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Social Capital, Internet Use and Poverty in West Java Province

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Abstract

Social capital is important because it represents the productive benefits of sociability. The importance of social capital cannot be understated since it relates to every benefit of living in a society rather than as a hermit. Meanwhile, the internet, as a mode of rapid communication, may free the individual from family ties and open opportunities to join new cultures and communities. Since the end of the last century, information and communication technologies (ICTs), and the internet in particular, have been considered essential in providing access to markets, decreasing transaction costs, and increasing income for a significant proportion of people living in developing countries. This paper aims to investigate the effect of bonding and bridging social capital, internet use on poverty in West Java Province. The data used in this study was sourced from the Central Statistics Agency (BPS) of West Java Province in 2014, namely the National Socio-Economic Survey covering 26 districts/cities analyzed through order logit model. The results showed that social capital and internet use had a negative effect on poverty in West Java.

Keywords: bridging and bonding social capital, ordered logit model, internet use, poverty
JEL classification : A13, A14. B55

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1. Introduction

One of the most important issues in development economics that concerns economists and policymakers is the role of social capital in the development. Development is a complex multidimensional process involving major changes in social structures, behaviours, and national institutions, as well as the acceleration of economic growth, reduction of poverty, narrowing of inequalities and improvement in the quality of life (Todaro & Smith, 2011). It, thus, development embraces economic, social, cultural, political, and environmental variables.

Social capital is about the value of social networks, bonding similar people and bridging between diverse people, with norms of reciprocity (Uslaner & Dekker, 2010). Videras, Owen, Conover, & Wu, (2012) show that the type of social relationships matter for understanding the determinants of pro-environmental behaviours. Uslaner & Dekker, (2010) posited that social capital is fundamentally about how people interact with each other. It should be recognized that there are two distinct meanings of social capital individual and community level social capital (Levien, 2015). Chalupnicek, (2010) has argued that a tension exists in sociology between social capital as an individual asset and the importance of its social context. Despite this growth in popularity, social capital remains a

controversial concept among economists, and questions on its usefulness as an analytical tool have been raised across the entire theoretical spectrum, from neoclassical (Starr, 2012).

From a social cohesion perspective, recent literature distinguishes social capital into three important forms (Lau, 2020; Meng, Borg, & Clausen, 2020). Firstly, bonding social capital denotes ties among people who are very close and known to one another, such as immediate family, close friends, and neighbours. Bonding social capital occurs among homogeneous populations. Often people in bonding networks are alike on key personal characteristics (e.g., class, race, ethnicity, education, age, religion, gender, and political affiliation). It is more inward-looking, protective, and exercising close membership, and therefore good for under-girding specific reciprocity and mobilizing informal solidarity. Bonding promotes communication and relationships necessary to pursue common goals. Moreover, it influences creation and nurturing of community organizations, like self-help groups and local associations. Secondly, bridging social capital refers to more distant ties of like persons, such as loose friends and workmates. Often people in bridging networks differ on key personal characteristics. Bridging is more outward-looking, civically engaged, narrows the gap between different communities and exercising open membership, and is, therefore, crucial to organizing solidarity and pursuing common goals (Meng et al., 2020). Bridging is crucial for solving community problems through helping people to know each other, building relationships, sharing information, and mobilizing community resources. Lastly, social linking capital refers to the social ties between individuals or community with a source of power and very useful for deep long term development tackling poverty and community marginalization (Jiang & Wang, 2020).

Development in West Java Province is an inseparable part of social capital in national development to achieve development goals that are adjusted to the potential and problems that exist in the region, where the Social Capital Index in West Java is still below the national figure. West Java's attitude of trust is above the national average, while the other 6 (six) components of social capital are religious and ethnic tolerance, participation in groups, networking, community actions, and reciprocity are still below the national average (see Table 1).

Table 1. Comparison of Indonesian and West Java Province
Social Capital Index Components 2014

Components of Social Capital	Indonesia	West Java	Difference
Social Capital Index	49,45	48,10	-1.35
Trust	60,87	61,64	0.77
Religious Tolerance	41,55	36,51	-5.04
Ethnic Tolerance	58,22	58,16	-0.06
Participation in groups	49,08	48,19	-0.89
Networking	13,46	10,41	-3.05
Joint Action	52,62	51,25	-1.37
Reciprocity	53,15	52,71	-0.44

Source: Badan Pusat Statistik, (2014)

Indonesia's population has reached more than 262 million people, of which more than 50 percent or around 143 million people have been connected to the internet throughout 2017 (APJII, 2019). The majority of internet users, as much as 72.41 percent, are still from the urban community. Its use has gone beyond conventional use, not only to communicate but also to buy goods, order transportation, to do business and work.

Based on its geographical area, the people of Java have the most access to the internet at 57.70 percent, especially in the province of West Java, which has the most internet users in Indonesia, with as many as 16.4 million. The other islands follow suit, including Sumatra 19.09 percent, Kalimantan 7.97 percent, Sulawesi 6.73 percent, Bali-Nusa 5.63 percent, and Maluku-Papua 2.49 percent (APJII, 2019). This information indicated that the highest internet usage lies in Indonesia is West Java Province.

Another issue related to social capital and internet use is poverty. Poverty represents one of

the greatest challenges of our times and comprises the most severe form of human deprivation as it not only translates into material needs, but also limits the development of abilities and use of opportunities to improve a person's welfare (Banerjee & Duflo, 2020).

One crucial issue of poverty in Indonesia is the ineffectiveness of poverty alleviation programs (Nasution, Rustiadi, Juanda, & Hadi, 2014). The Indonesian government has formulated policies to serve as a reference for the provincial poverty alleviation. This policy has technically targeted poverty alleviation in the National Medium Term Development Plan (RPJMN) to be reduced by 6-8% in 2015-2019. Even so, poverty alleviation programs, both at the national and provincial levels run independently (Hardiana, 2018)

This situation is also present in West Java Province; poverty alleviation significantly relies on economic approach, whereas poverty is a multidimensional problem, involving other factors, including social capital (Hayami, 2009; Nasution, Rustiadi, Juanda, & Hadi, 2015). Therefore, poverty alleviation programs are not entirely effective as all factors should be addressed, which the government is not currently doing. (millie, (2011) identified factors that cause suboptimal poverty alleviation program, namely: (1) a top-down approach; (2) disregarding local wisdom and outsiders; (3) lack of community participation; (4) not comprehensive; and (5) the prioritization of economic aspects. Meanwhile, poverty alleviation programs are generally limited to infrastructure and distribution of aid. However, in 2007 the Indonesian government expanded its poverty alleviation program through the Urban Community-Driven Development Program (PNPM) by focusing on the significant role of human resources, local economic development, and social capital.

The issue of poverty management of non-economic factors has long been raised strongly at the 1995 UN conference in Copenhagen, which reemerged the idea of social capital as one of the strategies for alleviating the poor (Harrison, Montgomery, & Jeanty, 2019). In line with this, complex and multidimensional poverty issues must be dealt with effectively at the community level. Social capital can reduce poverty if there is connectivity between these social networks through resource exchange mechanisms such as information flow, employment opportunities, funding support or learning among poor and poor communities (Grootaert & Narayan, 2004). Furthermore, communities with diverse social networks and societal ties can be strategies that can be used to fight vulnerability and poverty (Woolcock & Narayan, 2000). Meanwhile, the root of the problem of poverty in Indonesia is due to the weakness of the poor in access to productive resources. Therefore, social capital is considered as a non-economic factor that can bridge access to these productive resources.

The influence of the use of the internet on social capital has become an important concern for scientists, society and government. The social influence of the internet has been widely debated in the last decade, but there is a conflict between (i) the public and various academic literature that claim negative influences such as social isolation. This group claims that if the internet is mostly used for passive entertainment, then similarly to television; it can also hinder social participation, furthermore, conducting transactions such as shopping and banking on the internet can also deter people from face-to-face interaction (Franzen, 2003), communication via the internet may lose a lot of nonverbal information transmitted in face-to-face communication. Meanwhile, (ii) several studies have shown the positive influence of internet use on social interactions such as finding work or getting better jobs, social status, welfare, social integration, better management of shared resources, poverty alleviation (Jones, 2006).

Putnam, (2016) showed that the decline in social capital such as participation in formal organizations, informal social connectivity, and trust between individuals started in the United States due to several reasons, namely: a) the reduction in the time available for social interaction associated with increased labor flexibility and extended travel time; b) increased mobility of workers and students; c) advances in information and communication technology (ICT). Putnam, (2016) argues that television and other forms of domestic entertainment, such as

video games and video players replace individual, relational activities in leisure time. When television, a unidirectional mass media, is found to be significant in aspects of social capital, the internet, which provides on-demand content and enables interactive communication, can cause an even stronger substitution effect.

Studies analyzing the importance of internet, social capital and poverty as a determinant of the economic development of a society have been conducted in various developing countries, resulting in diverse results. Hassan & Birungi, (2011) showed that household income and welfare are positively associated with access to social capital or group participation. This suggests that government strategies to increase household income that take into consideration existing social institutions will go a long way to encourage associational growth and performance and consequently reduce poverty. Social capital has the potential to improve conditions for the poor in Bangladesh (Islam & Alam, (2018). Sabatini & Sarracino, (2017) found evidence that all forms of trust declined significantly affecting participation in online networks. Bauernschuster et al., (2014) identified that the internet could reduce the level of social capital. The use of the internet has a positive role in social interactions, such as the expansion of connectivity or social networks (Wang & Wellman, 2010). Bridging will makes a positive externality than bonding social capital (Glaeser, Laibson, & Sacerdote, 2013). There are three economic benefits from social capital, namely (i) reducing asymmetric information with the flow of information from non-poor households to poor households, (ii) reducing opportunistic behavior by coordinating and sharing responsibilities among group members, and (iii) gave rise to collective action. In essence, social capital is crucial in increasing family welfare and reducing poverty (Zhang, Anderson, & Zhan, 2011). Widiyastuti, (2015) stated that internet use significantly influences poverty alleviation. Risner & Gadhavi, (2015) explore the impact of Internet connectivity on an extreme poverty reduction program in Bangladesh and find evidence that Iinternet access reduces poverty.

This study aims to investigate the the effect of internet use on poverty in West Java Province, Indonesia. This research contributes important empirical results regarding the effect of social capital, internet use and poverty has never been done before in Indonesia, especially in West Java with a household's poverty status (no poor, poor vulnerable, almost poor, poor and very poor). Literature studying the internet-poverty alleviation nexus is scarce, and we are not aware of any study which directly examines this relationship in West Java Province. Although several empirical studies have examined the link between ICTs and poverty, most have done so indirectly (Mushtaq & Bruneau, 2019).

2. Research Methods

This research used data from The National Socio-Economic Survey (Survei Sosial Ekonomi Nasional) on Socio-Cultural and Educational Module (Modul Sosial Budaya dan Pendidikan) or The Social Security Module (Hansos Module) in 2014 with cross sectional design. Data were taken at the household unit (with a total sample of 5,990 households) and individual household members (23,181 people). For analysis, only the data and information of the head of the household will be used to represent the household. The data and information studied include socioeconomic characteristics, internet use, poverty status and information on social capital.

Social capital is approached with 2 (two) points of analysis, namely bonding and bridging social capital. Bonding social capital can be measured by the willingness to help and the ease of obtaining assistance (Zhang et al., 2011). The indicators used are: (i) willingness to help others who are helpless, (ii) participation in community activities to help residents who are experiencing disasters, (iii) ease in receiving assistance from neighbors (other than relatives), and (iv) the number of relatives, friends, and neighbors who are ready to help when experiencing problems.

The calculation of the bridging and bonding social capital index uses the exploratory factor analysis method. In the data preparation stage, all data scales are uniformed using a scale of 10

(Central Bureau of Statistic, 2014). Furthermore, the formed factor is extracted by the principal component analysis (PCA). Meanwhile, bridging social capital refers to previous research (Zhang, Anderson, & Zhan, 2011), namely (i) the number of organizations or groups (with active members) that are followed, (ii) participation in community activities in the public interest (such as volunteering in community service), (iii) participation in religious social activities (such as religious studies, religious celebrations), and (iv) participation in social activities (such as social gathering, sports, arts) with a measurement scale of (0–4), with 0 indicating no community activities. The model used to estimate the relationship between internet use, social capital to poverty alleviation at the household level using ordered logit model. The model will be explained in equation 1 as follows.

$$P_i = \alpha + \beta_1 W_i + \beta_2 S_i + \beta_3 X_i + \beta_4 Z_i + U_i \quad (1)$$

where P_i is a household's poverty status (no poor, poor vulnerable, almost poor, poor and very poor), is social capital measured by two indicators of bonding and bridging social capital. is internet use, is a vector of socioeconomic factors and is the community characteristic, whether it is a village or a city, and is an error term. Equation (1) is an ordered response model (probit or logit) with five outcomes, y = {0,1,2,3,4}. An ordered logit model for y (conditional on explanatory variables x) can be derived from a latent variable model. Assume that a latent variable, , is determined by:

$$y = x\beta + e, e \mid x \sim Normal\ (0,1) \quad (2)$$

where ß is a Kx1 coefficient vector and where vector x does not contain a constant (Wooldridge, 2002). The parameters of the model can be estimated by using maximum likelihood estimation. The signs of the estimated coefficients from the ordered probit (logit) models have the exact meaning with the result of ordinary least square (OLS) estimations. A negative sign determines whether the choice probabilities shift to lower categories when the independent variable increases. The partial effect of estimated coefficients, however, cannot be interpreted directly as the result of OLS estimation.

Logistic regression is quite different than linear regression in that it does not make several of the key assumptions that linear and general linear models (as well as other ordinary least squares algorithm based models) hold so close (Schreiber-Gregory & Bader, 2018): (1) logistic regression does not require a linear relationship between the dependent and independent variables, (2) the error terms (residuals) do not need to be normally distributed, (3) homoscedasticity is not required, and (4) the dependent variable in logistic regression is not measured on an interval or ratio scale.

3. Results and Discussion

Descriptive statistics in Table 2. shows that social capital in West Java Province generally has a higher bonding than bridging social capital by 5.31. This shows that people in West Java have strong ties in relationships between individuals who are in groups or neighbourhoods in close proximity with strong internal cohesion and are built on trust and good lead.

In general, the mean years of schooling of household heads in West Java reached six years, or they are primary school graduates, with an average of 4 members. Meanwhile, the average head of household who had health complaints in West Java was quite low at 14.3 percent, while the rest did not have health complaints with the number reaching 85.7 percent. It is noted that the gender of the head of the household is dominated by males by 89.6 percent, and the average marriage status had 87.8 percent being married. Meanwhile, the average age of household members in West Java Province was dominated by individuals under 18 years of age, which reached 32.8 percent. Furthermore, generally married household heads reached 87.8 percent, and an average of 86 percent was employed, where the main job of the household head as a farmer was very low at 9 percent. The average status of homeownership owned by households is quite high, reaching 81.2 percent who owns a home, while those who do not yet have a home are 18.8 percent.

The average distance to a place or sanitation facility of more than 10 meters reached 27.3 percent, while the remaining was 72.7 percent. This shows that the community's accessibility to sanitation facilities is quite high. Most of the people in West Java Province had an electricity supply, with an average of 99 percent. Furthermore, people in West Java Province generally have an average floor area of 69 m^2. Healthy house category is a house that has a floor area of at least 10 m^2 per capita. Thus, in West Java Province it can be said that generally, the houses are in a healthy category. Furthermore, access to water facilities in West Java Province on average is already high, reaching 89.5 percent.

Access to People's Business Credit (KUR) in West Java Province, in general is still very low at an average of 2.1 percent. KUR is a credit or financing scheme for working capital and or investment specifically intended for Micro, Small, and Medium Enterprises and Cooperatives (UMKMK) in productive and feasible businesses but has limitations in meeting the requirements set by the Banking industry. Finally, the majority of people in West Java Province live in urban areas, which reached 66.9 percent, while the rest are in rural areas, which amounted to 33.1 percent.

Internet use significantly affects household poverty status in West Java Province. The marginal effect shows that households with use to the internet may have a lower probability of being categorized into the status of the vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty at the 1 percent significance level. On the contrary, it may increase the probability of being categorized as not poor at a significance level of 1 percent (see Table 5). This result is in line with the findings of Widiyastuti, (2015), which stated that internet use significantly influences poverty alleviation. The rise of internet usage has begun since 2009 and increased annually. The internet is not just a communication tool, but also an information and knowledge media as well as data processing tool that can be utilized to strengthen the people's economy. Nevertheless, the poor may face obstacles that hinder them from obtaining the benefits of internet use to poverty. Previous research has shown that the internet can be used to empower and generate income in developing countries (Galperin & Viecens, 2017). Information and communication technology can also act as a sustainable intermediary in poverty alleviation. Mora-Rivera & García-Mora, (2021) showed that internet access helps reduce poverty levels in Mexico. Findings also reveal differentiated effects in the two indicators accounting for greater deprivation. The impacts on reducing extreme income poverty and extreme multidimensional poverty are more significant for the rural sector than for the urban sector. The results suggest policy measures aimed at solving issues that limit Internet access for individuals and households with higher social vulnerability, thereby contributing to a reduction of the poverty levels experienced by an important segment of Mexico's population.

Table 2. Descriptive Statistics

Variables	Obs	Mean	Std.Dev.
Bonding social capital	18954	5.310	0.307
Bridging social capital	18954	1.600	0.197
Mean years of schooling	18954	5.805	3.401
Head of household who had health complaints	18954	0.143	0.350
Gender of the head of the household males	18954	0.896	0.305
Marriage status of household head	18954	0.878	0.327
Household size	18954	4.103	1.510
Head of household works	18954	0.860	0.347
Homeownership owned by households	18954	0.812	0.390

Variables	Obs	Mean	Std.Dev.
The main job of the household as a farmer	18954	0.096	0.294
Distance to sanitation facility	18954	0.273	0.445
Electricity supply	18954	0.999	0.026
Floor area in m^2	18954	68.831	51.832
Access to water facilities	18954	0.895	0.306
Access to People's Business Credit (KUR)	18954	0.021	0.145
Rural areas	18954	0.331	0.471

Source: Badan Pusat Statistik, (2014)

*** References Category**

The bridging social capital is vital to reduce the poverty status of households, for all the categories, including the vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty. This estimation results support the hypotheses that (1) building social capital is associated with lower levels of poverty and (2) the presence of poverty is a deterrent to building community-wide social capital (Harrison et al., 2019). Slamet, (2010) indicated that poverty reduction does not correlate with bonding social capital, but, it does correlates with bridging and linking. Social capital has been associated with beneficial outcomes for economic development and growth, Additionally it has been associated with reductions in poverty, increased incomes, innovation and employment opportunities (Peiró-Palomino & Tortosa-Ausina, 2015; Akcomak & ter Weel, 2012; Romero & Yu, 2015). Previous studies concluded that bonding and bridging could not be separated in poverty alleviation (Naviaux & McGowan, 2000). When trying to alleviate poverty, poor households must have both high bonding and bridging. Bonding serves as a safety net for poor households, while bridging is useful to push them entirely from the poverty line. The reason being, households that interact in homogeneous communities will limit the exchange of resources such as information, knowledge, and experience. Productive resources, such as information, knowledge, abilities, or funds, are generally inherent in non-poor households and can only be accessed and mobilized when poor households participate in the network. In theory, positive experiences with different individuals will significantly affect individuals, as compared to just having the same experiences with the same individual (Coffé & Geys, 2007). Therefore, bridging is urgent for poor households to allow greater exchange of resources. Indeed, it is difficult for non-poor households to join the association network. Social barriers, such as differences in sex, social status, ethnicity, and religion, are significant challenges for poverty alleviation (Naviaux & McGowan, 2000). Furthermore, the role of community leaders or religious leaders is vital to bridge the meeting between non-poor households and poor households in communities. This role is also useful to transform bonding into a broader bridging bond. When poor households join an association network through a copying mechanism, poor households can learn from non-poor households. This joint ensures the flow of information in the form of knowledge, experience, or funds to flow more fluidly when compared if poor households only interact with poor households. This learning process can enable changes in the welfare of poor households. Job information or business development for non-poor households will be more extensive. The results of this study are in line with other studies that confirmed individuals involved in association networks (bridging) allow for improvement in household welfares (Jones, 2006).

The mean of years schooling plays a role in reducing poverty levels, both the status of vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty. This indicates that a higher level of education of the head of households reduces the probability of the

household becoming poor. Hassan & Birungi, (2011) found education as a form of human capital that can increase household access to new information (such as access to credit and access to health) and the ability to process this information, thus providing wider employment opportunities and affecting income increase (Zhang et al., 2011). Head of households with an education level of a minimum of Junior High School will ensure a higher probability of leaving the poverty line when compared with the head of households that is an elementary school dropout. The reasons are: first, with a higher level of education, the head of the household has broader skills and opportunities at work, and therefore has the possibility to stay away from poverty. Second, with increasing education, opportunities to gain access to information (employment information, markets, credit facilities, health, or personal development) will be greater, thus making information beneficial to improve family welfare.

Head of household health complaints have a positive relationship on the level of poverty but do not show statistically significant results, even though the results of this test do not have a significant effect. Poor and non-poor households have a relatively equal proportion of health insurance ownership. Therefore, when a poor household is sick, there is an equal possibility of being in poverty when compared with a non-poor household.

The gender of a male head of households has a negative effect on poverty status, for the categories of the vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty. This illustrates that male household heads will not be that close to the poverty line as compared to female head of households. In more simplistic terms, the possibility of female household heads to enter poverty is higher than male household heads. The results of this study are consistent with research previously (Jones, 2006). This reasoning certainly shows that male household heads are more fortunate than female household heads in some ways. For example, male household heads with a minimum of junior high school education have higher access to information than female household heads, or the opportunity to obtain access to credit for productive business development for male households is higher than female. It seems that gender issues are still discriminatory in Indonesia. This finding is in line with the findings obtained by Imai, Arun & Annim (2010), which explained that male heads of households have more income than women, and will use their money for business-related matters.

The age variable is related to the life cycle; as age increases, poverty status will increase. As age increases, knowledge and experience will also increase, ensuring a higher flow of information to the head of households on how to develop productive resources. Conversely, as people get older, the mobility level will decrease due to physical or health conditions. Therefore, the potential to be in poverty will also increase.

The size of the household has a positive relationship with poverty status, for all the categories, including the vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty. The size of the household factor is statistically significant at 1 percent. In this case, poor households with many household members will have a higher probability of being in poverty because they require a higher amount of consumption. This result shows that the more household members, the bigger the probability of becoming poor, assuming that other factors do not change. This is in line with previous research, which stated that the larger the size of the household, the higher the poverty tends to be. This finding is in line with the results of research conducted by Hassan & Birungi (2011).

Marital status has a positive relationship on the poverty status of households, for all the categories, including the vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty. The marital status factor indicates that households that are married/ divorced have a higher probability of entering poverty compared to unmarried households. This result is in line with the research of (Zhang et al., 2011). One explanation is that households with married/divorce status tend to have a higher number of family members than unmarried households, thus also increasing the burden of

meeting the family member's needs. This study is in line with the conclusion by (Geda, De Jong, Mwabu, & Kimenyi, 2001), which shows that the marital status of household heads significantly influences household poverty status.

In this study, employment was used as the variable to observe the effect of the employment status of the head of the household. The estimation in the model shows that every head of household who works will alleviate the household poverty for all the categories, including the vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty, but is not statistically significant. This finding is consistent with the study of (Sekhampu, 2013), which stated that the head of households who work would reduce the probability of being categorized as poor.

Another factor affecting the poverty level is the dependency ratio. In this case, the higher the percentage of dependency ratio, the higher the burden borne by the productive population to help the population that is not yet productive and no longer productive. This dependency has a positive and significant effect at the level of 1 percent on the probability of poverty status of households, for all the categories, including the vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty. This is supported by research conducted by (Tafesse, 2019), that age dependency ratio has had a tremendous impact on poverty and poverty has had a relatively very high impact on the age dependency ratio.

Distance to sanitation facilities of more than 10 m2 will increase household poverty, for all the categories, including the vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty at a significance level of 1 percent. On the contrary, it will bring households to non-poverty status at a significance level of 1 percent. These findings indicate that if the distance to sanitation facilities is more than 10 m2, it increases the poverty status of households for all the categories, including the vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty.

Households that have access to the People's Business Credit (KUR) will reduce the poverty status of households, for all the categories, including the vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty at a significance level of 1 percent. On the contrary, it will alleviate the poverty status of households to a non-poverty status at a significance level of 1 percent. This in line with the study results by Rini & Sugiharti, (2017), which stated that households with access to business credit have less probability of being in poverty than those who do not. Rini & Sugiharti, (2017) stated that easy access to credit could help poor families to start income-generating activities, such as opening a shop, making handicrafts, sewing, and others. Thus, the family can improve their welfare and alleviate their poverty by themselves. The same finding applies to households with a wider floor and access to water facilities; it will reduce the poverty status of households, for all the categories, including the vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty at a significance level of 1 percent. On the contrary, it will increase the probability of households being in poverty at a significance level of 1 percent.

Households living in rural areas tend to be close to poverty, for all the categories, including the vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty at a significance level of 1 percent, compared to urban areas. When considered employment status, households in urban areas have a higher probability of working in the formal sector. Therefore, urban areas have lower poverty rates compared to rural areas when employment is taken into consideration.

4. Conclusion

Bridging social capital is essential in reducing poverty status for all the categories, including the vulnerable to be in poverty, almost in poverty, in poverty, and extreme poverty. Conversely, it will increase the probability of households not being in poverty. Furthermore, internet use significantly influenced the household poverty status in West Java Province.

As novelty, this research shows that to overcome poverty, poor households must have bridging social capital. The role of bridging capital is useful so that it is not categorized as

poor. Internet use has a negative relationship with household poverty status in West Java for all categories including vulnerable to poor, near poor, poor, and very poor. Thus, social capital that bridges between social groups, social class, race, religion or other important socio-demographic or socioeconomic characteristics is very important in reducing poverty levels. Furthermore, the internet is not only a means of communication, but also as a medium of information and knowledge as well as data processing that can help strengthen the people's economy.

Finally, the weakness or limitation of this study is that the research period was carried out before the Covid-19 pandemic crisis occurred. Thus, it is hoped that further research can be carried out by considering the conditions of the Covid pandemic19. This needs to be done, given the condition of internet users, poverty levels, social capital before and after the Covid19 crisis will be different.

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7. References

Table 3. Internet, Social Capital and Poverty

Independent Variables	No Poor	Poor Vul-nerable	Almost Poor	Poor	Very Poor	No Poor	Poor Vul-nerable	Almost Poor	Poor	Very Poor
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Internet Use	0.317***	-0.111***	-0.093***	-0.078***	-0.036***	0.183***	-0.059***	-0.052***	-0.047***	-0.024***
	[0.01]	[0.004]	[0.004]	[0.003]	[0.002]	[0.010]	[0.003]	[0.003]	[0.003]	[0.002]
Bonding Social Capital	0.007	-0.003	-0.002	-0.002	-0.001	0.014	-0.004	-0.004	-0.004	-0.002
	[0.011]	[0.004]	[0.003]	[0.003]	[0.001]	[0.010]	[0.003]	[0.003]	[0.002]	[0.001]
Bridging Social Capital	0.308***	-0.108***	-0.090***	-0.075***	-0.035***	0.254***	-0.082***	-0.072***	-0.066***	-0.034***
	[0.02]	[0.007]	[0.006]	[0.005]	[0.003]	[0.019]	[0.006]	[0.006]	[0.005]	[0.003]
Mean years of schooling						0.009***	-0.003***	-0.003***	-0.002***	-0.001***
						[0.001]	[0.000]	[0.000]	[0.000]	[0.000]
Head of household who had health complaints						-0.001	0.000	0.000	0.000	0.000
						[0.008]	[0.003]	[0.002]	[0.002]	[0.001]
Gender of the head of the household males						0.098***	-0.032***	-0.028***	-0.025***	-0.013***
						[0.017]	[0.005]	[0.005]	[0.004]	[0.002]
Age						-0.001***	0.000***	0.000***	0.000***	0.000***
						[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Household size						-0.089***	0.029***	0.025***	0.023***	0.012***
						[0.002]	[0.001]	[0.001]	[0.001]	[0.001]
Marriage status of house-hold head						-0.049***	0.016***	0.014***	0.013***	0.006***
						[0.016]	[0.005]	[0.005]	[0.004]	[0.002]
Head of household works						0.010	-0.003	-0.003	-0.003	-0.001
						[0.010]	[0.003]	[0.003]	[0.003]	[0.001]
Dependency ratio						-0.002***	0.001***	0.001***	0.001***	0.000***
						[0.000]	[0.000]	[0.000]	[0.000]	[0.000]

Independent Variables	No Poor	Poor Vul-nerable	Almost Poor	Poor	Very Poor	No Poor	Poor Vul-nerable	Almost Poor	Poor	Very Poor
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
The main job of the house-hold as a farmer						-0.106***	0.034***	0.030***	0.027***	0.014***
						[0.009]	[0.003]	[0.003]	[0.002]	[0.001]
Distance to sanitation facility						-0.045***	0.015***	0.013***	0.012***	0.006***
						[0.006]	[0.002]	[0.002]	[0.002]	[0.001]
Electricity supply						-0.046	0.0150	0.013	0.0120	0.006
						[0.185]	[0.060]	[0.053]	[0.048]	[0.024]
Floor area in m^2						0.003***	-0.001***	-0.001***	-0.001***	-0.000***
						[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Access to water facilities						0.186***	-0.060***	-0.053***	-0.048***	-0.025***
						[0.008]	[0.003]	[0.002]	[0.002]	[0.001]
Access to People's Business Credit (KUR)						0.079***	-0.026***	-0.023***	-0.020***	-0.010***
						[0.020]	[0.007]	[0.006]	[0.005]	[0.003]
Rural Areas						-0.039***	0.013***	0.011***	0.010***	0.005***
						[0.006]	[0.002]	[0.002]	[0.002]	[0.001]
Control Variable	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
Prob > chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Number of observations	18954	18954	18954	18954	18954	18954	18954	18954	18954	18954

Robust standard errors in brackets, * p<0.1, ** p<0.05, *** p<0.01