

Social Financial Inclusion and Gender Equity Drivers of Sustainable Green Entrepreneurship

By

P Eko Prasetyo*

Economics, Faculty of Economics, Universitas Negeri Semarang, Indonesia.

Azwardi

Faculty of Economics, Sriwijaya University, Indonesia

Nurjannah Rahayu Kistanti

Faculty of Economics, Universitas Negeri Semarang, Indonesia

Abstract

Financial inclusion and literacy aim to improve the community's sustainable financial accessibility and welfare. However, studies show that higher financial inclusion contributes to increased inequality. This study aimed to explore the potential of social and financial inclusion (SFI) and gender equity (GE) as community economic mitigation and a driver of sustainable green entrepreneurship (GEn). Qualitative and quantitative descriptive analyses were used through exploratory and explanatory designs. The study used primary data obtained through a survey of entrepreneurial actors in various areas in Indonesia. The data were collected using questionnaires, semi-structured interviews, and in-depth observations on the basic patterns of economic behavior, SFI, GE, and GEn. The quantitative analysis method used multiple linear regression experimental techniques. The results showed that financial inclusion could effectively support financial systems and products' stability. However, it cannot increase economic efficiency, sovereignty, and local community welfare. The potential of SFI and GE has not achieved total economic efficiency because their growth is still insignificant. This potential could increase the community's economic sovereignty, encourage productivity and sustainable GE, and reduce unemployment, inequality, and relative poverty. This study could contribute to a policy implication of strengthening national economic sovereignty through the Social Solidarity Economic (SSE) System model ethical and appropriate to the community's real conditions. Additionally, it could strengthen the understanding of new institutional theories, financial entrepreneurship, and innovation.

Keywords: Social finance inclusion, gender equity, local community economic potential, and green entrepreneurship

Introduction

Knowledge of financial services significantly influences financial inclusion (Hasan et al., 2021). Social inclusion has become central to European policy and academic discourse (Federico et al., 2021). The two forms of inclusion are the main agendas of current development policies in many countries to achieve economic and social benefits (Eldomiaty, 2020; Ozili, 2020). However, the relationship between social and financial inclusion has received less attention in the policy and academic literature (Ozili, 2020). The social innovation theory still requires a better understanding of the most conducive situations (Walker et al., 2021). Financial inclusion development policies are expected to increase the green economy's efficiency and mitigate the impact of global climate change (Wang et al., 2022b). Previous studies stated that mainstream digital finance technology (fintech) policies should encourage sustainability through green and social finance orientations (Ozili, 2021). Therefore, policymakers should

explore the possibility of integrating financial inclusion into sustainable development goals (Ozili, 2022a). Other studies also found a relationship between inclusive leadership, job involvement, and innovation ability (Vladić et al., 2021). They showed the authenticity of leadership communication as a significant enabling factor for an inclusive environment and recommended exploring other perspectives (Vladić et al., 2021). Therefore, policies should be designed to address the gender gap in financial inclusion. The government also needs to support green entrepreneurship related to GESI (Ghosh, 2022; Alwakid et al., 2021).

Individuals and gender groups suffer more from the socio-economic effect of global climate change. This shows the needs for more effective, efficient, and gender-just policies to harmonize and balance socio-economic welfare. Green and social finance aims to improve development outcomes and the community's social, economic, and environmental welfare (Ozili, 2022b). Achieving this goal requires appropriate financial resources in a dynamic social and economic situation. This requires a better understanding and more relevant local financial literacy in the current era of electronic business (Ojong, 2015). Human and social capital, as well as social networks and institutions, are resources closely embedded in SFI relationships and significant keys to rural entrepreneurial competitiveness (Prasetyo et al., 2021; 2023; Prasetyo, 2020). Social capital resources have been essential in increasing household income to escape poverty and unemployment (Zhao & Li, 2021). Therefore, the urgency of entrepreneurial social and financial literacy is a vital force of financial inclusion that affects the rural communities' financial accessibility (Hasan et al., 2021; Tufail et al., 2022). Sustainable financial inclusion is also becoming increasingly important in enhancing green socio-economic performance, competitiveness, and economic growth (Liu et al., 2022; Wang et al., 2022).

Financial innovation implies creating a new financial instrument. This indicates SFI instruments that are inclusive, innovative, and responsive to GE are becoming increasingly essential in supporting sustainable SSE and GEn in rural Indonesia. Financial market instruments may stimulate positive social change and become progressively adopted by public administrations. In this case, SFI changes in various ways, and procurement mechanisms are more results-based toward SSE (OECD, 2021). This shows that the SSE system model could mitigate global climate change, critical growth, and inequality (Prasetyo & Setyadharma, 2022). SSE is increasingly important in food access (Ojong, 2015). It is touted as a model for local development in Africa (Che and Mbah, 2021). Therefore, the SFI project has been included in the Gender Equality and Social Inclusion Action Plan (GESI-AP). It is a policy model for reducing poverty and inequality in Indonesia (ADB, 2022).

Digital financial inclusion innovation is important to ensure financial service accessibility to drive sustainable economic growth effectively and efficiently. Digital finance and financial inclusion advancements have had various positive benefits for public finance, governments, financial service providers, economists, and sustainable development (Liu et al., 2022; Ozili, 2022b). Furthermore, programs of OECD and G20 countries to achieve socio-economic balance policies have used digital finance and financial inclusion in green financing projects. This aims to achieve sustainable development goals (SDGs) through their economic system (Saha et al., 2022; ADB, 2022; Wang et al., 2022a). However, the current digital finance and financial inclusion is unstable, partial, and widens inequality (Prasetyo & Setyadharma, 2022; Ozili, 2022a; Montgomery et al., 2020). The effect of financial inclusion on income inequality varies depending on the country. Its characteristics are not observed, and countries with a high class of institutions are better placed to reduce inequality (Sawadogo and Semedo, 2021). Additionally, there is a strong relationship between inequality in financial access and

income (Aslan et al., 2017).

Previous studies found that gender disparities persist even in countries with the highest financial inclusion (Fanta, 2016). Risk mitigation in the informal sector with safety nets has been widely conducted to increase financial inclusion and income. However, the gender gap in community economic activities persists (Fanta, 2016; Prasetyo et al., 2023). Fintech has pledged to promote financial inclusion and close the gender gap by delivering financial services digitally (Carbo-Valverde et al., 2022). However, most studies on Fintech have not been efficient and still cause inequality, and economic policy implementation is not effective enough. This implies the need for a balance between fairness and efficiency. The latest studies only examine the relationship between fintech and inequality, focusing more on income inequality without providing the best solution. New studies and stabilization policies are needed as drivers of green innovation. They should be more relevant and feasible to reduce crowding-out effects and cost constraints (Yu et al., 2022). The urgency of examining the role of SFI, GE, and GEn activities is a new financial innovation instrument in a policy strategy to optimize the local potential of gender-based communities (Montgomery et al., 2020; Prasetyo et al., 2023).

Various countries have increased their commitment to promoting green economic development and entrepreneurship (Haldar, 2019; Okoh, 2019; Mishra, 2021; Lehmann et al., 2022). The GEn concept has steadily built a stronghold in the Indian market (Haldar, 2019), while the green economy is the most suitable model in Africa (Okoh, 2019). According to Lehmann et al. (2022), green growth, a-growth, post-growth, and degrowth are central concepts in achieving environmental sustainability in Germany. However, the study favored the critical concept of growth and the best feasible policy options more than green growth. The potential for gender equity and social inclusion (GESI) and the SSE model is more suitable for mitigating global climate effects and inequality in Indonesia (Prasetyo et al., 2023; Prasetyo & Setyadharma, 2022). Furthermore, other studies suggest increasing education and understanding of causality between knowledge, attitudes, environmental, economic, and social actors in GEn development. This could be realized through cultural change and green technology to encourage the achievement of SDGs goals (Haldar, 2019; Okoh, 2019; Anghel & Anghel, 2022; Lehmann et al., 2022). Therefore, the most important scientific challenge in this development is to assess a region's capability in green production, trade construction, and its driving forces.

The GEn funding policy program strategy through social connections is becoming increasingly important and needed. Greater funding results have been provided more by external than internal social connections (Guo et al., 2021). Therefore, this study examined the collaboration of GEn, institutional quality, SFI, and cooperative social networks in economic, social, and environmental sustainability. The dissemination of cooperative information through multiplex social networking encourages sharing target information and decreases the diffusion threshold partially (Zhang et al., 2022a). Studies on the linkage of GESI and local and institutional potential as a driver of sustainable GEn are becoming increasingly important. Another novelty emphasizes the relationship between studies and the SSE system model as an interesting solution. The potential linkages between SSE and SFI, GE, and GEn in rural areas indicate that the community would mitigate climate effects and become more independent in equality, solidarity, and justice. This study is expected to provide a more comprehensive understanding of the benefits of contemporary financial literacy and social finance innovation in new social and financial innovations more relevant and feasible in rural communities.

Literature Review

Social innovation theory explains the need to understand the dynamics of social finance practice (Walker et al., 2021; Ozili, 2021). The transition to innovation theory has transcended economic value in analyzing new and increasingly innovative trends (Walker et al., 2021). In line with this, social finance initiatives facilitate GE's pathway into entrepreneurial activity (Walker et al., 2021). The effect of financial technology transformation on SFI is increasingly contributing to rural economic growth (Goswami et al., 2022). Financial inclusion could be beneficial to institutions related to women's entrepreneurship. Furthermore, social finance creates self-financed organizations and does not depend on government grants or charities. This signifies that the innovation is more influential in reducing unemployment, poverty, and inequality. However, the concept of social finance is different from the approach to improving social welfare.

The general principles and basic concepts of the social and institutional theory help understand the real world (Dugger, 2022). In this regard, Islamic finance has many principles that make it close to social finance, such as risk sharing, calling for justice, and social welfare (Biancone and Radwan, 2018). Many SFI financial institutions are involved in social finance (Ozili, 2022a; Oman and Svartzman 2021; Eldomiaty, 2020; Cornee et al., 2018). SFI has participated in mitigating climate change and promoting sustainable development goals to align financial services with other social benefits (Cornee et al., 2018). However, it faces information asymmetry, trades expensive social screening for social contributions, and realizes social preferences. The results contradict the theoretical and empirical claims of socially responsible investments (SRI) approaches (Cornee et al., 2018). According to Cornee et al. (2018), the social contribution still depends on investors that incur costs to achieve higher outcomes.

Social screening has become the key to credibility and accountability, making SRI and FSI mutually beneficial (Cornee et al., 2018). However, social screening in FSI and SRI is sometimes contradictory because it combines high screening costs and high random social outcomes. This study aimed to exploit GE's behavioral patterns concerning SFI as a driver of local economic potential and sustainable GEN. The study contributes to the local community's prevailing social and financial behavior. Furthermore, the basic concept of entrepreneurial ecology could be part of a fundamental change in a new industry or green economy (Liu et al., 2022).

There is a need to optimize sustainable financial inclusion projects in a green economy through green finance. Therefore, the cointegration theory has been launched in response to local women entrepreneurs struggling to enter a green economy (Montgomery et al., 2020; Tufail et al., 2022). The official Bank Indonesia document No.24/186/DKCom has also emphasized the need for sustainable economic improvement through optimizing waqf and increasing green financing. However, the role of GESI is still under-represented in conventional entrepreneurship, widening the gap. Social entrepreneurship and private business have also played a key role in Victoria's transition to a greener economy (Montgomery et al., 2020). Montgomery et al. (2020) showed that the transition is inclusive, though it has not closed the widening gender gap. There are still various obstacles to financial literacy, including lack of assets for collateral, related institutions, limited financing for sustainable green businesses, language accessibility, and other socio-cultural factors. Additionally, the study emphasized that these resource constraints are often hidden and exacerbated by factors such as culture and socio-economic status.

The concepts of the SFI change linkage theory and the previous GEN development strategy have been described using a structural model through three essential components of resource development. These components are ability, motivation, and opportunity (AMO) theory (Mia et al., 2022). The results show that the AMO theory affects the predictor variables of skills, incentives, and entrepreneurship education. The GEN development strategy is positively and significantly more affected by entrepreneurial intentions that drive social change (Mia et al., 2022). Unfortunately, the results do not explain diverse entrepreneurial intentions and could be biased in achieving efficiency and effectiveness. Innovations in new theories of sustainable finance are emerging to help explain the linkage of digital finance with green and social finances (Ozili, 2022b). This theoretical concept describes economic agents' behavior patterns and actions toward sustainable finance (Ozili, 2022a).

Integration and collaboration, GE, environmental sustainability, and socio-economic protection have become the leading indicators of social inclusion (Ozili, 2020). However, GESI is often a major social problem in OECD countries due to non-gender inclusion (GI). It creates difficulties in green financing and environmental innovation (Saha et al., 2022). As an important aspect of socio-economic operations, GESI has produced various projects, including their economic consequences (Lin & Yin, 2022). GE's potential has increased the performance of green innovation and economic resilience amid violent conflicts (Lin & Yin, 2022). Furthermore, the orientation of GEN as part of green social finance and economic innovation is becoming increasingly complex and interesting (Alavi et al., 2021). Previous studies showed that GEN's intention positively affected GEN's behavior (Amankwah & Sesen, 2021). The social finance quantity's contribution to encouraging the green economy is still insignificant. This is because it was formed in a separate organization that does not expect government grants and charity assistance. According to Sinderbrand (2021), this innovation should be funded by social institutions, and not the government. The institutions should raise capital, apply strict selection criteria, and invest only in a few social enterprises with good growth potential (Jansen et al., 2021), though this organization could operate successfully. Supporting women entrepreneurs in GESI is a global priority. Therefore, the Canadian government doubled the number of women in their entrepreneurship strategy (WES) and is a global leader in its attention to gender (Chavoushi et al., 2021; Cukier & Chavoushi, 2020).

Methodology

This study aimed to explore the role of SFI and GE as potential drivers of community local wisdom. The financial inclusion and SFI concepts are complex, diverse, and have no standard global definition (Federico et al., 2021). As the core concept, inclusive finance makes financial products and services accessible and affordable to the individuals and businesses excluded from the formal financial system (Hasan et al., 2021). Social finance is an instrument, tool, and strategy for funding community activities. Therefore, the SFI instrument is expected to close the funding gap associated with social goals that cannot be reached with mainstream financial inclusion. The SFI operational is the potential ability to achieve socio-economic welfare goals that are more appropriate, equitable, just, humanistic. Also, the goals should be economically, socially, and environmentally harmonious, balanced, and sustainable.

The main difference between conventional entrepreneurship and GEN lies in value creation (Saari & Joensuu-Salo, 2019). Conventional entrepreneurship contributes to national, regional, and local economic growth. In contrast, GEN is a business ecosystem that refers to creating value for harmony by minimizing the negative effects of global climate change and optimizing sustainability (Gast et al., 2017; Saari & Joensuu-Salo, 2019). It is oriented toward

creating socio-economic value to mitigate the negative effects of global climate change and enhance growth. This is the path to human life that is more harmonious, just, and sustainable in social, economic, and environmental dimensions. Furthermore, the difference between GEN and social entrepreneurship (SEn) lies in the activities or efforts undertaken. This is because SEn is an informal solution untouched by formal institutions (Prasetyo et al., 2022). It is funded based on awareness of the Social Economic Solidarity System (SSE) model without government grant assistance. Therefore, SEn is an informal institution with the main goal orientation being resilience or mitigation, not a solution. It aims to mitigate the negative effects of global climate change and the economic crisis, strengthen community density, as well as reduce unemployment, poverty, and inequality. The GEN concept is a follow-up activity of SEn, oriented towards value creation as a driver of sustainable development. It could be formal or informal, and is funded from its own capital, grants from formal institutions, the government, and charities.

This study used mixed methods with exploratory and explanatory designs. The initial stage used an exploratory design because SFI and GEN are the main concepts considered nascent. The exploratory model was considered more appropriate to offer insight, and GEN is a new focal point for sustainable development and socio-economic prosperity. The second phase used explanatory design to strengthen the argument quantitatively. This method focuses more on directing study objectives in exploring, synthesizing, and identifying positive and negative effects. It aimed to make the community more aware of the importance of environmental sustainability for human life. Furthermore, the mixed method performs authenticity of context, measurement or control, and generalizability through the two stages. The model used principal component analysis (PCA) and cluster analysis (AC). The PCA method was used through multivariate statistical techniques on several related variables. Furthermore, the study involved variables such as community institutional potential (CIP), local community potential (CLP), digital technology (DT), social network (SN), and technology uptake (TA). Other variables were human capital (HC), social capital (SC), gender equity (GE), and social equity (SE), as well as SFI and GEN itself. Therefore, it aimed to find the best theoretical and empirical analysis model to align financial services with appropriate socio-economic benefits. The best model selected was based on a cluster analysis of the community potential.

The study used primary data obtained through surveys using questionnaires, interviews, and focus group discussions. For quantitative data analysis, the operational definition of variables was measured using the transformation of the Gini Ratio Index (IGR) value formulation as in equation-1 (Prasetyo et al., 2022; 2023). The magnitude of the index value ranged between 0 and 1, indicating the lowest and highest SFI dimensions, respectively. Therefore, this index value dimension tried to adjust to the index of financial inclusion (IFI) dimension (Sarma, 2015; Camara & Tuesta, 2014; Ozili, 2021; Zhang et al., 2021). In this study, it is better known as the dimension of the SFI index value. Where is $IGx = [(change\ in\ the\ financial\ value\ of\ the\ sector\ being\ measured, Y_i) / (change\ in\ the\ financial\ value\ of\ the\ total\ population, Y_n) * 100]$ or written $IGx = [(Y_i - Y_{i-1}) / [(Y_n - Y_{n-1}) / Y_{n-1}] * 100]$. This could be written as follows:

$$IGx = 1 - \sum_{i=1}^n f_i (Y_i - Y_{i-1}) \quad (1)$$

The intended block or cluster was built and formulated through several pillars to make the assessment easier, where the pillars were the basic building of GEN. in this case, GEN Pillar is considered the main pillar built on three significant sub-pillars. These are community

institutional potential (CIP), local community potential (CLP), and community gender potential (GPC). The sub-index value of the three main pillars for any community is the arithmetic mean of the sub-pillars, multiplied by 100, reflecting the relative index value. The sub-index's minimum and maximum potential values were 0 and 100, respectively. The three central pillars (super index) were formulated as follows.

$$CIP_i = 100 \sum_{j=1}^5 \frac{h_j}{5} \dots \dots \dots (2)$$

$$CLP_i = 100 \sum_{j=1}^9 \frac{h_j}{9} \dots \dots \dots (3)$$

$$GPC_i = 100 \sum_{j=1}^7 \frac{h_j}{7} \dots \dots \dots (4)$$

$$GEn_i = \frac{1}{3} (CIP_i + CLP_i + GPC_i) \dots (5)$$

The GEn super-index was built based on the results of the experimental model technique. GEn is only the average index value of the three main sub-indexes. This indicates that the GEn value in equation (5) could be interpreted as an efficient resource dimension. Moreover, j is the normalized value of changes in the index component of j in community i. Therefore, i = 1, 2, 3... n is total community. Similarly, j = 1, 2, 3, and p is the number of pillars, and h is the modification limit of normalization changes. Based on the stages of the experimental model technique, the results of the best regression model equations were obtained as follows:

$$GEI_i = \alpha_0 + \alpha_1 CLP_i + \alpha_2 DT_i + \alpha_3 SN_i + \alpha_4 TA_i + \alpha_5 HC_i + \alpha_6 SC_i + \alpha_7 GE_i + \alpha_8 SFI_i + \alpha_9 SE_i + \epsilon_1 \dots \dots \dots (6)$$

$$CLP_i = \beta_0 + \beta_1 DT_i + \beta_2 SN_i + \beta_3 TA_i + \beta_4 HC_i + \beta_5 SC_i + \beta_6 GE_i + \beta_7 FSI_i + \beta_8 SE_i + \epsilon_2 \dots (7)$$

$$CLP_i = \pi_0 + \pi_1 DT_i + \pi_2 SN_i + \pi_3 TA_i + \pi_4 HC_i + \pi_5 SC_i + \pi_6 GE_i + \pi_7 FSI_i + \epsilon_2 \dots \dots \dots (8)$$

Results and Discussion

Financial inclusion aims to increase public access to various products and services to eliminate economic and social inequalities. However, the high financial literacy and inclusion in rural areas provide benefits and disadvantages, such as widening economic and social inequality. The relationship between inclusion and financial literacy is interrelated, inherited, and positively affects the community's economic and social life. Higher public financial literacy is expected to increase the community's accessibility to financial services and products. Previous studies in Indonesia showed that higher financial inclusion increases income inequality. This relationship is not confirmed because financial inclusion has no significant effect on income inequality and only positively affects GRDP (Sari & Filianty, 2021). Furthermore, increased use of financial products and services does not always positively affect the socio-economic life of rural communities. Many individuals have various financial products and services, such as payment instruments, OVO, credit cards, and insurance, but their lives are not improving. These findings support Sari and Filianty (2021). However, financial inclusion as the availability of financial access is still important and needed for the community as a macroeconomic and financial stabilization system. Even positively, the fundamentals are not ideal (das Solen).

Financial literacy implies knowledge and beliefs that affect the attitudes and behavior

of individuals and society in making financial management decisions to achieve prosperity. When more money is in circulation, it is expected that the community becomes more prosperous. The critical question is why inequality still happens, and welfare is not achieved. This may imply that the level of public financial literacy is still low. The results showed that normatively (*das Sein*), the community's financial literacy is already good. This triggers the question of why higher financial inclusion and literacy do not positively contribute to community economic and social welfare. First, certain actors seek only economic gain by directing the public to use their services, regardless of their real needs and capabilities (*das Solen*). For instance, the community is always directed to buy vehicles and other products by credit and should take insurance. Individuals and communities lacking control over their abilities and needs follow these directions to take the recommended financial services or products. These actors' directives only encourage consumption in their lives. When the users are constrained, the actors simultaneously act like debt collectors forcing individuals to pay it off immediately. Such a consumptive lifestyle has created new problems that are increasingly complicated and contrary to achieving real economic and social welfare. This supports previous studies that the low financial institutional governance quality negatively affects the objectives of financial inclusion in Indonesia, even when it positively affects financial stability (Malik et al., 2021).

Another new concept of public financial innovation emerged from the SSE system model (Prasetyo et al., 2023; Prasetyo & Setyadharma, 2022). In carrying out the SSE, a new financial inclusion innovation is needed as a funding system known as SFI. There are no conditions and obligations to SFI other than an awareness of sharing and solidarity. The economic benefits of the SSE system are still reasonable, but the main orientation remains on socio-economic solidarity. The main actors as the drivers of SFI and SSE are genders that defend themselves from the effects of the crisis and global climate change and still want better equality. This activity pattern was initially manifested as the SEn business model. The financing pattern in SEn grows because government policies cannot touch the suffering of gender. Therefore, they rise together to achieve shared social welfare goals (Prasetyo et al., 2022). As a fundamental principle in the SEn business, one form of socio-economic innovation is the *tuna satak bathi* sanak model (Prasetyo et al., 2020). Regarding the negative effect of global climate change, the SEn business continues to grow and develop dynamically, leading to GEn business branches. However, at the beginning of its growth, the SSE system is new as a mitigation with no solution. These social innovations integrated into the SSE system could be considered the strength of the new informal institutional theory.

The awareness of rural communities about the importance of the SEn business has increased and become beneficial. However, awareness about the importance of GEn is still low. The efforts of SEn and GEn are interrelated and complementary, but the main goal orientation and dimensions are slightly different. This phenomenon makes the SFI and SSE funding models not fully efficient economically. Since the main goal orientation only solves social problems untouched by government policies, it is more focused on achieving survival and social welfare. GEn's orientation focuses on achieving long-term sustainability harmoniously to support sustainable development. In line with this, SEn's business model still has a vision and sustainability orientation. However, the funding system prioritizes short-term solutions, which is more appropriate as an endurance model. The GEn orientation is more long-term and tends to be a driving force or propulsion model. SEn and GEn are mutually supportive, complementary, and equally oriented towards sustainability as an attraction. This finding supports previous studies in Slovakia that SEn solves social problems better and does not prioritize supporting sustainable development.

The results do not fully agree with previous studies that low credit is the main obstacle to developing a green economy market (Bhatnagar & Sharma, 2021; Montgomery et al., 2020). Bank credit does not help their rural socio-economic business because most of it is more consumptive. However, the results indicate that the development of financial inclusion could increase the efficiency of the green economy. This is mainly realized through credit tightening policies and strengthening credit restrictions on high-polluting carbon-generating companies (Wang et al., 2022a; Liu et al., 2022). The results also support the specific financing of green credit (Wang et al., 2022b; Zhang et al., 2022b). In this case, green credit could improve the quality of GEN innovations to increase their economic profits (Wang et al., 2022b). This special green credit program could also formally assist private financing through SEN in encouraging GEN. Green credit increases the efficiency of companies' foreign investment. Therefore, the effectiveness of green credit policies is important for green development and foreign investment in China (Zhang et al., 2022b). They could internalize negative externalities caused by corporate pollution, increasing net investment and reducing pollution investment (Wang et al., 2022b). Unfortunately, green credit in Indonesia is still rare or does not exist.

Table-1. *The role of the community's socio-economic resources in green entrepreneurship*

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T - Stc.	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
(Constant)	-13.292	2.053		-6.476	.000		
CLP	1.005	.061	1.041	16.371	.000	.013	74.559
DT	25.530	3.407	.111	7.493	.000	.247	4.056
SN	-6.181	1.757	-.072	-3.517	.001	.129	7.770
TA	-9.774	1.891	-.127	-5.170	.000	.090	11.171
1 HC	-5.115	1.565	-.061	-3.268	.001	.156	6.402
SC	-11.734	2.187	-.128	-5.365	.000	.095	10.539
GE	5.322	1.081	.074	4.922	.000	.242	4.124
SE	7.038	1.093	.082	6.437	.000	.335	2.986
SFI	7.644	1.290	.094	5.927	.000	.215	4.657

Dependent Variable: Green Entrepreneurship (Gen).

Source: primary data processed by the author

The exploratory description in Table 1 could be strengthened based on the quantitative results in Tables 1, 2, and 3, as well as various previous studies. Table 1 describes the potential of local community wisdom and sub-pillars such as SFI and GE to positively and significantly encourage GEN sustainability. In Table 2, there is a significant negative effect of the sub-pillar factors on community potential. The sub-pillars include human capital (HC), social capital (SC), social networks (SN), technology absorption (TA), and digital technology (DT). Other factors such as SFI and GE positively and significantly encourage local community potential (CLP). In the model in Table 2, only social equity (SE) negatively and insignificantly affects the community's local potential

This phenomenon implies more integration of the resource factor into financing the intended SSE system model. The negative values for the SN, TA, HC, and SC are due to their increasing financing to encourage the community's economic sovereignty, making it not a significant problem. However, the negative value of SE in Table 2 implies financial inclusion in rural areas has provided false benefits or shows off wealth only. This signifies that the effect of financial inclusion on some of these families is more consumptive, with an unfavorable economic and psychological impact. It is appropriate to Keynes's theory that inflation is

difficult to control because people consume beyond their limits.

Table-2: The role of social and economic resource factors on the economic potential of the local community

Model	Unstandardized Coefficients		Standardized Coefficients	T-Std.	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-16.637	2.442		-6.813	.000		
DT	26.969	4.085	.113	6.602	.000	.323	3.098
SN	11.902	2.192	.134	5.429	.000	.156	6.426
TA	22.668	1.755	.285	12.913	.000	.195	5.118
2 HC	19.178	1.414	.220	13.560	.000	.360	2.779
SC	24.763	2.157	.261	11.479	.000	.184	5.448
GE	3.362	1.456	.045	2.309	.022	.252	3.973
SFI	4.239	1.733	.050	2.447	.016	.224	4.468
SE	-.930	1.498	-.010	-.621	.536	.336	2.978

Dependent Variable: Community Local Potential (CLP)

Source: primary data processed by the author

The results in Table 2 also show that financial inclusion in Indonesia only supports the financial system's stability and new banking markets. However, it cannot increase rural communities' economic efficiency and sovereignty. This is because higher financial inclusion increases the community's income inequality. It also disrupts the potential of local wisdom and the sovereignty of the community's real economy. This necessitates the role of SFI, though it has not increased the community's economic efficiency. However, it could improve the sovereignty of the rural economy in a better and wiser manner. This indicates the primary financial inclusion system only benefits financial service institutions. Moreover, banking has not improved the community's socio-economic welfare in line with the objective of financial inclusions (*das-Sein* and *das Solen*). This supports previous studies that higher financial inclusion increases the income inequality of the community (Sari & Falianty, 2021). It signifies that policies for developing financial inclusion in Indonesia have not achieved their goals of real public welfare.

This description could be assisted by the negative and insignificant role of the SE factor. The results in Table 2 become more interesting and critical when confirmed in Tables 1 and 3. This study defined the SE factor as social wealth measured by a sense of respect, esteem, and community recognition. It is also measured in the dimensions of being cared for, loved, solidarity, and power, as well as the psychological effect of showing off wealth. This implies financial inclusion only provides artificial wealth for the community, not real welfare. According to Keynes theory, the negative role of SE is more driven by the effect of showing off the community's wealth. However, this phenomenon also shows that the Keynes monetary system that financial assistance could alleviate poverty has failed in Indonesia. Government policy programs and spending for poverty alleviation were unsuccessful, such as social assistance, subsidies, and direct cash transfers (BLT). Therefore, SE contribution built and driven only by psychological factors lasts temporarily without real awareness and social solidarity. When the contribution is more driven by the SSE system, it would encourage stronger economic sovereignty.

Table-3: The real role of social finance inclusion and gender equity in the community's economic potential

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T-Stc.	Sig.	Collinearity Statistics	
	B	Std. Error				Tolerance	VIF
(Constant)	-16.563	2.434		-6.805	.000		
DT	26.723	4.057	.112	6.587	.000	.326	3.069
SN	11.924	2.187	.134	5.452	.000	.156	6.425
TA	22.627	1.750	.284	12.927	.000	.196	5.111
3 HC	19.024	1.389	.219	13.693	.000	.371	2.693
SC	24.552	2.126	.259	11.550	.000	.188	5.313
GE	3.323	1.451	.044	2.290	.024	.252	3.966
SFI	3.935	1.658	.047	2.373	.019	.243	4.111

Dependent Variable: Community Local Potential (CLP)
Source: primary data processed by the author

The results in Table 1 indicate a positive and significant contribution of the SE to the GEn role. However, the role of SE's contribution in Table 2 is negative and insignificant to the local community potential (CLP). The contribution of SFI and GE is positive and significant in Tables 1, 2, and 3. Although the contribution slightly decreased in Tables 2 and 3 compared to Table 1, it still encouraged sustainable GEn and community economic sovereignty as reflected in the CLP. This indicates that the role of SFI and GE could be the main driver of green entrepreneurship and the power of local community economic sovereignty. SFI, GE, Sen, and Gen's contributions to the SSE system model could increase collective productivity and reduce unemployment, poverty, and inequality. Since they are integrated into the SSE system, they reduce the greatest profits of the strongest individuals and families and increase the benefits and welfare of the average community.

SFI is a model for funding new socio-economic innovations and could increase productivity and local economic sovereignty when driven by GE. They could support welfare and make life sustainability more feasible and in harmony with the environment, mitigating the negative effects of global climate change. As policy and theoretical implication, the two could serve as models of a better, ethical, and appropriate SSE system. Therefore, SFI and GE could increase economic productivity and maintain sovereignty. This is because they are not politicized to legitimize corporations as seen in the Capitalist social solidarity economy system (Seguino, 2019; Hossein, 2021). Under high economic uncertainties, companies in a capitalist socio-economic system raise capital more frequently with a preference for new debt financing (Ashraf et al., 2022). This signifies that the capitalist social and economic system model only accumulates public debt and does not consider the community's welfare. As a result, corporations or related financial institutions receive high profits, indicating injustice in the financial and economic system.

Conclusion

Financial innovations in SFI, GESI, Sen, and GEn are new paradigms for building local and global communities. This paradigm emerged as a reaction to the effect of global climate change and the frequent economic crises. Although its growth is still insignificant, it is important as capital for long-term success. The growth of SFI, GESI, SEn, and Gen integrated

into the SSE system model has great long-term potential for economic, social, and environmental sustainability. It could enable the community to live more decently and humanely. Therefore, the growth could exceed the economic benefits of the old or primary financial inclusion. The old financial inclusion has effectively supported stabilizing financial systems, products, and services. However, mainstream financial inclusion cannot increase economic efficiency and the community's socio-economic welfare in a humanistic and harmonious manner. The innovation potential of SFI and GESI is not yet economically efficient in the short term but could increase economic sovereignty. It could also encourage family economic productivity and green entrepreneurship, as well as reduce unemployment, inequality, and poverty. Therefore, it is expected to encourage more decent, harmonious, and humanistic welfare. SFI and GESI encourages SEn and Gen, meaning they could mitigate the negative effects of global climate change and economic crisis, and help achieve sustainable development goals.

Financial innovations in SFI, GESI, and GEn could contribute to local and global community development. This study could help understand academic and government policies and other community organizations in mitigating the effect of global climate change. However, SFI and GESI only serve to mitigate without providing a solution, though prevention is better than cure. Regarding limitations, this study only focused on case studies in rural Indonesia, meaning the findings cannot be generalized scientifically to the global region. Every village, region, and the country has uniqueness and local potential. As a new paradigm, the findings could provide inspiration and initial knowledge for future studies. The results showed that family ownership positively affects the growth of the SSE system mentioned. This ownership varies between average and more democratic, which seems more effective and innovative in various social financing. However, the study did not explore family ownership more deeply and scientifically.

References

- ADB, (2022). Finance sector development, this document is provided for the ADB project 54152-001 in Indonesia; Sustainable Development Goals Indonesia One-Green Finance Facility (Phase 1). <https://www.adb.org/projects/documents/ino-54152-001-gap>
- Alavi, M.G., Sakhdari, K., & Alirezaei, A. (2021). A Review of The Literature on Entrepreneurship and The Environment: Opportunities for Researching on The Green Entrepreneurial Orientation. *Environmental Engineering and Management Journal*, 20(5), 819-839.
- Amankwah, J.; Sesen, H. (2021). On the Relation between Green Entrepreneurship Intention and Behavior. *Sustainability*, 2021, 13, 7474. <https://doi.org/10.3390/su13137>.
- Anghel., G.A., & Anghel, M.A. (2022). Green Entrepreneurship among Students—Social and Behavioral Motivation. *Sustainability*, 2022, 14, 8730. <https://doi.org/10.3390/su14148730>
- Ashraf, D., Khawaja, M., & Bhatti, M.I. (2022). Raising capital amid economic policy uncertainty: an empirical investigation. *Financial Innovation*, (2022)8:74. <https://doi.org/10.1186/s40854-022-00379-w>
- Aslan, G., Delechat, C., Newiak, M., & Yang, F. (2017). Inequality in Financial Inclusion, Gender Gaps, and Income Inequality. *IMF Working Paper*, 2017(236), 32 International Monetary Fund.
- Alwakid, W., Aparicio, S., Urbano, D. (2021). The Influence of Green Entrepreneurship on Sustainable Development in Saudi Arabia: The Role of Formal Institutions. *International Journal of Environmental Resources Public Health*, 18, 5433.

- <https://doi.org/10.3390/ijerph18105433>
- Bautista-Puig, N., Mauleon, E., & Casado, E.S. (2021). Analysis of social, environmental and economic sustainability core: a bibliometric overview. *International Journal of Innovation and Sustainable Development*, 15(4), 356-381. doi:10.1504/IJISD.2020.10026529).
- Bhatnagar, S., & Dipti Sharma, D. (2021). Green financing in India: identifying future scope for innovation in financial system. *International Journal of Green Economics*, 5(3), 185-212).
- Biancone, P.P & Radwan, M. (2018). Social Finance and Financing Social Enterprises: An Islamic Finance Prospective. *European Journal of Islamic Finance*, 10(2), 1-5. doi:10.13135/2421-2172/2818
- Biasi, Barbara, and Heather Sarsons, "Flexible Pay, Bargaining, and the Gender Gap," *Quarterly Journal of Economics*, 137(2022), 215–266.
- Camara, N., & Tuesta, D. (2014). Measuring financial inclusion: A multidimensional index. BBVA Research Paper, (14/26)
- Carbo-Valverde, S., Solas, P.J.C., Fernandez, F.R. (2022). Entrepreneurial, institutional and financial strategies for FinTech profitability. *Financial Innovation*, (2022)8:15 <https://doi.org/10.1186/s40854-021-00325-2>
- Chavoushi, Z.H., Mo, G.Y. & Cukier, W. (2021). Social Finance for Women's Entrepreneurship in Canada. *Innovations in Social Finance*, 69-96. Palgrave Cham: Macmillan.
- Che, C.F., & Mbah, M. (2021). Social Solidarity Economy and Village-centric Development in North-West Cameroon. *The International Journal of Community and Social Development*, 3(2), 126–144. doi: 10.1177/25166026211015474
- Cornee, S., Jegers, M., & Szafarz, A. (2018). A Theory of Social Finance. *Working Paper*, WP 2018-02 : University Caen Normandie, Cnrs, Univeritas Rennes.
- Cukier, W., & Chavoushi, Z. H. (2020). Facilitating women entrepreneurship in Canada: The case of WEKH. *Gender in Management*, 35(3), 303–318. <https://doi.org/10.1108/GM-11-2019-0204>
- Dany, K., Mollerstrom, J., & Veldhuizen, R.v. (2021). Can Simple Advice Eliminate the Gender Gap in Willingness to Compete? *European Economic Review* 138, Article 103777.
- Dugger, W.M. (2022) The Inclusive, Social Economic Point of View: Foreword to 'The Doleful Dynamics of Competition: Inequality and Fakery in Modernity', *Forum for Social Economics*, 51(1), 41-42, doi: 10.1080/07360932.2017.1392334
- Exley, C., & Kessler, J.B. (2022). The Gender Gap in Self-Promotion. *The Quarterly Journal of Economics*, 137(3), 1345–1381, <https://doi.org/10.1093/qje/qjac003>.
- Federico, D., Grazioli, R., Milioli, M.A, Notte, A., & Poletti, L. (2021). *Financial and social inclusion in Europe*. EIF Research & Market Analysis; Working paper, 2021/72, Luxembourg.
https://www.eif.org/news_centre/publications/EIF_Working_Paper_2021_72.htm
- Gast, J., Gundolf, K., & Cesinger, B. (2017). Doing business in a green way: A systematic review of the ecological sustainability entrepreneurship literature and future research directions. *Journal of Cleaner Production*, 147, 44-56. <https://doi.org/10.1016/j.jclepro.2017.01.065>.
- Goswami, S., Sharma, R.B., & Chouhan, V. (2022). Impact of Financial Technology (Fintech) on Financial Inclusion (FI) in Rural India. *Universal Journal of Accounting and Finance*, 10(2), 483-497. doi: 10.13189/ujaf.2022.100213
- Ghosh, S. (2022). Gender and financial inclusion: does technology make a difference? *Gender, Technology and Development*, 26(2), 195-213.

- <https://doi.org/10.1080/09718524.2022.2073323>
- Guo, L., Wang, W., Wu, Y.J., & Goh, M. (2021). How much do social connections matter in fundraising outcomes? *Financial Innovation*, (2021) 7:79. <https://doi.org/10.1186/s40854-021-00293-7>
- Haldar, S. (2019). Green entrepreneurship in theory and practice: insights from India. *International Journal Green Economics*, 13(2), 99-119. doi:10.1504/IJGE.2019.10024799.
- Hasan, M., Le, T., & Hoque, A. (2021). How does financial literacy impact on inclusive finance? *Financial Innovation*, (2021)7:40. <https://doi.org/10.1186/s40854-021-00259-9>
- Hossein, C. S. (2021) Racialized People, Women, and Social Enterprises: Politicized Economic Solidarity in Toronto, *Feminist Economics*, 27(3), 21-50. doi: 10.1080/13545701.2020.1821078
- Jansen, S.A., Mast, C., Spiess-Knafl, W. (2021). Social Finance Investments with a Focus on Digital Social Business Models. *Innovations in Social Finance*, 235-249. Palgrave Cham: Macmillan.
- Lehmann, C., Delbard, O., & Lange, S. (2022). Green growth, a-growth or degrowth? Investigating the attitudes of environmental protection specialists at the German Environment Agency. *Journal of Cleaner Production*, 336(2), 130306. <https://doi.org/10.1016/j.jclepro.2021.130306>
- Le, T.H.T & Kolleck, N. (2022). The Power of Places in Building Cultural and Arts Education Networks and Cooperation in Rural Areas. *Social Inclusion*, 10(3), 284-294. <https://doi.org/10.17645/si.v10i3.5299>
- Lin, X.-L., & Yin, H.-T. (2022). The Impact of Gender Equality on Green Innovation. *Energy Research Letters*, 3(Early View). <https://doi.org/10.46557/001c.36536>
- Liu, Z., Vu, T.L., Phan, T.T.H., Ngo, T.O., Anh, N.H.V., & Putra, A.R.S. (2022). Financial inclusion and green economic performance for energy efficiency finance. *Economic Change and Restructuring*, 65(2), 240-271. <https://doi.org/10.1007/s10644-022-09393-5>.
- Malik, A.H., Md-Isa, A.H., Jais, M., Rehman, A.U. & Khan, M.A. (2021). Financial stability of Asian Nations: Governance quality and financial inclusion. *Borsa Istanbul Review*, 22(2), 377-387.
- Mia, M.M., Rizwan, S., Zayed, N.M., Nitsenko, V., Miroshnyk, O., Kryshtal, H., Ostapenko, R. (2022). The Impact of Green Entrepreneurship on Social Change and Factors Influencing AMO Theory. *Systems*, 2022, 10, 132.
- Mishra, M.K., Kumar, S., & Kumar, J. (2021). Green Entrepreneurship and Sustainable Development - Prospects and Emerging Challenges for MSMEs. *Emerging Dimensions of Business & Management in the Present-day Competitive Environment*. <https://www.researchgate.net/publication/356615991>
- Mojumder, A., Singh, A., Kumar, A., & Liu, Y. (2022). Mitigating the barriers to green procurement adoption: An exploratory study of the Indian construction industry. *Journal of Cleaner Production*, 370(10), 33442.
- Montgomery, M., Gibson, D., & Glover, E. (2020). *Financial Inclusion in the Green Economy*. FIGE Report I Community Council: Canada
- OECD (2021). Social impact measurement for the social and solidarity economy: OECD global action promoting social & solidarity economy ecosystems. OECD Local Economic and Employment Development (LEED) Working Papers.
- Ojong, N. (2015). Social Finance for Social Economy, Working Paper No. 67. International Labour Organization, Social Finance Programme, Geneva: ILO.
- Okoh, A.S. (2019). Green economy versus green economics: examining Africa's conceptual

- uncertainty in the post-Paris era. *International Journal of Green Economics*, 13(1), 40-54. doi:10.1504/IJGE.2019.10022999
- Oman, W., and R. Svartzman. 2021. 'What Justifies Sustainable Finance Measures? Financial-Economic Interactions and Possible Implications for Policymakers. *CESifo Forum*, 22(3), 3-11.
- Ozili, P.K. (2020). Social Inclusion and Financial Inclusion: International Evidence. *International Journal of Development Issues*, 19(2), 169-186. <https://doi.org/10.1108/IJDI-07-2019-0122>
- Ozili, P. K. (2021). Digital Finance, Green Finance and Social Finance: Is there a Link? *Financial Internet Quarterly*, MPRA Paper No. 110151 (1), 1-7. <https://mpra.ub.uni-muenchen.de/110151>
- Ozili, P.K. (2022a). Financial inclusion, sustainability and sustainable development. <https://google scholar citations>
- Ozili, P.K. (2022b). Green finance research around the world: a review of literature. *International Journal of Green Economics (IJGE)*, 16(1), 56-75. doi:10.1504/IJGE.2022.10048432
- Prasetyo, P.E., Azwardi, & Kistanti, N.R. (2023). Gender equality and social inclusion (GESI) and institutions as key drivers of green entrepreneurship. *International Journal of Data and Network Science*, 7(1), on line first, September 2022. doi:10.5267/j.ijdns.2022.9.008.
- Prasetyo, P.E., & Setyadharma, A. (2022). Digitalization Technology for Sustainable Rural Entrepreneurship and Inequality. *Journal of Human Resource and Sustainability Studies*, 10(3), 464-484.
- Prasetyo, P.E., Setyadharma, A., & Kirtanti, N.R. (2022). The role of institutional potential and social entrepreneurship as the main drivers of business opportunity and competitiveness, *Uncertain Supply Chain Management*, 10(1), 101-108. <https://doi.org/10.5267/j.uscm.2021.10.006>
- Prasetyo, P.E., Setyadharma, A., & Kistanti, N.R. (2020). Social Capital: The Main Determinant of MSME Entrepreneurship Competitiveness. *International Journal of Scientific & Technology Research*, 9(3), 6627-6637
- Prasetyo, P.E. (2020). Human Capital as the Main Determinant of Regional Economic Growth. *International Journal of Advanced Science and Technology*, 29(03), 6261-6267.
- Pursiainen, V. (2022). Cultural Biases in Equity Analysis. *The Journal of Finance*, 77(1), 163-211. doi: 10.1111/jofi.13095.
- Ryszawska, B. 2016. 'Sustainability transition needs sustainable finance. *Copernican Journal of Finance & Accounting*, 5(1), 185-194. <http://dx.doi.org/10.12775/CJFA.2016.011>
- Saari U.A. & Joensuu-Salo, S. (2019). Green Entrepreneurship. In: Leal Filho W., Azul A., Brandli L., Özuyar P., Wall T. (eds) *Responsible Consumption and Production. Encyclopedia of the UN Sustainable Development Goals*. Springer, Cham. Doi: 10.1007/978-3-319-71062-4_6-1
- Saha, T., Sinha, A., & Abbas, S. (2022). Green financing of eco-innovations: is the gender inclusivity taken care of? *Economic Research-Ekonomska Istraživanja*. doi:10.1080/1331677X.2022.2029715
- Sari, I.Z., & Falianty, T.A. (2021). Financial Inclusion And Income Inequality: Does Financial Structure Matter? *Jurnal Ekonomi dan Kebijakan Pembangunan*, 10(1), 72-100.
- Sarma, M. (2015). Measuring Financial Inclusion. *Economics Bulletin*, 35(1), 604-611.
- Sawadogo, R., & Semedo, G. (2021). Financial inclusion, income inequality, and institutions in sub-Saharan Africa: Identifying cross-country inequality regimes. *International Economics*, 167(2021), 15-28.
- Seguino, S. (2019). Macroeconomic policy tools to finance gender equality, *Development*

- Policy Review*, 37(4), 504-525. doi: 10.1111/dpr.12396.
- Soukhasing, D., Dea, V., & Ruslim, C. (2017). Social Finance and Social Enterprises: A New Frontier for Development in Indonesia. *The Indonesian Journal of Dev. Planning*, 1(3), 240-255.
- Schumacher, K., Chenet, H., and U. Volz. 2020. 'Sustainable finance in Japan.' *Journal of Sustainable Finance & Investment* 10 (2): 213-246. <https://doi.org/10.1080/20430795.2020.1735219>
- Sinderbrand, M. (2021). Who Should Fund Social Innovation? *Innovations in Social Finance*, 375-390. Palgrave Cham: Macmillan. https://doi.org/10.1007/978-3-030-72535-8_17.
- Tufail, M., Song L., Umut, A., Ismailova, N., & Kuldasheva, Z. (2022). Does financial inclusion promote a green economic system? Evaluating the role of energy efficiency, *Economic Research-Ekonomska Istraživanja*, 35(1), 1-23. doi:10.1080/1331677X.2022.2053363
- Vladić, N., Maletič, D., & Maletič, M. (2021). Determinants of Innovation Capability: An Exploratory Study of Inclusive Leadership and Work Engagement. *Quality Innovation Prosperity*, 25(2), 130-152. doi:10.12776/QIP.V25I2.1596).
- Wang, L., Wang, Y., Sun, Y., Han, K., & Chen, Y. (2022a) Financial inclusion and green economic efficiency: evidence from China, *Journal of Environmental Planning and Management*, 65(2), 240-271, doi: 10.1080/09640568.2021.1881459
- Wang, H., Qi, S., Zhou, C., Zhou, J., & Huang, X. (2022b). Green credit policy, government behavior and green innovation quality of enterprises Author links open overlay panel. *Journal of Cleaner Production*, 331(1), 129834. <https://doi.org/10.1016/j.jclepro.2021.129834>
- Walker, T., McGaughey, J., Goubran, S., & Wagdy, N. (2021). *Innovations in Social Finance Transitioning Beyond Economic Value. (eBook):* Palgrave Macmillan. <https://doi.org/10.1007/978-3-030-72535-8>
- Yu, H., Jiang, Y., Zhang, Z., Shang, W.L. Han, C., & Zhao, Y. (2022). The impact of carbon emission trading policy on firms' green innovation in China. *Financial Innovation* (2022)8:55. <https://doi.org/10.1186/s40854-022-00359-0>
- Zain, N. R. M., Fauziah, N. N., Zakariyah, H. & Noor, A. M. (2021). Financing social enterprises through cash waqf: An innovation of business model. In *Handbook of Research on Islamic Social Finance and Economic Recovery After a Global Health Crisis*, 214-227).
- Zhang, H., Chen, X., Peng, Y., Kou, G., Wang, R. (2022a). The interaction of multiple information on multiplex social networks. *Information Sciences*, 605(2022), 366–380. <https://doi.org/10.1016/j.ins.2022.05.036>.
- Zhang, J., Luo, Y., & Ding. X. (2022b). Can green credit policy improve the overseas investment efficiency of enterprises in China? *Journal of Cleaner Production*, 340(3), 2022, 130785.
- Zhang, H., Yuan, F., Cui, Y., & Li, G. (2021). Research on the construction and measurement of inclusive finance evaluation index system Heng. *Procedia Computer Science*, 199(2022), 1152–1159.
- Zhao, J. & Li, T. (2021). Social Capital, Financial Literacy, and Rural Household Entrepreneurship: A Mediating Effect Analysis. *Frontiers in Psychology*, 12(724605), 1-13. doi: 10.3389/fpsyg.2021.724605