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Article

The influence of community empowerment and sustainability oriented innovation on sustainability performance through co-working spaces

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Abstract: This research aims to determine and analyze the extent of the influence of community empowerment and sustainability-oriented innovation on sustainable performance through coworking spaces in the city of Bandung. To achieve the research objectives, a deductive approach is employed, intending to test a hypothesis to strengthen or reject existing hypotheses. Therefore, this research is also categorized as explanatory research. The research method used is the survey research method. The research sample is determined based on proportional stratified random sampling. This study focuses on business groups in coworking spaces in the 28 districts of Bandung City, with a total of 408 business operators. The sample selected consists of 208 business operators. Based on the research results, several conclusions are drawn, as follows: (1) Community empowerment has a significantly positive influence on sustainability performance, with a contribution of 84.5%; (2) Sustainability-oriented innovation has a significantly positive influence on sustainability performance, with a contribution of 69.2%; (3) Community empowerment has a significantly positive influence on Coworking Space, with a contribution of 93.6%; (4) Sustainability-oriented innovation has a significantly positive influence on Coworking Space, with a contribution of 36%; (5) Community empowerment has a significantly positive influence on sustainability-oriented innovation, with a contribution of 90.6%; (6) Coworking Space has a significantly positive influence on sustainability performance, with a contribution of 34%; (7) Community empowerment has a significantly positive influence on sustainability performance through Coworking Space, with a contribution of 20.7%; and (8) Sustainability oriented innovation has a significantly positive influence on sustainability performance through Coworking Space, with a contribution of 12.2%.

Keywords: community empowerment; sustainability oriented innovation; sustainability performance; coworking space

1. Introduction

The creative economy has now become the driving force for economic development in Indonesia. In fact, the creative economy sector positively contributes to employment absorption. In 2018, it absorbed 18.4 million people, increasing to 19.2 million in 2019. The Gross Domestic Product (GDP) in 2018 was IDR 1066 trillion, rising to IDR 1153 trillion in 2019 (**Table 1**) (Bekraf, 2021).

Based on data from the Bandung City Creative Economy Agency (Disparbud Kota Bandung, 2023), there are 2139 participants in the creative economy in Bandung. Of these, 1465 participants have been verified, while 674 participants are still unverified. Additionally, there are 1593 participants in the creative economy pentahelix business as of the year 2021. One of the creative economy programs

developed by the Bandung City government is the establishment of coworking spaces (CWS). The goal of establishing CWS in Bandung is to promote entrepreneurship development over a period of four years, enabling it to become self-reliant and sustainable (**Figure 1**).

Table 1. Gross domestic product of Indonesia's creative economy sector.

Year	GDP (Trillion)	Labour
2015	852.56	15,959,590
2016	923.05	16,909,690
2017	989.15	17,678,878
2018	1066.64	18,497,322
2019	1153,4	19,240,184

Source: Bekraf (2021).

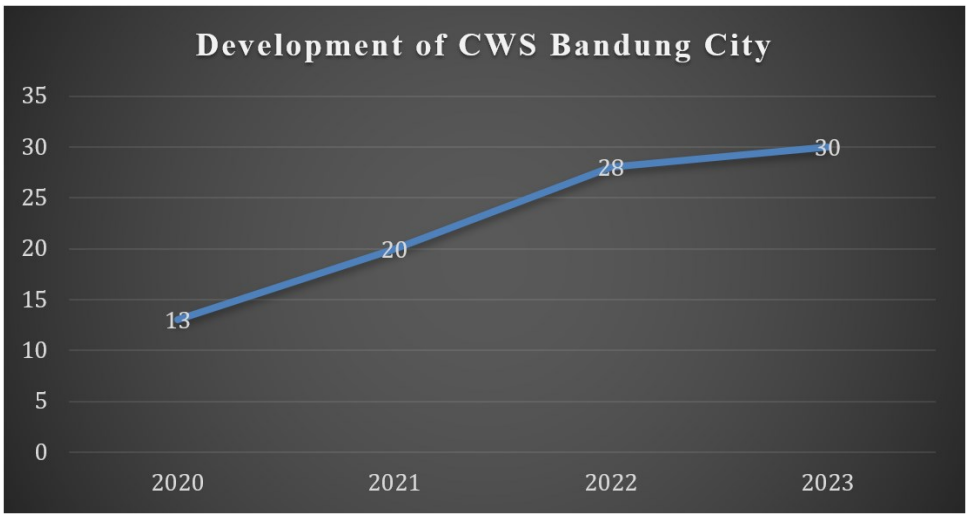

Figure 1. Development of CWS Bandung City in 2020–2023.
Source: Disparbud Kota Bandung (2023).

To cultivate creative behavior, simultaneous support from stakeholders is required (Aranha et al., 2017). Government program innovation is crucial for generating employment opportunities through activities on innovative platforms that drive various sectors, such as education, entrepreneurship, social, cultural, industrial, and artistic (Huang and Jia, 2022; OECD, 2018). This is aimed at promoting greater independence and prosperity among entrepreneurs (Ramadhani, 2020). Community activities can also be nurtured through facilities designed to develop entrepreneurial capacities and skills, fostering collaboration through various creative and innovative empowerment approaches within Coworking Spaces (CWS).

Currently, coworking spaces have become integral nodes in community empowerment, serving as platforms for the development of creativity and innovation, collaborative spaces, and knowledge sharing, aiming to create economic value for sustainable communities (Bednář et al., 2021; Durante and Turvani, 2018). This concept is believed to facilitate the establishment of networks, value exchanges, and the collaboration of various diversities (Rese et al., 2022).

Coworking spaces have become a burgeoning lifestyle with significant implications for economic development (van Holm, 2017), particularly in the sustenance of small businesses (Rathore and Agrawal, 2020) and the creation of sustainable small and medium enterprises (Hewitt and van Rensburg, 2020). The trend is steadily increasing and gaining popularity in supporting community-based entrepreneurs (Avdikos and Merkel, 2020; Merrell et al., 2022).

The study conducted by Tremblay and Scaillerez (2020) identifies key factors contributing to the attractiveness and success of coworking spaces. It should be a versatile space open to the public (not a private residence or business), accessible to everyone, and unrestricted (especially in conducting various activities). Additionally, it should be equipped with facilities and infrastructure that support the activities of entrepreneurs. It is open to freelancers, business owners, and stakeholders to access support, networks, and knowledge (Fuzi, 2015; Gandini, 2015). It can be adapted for office-based business spaces (Leclercq-Vandelannoitte and Isaac, 2016), or for creative businesses often referred to as maker spaces (Holm, 2015).

The study conducted by Merrell et al. (2022) found that coworking spaces support entrepreneurial rural communities by providing economic benefits and positively impacting community well-being. Research by Reichenberger (2018), Taylor et al. (2016), and Spinuzzi (2012) reveals that coworking spaces can enhance a sense of community, freedom, and collaboration, particularly in micro-enterprises, which are a type of grassroots economic activity. Furthermore, research conducted by Daulay (2018) indicates that community economic development in the micro, small, and medium-sized enterprises (MSMEs) sector has proven to increase community income, employment opportunities, and overall living standards.

In the context of community empowerment, coworking spaces (CWS) represent an economic development concept that encompasses social values, reflecting a development paradigm that is peoplecentered, participatory, empowering, and sustainable (Avelino, 2017). Sustainability is related to how companies, in carrying out activities, consistently consider the sustainability of resources in the future. This involves incorporating social, environmental, and economic benefits to achieve goals (Aktin and Gergin, 2016) through collaborative efforts (Rodríguez-Espíndola et al., 2020, 2022). It is also essential to assess the potential impact of sustainability activities on a company to understand potential benefits (Meehan and Bryde, 2011). Despite challenges in integrating social and environmental dimensions with traditional financial performance goals (Epstein and Roy, 2003), several articles in recent years have discussed sustainability performance with positive influences (Pinto, 2020). The aim is to assist companies in achieving an economically efficient business model that can thrive with limited resources and address social challenges (Geradts and Bocken, 2019).

According to the principles of interaction, the analysis of community empowerment encompasses sustainable aspects capable of preserving and achieving the goals of enhancing community capacity and autonomy (Roseland, 1992). To achieve sustainable community empowerment (Roseland and Spiliotopoulou, 2017), it requires the convergence of several factors, such as mobilizing stakeholders and having planning and assessment tools. Community empowerment should bring about positive change by fostering autonomy through factors examined in economic,

environmental, and technological aspects. This will determine the extent to which community empowerment and sustainable innovation orientation influence sustainable performance through coworking spaces in the city of Bandung.

2. Objectives

This research aims to determine and analyze the extent of the influence of community empowerment and sustainable innovation orientation on sustainable performance through coworking spaces in the city of Bandung.

3. Literature review

3.1. Systematic mapping study

The stages of a systematic mapping study involve, firstly, defining the main keywords. Secondly, review known research in the field of competitive advantage. Thirdly, searching for alternative keyword forms to use in the search process (**Figure 2**) (Kitchenham and Charters, 2007; Petersen et al., 2008). Subsequently, determining exclusion and inclusion criteria categories, encompassing relevant articles, and separating irrelevant ones (Petersen et al., 2008).

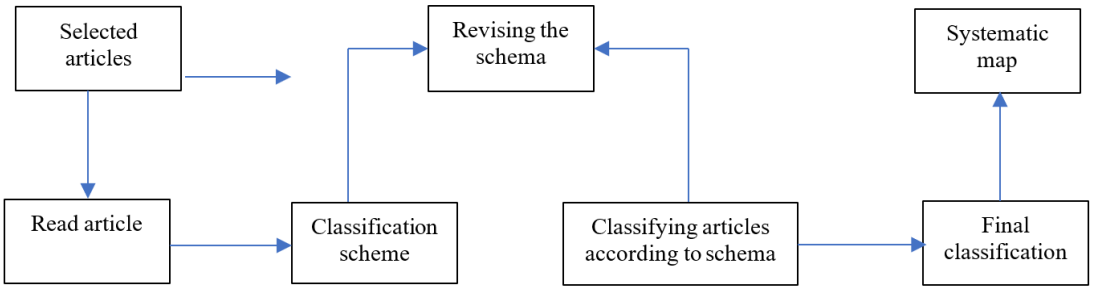

Figure 2. Systematic mapping studies process.
Source: Banaeianjahromi and Smolander (2016).

The scoping process	Scope review	Entire Paper
Search for keywords (sustainability OR sustainability-oriented innovation) AND SMEs in the document search.	All papers	**2.252**
Focusing on relevant papers (last ten years), document-type articles, business subject areas, and English	Article	**1.045**
Specify with the vital string empowerment.	Article	**112**
Evaluate relevant papers	Inclusion categorized papers	**52**

Figure 3. Systematic mapping process on Scopus database.

The data search was conducted through the Scopus database (Banaeianjahromi and Smolander, 2016). using the document search keyword. Subsequently, the

keystring used was ("sustainability" OR "sustainability-oriented innovation") AND "SMEs" AND "empowerment." The researcher carried out the inclusion selection process exclusively for journal articles, excluding books, proceedings, and magazines. Following this, a scanning process was performed on each abstract, focusing on findings to identify relevant articles. A total of 52 inclusive articles were found in scholarly publications on the research and development of sustainability and SMEs. The article classification process is illustrated in **Figure 3**.

3.2. Bibliometric VOSviewer

The results of the article group search through the Scopus database using the key string ("sustainability" OR "sustainability-oriented innovation") AND "SMEs" AND "empowerment" and categorized as inclusion were then analyzed using the VOSViewer application, resulting in the following findings (see **Figure 4**):

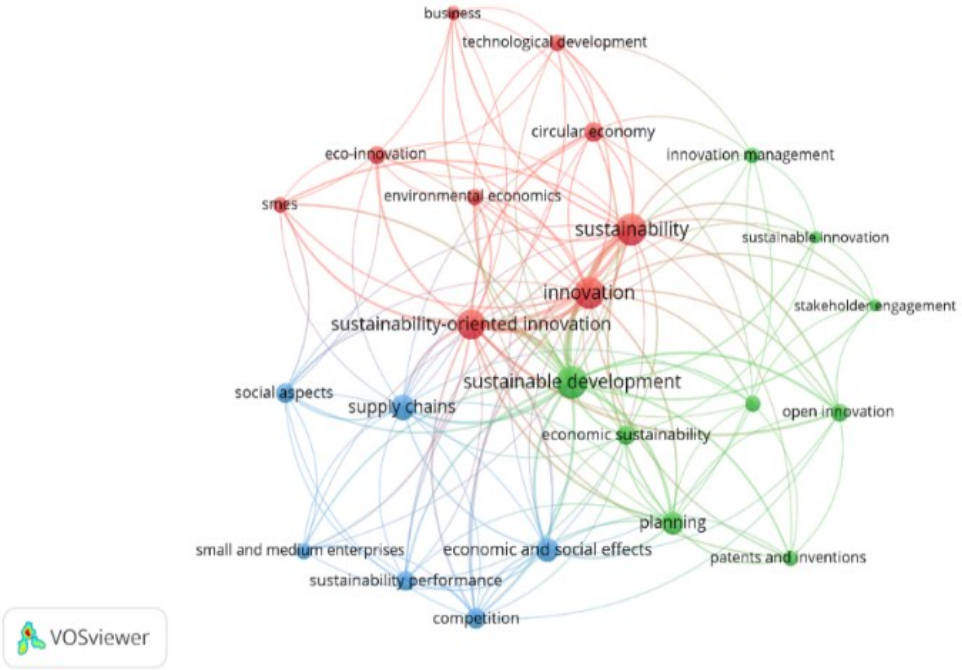

Figure 4. Visualization of research development network.
Source: Processed by researchers, 2022.

Cluster 1 shows a visualization of a red-colored map that is interconnected and consists of 8 research topics, including business, circular economy, environmental economics, eco-innovation, SMEs, sustainability-oriented innovation, and technological development.

Cluster 2 displays a visualization of a green-colored map that is interconnected and comprises 8 research topics, including environmental management, innovation, innovation management, open innovation, stakeholder engagement, sustainability, sustainable development, and sustainable innovation.

Cluster 3 exhibits a visualization of a blue-colored map that is interconnected and consists of 7 research topics, including competition, economic and social effects, economic sustainability, small and medium enterprises, social aspects, supply chains, and sustainability performance.

The clusters of research topic development are classified as follows (**Table 2**):

Table 2. Research topic classification.

Keyword	Occurrences	Total Link Strength
Business	3	13
Circular economy	6	21
Competition	5	26
Eco-innovation	3	14
Economic and social effects	6	30
Economic sustainability	3	15
Environmental Economics	3	14
Environmental management	3	12
Innovation	25	86
Innovation management	3	10
Open innovation	7	24
Small and medium enterprises	4	13
SMEs	5	20
Social aspects	3	16
Stakeholder engagement	3	9
Supply chains	6	30
Sustainability	24	94
Sustainability performance	3	18
Sustainability-oriented innovation	36	107
Sustainable development	34	127
Sustainable innovation	3	8
Technological development	3	13

Source: processed by the researchers, 2022.

3.3. Sustainability

Sustainability is the community's effort to prioritize social responses to environmental and economic issues (McGinnis et al., 1973). It is applied in the context of corporate sustainability from the triple bottom line (TBL) perspective, which integrates economic, social, and environmental pillars as business and investment strategies aimed at enhancing business practices by balancing the needs of current and future stakeholders (Chams and García-Blandón, 2019; Elkington, 1998; Pemer et al., 2020; Teece, 2019). Sustainability has two interrelated dimensions: sustainability-oriented innovation, encompassing product innovation, process innovation, organizational innovation, and technology innovation (Dey et al., 2020), and sustainability performance, covering economic performance, environmental performance, and social performance (Afum et al., 2020; Yildiz Çankaya and Sezen, 2019).

3.4. Community empowerment

Empowerment is a construct that links individual strengths and competencies, natural support systems, and proactive behavior towards social policies and social change (Rappaport, 1981). Empowerment involves both processes and outcomes, indicating that actions, activities, or structures can empower and that the results of these processes yield a level of empowerment (Swift and Levin, 1987; Zimmerman, 2000). The outputs of empowerment, in terms of both process and outcomes, vary as there is no single standard that can fully capture its meaning in all contexts or populations (Rappaport, 2014; Rothman et al., 2019). Components of community empowerment include being confident, inclusive, organized, cooperative, and influential (Yang and Huang, 2015; Spiliotopoulou and Roseland, 2020).

3.5. Co-working space

A coworking space, according to the Oxford Dictionary, is a workspace or office used by individuals such as entrepreneurs or workers who are employed by various companies. Additionally, co-working spaces include the rental of workspaces used openly, allowing users the flexibility to use them as needed. Shared workspaces are utilized by people from all backgrounds, including entrepreneurs, freelancers, start-ups, associations, consultants, investors, artists, researchers, and students (Rese et al., 2022). Components of coworking spaces include creativity space, social climate, network size, and centrality (Cheah and Ho, 2019; Rese et al, 2022).

4. The framework of mind

The design of the research conceptual framework is as follows (see **Figure 5**):

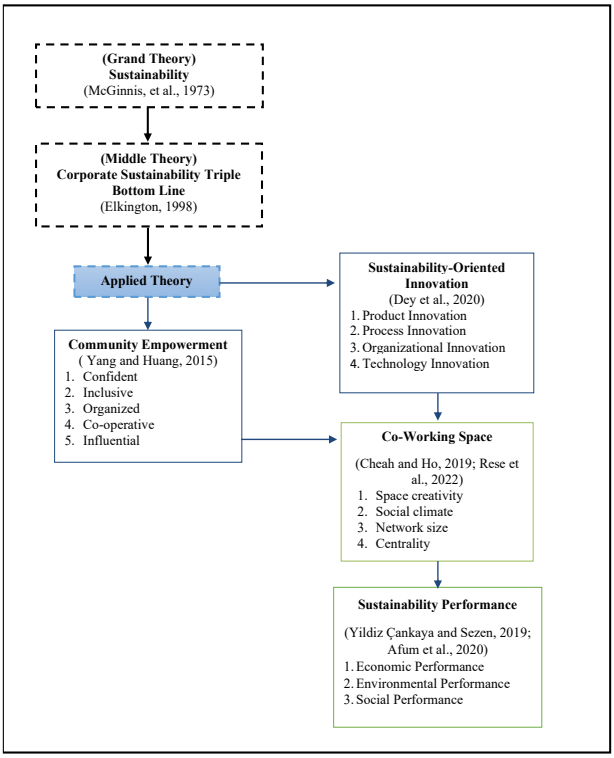

Figure 5. The research framework.

5. Research hypothesis

The researcher constructs the conceptual framework by adopting variables that have been used and tested in previous studies, then simplifying them into a research model that will be used to examine the relationships and connections in the study as follows (see **Figure 6**):

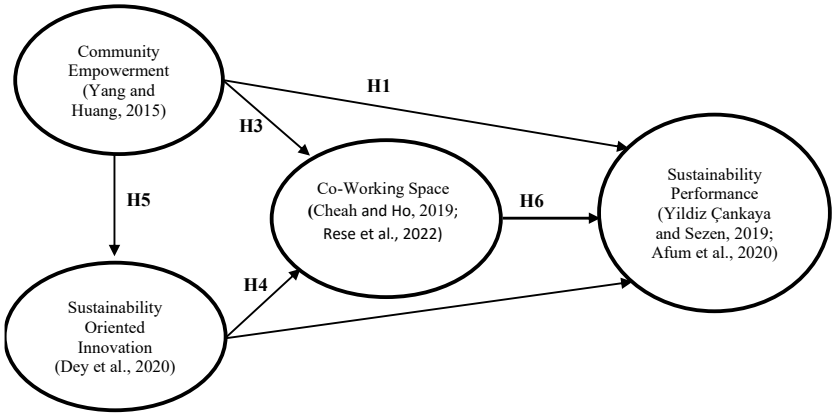

Figure 6. The research conceptual framework.

H1: Community Empowerment has a positive and significant impact on Sustainability Performance.

H2: Sustainability Oriented Innovation has a positive and significant impact on Sustainability Performance.

H3: Community Empowerment has a positive and significant impact on Coworking Space.

H4: Sustainability Oriented Innovation has a positive and significant impact on Coworking Space.

H5: Community Empowerment has a positive and significant impact on Sustainability Oriented Innovation.

H6: Coworking Space has a positive and significant impact on Sustainability Performance.

6. Research method

6.1. Research design

This study uses a deductive approach, intended to test a hypothesis to either strengthen or reject existing hypotheses. The research is also categorized as explanatory research (Leedy and Ormrod, 2005). The research method used is the survey research method (Creswell, 2010). During the survey, the researcher employs a quantitative method, systematically posing the same questions to all samples and recording their responses (Neuman, 2013).

6.2. Population and sample

The population in this study consists of entrepreneurs utilizing coworking spaces in the city of Bandung. The research sample is determined through proportional stratified random sampling (Sekaran and Bougie, 2016). This study focuses on

business groups in the coworking spaces of Bandung, covering 28 districts with a total of 408 entrepreneurs from various fields. The next step is to calculate the sample size.

The determination of the sample size uses the following Slovin formula:

$$n = \frac{N}{1 + Nd^2} = \frac{408}{1 + (408)(0.05)^2} = 201.98$$

$$n = 202 \text{ (Rounding numbers)}$$

where:

n = Sample Size;

N = Population;

d = Precision Value.

6.3. Types and sources of data

The types and sources of data used in this study are primary. Primary data consists of information about the social profile and identification of respondents, such as gender, age, respondent status, highest education level, and company profile, as well as respondents' answers to the questionnaire regarding the observed phenomenon.

6.4. Data collection techniques

Data collection techniques include library research and field research (questionnaires, interviews, and observations) (see Appendix A**)**.

6.5. Operational variables

The variables in this study are community empowerment, sustainability-oriented innovation, sustainable performance, and Coworking Space (CWS) (see **Table 3**).

Table 3. Operational variables.

No	Variable	Dimension	Indicator
1	Community Empowerment (Yang and Huang, 2015)	Confident	1. Working by enhancing skills 2. Increasing knowledge 3. Boosting self confidence 4. Instilling belief in personal growth
		Inclusive	5. Working without discrimination 6. Having equal opportunities and chances 7. Opposing inequality within the group
		Organized	8. Being open with fellow members 9. Having a shared concern 10. Working together and being united with members
		Co-operative	11. Building positive relationships across groups 12. Identifying each received message 13. Maintaining partnership relations 14. Promoting cooperation
		Influential	15. Encouraging fellow community members to participate in decision-making 16. Providing services together 17. Encouraging and empowering the community in every activity
2	Co-working Space (Cheah and Ho, 2019; Rese et al., 2022)	Space Creativity	1. A workspace that encourages creative thinking 2. A workspace that promotes cheerfulness 3. A workspace that generates good ideas
		Social climate	4. A cooperative atmosphere with fellow members 5. Creating a good friendship atmosphere 6. Each member has integrity

Table 3. (*Continued*).

No	Variable	Dimension	Indicator
2	Co-working Space (Cheah and Ho, 2019; Rese et al., 2022)	Network size	7. Knowledge exchange 8. Friendship at the workplace 9. Direct involvement in work
		Centrality	10. Quickly receiving important news 11. Receiving useful information at work 12. Always discuss current business information
3	Sustainability Oriented Innovation (Dey et al., 2020)	Product Innovation	1. Improving product quality 2. Product development 3. Creating product designs 4. Using recyclable packaging
		Process Innovation	5. Improving management skills 6. Enhancing company effectiveness and efficiency 7. Expanding networks
		Organizational Innovation	8. Supporting product and service innovation 9. Conducting research and development of products and services 10. Focusing on business models and concepts
		Technology Innovation	11. Using digital platforms 12. Utilizing technology infrastructure in business systems 13. Being proactive toward technological developments
4	Sustainability Performance (Yildiz Çankaya and Sezen, 2019; Afum et al., 2020)	Economic Performance	1. Increasing profit 2. Increasing sales 3. Expanding market share 4. Reducing production costs
		Environmental Performance	5. Improving the company's environmental situation 6. Minimizing waste 7. Reducing energy resource consumption 8. Increasing the use of renewable energy and recycled materials
		Social Performance	9. Improving the quality of life in the surrounding community 10. Enhancing safety and health 11. Increasing job satisfaction 12. Improving relationships with the community and stakeholders

6.6. Validation and reliability test of research instruments

The validity and reliability tests were conducted on 30 respondents. In this stage, improvements were also made to questionnaire statements that were considered difficult for respondents to understand. Calculations were performed using SPSS v25 software.

The validity testing technique is the Pearson Product Moment correlation. With df = $n - 2$ (30 − 2 = 28), and α (0.05), the value obtained is 0.361. The significance level used in the validity test is 5% (α = 0.05) (see Appendix B). The following presents the results of the validity test with the help of SPSS v25 software:

Table 4. Community empowerment variable validity test results.

Dimension	Indicator	*r*-value	*r*-table	Conclusion
Confident	EC1.1	0.922	0.361	Valid
	EC1.2	0.966	0.361	Valid
	EC1.3	0.947	0.361	Valid
	EC1.4	0.953	0.361	Valid

Table 4. (*Continued*).

Dimension	Indicator	*r*-value	*r*-table	Conclusion
Inclusive	CE2.1	0.947	0.361	Valid
	CE2.2	0.928	0.361	Valid
	EC2.3	0.933	0.361	Valid
Organized	EC3.1	0.933	0.361	Valid
	EC3.2	0.925	0.361	Valid
	EC3.3	0.942	0.361	Valid
Co-operative	EC4.1	0.963	0.361	Valid
	EC4.2	0.889	0.361	Valid
	EC4.3	0.966	0.361	Valid
	EC4.4	0.936	0.361	Valid
Influential	EC5.1	0.932	0.361	Valid
	EC5.2	0.950	0.361	Valid
	EC5.3	0.927	0.361	Valid

Source: Processed data using SPSS v25 software.

From the **Table 4**, it can be inferred that the validity coefficient values (*r*-value) for each statement item on the community empowerment variable are greater than the *r*-table (0.361), indicating validity. This indicates that all statement items representing the variable are valid and suitable for use as a research measurement tool.

Table 5. Sustainability-oriented innovation variable validity test results.

Dimension	Indicator	*r*-value	*r*-table	Conclusion
Product Innovation	SOI1.1	0.958	0.361	Valid
	SOI1.2	0.938	0.361	Valid
	SOI1.3	0.958	0.361	Valid
	SOI1.4	0.848	0.361	Valid
Process Innovation	SOI2.1	0.944	0.361	Valid
	SOI2.2	0.953	0.361	Valid
	SOI2.3	0.943	0.361	Valid
Organizational Innovation	SOI3.1	0.950	0.361	Valid
	SOI3.2	0.957	0.361	Valid
	SOI3.3	0.956	0.361	Valid
Technology Innovation	SOI4.1	0.972	0.361	Valid
	SOI4.2	0.965	0.361	Valid
	SOI4.3	0.944	0.361	Valid

Source: Processed data using SPSS v25 software.

From the **Table 5**, it can be inferred that the validity coefficient values (*r*-value) for each statement item on the Sustainability Oriented Innovation variable are greater than the *r*-table (0.361), indicating validity. This indicates that all statement items representing the variable are valid and suitable for use as a research measurement tool.

Table 6. Co-working space variable validity test results.

Dimension	Indicator	*r*-value	*r*-table	Conclusion
Space Creativity	CWS1.1	0.971	0.361	Valid
	CWS1.2	0.950	0.361	Valid
	CWS1.3	0.941	0.361	Valid
Social climate	CWS2.1	0.952	0.361	Valid
	CWS2.2	0.907	0.361	Valid
	CWS2.3	0.884	0.361	Valid
Network size	CWS3.1	0.903	0.361	Valid
	CWS3.2	0.941	0.361	Valid
	CWS3.3	0.822	0.361	Valid
Centrality	CWS4.1	0.910	0.361	Valid
	CWS4.2	0.964	0.361	Valid
	CWS4.3	0.930	0.361	Valid

Source: Processed data using SPSS v25 software.

Table 6 shows that the validity coefficient (*r*-calculated) of each statement item in the co-working space variable is greater than the *r*-table (0.361) declared valid. This shows that all statement items representing these variables are valid and suitable for use as research measuring tools.

Table 7. Sustainability performance variable validity test results.

Dimension	Indicator	*r*-value	*r*-table	Conclusion
Economic Performance	SP1.1	0.948	0.361	Valid
	SP1.2	0.956	0.361	Valid
	SP1.3	0.956	0.361	Valid
	SP1.4	0.879	0.361	Valid
Environmental Performance	SP2.1	0.936	0.361	Valid
	SP2.2	0.936	0.361	Valid
	SP2.3	0.933	0.361	Valid
	SP2.4	0.733	0.361	Valid
Social Performance	SP3.1	0.954	0.361	Valid
	SP3.2	0.910	0.361	Valid
	SP3.3	0.968	0.361	Valid
	SP3.4	0.953	0.361	Valid

Source: Processed data using SPSS v25 software.

From the **Table 7**, it can be inferred that the validity coefficient values (*r*-value) for each statement item on the Sustainability Performance variable are greater than the *r*-table (0.361), indicating validity. This indicates that all statement items representing the variable are valid and suitable for use as a research measurement tool.

Reliability testing was conducted by testing the instrument once, then analysing it using the Alpha Cronbach method. The results of the reliability coefficient calculation can be seen in the following table:

Table 8. Result of the reliability test for research variables.

Variable	Item	*r*-value	Critical Point	Conclusion
Community Empowerment (X1)	17	0.980	0.700	Reliable
Sustainability Oriented Innovation (X2)	13	0.969	0.700	Reliable
Co-working space (Y)	12	0.974	0.700	Reliable
Sustainability Performance (Z)	12	0.958	0.700	Reliable

Source: Processed data using SPSS v25 software.

In **Table 8**, it can be seen that for the four variables under study, the reliability coefficient values obtained using Cronbach's alpha are 0.980, 0.969, 0.974, and 0.958. All four reliability coefficient values are greater than 0.700, so it can be concluded that the measurement tool used is reliable.

6.7. Data analysis techniques

Data is analyzed using the ordinal scale data measurement technique using the Likert scale as follows (see **Table 9**):

Table 9. Gradation of the likert scale instrument.

Gradasi Instrument Skala Likert		Score
a. Strongly Agree	a. Very High	5
b. Agree	b. High	4
c. Uncertain	c. Moderate	3
d. Disagree	d. Low	2
e. Strongly disagree	e. Very Low	1

Source: Sekaran and Bougie (2016).

6.7.1. Structural equation Model/Smart-Partial least square

The analytical technique employed in this study utilizes SmartPLS 3.0 software, specifically PLS (Partial Least Squares). The analysis involves testing the model and relationships among dimensions using Structural Equation Modeling (SEM). The structural model that represents the causal relationships among the dimensions or variables under investigation can be observed in the following **Figure 7**:

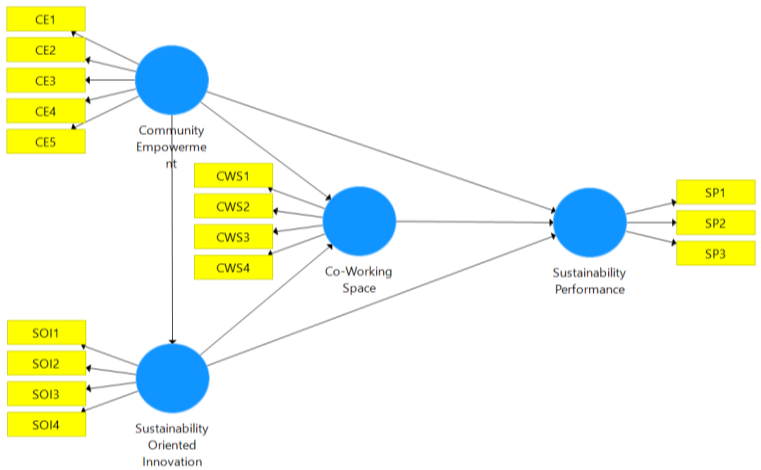

Figure 7. Overall analysis structure of research variables.

7. Research results

7.1. Profile respondent

The respondent profile based on gender is as follows (see **Table 10**):

Table 10. Respondent characteristics based on gender.

Gender	Frequency	%
Male	42	21%
Female	160	79%
Total	202	100%

Source: Processed questionnaire data, 2022.

In terms of culture, the working population in Bandung is traditionally dominated by males, but currently, it is also increasingly becoming dominated by females. Based on interviews with female micro-business entrepreneurs, information was obtained that their involvement is driven by efforts to support household economies, women heading households, creating job opportunities for family members, and promoting equal roles in entrepreneurship. As business activities grow, the number of employees and income also increase, leading to an increased complexity of the business. The owner's ability depends heavily on the skills of both male and female employees.

According to Robbins et al. (2016), it is acknowledged that there are some significant differences between men and women that affect sustainable performance. One issue that appears to differentiate between genders, especially when business owners have families and children, is the choice of work. Women working are more likely to choose part-time jobs and overtime schedules to accommodate family responsibilities.

Respondent profiles based on age are as follows (see **Table 11**):

Table 11. Respondent characteristics based on age.

Age	Frequency	%
20–30 Years	13	6%
30–40 Years	42	21%
40–50 Years	96	48%
> 50 Years	51	25%
Total	202	100%

Source: Processed questionnaire data, 2022.

The age of the respondents greatly influences their performance, and this is based on the reasoning that a person's maturity can be seen from their age, which is one of the factors that will affect someone's abilities, knowledge, responsibilities in actions, thinking, and decision-making in every implementation of company activity.

The profile of respondents based on income is as follows (see **Table 12**):

Table 12. Characteristics of respondents based on income.

Income	Frequency	%
IDR 1,000,000–IDR 5,000,000	157	77.7%
IDR 5,000,000–IDR 10,000,000	35	17.3%
> IDR 10,000,000	10	5%
Total	202	100%

Source: Processed questionnaire data, 2022.

Profile of respondents based on Education Level as follows (see **Table 13**):

Table 13. Characteristics of respondents based on education.

Education	Frequency	%
Junior High School	20	9.9%
Senior High School	106	52.5%
3-Year Diploma	27	13.4%
Applied Bachelor/Bachelor	44	21.8%
Master-Doctor	5	2.5%
Total	202	100%

Source: Processed questionnaire data, 2022.

Based on interviews, it was found that education is important for entrepreneurs because higher education allows the managed company to grow and survive. As business activities increase, the number of employees and income also increase, leading to an increase in the complexity of the company. The owner's ability depends greatly on their level of education. Owners with lower formal education tend to struggle to utilize technology and information effectively compared to those with higher formal education.

This aligns with the research by Laing et al. (2011), which states that economic improvement is influenced by education, leadership, infrastructure, culture, government policies, technological innovation, creative clusters and networks, and diversity.

Additionally, entrepreneurial experience and education, as well as vision, goals, values, time, and focus, are directly related to entrepreneurial success (Evans, 2009). Similarly, family background, personal commitment, motivation and knowledge, personal skills, flexibility, and adaptability contribute significantly to entrepreneurial success (Zaheer et al., 2019).

The last education level influences the abilities, insights, and confidence levels of respondents in performing their jobs. This is because education is crucial for improving their capabilities. Respondents with higher education levels can handle higher levels of difficulty and responsibility (Robbins et al., 2016).

7.2. Results of descriptive analysis

Descriptive analysis aims to examine an overview of research results regarding the variables of community empowerment, sustainable innovation orientation, sustainable performance, and the Bandung City Community Work Space (CWS). In

order to facilitate the interpretation of the variables under investigation, categorization is performed based on the percentage of respondents' feedback scores obtained using criteria according to Narimawati (2010, p. 85) as follows (see **Table 14**):

Table 14. Criteria for classifying percentage scores of respondents' feedback.

No	Interval Range	Criterion
1	20.00%–36.00%	Very Low
2	36.01%–52.00%	Low
3	52.01%–68.00%	Moderate
4	68.01%–84.00%	Good
5	84.01%–100%	Very Good

Source: Narimawati (2010).

7.2.1. Respondents' feedback on community empowerment

Feedback regarding community empowerment was obtained with the following results:

Table 15. Respondents' feedback on community empowerment.

No	Dimension	Item	Actual Score	Score Ideal	(%)	Criterion
1	Confident	4	3461	4040	85.67%	Very Good
2	Inclusive	3	2566	3030	84.69%	Very Good
3	Organized	3	2533	3030	83.60%	Good
4	Co-operative	4	3361	4040	83.19%	Good
5	Influential	3	2467	3030	81.42%	Good
Total		17	14,388	17,170	83.71%	Good

Source: Data processing from the 2022 Questionnaire.

Based on **Table 15**, it can be observed that the obtained percentage value is 83.71%, which falls into the good category. This indicates that respondents' feedback on statements related to the community empowerment variable is considered good.

7.2.2. Respondents' feedback on sustainability-oriented innovation

To gain an overall understanding of the sustainability-oriented innovation variable, respondents' feedback was obtained with the following results:

Table 16. Respondents' feedback on sustainability oriented innovation.

No	Dimension	Item	Actual Score	Ideal Score	(%)	Criterion
1	Product Innovation	4	3319	4040	82.15%	Good
2	Process Innovation	3	2523	3030	83.27%	Good
3	Organizational Innovation	3	2476	3030	81.72%	Good
4	Technology Innovation	3	2323	3030	76.67%	Good
Total		13	10,641	13,130	80.95%	Good

Source: Data processing from the 2022 Questionnaire.

Based on **Table 16**, it can be observed that the obtained percentage value is 80.95%, which falls into the good category. This indicates that respondents' feedback

on statements related to the sustainability-oriented innovation variable is considered good.

7.2.3. Respondents feedback on co-working space

To gain an overall understanding of the co-working space variable, respondents' feedback was obtained with the following results:

Table 17. Respondents' feedback on co-working space.

No	Dimension	Item	Actual Score	Ideal Score	(%)	Criterion
1	Space Creativity	3	2623	3030	86.57%	Very Good
2	Social climate	3	2556	3030	84.36%	Very Good
3	Network size	3	2509	3030	82.81%	Good
4	Centrality	3	2494	3030	82.31%	Good
Total		12	10,182	12,120	84.01%	Very Good

Source: Data processing from the 2022 Questionnaire.

Based on **Table 17**, it can be observed that the obtained percentage value is 84.01%, which falls into the very good category. This indicates that respondents' feedback on statements related to the coworking space variable is considered very good.

7.2.4. Respondents' feedback on sustainability performance

To gain an overall understanding of the sustainability performance variable, respondents feedback was obtained with the following results:

Table 18. Respondents' feedback on sustainability performance.

No	Dimension	Item	Actual Score	Ideal Score	(%)	Criterion
1	Economic Performance	4	3176	4040	78.61%	Good
2	Environmental Performance	4	3216	4040	79.60%	Good
3	Social Performance	4	3326	4040	82.33%	Good
Total		12	9718	12,120	80.18%	Good

Source: Data processing from the 2022 Questionnaire.

Based on **Table 18**, it can be observed that the obtained percentage value is 80.18%, which falls into the good category. This indicates that respondents' feedback on statements related to the sustainability performance variable is considered good.

7.2.5. SEM-PLS confirmatory analysis

The statistical method employed to test the research hypotheses is Structural Equation Modeling (SEM) using the Partial Least Squares (PLS) v3.0 approach. In SEM, two types of models are formed, namely the outer model and the inner model.

Outer model

The testing of the outer model is used to determine the specification of the relationship between latent variables and their manifest variables. This testing includes convergent validity, discriminant validity, and reliability tests. The outer model in this study can be observed in the following **Figure 8** based on the algorithm results:

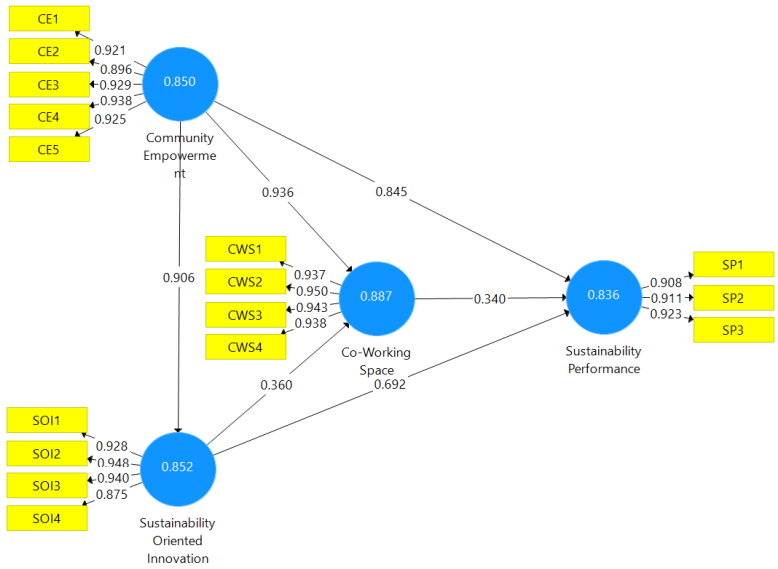

Figure 8. Outer model structural equation modelling (algorithm).
Source: Output from SmartPLS Version 3.0.

(1) Convergent validity

The test of convergent validity using PLS software can be observed from the loading factor values for each indicator of the construct. To assess convergent validity, the loading factor values should be greater than 0.7, and the Average Variance Extracted (AVE) should be greater than 0.5. The results are as follows (see **Table 19**):

Table 19. Convergent validity test.

Latent Variable	Indicator Items	Loading Factor	AVE	Conclusion
Community empowerment (X1)	CE_1	0.921	0.887	Valid
	CE_2	0.896		Valid
	CE_3	0.929		Valid
	CE_4	0.938		Valid
	CE_5	0.925		Valid
Sustainability oriented innovation (X2)	SOI_1	0.928	0.850	Valid
	SOI_2	0.948		Valid
	SOI_3	0.940		Valid
	SOI_4	0.875		Valid
Co-working space (Y)	CWS_1	0.937	0.852	Valid
	CWS_2	0.950		Valid
	CWS_3	0.943		Valid
	CWS_4	0.938		Valid
Sustainability performance (Z)	SP_1	0.908	0.836	Valid
	SP_2	0.911		Valid
	SP_3	0.923		Valid

Source: Data processing results from SmartPLS Version 3.0, 2022.

(2) Discriminant validity

Discriminant validity is assessed through cross-loading factor measurements and comparing AVE with the correlation between variables in a study. The following is cross-loading validity testing.

Table 20. Cross loading factor test results.

	Co-Working Space	Community Empowerment	Sustainability Oriented Innovation	Sustainability Performance	Conclusion
CE_1	0.885	0.921	0.864	0.791	Valid
CE_2	0.779	0.896	0.753	0.709	Valid
CE_3	0.861	0.929	0.825	0.778	Valid
CE_4	0.892	0.938	0.883	0.805	Valid
CE_5	0.888	0.925	0.843	0.805	Valid
CWS_1	0.937	0.875	0.838	0.787	Valid
CWS_2	0.950	0.913	0.855	0.804	Valid
CWS_3	0.943	0.883	0.869	0.842	Valid
CWS_4	0.938	0.856	0.876	0.844	Valid
SOI_1	0.838	0.857	0.928	0.829	Valid
SOI_2	0.890	0.867	0.948	0.848	Valid
SOI_3	0.884	0.869	0.940	0.861	Valid
SOI_4	0.749	0.745	0.875	0.740	Valid
SP_1	0.794	0.771	0.826	0.908	Valid
SP_2	0.743	0.728	0.788	0.911	Valid
SP_3	0.845	0.816	0.825	0.923	Valid

Source: Data processing results from SmartPLS Version 3.0, 2022.

Based on the data in **Table 20**, it can be observed that the cross-loading factor values for each indicator are higher compared to the values for other constructs. Therefore, it can be stated that the indicators used to measure latent variables have met the criteria.

Discriminant validity can also be tested by comparing the square root of AVE with its correlations. The following is the validity testing using the Fornell Larcker Criterion.

Table 21. Fornell lacker criterion test.

Latent Variable	Community empowerment	Sustainability oriented innovation	Co-working Space	Sustainability performance
Community empowerment (X1)	**0.936**			
Sustainability oriented innovation (X2)	0.906	**0.923**		
Co-working space (Y)	0.936	0.912	**0.942**	
Sustainability performance (Z)	0.845	0.890	0.870	**0.914**

Source: Data processing results from SmartPLS Version 3.0, 2022.

From **Table 21**, it can be observed that the square root of AVE for each latent variable has higher values compared to the correlations with other variables. Therefore, it can be concluded that the model has good discriminant validity.

(3) Reliability test

In Partial Least Squares (PLS), reliability testing can be conducted using two methods: Composite Reliability and Cronbach's Alpha. The criteria for considering each variable as reliable are > 0.60 for Composite Reliability and > 0.60 for Cronbach's Alpha. The following are the results of the reliability test:

Table 22. Reliability test results.

Latent Variable	Composite Reliability	Critical Value	Cronbach's Alpha	Critical Value	Conclusion
Community empowerment (X1)	0.966	> 0.6	0.956	> 0.6	Reliable
Sustainability oriented innovation (X2)	0.958		0.942		Reliable
Co-working Space (Y)	0.969		0.958		Reliable
Sustainability performance (Z)	0.938		0.902		Reliable

Source: Data processing results from SmartPLS Version 3.0, 2022.

Based on the reliability test results in **Table 22**, both the Composite Reliability and Cronbach's Alpha values for each variable are above 0.6, indicating that the data has high reliability. It can be concluded that all statements related to variables in this research questionnaire are considered reliable or consistent.

Inner model

The inner model measurement aims to conduct tests regarding the influence of other latent variables. The following are the bootstrap results in this study (see **Figure 9**):

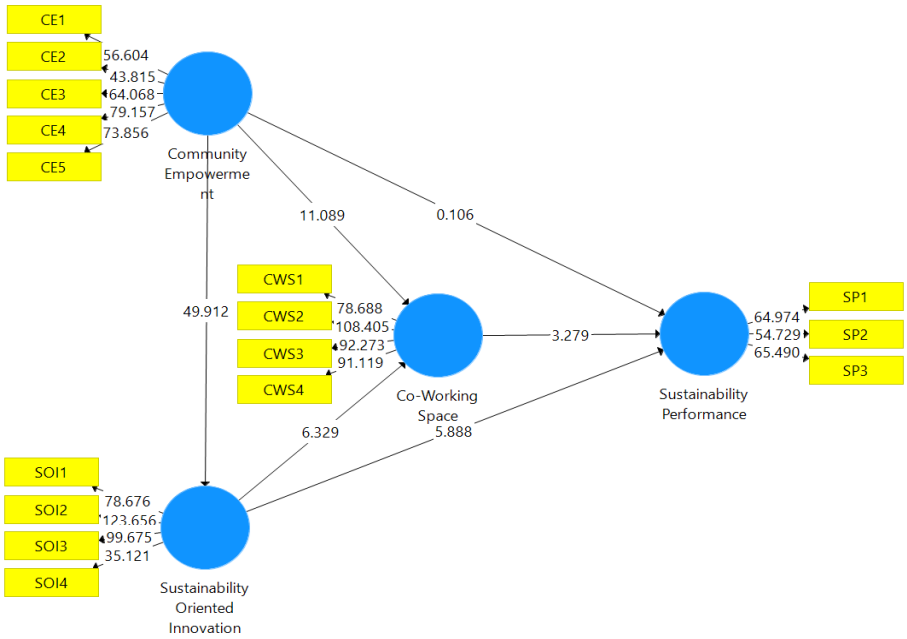

Figure 9. Full structural model path diagram (bootstrapping).

Source: Output from SmartPLS Version 3.0.

The *t*-statistic values can be obtained through the bootstrapping process in SmartPLS v3.0. The evaluation of structural measurement can be observed from the values of *R*-Square, Predictive Relevance (Q^2), and Goodness of Fit Index (GoF) for each endogenous variable as the predictive strength of the structural model. Changes

in *R*-Square values can be used to explain the influence of certain exogenous latent variables on endogenous latent variables.

(1) R-square

R-Square values represent the coefficient of determination for endogenous constructs. A higher *R*-Square value indicates a better predictive model from the proposed research model (criteria: R^2 of 0.67 = strong, 0.33 = moderate, and 0.19 = weak) (Chin and Marcoulides, 1998). The following are the results of the reliability test using SmartPLS version 3.0:

Table 23. *R*-square analysis.

Latent Variable	***R* Square**
Co-working space (*Y*)	0.898
Sustainability performance (*Z*)	0.809

Source: Data processing results from SmartPLS Version 3.0, 2022.

Based on the *R*-Square (**Table 23**), it can be observed that in substructure 1, co-working space (*Y*) is explained by the constructs of community empowerment (X_1) and sustainability-oriented innovation (X_2) at 89.8%, with the remaining 10.2% influenced by other constructs not examined in this research. The R^2 value of 0.898 is above 0.67 (the criterion for strong influence, i.e., $R^2 > 0.67$), indicating that the total influence of community empowerment (X_1) and sustainability-oriented innovation (X_2) on coworking space (*Z*) is considered strong.

While in substructure 2, it is known that the sustainability performance construct (*Y*) is explained by the constructs of community empowerment (X_1), sustainability-oriented innovation (X_2), and coworking space (*Y*) at 80.9%, with the remaining 19.1% influenced by other constructs not examined in this research. The R^2 value of 0.809 is above 0.67 (the criterion for strong influence, i.e., $R^2 > 0.67$), indicating that the total influence of community empowerment (X_1), sustainability-oriented innovation (X_2), and coworking space (*Y*) on sustainability performance (*Z*) is considered strong.

(2) Predictive relevance (Q^2)

Here is the calculation of the inner model test with Predictive Relevance (Q^2) using the formula:

$$Q^2 = 1 - (1 - R1^2)\,(1 - R2^2)$$
$$Q^2 = 1 - (1 - 0.792)\,(1 - 0.669)$$
$$Q^2 = 0.931$$

Thus, Q^2 (predictive relevance) has a value of 0.931, meaning that Q^2 is greater than 0 (zero), indicating that the model has relevant predictive value.

(3) Goodness of fit index (GoF)

Here are the results of the manually calculated GoF, which involves computing the square root of the average AVE multiplied by the average R^2:

$$\text{GOF} = \sqrt{\text{AVE average} \times \text{R square average}} = \sqrt{0.856 \times 0.853} = 0.854$$

From the above calculation, it can be seen that the GoF value is 0.854. A GoF value of 0.854 (GoF > 0.36) indicates that the model formed in this research has a strong structure or strong relationships between variables.

7.2.6. Direct influence

To assess the significance of the prediction model in structural model testing, it can be examined by the t-statistic values between exogenous variables and endogenous variables in the total effects table in the SmartPLS v3.0 output below:

Table 24. Path coefficient partial.

Latent Variable	Original Sample	Sample Mean	Standard Deviation	*T* Statistics	*P* Values
Community empowerment (X1) → Sustainability performance (Z)	0.845	0.843	0.026	32.232	0.000
Sustainability oriented innovation (X2) → Sustainability performance (Z)	0.692	0.698	0.084	8.253	0.000
Community empowerment (X1) → Co-working Space (Y)	0.936	0.935	0.012	80.025	0.000
Sustainability oriented innovation (X2) → Co-working Space (Y)	0.360	0.353	0.059	6.059	0.000
Community empowerment (X1) → Sustainability oriented innovation (X2)	0.906	0.905	0.017	53.755	0.000
Co-working Space (Y) → Sustainability performance (Z)	0.340	0.336	0.099	3.437	0.001

Source: Data processing results from SmartPLS Version 3.0, 2022.

Interconstruct relationships can be considered significant if they have *T*-Statistics values greater than 1.96 or 2.0 (Ghozali, 2017, p. 202). Based on **Table 24**, it can be observed that all exogenous variables significantly influence the endogenous variable.

7.2.7. Indirect influence

The recapitulation of the indirect effects testing of co-working space as a mediating variable is as follows:

Table 25. Path coefficient intervening.

Latent Variable	Original Sample	Sample Mean	Standard Deviation	*T* Statistics	*P* Values
Community empowerment (X1) → Co-working Space (Y) → Sustainability performance (Z)	0.207	0.211	0.068	3.056	0.002
Sustainability oriented innovation (X2) → Co-working Space (Y) → Sustainability performance (Z)	0.122	0.121	0.041	2.947	0.003

Source: Data processing results from SmartPLS Version 3.0, 2022.

From **Table 25**, it can be observed that the indirect relationship, i.e., the influence of community empowerment on sustainability performance through coworking space, has a path coefficient of 0.207 with a *t*-statistic of 3.056 and a *p*-value of 0.002. Since the t-statistic value is greater than the *t*-value (3.056 > 1.96) and the *p*-value (0.002) is less than 0.05, it is considered significant. This indicates that community empowerment has a significantly positive effect on sustainability performance through coworking space as an intervening variable. In other words, the coworking space variable can strengthen the influence of community empowerment on sustainability performance with a path coefficient of 0.207, or 20.7%.

The indirect relationship, i.e., the influence of sustainability-oriented innovation on sustainability performance through coworking space, has a path coefficient of 0.122 with a *t*-statistic of 2.947 and a *p*-value of 0.003. Since the *t*-statistic value is greater than the *t*-value (2.947 > 1.96) and the *p*-value (0.003) is less than 0.05, it is considered

significant. This indicates that sustainability-oriented innovation has a significantly positive effect on sustainability performance through coworking space as an intervening variable.

In other words, the coworking space variable can strengthen the influence of sustainability-oriented innovation on sustainability performance with a path coefficient of 0.122, or 12.2%.

7.3. Discussion of hypotheses

1) The Influence of Community Empowerment on Sustainability Performance (see **Table 26**).

H0: Community empowerment does not have a significant effect on sustainability performance.

H1: Community empowerment's significant effect on sustainability performance.

Table 26. Hypothesis 1 testing (H1).

Latent Variable	Path Coefficient	*T* Statistics	*T* table	*P* Value	H1
X1 → Z	0.845	32.232	1.96	0.000	Accepted

Source: Data processing results from SmartPLS Version 3.0, 2022.

Based on the *t*-statistic test for the variable community empowerment on sustainability performance, a value of 32.232 was obtained with a path coefficient formed being positive at 0.845. The *t*-statistic value is greater than the *t*-table value (32.232 > 1.96), and the *p*-value (0.000) is less than 0.05, yielding a significant positive result. Therefore, it can be concluded that H0 is rejected, and H1 is accepted, indicating that community empowerment has a significantly positive effect on sustainability performance. The better the community empowerment, the better the sustainability performance, thus supporting the proposed research hypothesis.

Specifically, in this study, it is identified that the crucial dimension to be considered within the variable of community empowerment is confidence. This pertains to the level of belief among business actors in community empowerment activities through coworking spaces. The evaluation results indicate that the more business actors recognize the benefits of coworking spaces, the higher the sustainable business performance will be.

At the organizational level, the empowerment process may involve collective decision making and shared leadership. Empowerment processes at the community level may encompass collective actions to access government and other community resources. At the community level, empowerment refers to collective actions to enhance the quality of life within the community and connections between community organizations. Organizational and community empowerment, however, is not merely a collection of empowered individuals (Perkins and Zimmerman, 1995).

Empowerment indicates that participation with others to achieve goals, efforts to gain access to resources, and a critical understanding of the socio-political environment are fundamental components of the construct. At the organizational analysis level, empowerment entails organizational processes and structures that enhance member participation and contribute to goal attainment for the organization.

Capacity enhancement is a fundamental requirement for making effective choices. The level of empowerment varies with situations and depends on the availability, utilization, and achievement of choices. Empowerment processes include capacity and skills, local resource management, and participation in decision making. Empowered outcomes for individuals may include perceived control over specific situations and resource mobilization skills.

Empowered outcomes refer to the operationalization of empowerment that allows studying the consequences of the empowerment process. Empowerment involves both processes and outcomes, indicating that actions, activities, or structures can empower and that the results of these processes yield empowered levels (Zimmerman, 2000). Community level empowerment outcomes may include evidence of pluralism, the existence of organizational coalitions, and accessible community resources (Ahmad and Abu Talib, 2016). The outputs of the empowerment process and outcomes vary because there is no single standard that can fully capture its meaning in all contexts or populations (Rappaport, 2014; Rothman et al., 2019).

2) The Influence of Sustainability-Oriented Innovation on Sustainability Performance (see **Table 27**).

H0: Sustainability-oriented innovation does not have a significant effect on sustainability performance.

H1: Sustainability-oriented innovation has a significant effect on sustainability performance.

Table 27. Hypothesis 2 Testing (H2).

Latent Variable	Path Coefficient	*T* Statistics	*T* table	*P* Value	H1
X2 → Z	0.692	8.253	1.96	0.000	Accepted

Source: Data processing results from SmartPLS Version 3.0, 2022.

Based on the test, the *t*-statistic value for the variable sustainability-oriented innovation on sustainability performance is 8.253, with a positive path coefficient of 0.692. The *t*-statistic value is greater than the *t*-table value (8.253 > 1.96), and the *p*-value (0.000) is less than 0.05, yielding a significant positive result. Therefore, it can be concluded that H_0 is rejected and H_1 is accepted, indicating that sustainability-oriented innovation has a significantly positive effect on sustainability performance. The better the sustainability-oriented innovation, the better the sustainability performance, thus supporting the proposed research hypothesis.

In this study, it is identified that a crucial dimension to be considered in sustainability-oriented innovation is process innovation, specifically for improving business management capabilities. The test results indicate that businesses should always pay attention to how each innovation creation process will enhance sustainable performance for each effort undertaken.

In this context, the collaborative strength of Bandung City as a collaborative network of economic actors in the city remains unexplored. The evolution from fragmented individual strength to collaborative strength through networking is expected to have significant implications for the empowerment of the Bandung city community. The role of business actors through their collaborative actions is believed to influence the creative community, society, and the government.

3) The Influence of Community Empowerment on Co-Working Space (see **Table 28**)

H0: Community empowerment has no significant effect on co-working space.

H1: Community empowerment significant effect on co-working space.

Table 28. Hypothesis 3 testing (H3).

Latent variable	Path Coefficient	*T* Statistics	*T* table	*P* Value	H1
X1 → Y	0.936	80.025	1.96	0.000	Accepted

Source: Data processing results from SmartPLS Version 3.0, 2022.

Based on the test, the *t*-statistic value for the variable community empowerment on Coworking Space is 80.025, with a positive path coefficient of 0.936. The *t*-statistic value is greater than the *t*-table value (80.025 > 1.96), and the *p*-value (0.000) is less than 0.05, yielding a significant positive result. Therefore, H_0 is rejected and H_1 is accepted, indicating that community empowerment has a significantly positive effect on Coworking Space. The better the community empowerment, the better the Coworking Space, supporting the proposed research hypothesis.

In this study, it is essential to note the motivation for creative thinking capabilities within the coworking space, which serves as a facility for community empowerment in Bandung City. Coworking Space is implemented to be a solution to their problems, with the ultimate result of achieving their goals and visions, measured by three components: people, process, and technology (Bhojaraju, 2005).

The potential for community empowerment for economic improvement also requires institutional and physical infrastructure to facilitate creative individuals in creating, developing, and marketing their creative products. Human resources and social capital in the form of social behavior patterns are crucial to community empowerment. Moreover, the importance of a city environment that supports the creative activities of its community by providing what they need.

In practice, Coworking Space has many benefits for companies. Many companies even use Coworking Space as the central base of their operations. The benefits of Coworking Space include reducing the loss of intellectual capital, making rapid and easy improvements to increase productivity, enhancing performance through personal development and community empowerment, and driving competitiveness in market strategies. The presence of Coworking Space can enhance skills by learning from the surrounding environment. Additionally, Coworking Space is crucial for the sustainability of a company's business processes (Inigo and Albareda, 2019).

4) The Influence of Sustainability-Oriented Innovation on Co-Working Space (see **Table 29**).

H0: Sustainability-oriented innovation does not have a significant effect on co-working space.

H1: Sustainability-oriented innovation significant effect on co-working space.

Table 29. Hypothesis 4 testing (H4).

Latent variable	Path Coefficient	*T* Statistics	*T* table	*P* Value	H1
X2 → Y	0.360	6.059	1.96	0.000	Accepted

Source: Data processing results from SmartPLS Version 3.0, 2022.

Based on the test, the *t*-statistic value for the variable sustainability-oriented innovation in coworking spaces is 6.059, with a positive path coefficient at 0.360. The *t*-statistic value is greater than the *t*-table (6.059 > 1.96), and the *p*-value (0.000) is less than 0.05, indicating a positive and significant effect. Thus, H_0 is rejected and H_1 is accepted, meaning that sustainability-oriented innovation has a significant positive effect on coworking space. A better sustainability-oriented innovation leads to a better coworking space, supporting the research hypothesis.

Although human resources and the availability of supporting facilities and infrastructure play a crucial role in community empowerment, fostering creative behavior in the economy of a city requires simultaneous support from all elements, including the government, economic actors, and the community (Aranha et al., 2017). This is further supported by the existence of Coworking Space programs. Business actors in Bandung are required to enhance their knowledge and understanding related to the utilization of shared workspaces.

Determining the role of entrepreneurs in contributing to the idea and innovation system, specifically, and the sustainable socio-economic system in general, is crucial. Innovation has been found to influence company performance (Slater and Narver, 1994), but other studies (Indriani et al., 2020; Jaworski and Kohli, 1993) found mixed results.

Entrepreneurial self-efficacy was found to have a positive and significant role in the success of digital entrepreneurship, while the relationship with innovation was not significant. Similar findings by other studies (Ayuso et al., 2006; Baker et al., 2020; Zaheer et al., 2019) indicated that managerial factors significantly contribute to business success, but market, financial, and customer satisfaction factors showed weaker relationships.

Creative enterprises relying on unique and innovative ideas should be aware that developing and managing valuable knowledge and skills is essential for competitiveness. This knowledge is not only obtained internally but also through social interaction with the community, customers, competitors, government, and other stakeholders. Therefore, creativity, innovation, intellectual capital, social capital, and technology are factors influencing business sustainability.

5) The Influence of Community Empowerment on Sustainability-Oriented Innovation (see **Table 30**).

H0: Community empowerment has no significant effect on sustainability-oriented innovation.

H1: Community empowerment's significant effect on sustainability-oriented innovation.

Table 30. Hypothesis 5 testing (H5).

Latent Variable	Path Coefficient	*T* Statistics	*T* table	*P* Value	H1
X1 → X2	0.906	53.755	1.96	0.000	Accepted

Source: Data processing results from SmartPLS Version 3.0, 2022.

Based on the test, the *t*-statistic value for the variable community empowerment on sustainability-oriented innovation is 53.755, with a positive path coefficient of 0.906. The *t*-statistic value is greater than the *t*-table (53.755 > 1.96), and the *p*-value

(0.000) is less than 0.05, indicating a positive and significant effect. Therefore, H_0 is rejected and H_1 is accepted, meaning that community empowerment has a significant positive effect on sustainability-oriented innovation. Better community empowerment leads to better sustainability-oriented innovation, supporting the research hypothesis.

From open interviews and the researchers' observations, it is evident that the availability of coworking spaces for entrepreneurs in Bandung is crucial in shaping the innovation process, both in business engagement and the development or creation of new businesses. An unlimited network is essential for business development. Entrepreneurs utilizing coworking spaces in Bandung are predominantly mature women willing to take risks, digitally literate, and capable of innovating in business operations. Community empowerment through coworking spaces is a fundamental driver of the innovation system, particularly in behaviors related to digitization and assessing opportunities for sustainable performance (Nwaiwu, 2018).

Several researchers emphasize the critical role of community empowerment in providing facilities for innovation, offering shared economic potential, overcoming institutional barriers, and achieving institutional changes (Geissinger et al., 2019). Coworking spaces also facilitate the transformation of stakeholder interaction patterns, strengthening new approaches to compete in economic and business activities (Suseno et al., 2018). The current challenges are increasingly complex due to changes in various aspects of life, influencing every side.

Research on the role and interaction of stakeholders in community empowerment for broad economic enhancement involved in utilizing coworking spaces suggests further investigation. Such an approach will advance understanding the interconnectedness of entrepreneurial processes with dimensions of the socio-economic system, especially in the context of global societal transitions (Rebernik and Hojnik, 2017). This signifies how a sustainable socio-economic system operates.

6) The Effect of Co-Working Space on Sustainability Performance (see **Table 31**).

H0: Co-working space does not have a significant effect on sustainability performance.

H1: Co-working space's significant effect on sustainability performance.

Table 31. Hypothesis 6 testing (H6).

Latent Variable	Path Coefficient	*T* Statistics	*T* table	*P* Value	H1
Y → Z	0.340	3.437	1.96	0.001	Accepted

Source: Data processing results from SmartPLS Version 3.0, 2022.

Based on the test, the *t*-statistic value for the variable coworking space on sustainability performance is 3.437, with a positive path coefficient of 0.340. The *t*-statistic value is greater than the *t*-table (3.437 > 1.96), and the *p*-value (0.001) is less than 0.05, indicating a positive and significant effect. Therefore, H0 is rejected and H1 is accepted, meaning that coworking space has a significant positive effect on sustainability performance. A better coworking space leads to better sustainability performance, supporting the research hypothesis.

Through interviews and direct observations, the researcher notes that the improvement of urban aspects such as co-working spaces contributes to economic and social activities. Creating an inspirational atmosphere in Bandung requires support in

the form of psychological and physical environments where people can maximize their creativity. The psychological environment is related to social attitudes, such as support and tolerance for creativity from the city government and the community, in achieving successful community empowerment. The physical environment is related to facilities or spaces that accommodate human creative activities. Coworking spaces serve as a stage and container where activities take place and evolve. An inspirational coworking space can influence the human spatial experience, making people feel comfortable and motivated to express their creative ideas.

In managing the business processes of an organization, innovation must encompass all levels, from strategy to operations (Heavin and Power, 2018) and all layers (resources, activities, and actors) (Pagani and Pardo, 2017). Marketing is also a determining factor in competition, and from this, the social aspect is developed in reference to ongoing innovations. This is closely related to innovation capability and is based on organizational strategy. Transformation is a process that is unavoidable and, on the one hand, can be seen as a reactive step; on the other hand, it is a voluntary process (Kotarba, 2018).

The existence of coworking spaces in entrepreneurial activities enhances and develops businesses for innovation promotion, job creation, and increased productivity, both socially and economically. This becomes a priority for governments in various cities, especially in Bandung, to pay special attention to community empowerment through co-working spaces. This is reinforced by research conducted by Wijayanti and Sundiman (2017), which state that to achieve good performance in the current knowledge era, management needs to treat knowledge owned by all entrepreneurs as an asset (Kosasih and Budiani, 2008).

8. Novelty

Based on the research findings, the novelty in this study can be summarized as follows: the involvement of co-working space as an intervening variable in community empowerment and sustainability-oriented innovation toward sustainability performance.

Utilizing coworking space as the central hub of a company is a strategy to transform intellectual assets, including information, productivity, new values, and high competitiveness. The presence of a company's coworking space can enhance skills by learning from the surrounding environment, making ideas, creativity, and innovation the "life" of organizational activities. This capability strengthens the influence of community empowerment and sustainability-oriented innovation on sustainability performance within the organization.

A coworking space serves as a management facility used to support the achievement of organizational goals and objectives, showcasing the competitive advantages of each company. This can lead to the creation of excellent company performance. Through coworking space, the knowledge possessed by the organization can be identified, contributing to the enhancement of member performance and the generation of innovation and new knowledge. To foster innovation and new knowledge within an organization, a collaborative system is essential. This involves a process that creates a specific cycle, accompanied by media and the transfer of

knowledge to others. By effectively implementing coworking space within an organization, it will continuously improve itself and produce creative and innovative works in response to the ever-changing environment.

9. Research limitations

The researcher acknowledges that this study has certain limitations, suggesting the need for further research to enhance its quality. The limitations include: (1) Numerous other factors could potentially influence sustainable performance. The variables in this study do not explain the overall dynamics of the organization. For instance, concerning the topic of competitive advantage, which is predicted to impact organizational management and behavior in supporting organizational competitiveness; (2) The data analysis in this research is based on information provided by the company's representatives, namely the employees. The study does not delve deeper into the information provided by each leader, thus tending to have the weakness of not fully representing the overall organizational situation; and (3) The research does not capture the opinions of business actors as a whole in the city of Bandung, each having different conditions and situations in various areas. The study only focuses on several districts representing the city of Bandung. Each analytical unit is observed only during the survey, leading to a tendency for less specific research results.

10. Conclusion

Based on the research results related to the influence of community empowerment and sustainability-oriented innovation on sustainability performance through co-working spaces, several conclusions can be drawn as follows:

1) Community empowerment has a significant positive influence on sustainability performance, where the better the community empowerment, the better the sustainability performance, with a contribution of 84.5%.
2) Sustainability-oriented innovation has a significant positive influence on sustainability performance, where the better the sustainability-oriented innovation, the better the sustainability performance, with a contribution of 69.2%.
3) Community empowerment has a significant positive influence on the coworking space, where the better the community empowerment, the better the coworking space, with a contribution of 93.6%.
4) Sustainability-oriented innovation has a significant positive influence on coworking space, where the better the sustainability-oriented innovation, the better the coworking space, with a contribution of 36%.
5) Community empowerment has a significant positive influence on the sustainability-oriented innovation, where the better the community empowerment, the better the sustainability-oriented innovation, with a contribution of 90.6%.
6) Coworking space has a significant positive influence on sustainability performance, where the better the coworking space, the better the sustainability performance, with a contribution of 34%.

7) Community empowerment has a significant positive influence on sustainability performance through coworking space, with a contribution of 20.7%.
8) Sustainability-oriented innovation has a significant positive influence on sustainability performance through coworking space, with a contribution of 12.2%.

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Appendix A

Research questionnaire

Title: The Influence of Community Empowerment and Sustainability-Oriented Innovation on Sustainability Performance Through Co-Working Space

1. Charging instructions

1) This questionnaire is solely for academic purposes; please answer it honestly.
2) Read and answer all questions carefully, and (somebody) missed some queries.
3) You are expected to answer each question in this questionnaire according to your experience.
4) For each question, answer choices are provided; you have to tick (√) the answer you want and are expected to choose only one answer.

A. Respondent Profile

1. Name :
2. Gender : ( ) Male ( ) Female
3. Age : ( ) 20–30 years ( ) 40–50 years
   ( ) 30–40 years ( ) > 50 years
4. Monthly income: ( ) IDR 1,000,000–IDR 5,000,000
   ( ) IDR 5,000,000–IDR 10,000,000
   ( ) > IDR 10,000,000
5. Last Education : ( ) Junior High School ( ) Vocational Bachelor/Bachelor
   ( ) Senior High School ( ) Masters
   ( ) 3-year diploma ( ) PhD

B. Company Profile

General	
Business Name	
Long Business Establishment	
Origin of CWS District	
Number of Branches	
Number of employees	
Type of product sold	
Source of capital	Personal ( ) Loans ( ) Shared Capital ( )
Utilize non-bank financial resources (co-operatives, pawnshops, leasing, and others)	Yes No ( )
Average sales results in one month	
Utilization of technology in business systems	Yes No ( ) ① Hardware ② Software - - - - - -

2. Statement

Answer based on the actual conditions of the business that you are managing or based on the experience you have after participating in CWS activities

CHARGING INSTRUCTIONS

a) Give a sign **Checklist (√)** in one of the categories that best supports your answer.
b) Each question only requires one answer.
c) Answer Description:
   1. Very low;
   2. Low;
   3. Enough;
   4. Tall;

Very high;

No	Statement	Answer Choices				
		1	**2**	**3**	**4**	**5**
Community Empowerment						
Confident		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
1	Increased skills and expertise					
2	Increased knowledge					
3	Increased self-confidence					
4	Level of confidence to develop					
Inclusive		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
5	Awareness and ability to blend in and be accepted by society					
6	Opening up wider opportunities and opportunities					
7	Awareness and ability to uphold equality within the group					
Organized		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
8	Awareness of mutual openness between members					
9	A sense of togetherness between members					
10	Ability to collaborate between members					
Co-operative		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
11	Ability to build positive relationships between cross-groups					
12	Awareness in identifying each message received					
13	Ability to maintain partnership relationships					
14	Awareness to foster a spirit of cooperation					
Influential		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
15	Involvement of others as part of decision-making					
16	Togetherness to provide mutual services					
17	Facilitate community strengthening in every activity.					
Co-Working Space						
Space Creativity		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
18	Encouragement to have the ability to think creatively					
19	Encouragement to be cheerful					
20	The drive to generate good ideas					
Social climate		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
21	Encouragement to build an atmosphere whole of cooperation with fellow members					
22	Encouragement to create an excellent, friendly atmosphere					
23	The level of integrity of each member					

CHARGING INSTRUCTIONS

a) Give a sign **Checklist (√)** in one of the categories that best supports your answer.
b) Each question only requires one answer.
c) Answer Description:
   1. Very low;
   2. Low;
   3. Enough;
   4. Tall;

Very high;

No	Statement	Answer Choices				
		1	**2**	**3**	**4**	**5**
Co-Working Space						
Network size		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
24	Level of knowledge exchange					
25	The extent of friendship expansion					
26	Level of direct involvement in activities					
Centrality		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
27	The level of distribution and acceptance of important news					
28	The level of acceptance of information that is useful for business					
29	Frequency of discussions related to the latest business information					
Sustainability Oriented Innovation						
Product Innovation		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
30	Ability to improve product quality					
31	Product development capabilities					
32	Ability to create attractive product designs					
33	Awareness of using environmentally friendly packaging					
Process Innovation		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
34	Increasing business management capabilities					
35	Increased business effectiveness and efficiency					
36	Level of business network expansion					
Organizational Innovation		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
37	Support product and service innovation					
38	Ability to carry out R&D (research and development) of products and services					
39	Ability to focus on business models and business concepts					
Technological Innovation		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
40	Use of digital platforms in business					
41	The level of use of technological infrastructure in business systems					
42	Level of adaptation to technological developments					
Sustainability Performance						
Economic Performance		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
43	Increased business profits					
44	Increased sales volume					
45	Expansion of market share					
46	Reducing production costs					

CHARGING INSTRUCTIONS

a) Give a sign **Checklist (√)** in one of the categories that best supports your answer.
b) Each question only requires one answer.
c) Answer Description:
   1. Very low;
   2. Low;
   3. Enough;
   4. Tall;

Very high;

No	Statement	Answer Choices				
		1	**2**	**3**	**4**	**5**
Sustainability Performance						
Environmental Performance		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
47	Increased ability to create a clean, conducive business environment					
48	Strengthening awareness in minimizing business waste					
49	Increased ability to use energy resources more effectively					
50	Increasing the proportion of environmentally friendly/recycled materials used in product packaging					
Social Performance		**Very low**	**Low**	**Enough**	**Tall**	**Very high**
51	Support for improving the quality of life of the surrounding community					
52	Support for improving safety and health through activities carried out at CWS					
53	Increased job satisfaction through activities carried out at CWS					
54	Strengthening community and stakeholder relations through activities carried out at CWS					

Thank you to the respondents who were willing to take the time to complete this research questionnaire.

Appendix B

Validity And Reliability Test Appendix

Validity Test of Community Empowerment Variables (CE):

CE1:

Correlations

		CE1.1	CE1.2	CE1.3	CE1.4	CE1.Total
CE1.1	Pearson Correlation	1	0.872**	0.807**	0.819**	0.922**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	30	30	30	30	30
CE1.2	Pearson Correlation	0.872**	1	0.890**	0.897**	0.966**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	30	30	30	30	30
CE1.3	Pearson Correlation	0.807**	0.890**	1	0.890**	0.947**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000
	N	30	30	30	30	30
CE1.4	Pearson Correlation	0.819**	0.897**	0.890**	1	0.953**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	30	30	30	30	30
CE1.Total	Pearson Correlation	0.922**	0.966**	0.947**	0.953**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

CE2:

Correlations

		CE2.1	CE2.2	CE2.3	CE2.Total
CE2.1	Pearson Correlation	1	0.836**	0.830**	0.947**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	30	30	30	30
CE2.2	Pearson Correlation	0.836**	1	0.780**	0.928**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	30	30	30	30
CE2.3	Pearson Correlation	0.830**	0.780**	1	0.933**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	30	30	30	30
CE2.Total	Pearson Correlation	0.947**	0.928**	0.933**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

CE3:

Correlations					
		CE3.1	**CE3.2**	**CE3.3**	**CE3.Total**
CE3.1	Pearson Correlation	1	0.784**	0.845**	0.933**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	30	30	30	30
CE3.2	Pearson Correlation	0.784**	1	0.790**	0.925**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	30	30	30	30
CE3.3	Pearson Correlation	0.845**	0.790**	1	0.942**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	30	30	30	30
CE3.Total	Pearson Correlation	0.933**	0.925**	0.942**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

CE4:

Correlations						
		CE4.1	**CE4.2**	**CE4.3**	**CE4.4**	**CE4.Total**
CE4.1	Pearson Correlation	1	0.793**	0.910**	0.912**	0.963**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	30	30	30	30	30
CE4.2	Pearson Correlation	0.793**	1	0.829**	0.714**	0.889**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	30	30	30	30	30
CE4.3	Pearson Correlation	0.910**	0.829**	1	0.887**	0.966**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000
	N	30	30	30	30	30
CE4.4	Pearson Correlation	0.912**	0.714**	0.887**	1	0.936**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	30	30	30	30	30
CE4.Total	Pearson Correlation	0.963**	0.889**	0.966**	0.936**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

CE5:

Correlations					
		CE5.1	**CE5.2**	**CE5.3**	**CE5.Total**
CE5.1	Pearson Correlation	1	0.841**	0.768**	0.932**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	30	30	30	30

Correlations					
		CE5.1	**CE5.2**	**CE5.3**	**CE5.Total**
CE5.2	Pearson Correlation	0.841**	1	0.838**	0.950**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	30	30	30	30
CE5.3	Pearson Correlation	0.768**	0.838**	1	0.927**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	30	30	30	30
CE5.Total	Pearson Correlation	0.932**	0.950**	0.927**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Validity Test of the Sustainability Oriented Innovation Variable (SOI):

SOI1:

Correlations						
		SOI1.1	**SOI1.2**	**SOI1.3**	**SOI1.4**	**SOI1.Total**
SOI1.1	Pearson Correlation	1	0.913**	0.942**	0.711**	0.958**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	30	30	30	30	30
SOI1.2	Pearson Correlation	0.913**	1	0.913**	0.669**	0.938**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	30	30	30	30	30
SOI1.3	Pearson Correlation	0.942**	0.913**	1	0.711**	0.958**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000
	N	30	30	30	30	30
SOI1.4	Pearson Correlation	0.711**	0.669**	0.711**	1	0.848**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	30	30	30	30	30
SOI1.Total	Pearson Correlation	0.958**	0.938**	0.958**	0.848**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

SOI2:

Correlations					
		SOI2.1	**SOI2.2**	**SOI2.3**	**SOI2.Total**
SOI2.1	Pearson Correlation	1	0.863**	0.823**	0.944**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	30	30	30	30
SOI2.2	Pearson Correlation	0.863**	1	0.850**	0.953**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	30	30	30	30

Correlations					
		SOI2.1	**SOI2.2**	**SOI2.3**	**SOI2.Total**
SOI2.3	Pearson Correlation	0.823**	0.850**	1	0.943**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	30	30	30	30
SOI2.Total	Pearson Correlation	0.944**	0.953**	0.943**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

SOI3:

Correlations					
		SOI3.1	**SOI3.2**	**SOI3.3**	**SOI3.Total**
SOI3.1	Pearson Correlation	1	0.859**	0.863**	0.950**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	30	30	30	30
SOI3.2	Pearson Correlation	0.859**	1	0.878**	0.957**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	30	30	30	30
SOI3.3	Pearson Correlation	0.863**	0.878**	1	0.956**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	30	30	30	30
SOI3.Total	Pearson Correlation	0.950**	0.957**	0.956**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

SOI4:

Correlations					
		SOI4.1	**SOI4.2**	**SOI4.3**	**SOI4.Total**
SOI4.1	Pearson Correlation	1	0.928**	0.872**	0.972**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	30	30	30	30
SOI4.2	Pearson Correlation	0.928**	1	0.851**	0.965**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	30	30	30	30
SOI4.3	Pearson Correlation	0.872**	0.851**	1	0.944**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	30	30	30	30
SOI4.Total	Pearson Correlation	0.972**	0.965**	0.944**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Co-Working Space Variable Validity Test (CWS):

CWS1:

Correlations					
		CWS1.1	**CWS1.2**	**CWS1.3**	**CWS1.Total**
CWS1.1	Pearson Correlation	1	0.900**	0.878**	0.971**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	30	30	30	30
CWS1.2	Pearson Correlation	0.900**	1	0.817**	0.950**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	30	30	30	30
CWS1.3	Pearson Correlation	0.878**	0.817**	1	0.941**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	30	30	30	30
CWS1.Total	Pearson Correlation	0.971**	0.950**	0.941**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

CWS2:

Correlations					
		CWS2.1	**CWS2.2**	**CWS2.3**	**CWS2.Total**
CWS2.1	Pearson Correlation	1	0.850**	0.768**	0.952**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	30	30	30	30
CWS2.2	Pearson Correlation	0.850**	1	0.644**	0.907**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	30	30	30	30
CWS2.3	Pearson Correlation	0.768**	0.644**	1	0.884**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	30	30	30	30
CWS2.Total	Pearson Correlation	0.952**	0.907**	0.884**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

CWS3:

Correlations					
		CWS3.1	**CWS3.2**	**CWS3.3**	**CWS3.Total**
CWS3.1	Pearson Correlation	1	0.894**	0.533**	0.903**
	Sig. (2-tailed)		0.000	0.002	0.000
	N	30	30	30	30
CWS3.2	Pearson Correlation	0.894**	1	0.627**	0.941**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	30	30	30	30

Correlations					
		CWS3.1	**CWS3.2**	**CWS3.3**	**CWS3.Total**
CWS3.3	Pearson Correlation	0.533**	0.627**	1	0.822**
	Sig. (2-tailed)	0.002	0.000		0.000
	N	30	30	30	30
CWS3.Total	Pearson Correlation	0.903**	0.941**	0.822**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

CWS4:

Correlations					
		CWS4.1	**CWS4.2**	**CWS4.3**	**CWS4.Total**
CWS4.1	Pearson Correlation	1	0.828**	0.728**	0.910**
	Sig. (2-tailed)		0.000	0.000	0.000
	N	30	30	30	30
CWS4.2	Pearson Correlation	0.828**	1	0.873**	0.964**
	Sig. (2-tailed)	0.000		0.000	0.000
	N	30	30	30	30
CWS4.3	Pearson Correlation	0.728**	0.873**	1	0.930**
	Sig. (2-tailed)	0.000	0.000		0.000
	N	30	30	30	30
CWS4.Total	Pearson Correlation	0.910**	0.964**	0.930**	1
	Sig. (2-tailed)	0.000	0.000	0.000	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Validity Test of the Sustainability Performance Variable (SP):

SP1:

Correlations						
		SP1.1	**SP1.2**	**SP1.3**	**SP1.4**	**SP1.Total**
SP1.1	Pearson Correlation	1	0.954**	0.855**	0.740**	0.948**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	30	30	30	30	30
SP1.2	Pearson Correlation	0.954**	1	0.904**	0.722**	0.956**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	30	30	30	30	30
SP1.3	Pearson Correlation	0.855**	0.904**	1	0.816**	0.956**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000
	N	30	30	30	30	30
SP1.4	Pearson Correlation	0.740**	0.722**	0.816**	1	0.879**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	30	30	30	30	30

Correlations						
		SP1.1	**SP1.2**	**SP1.3**	**SP1.4**	**SP1.Total**
SP1.Total	Pearson Correlation	0.948**	0.956**	0.956**	0.879**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

SP2:

Correlations						
		SP2.1	**SP2.2**	**SP2.3**	**SP2.4**	**SP2.Total**
SP2.1	Pearson Correlation	1	0.940**	0.943**	0.501**	0.936**
	Sig. (2-tailed)		0.000	0.000	0.005	0.000
	N	30	30	30	30	30
SP2.2	Pearson Correlation	0.940**	1	0.943**	0.501**	0.936**
	Sig. (2-tailed)	0.000		0.000	0.005	0.000
	N	30	30	30	30	30
SP2.3	Pearson Correlation	0.943**	0.943**	1	0.491**	0.933**
	Sig. (2-tailed)	0.000	0.000		0.006	0.000
	N	30	30	30	30	30
SP2.4	Pearson Correlation	0.501**	0.501**	0.491**	1	0.744**
	Sig. (2-tailed)	0.005	0.005	0.006		0.000
	N	30	30	30	30	30
SP2.Total	Pearson Correlation	0.936**	0.936**	0.933**	0.744**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

SP3:

Correlations						
		SP3.1	**SP3.2**	**SP3.3**	**SP3.4**	**SP3.Total**
SP3.1	Pearson Correlation	1	0.807**	0.908**	0.898**	0.954**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000
	N	30	30	30	30	30
SP3.2	Pearson Correlation	0.807**	1	0.839**	0.792**	0.910**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000
	N	30	30	30	30	30
SP3.3	Pearson Correlation	0.908**	0.839**	1	0.919**	0.968**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000
	N	30	30	30	30	30
SP3.4	Pearson Correlation	0.898**	0.792**	0.919**	1	0.953**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000
	N	30	30	30	30	30

Correlations						
		SP3.1	**SP3.2**	**SP3.3**	**SP3.4**	**SP3.Total**
SP3.Total	Pearson Correlation	0.954**	0.910**	0.968**	0.953**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

Reliability Test:

Community Empowerment (X1):

Case Processing Summary			
		N	**%**
Cases	Valid	30	100.0
	Excluded[a]	0	0.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha	N of Items
0.980	17

Item-Total Statistics				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**
X1.1	67.80	120.786	0.866	0.978
X1.2	67.60	119.697	0.891	0.978
X1.3	67.77	120.185	0.891	0.978
X1.4	67.60	119.628	0.895	0.978
X1.5	67.77	121.151	0.833	0.979
X1.6	67.77	120.806	0.853	0.978
X1.7	67.80	120.441	0.795	0.979
X1.8	67.97	121.964	0.882	0.978
X1.9	67.90	121.472	0.771	0.979
X1.10	67.73	119.926	0.897	0.978
X1.11	67.90	121.472	0.870	0.978
X1.12	67.93	122.133	0.793	0.979
X1.13	67.87	121.016	0.881	0.978
X1.14	67.93	121.375	0.840	0.979
X1.15	68.00	122.069	0.743	0.980
X1.16	67.93	121.582	0.883	0.978
X1.17	67.80	120.028	0.913	0.978

Sustainability Oriented Innovation (X2):

Reliability Statistics	
Cronbach's Alpha	N of Items
0.969	13

Item-Total Statistics				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**
X2.1	49.87	69.499	0.850	0.966
X2.2	49.90	69.610	0.856	0.966
X2.3	49.87	69.223	0.873	0.965
X2.4	50.17	69.661	0.698	0.970
X2.5	49.80	68.786	0.883	0.965
X2.6	49.83	69.385	0.846	0.966
X2.7	49.77	68.323	0.862	0.966
X2.8	49.80	68.924	0.872	0.965
X2.9	49.93	69.651	0.770	0.968
X2.10	49.83	68.971	0.880	0.965
X2.11	50.17	70.006	0.749	0.968
X2.12	50.13	68.947	0.807	0.967
X2.13	50.13	69.223	0.831	0.966

Co-Working Space (Y):

Reliability Statistics	
Cronbach's Alpha	N of Items
0.974	12

Item-Total Statistics				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**
Y1	46.73	60.685	0.917	0.970
Y2	46.80	60.717	0.921	0.970
Y3	46.83	61.316	0.876	0.971
Y4	46.97	61.895	0.868	0.971
Y5	46.83	60.833	0.918	0.970
Y6	47.00	61.931	0.781	0.973
Y7	46.93	61.651	0.876	0.971
Y8	46.87	60.809	0.928	0.970
Y9	47.27	63.857	0.609	0.978
Y10	47.07	62.478	0.814	0.972
Y11	46.90	60.990	0.922	0.970
Y12	47.00	61.310	0.881	0.971

Sustainability Performance (Z):

Reliability Statistics	
Cronbach's Alpha	N of Items
0.958	12

Item-Total Statistics				
	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item Deleted**
Z1	45.00	54.276	0.817	0.954
Z2	44.93	53.582	0.848	0.953
Z3	44.93	53.306	0.872	0.952
Z4	45.20	54.441	0.750	0.956
Z5	44.93	54.064	0.908	0.952
Z6	44.93	54.202	0.895	0.952
Z7	45.00	54.828	0.874	0.953
Z8	45.47	57.706	0.405	0.969
Z9	45.03	55.275	0.794	0.955
Z10	45.13	54.947	0.791	0.955
Z11	45.00	54.828	0.874	0.953
Z12	44.90	54.507	0.849	0.953

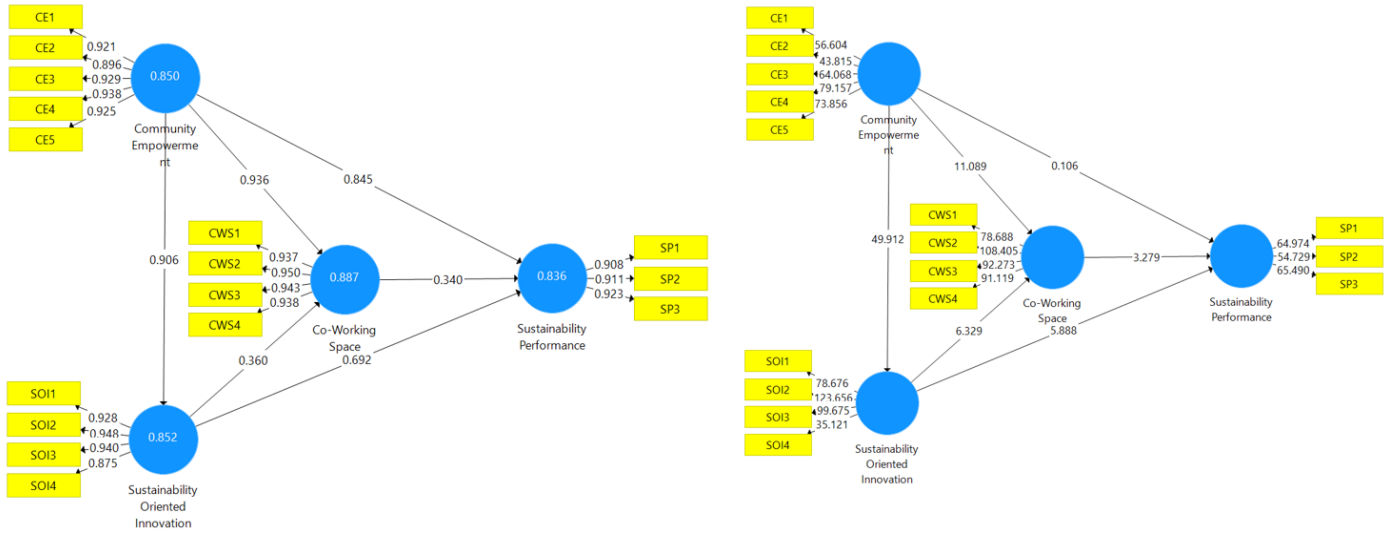

Figure B1. SmartPLS output attachment.

Construct Crossvalidated Redundancy:

Construct Crossvalidated Redundancy			
Total			
	SSO	**SSE**	**Q^2 (= 1-SSE/SSO)**
Co-Working Space	808.000	168.217	0.792
Community Empowerment	1010.000	1010.000	
Sustainability Oriented Innovation	808.000	247.693	0.693
Sustainability Performance	606.000	200.755	0.669

Total Effects:

Total Effects					
Mean, STDEV, *T*-Values, *P*-Values					
	Original Sample (O)	**Sample Mean (M)**	**Standard Deviation (STDEV)**	**T Statistics (|O/STDEV|)**	**P Values**
Co-Working Space → Sustainability Performance	0.340	0.336	0.099	3.437	0.001
Community Empowerment → Co-Working Space	0.936	0.935	0.012	80.025	0.000
Community Empowerment → Sustainability Oriented Innovation	0.906	0.905	0.017	53.755	0.000
Community Empowerment → Sustainability Performance	0.845	0.843	0.026	32.232	0.000
Sustainability Oriented Innovation → Co-Working Space	0.360	0.353	0.059	6.059	0.000
Sustainability Oriented Innovation → Sustainability Performance	0.692	0.698	0.084	8.253	0.000

Specific Indirect Effects:

Specific Indirect Effects					
Mean, STDEV, *T*-Values, *P*-Values					
	Original Sample (O)	**Sample Mean (M)**	**Standard Deviation (STDEV)**	**T Statistics (|O/STDEV|)**	**P Values**
Community Empowerment → Sustainability Oriented Innovation → Co-Working Space	0.326	0.319	0.053	6.136	0.000
Community Empowerment → Co-Working Space → Sustainability Performance	0.207	0.207	0.066	3.126	0.002
Sustainability Oriented Innovation → Co-Working Space → Sustainability Performance	0.122	0.118	0.039	3.173	0.002
Community Empowerment → Sustainability Oriented Innovation → Co-Working Space → Sustainability Performance	0.111	0.107	0.035	3.173	0.002
Community Empowerment → Sustainability Oriented Innovation → Sustainability Performance	0.516	0.526	0.086	5.997	0.000

Outer Loadings				
	Co-Working Space	**Community Empowerment**	**Sustainability Oriented Innovation**	**Sustainability Performance**
CE1		0.921		
CE2		0.896		
CE3		0.929		
CE4		0.938		
CE5		0.925		
CWS1	0.937			
CWS2	0.950			
CWS3	0.943			
CWS4	0.938			
SOI1			0.928	

Outer Loadings				
	Co-Working Space	**Community Empowerment**	**Sustainability Oriented Innovation**	**Sustainability Performance**
SOI2			0.948	
SOI3			0.940	
SOI4			0.875	
SP1				0.908
SP2				0.911
SP3				0.923
Outer Weights				
	Co-Working Space	**Community Empowerment**	**Sustainability Oriented Innovation**	**Sustainability Performance**
CE1		0.223		
CE2		0.197		
CE3		0.216		
CE4		0.226		
CE5		0.222		
CWS1	0.259			
CWS2	0.266			
CWS3	0.269			
CWS4	0.267			
SOI1			0.274	
SOI2			0.282	
SOI3			0.283	
SOI4			0.242	
SP1				0.368
SP2				0.349
SP3				0.377

R Square:

***R* Square**		
	***R* Square**	***R* Square Adjusted**
Co-Working Space	0.899	0.898
Sustainability Oriented Innovation	0.821	0.820
Sustainability Performance	0.812	0.809

***f* Square**				
	Co-Working Space	**Community Empowerment**	**Sustainability Oriented Innovation**	**Sustainability Performance**
Co-Working Space				0.062
Community Empowerment	0.658		4.581	0.000
Sustainability Oriented Innovation	0.230			0.251
Sustainability Performance				

Construct Reliability and Validity				
	Cronbach's Alpha	**rho_A**	**Composite Reliability**	**Average Variance Extracted (AVE)**
Co-Working Space	0.958	0.958	0.969	0.887
Community Empowerment	0.956	0.958	0.966	0.850
Sustainability Oriented Innovation	0.942	0.946	0.958	0.852
Sustainability Performance	0.902	0.903	0.938	0.836

Discriminant Validity:

Discriminant Validity				
Fornell-Larcker Criterion				
	Co-Working Space	**Community Empowerment**	**Sustainability Oriented Innovation**	**Sustainability Performance**
Co-Working Space	0.942			
Community Empowerment	0.936	0.922		
Sustainability Oriented Innovation	0.912	0.906	0.923	
Sustainability Performance	0.870	0.845	0.890	0.914
Cross Loadings				
	Co-Working Space	**Community Empowerment**	**Sustainability Oriented Innovation**	**Sustainability Performance**
CE1	0.885	0.921	0.864	0.791
CE2	0.779	0.896	0.753	0.709
CE3	0.861	0.929	0.825	0.778
CE4	0.892	0.938	0.883	0.805
CE5	0.888	0.925	0.843	0.805
CWS1	0.937	0.875	0.838	0.787
CWS2	0.950	0.913	0.855	0.804
CWS3	0.943	0.883	0.869	0.842
CWS4	0.938	0.856	0.876	0.844
SOI1	0.838	0.857	0.928	0.829
SOI2	0.890	0.867	0.948	0.848
SOI3	0.884	0.869	0.940	0.861
SOI4	0.749	0.745	0.875	0.740
SP1	0.794	0.771	0.826	0.908
SP2	0.743	0.728	0.788	0.911
SP3	0.845	0.816	0.825	0.923