricultural Extension Officers (*Penyuluhan Pertanian Lapangan/* PPL). The extension program in the form of group coaching is directed at the agribusiness system, increasing the role and participation of farmers and other members of rural communities to develop their farming businesses. The existence of Gapoktan can increase development as evidenced by an increase in Remaining Business Results. So, under any circumstances, increasing social capital through formal and non-formal education can contribute to increasing economic development for individuals and farmer groups (Woolcok, 1998).

Hasil analisis di atas menunjukkan bahwa masyarakat Kabupaten Ponorogo dengan tingkat kesejahteraan (Y) apapun memiliki hubungan yang erat dengan seluruh elemen modal manusia (X2). Human capital, one of which is the development of social capital in Ponorogo Regency in the form of trust, social networks, and norms. High-income people are associated with an increase in social class. This is directly proportional to the literature, which states that the level of education at the individual or group level not only develops social capital but is also able to increase social capital. Other studies that support this show a significant effect of education and welfare on social capital (Mishra, 2021). Education and people's quality of life mediate the influence of human resource development practices. These improvements are in the form of social networks, forwarding of rules, and prevailing social norms (Fukuyama, 2001).

CONCLUSION

Ponorogo Regency's human capital, which is the development of social capital (X2) and level of education (X1), affects the level of welfare/income, especially at a high level of trust. However, in contrast to social networks in the form of participation, especially traditional activities, tend to have a close relationship with the elementary to junior secondary education level. The inculcation of traditional values and community participation in Ponorogo Regency is quite intense in young people who also form social capital while taking education. The level of education (human intellectual) in Ponorogo Regency influences the social capital that is formed in society. Increased education can also influence improving the quality of life because it relates to trust between farmers. In addition, it has been proven to enhance sustainability practices that are information-intensive or require training significantly. In addition, income also shows a close relationship to social capital in all elements. Ponorogo Regency itself with a UMR of Rp. 2,149,709, it can be concluded that there is no tendency for a particular level of community income, considering that at all levels, it has a strong relationship with social capital. The higher secondary education level has a high correlation with social capital trust. In contrast, the lower middle class has a high correlation to the social network of the people of Ponorogo Regency.

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