



LAPORAN PENELITIAN

GREEN WORKFORCE TRANSITION IN EDUCATION AND HEALTH FOR SUSTAINABLE INVESTMENT

Oleh:

Ketua : Aldi Friyatna Dira SE, MM
Anggota : 1. Kurniawan Prambudi Utomo
2. Muhammad Aziz Winardi N, ST, MM
3. Abdul Rahman

**PENELITIAN INI DILAKSANAKAN ATAS BIAYA ANGGARAN
PENDAPATAN DAN BELANJA STIE GICI TAHUN AKADEMIK
2024/2025. NOMOR KONTRAK: 320/LPPM-GBS/I/2025**

**PROGRAM STUDI MANAJEMEN
SEKOLAH TINGGI ILMU EKONOMI "GICI"
2024**

SURAT PERJANJIAN KONTRAK PENELITIAN Nomor : 320/LPPM-GBS/I/2025

Pada hari ini, Senin, tanggal Enam bulan Januari tahun Dua Ribu Dua Puluh Lima (06-01-2025), kami yang bertanda tangan di bawah ini:

- 1) Herman Susilo, SE, MM.
Selaku Ketua LPPM STIE “GICI” untuk Program Pasca Sarjana Sekolah Tinggi Ilmu Ekonomi “GICI”, selanjutnya disebut **PIHAK PERTAMA**;
- 2) Aldi Friyatna Dira SE, MM
Selaku Peneliti, selanjutnya disebut **PIHAK KEDUA**; menyatakan bersepakat untuk membuat perjanjian kontrak penelitian sebagai berikut.

Pasal 1 JUDUL PENELITIAN

PIHAK PERTAMA dalam jabatannya tersebut di atas, memberikan tugas kepada **PIHAK KEDUA** untuk melaksanakan penelitian yang berjudul: **“Green Workforce Transition In Education And Health For Sustainable Investment”**

Pasal 2 WAKTU DAN BIAYA PENELITIAN

- 1) Waktu penelitian adalah 6 bulan, dari 06 Januari sampai dengan 23 Juni 2025.
- 2) Biaya pelaksanaan penelitian ini dibebankan pada pos Anggaran Pendapatan dan Belanja (APB) Jurusan Peneliti bersangkutan tahun 2024/2025 dengan nilai kontrak sebesar **Rp.1.900.000 (Satu Juta Sembilan Ratus Ribu Rupiah)**.

Pasal 3 PERSONALIA PENELITIAN

Susunan personalia penelitian ini sebagai berikut :

- Ketua : Aldi Friyatna Dira SE, MM
Anggota : 1. Kurniawan Prambudi Utomo
2. Muhammad Aziz Winardi N, ST, MM
3. Abdul Rahman

Pasal 4 CARA PEMBAYARAN

Pembayaran biaya penelitian diberikan sesuai dengan aturan dan tata cara yang telah ditetapkan dalam Pedoman Penelitian STIE “GICI”, yaitu:

- 1) Tahap I sebesar 70% dari nilai kontrak yang diterimakan paling cepat dua minggu setelah surat perjanjian kontrak penelitian ini ditandatangani oleh kedua belah pihak melalui Bendahara STIE “GICI”.
- 2) Tahap II sebesar 30% dari nilai kontrak yang diterimakan setelah **PIHAK KEDUA** menyelesaikan seluruh kewajiban pekerjaan penelitian

Pasal 5
KEASLIAN PENELITIAN DAN KEBEBAS-IKATAN DENGAN PIHAK LAIN

- 1) **PIHAK KEDUA** bertanggung jawab atas keaslian judul penelitian sebagaimana disebutkan dalam pasal 1 Surat Perjanjian Kontrak Penelitian ini (bukan duplikat/jiplakan/plagiat) dari penelitian orang lain.
- 2) **PIHAK KEDUA** menjamin bahwa judul penelitian tersebut bebas dari ikatan dengan pihak lain atau tidak sedang didanai oleh pihak lain.
- 3) **PIHAK KEDUA** menjamin bahwa judul penelitian tersebut bukan merupakan penelitian yang SEDANG ATAU SUDAH selesai dikerjakan, baik didanai oleh pihak lain maupun oleh sendiri.
- 4) Apabila di kemudian hari diketahui ketidak benaran pernyataan ini, maka kontrak penelitian dinyatakan batal, dan **PIHAK KEDUA** wajib mengembalikan dana yang telah diterima.

PASAL 6
PEMBIMBING/KONSULTAN PENELITIAN LATIHAN

- 1) Setiap Peneliti Latihan harus menunjuk seorang Pembimbing/Konsultan yang bertugas membimbing pelaksanaan penelitiannya.
- 2) Peneliti Latihan diharuskan berkonsultasi dengan pembimbingnya berkaitan dengan penelitian yang akan dilaksanakan serta laporan hasil penelitiannya.
- 3) *Honorarium* Pembimbing/Konsultan (untuk peneliti dari mahasiswa) ditanggung oleh institusi STIE “GICI” di luar nilai kontrak penelitian sesuai ketentuan yang berlaku, dan akan dibayarkan setelah laporan hasil penelitian beserta kelengkapannya diserahkan ke LPPM melalui Bendahara STIE “GICI”.

Pasal 7
MONITORING PENELITIAN

- (1) **PIHAK PERTAMA** berhak untuk:
 - a) Melakukan pengawasan administrasi, monitoring, dan evaluasi terhadap pelaksanaan penelitian.
 - b) Memberikan sanksi jika dalam pelaksanaan penelitian terjadi pelanggaran terhadap isi perjanjian oleh Peneliti.
 - c) Bentuk sanksi disesuaikan dengan tingkat pelanggaran yang dilakukan.
- (2) Pemantauan kemajuan penelitian dilakukan oleh **PIHAK PERTAMA** bersama dengan *Reviewer*, dan Pembimbing Penelitian untuk Penelitian Latihan.
- (3) **PIHAK KEDUA** diharuskan membuat dan menyampaikan Laporan Kemajuan atas pelaksanaan penelitiannya kepada **PIHAK PERTAMA** sebanyak 2 (dua) eksemplar.
- (4) Pelaksanaan kemajuan penelitian dijadwalkan pada bulan ke-3 setelah Kontrak Penelitian ditanda tangani (Maret 2025).
- (5) Format Laporan Kemajuan dan Teknis pelaksanaannya akan diatur kemudian.

Pasal 8
LAPORAN SEMENTARA DAN SEMINAR HASIL PENELITIAN

- 1) **PIHAK KEDUA** wajib menyerahkan laporan hasil penelitian sementara kepada **PIHAK PERTAMA** paling lambat pada 30 Juni 2025 sebanyak 2 (dua) eksemplar.
- 2) Laporan sementara itu digunakan sebagai bahan seminar hasil penelitian yang penyelenggaraannya menjadi tanggung jawab **PIHAK PERTAMA**.
- 3) Ketua Peneliti diwajibkan hadir untuk mempresentasikan hasil penelitiannya pada seminar hasil penelitian.
- 4) Pelaksanaan teknis seminar hasil penelitian akan diatur tersendiri oleh **PIHAK PERTAMA**.

Pasal 9
LAPORAN AKHIR PENELITIAN

- 1) Setelah seminar hasil penelitian sebagaimana dimaksud pada pasal 8 Perjanjian ini, **PIHAK KEDUA** wajib menyerahkan revisi laporan penelitiannya dalam waktu paling lambat dua minggu.
- 2) Revisi laporan penelitian yang sudah diseminarkan harus mendapat pengesahan dari *reviewer* dan dijilid dalam satu kesatuan dengan laporan.
- 3) Berkas-berkas laporan meliputi:
 - (a) Laporan lengkap penelitian terdiri dari: (A) Laporan Hasil Penelitian, (B) Naskah Publikasi, dan (C) Sinopsis Penelitian Lanjutan (jika ada kelanjutan).
 - (b) Laporan akhir penelitian rangkap 4 (empat) dengan perincian 1 eks. Untuk LPPM, 1 eks. Untuk Perpustakaan STIE “GICI”, 1 eks. Untuk Jurusan.
 - (c) Naskah publikasi dalam bentuk *feature* sebanyak 2 eksemplar yang terpisah dari laporan akhir hasil penelitian. Naskah *feature* (dalam bentuk *hardcopy* dan *softcopy*) ini disiapkan untuk publikasi di media massa.
 - (d) Disket atau CD berisi *file* laporan lengkap dan naskah publikasi bentuk *feature* sebanyak 1 keping.
- 4) Format laporan hasil penelitian sesuai dengan aturan-aturan yang berlaku dan telah ditetapkan dalam Pedoman Penelitian STIE “GICI” dan suplemen ralatnya baik dalam hal warna sampul, tata tulis maupun urutan masing-masing komponen.
- 5) Pada sampul bagian tengah dituliskan nama Peneliti atau Tim Peneliti lengkap dengan gelar masing-masing, sedangkan pada bagian bawah dari laporan tersebut harus dituliskan pernyataan yang berbunyi:

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Pasal 10
HAK KEPEMILIKAN ATAS BARANG/PERALATAN PENELITIAN

Segala barang atau alat yang dibeli atas biaya penelitian menjadi milik Jurusan Peneliti yang bersangkutan. Pengaturan kepemilikannya sebagai berikut :

- 1) Barang atau alat berupa *catridge*, *printer*, alat perekam, akses internet, dan sejenisnya selama masih dapat menggunakan fasilitas STIE “GICI” pada dasarnya tidak dianggarkan dalam biaya penelitian.
- 2) Kamera, alat perekam, dan semacamnya yang dapat dipakai ulang, Buku, Jurnal, CD, VCD, DVD, *cassete*, dan sejenisnya yang merupakan *software*, program, alat atau referensi penelitian yang didapatkan (dibeli) dari anggaran penelitian menjadi milik Jurusan Peneliti.
- 3) Pemindahan hak kepemilikan barang atau alat sebagaimana tersebut dilakukan melalui **PIHAK PERTAMA**.

Pasal 11
INSTITUSIONAL FEE

Dalam rangka penyeragaman dan efisiensi administrasi pelaporan penelitian, **PIHAK PERTAMA** melakukan pemotongan terhadap dana penelitian yang telah disetujui sebesar 5% dengan alokasi pemanfaatan antara lain untuk :

- 1) Penggandaan laporan akhir penelitian sebanyak 4 eksemplar.
- 2) Kegiatan penunjang penelitian bagi dosen/pengusul penelitian.

Pasal 12
SANKSI

Segala kelalaian baik disengaja maupun tidak, sehingga menyebabkan keterlambatan menyerahkan laporan hasil penelitian dengan batas waktu yang telah ditentukan sebagaimana dimaksud dalam pasal 8 Perjanjian ini akan mendapatkan sanksi sebagai berikut :

- 1) Diberhentikannya bantuan keuangan, dan **PIHAK KEDUA** diwajibkan mengembalikan dana yang sudah diterima kepada STIE “GICI” melalui **PIHAK PERTAMA**, atau
- 2) tidak diperbolehkan mengajukan usulan penelitian pada periode tahun anggaran tersebut bagi Ketua dan Anggota Peneliti.

Pasal 13
PENUTUP

Perjanjian ini berlaku sejak ditanda tangani dan disetujui oleh **PIHAK PERTAMA** dan **PIHAK KEDUA**.

Depok, 06 Januari 2025,

PIHAK PERTAMA,

PIHAK KEDUA,



Herman Susilo, SE, MM

Ketua LPPM

Aldi Friyatna Dira SE, MM

Peneliti

**HALAMAN PENGESAHAN
PENELITIAN DOSEN STIE “GICI”**

Judul Penelitian : Green Workforce Transition in Education and Health for Sustainable Investment

Ketua Peneliti

- a. Nama Lengkap : Aldi Friyatna Dira SE, MM
- b. Jenis Kelamin : Laki - Laki
- c. NIDN : 0404119201
- d. Jabatan Fungsional : Lektor
- e. Jurusan : Manajemen
- f. Nomor Handphone : 08129457661
- g. Alamat E-mail : aldifdira@gmail.com

Anggota Tim

- a. Nama Anggota 1/Jurusan : Kurniawan Prambudi Utomo
- b. Nama Anggota 2/Jurusan : Muhammad Aziz Winardi N, ST, MM
- c. Nama Anggota 3/Jurusan : Abdul Rahman

Lokasi Penelitian :

Alamat :

Lama Penelitian : 6 (Enam) Bulan

Biaya yang diperlukan : Rp. 1.900.000

Sumber Pendanaan : LPPM GICI

Sumber Lain :

Depok, 23 Juni 2025

Mengetahui:
Ketua Jurusan,

Ketua Peneliti

Drs. Henky Hendrawan, MM, M.Si

NIDN: 0416076506

Aldi Friyatna Dira SE, MM

NIDN: 0404119201

Menyetujui,
Ketua LPPM STIE GICI

Herman Susilo, SE, MM

NIDN: 0401128604

ABSTRAK

Judul Penelitian : Transisi Tenaga Kerja Hijau dalam Pendidikan dan Kesehatan untuk Investasi Berkelanjutan

Ketua Peneliti : Aldi Friyatna Dira SE, MM

Anggota : 1. Kurniawan Prambudi Utomo
2. Muhammad Aziz Winardi N, ST, MM
3. Abdul Rahman

Kata Kunci : Tenaga kerja hijau; Investasi; Pendidikan; Health; Ekonomi Berkelanjutan.

Penelitian ini bertujuan untuk menganalisis pengaruh hubungan kerja hijau di sektor pendidikan dan kesehatan terhadap investasi ekonomi berkelanjutan, Green labor mencerminkan peran penting sumber daya manusia dalam mendorong praktik ramah lingkungan di masyarakat, yang berdampak langsung pada keberlanjutan ekonomi. Metode penelitian melibatkan pengumpulan data primer melalui survei terhadap pekerja di sektor pendidikan dan kesehatan. Data diproses menggunakan SPSS untuk menguji validitas, keandalan, dan korelasi antar variabel, Penelitian ini dilakukan selama empat bulan dari Juli - Oktober 2024. Selanjutnya, SEM digunakan untuk menguji hubungan kausal antara tenaga kerja hijau, investasi ekonomi berkelanjutan, dan variabel mediasi seperti kualitas pendidikan dan kesehatan. Hasil analisis menunjukkan bahwa green labor memiliki pengaruh yang signifikan terhadap investasi ekonomi berkelanjutan. Kualitas pendidikan dan faktor kesehatan berperan sebagai mediator yang mempererat hubungan ini. Temuan ini menjelaskan bahwa menekankan pentingnya pengembangan tenaga kerja hijau untuk mendukung kebijakan investasi yang berorientasi pada pertumbuhan ekonomi yang inklusif dan ramah lingkungan untuk mendorong investasi ekonomi yang berkelanjutan.

ABSTRACT

Judul Penelitian : *Green Workforce Transition in Education and Health for Sustainable Investment*

Ketua Peneliti : Aldi Friyatna Dira SE, MM

Anggota : 1. Kurniawan Prambudi Utomo
2. Muhammad Aziz Winardi N, ST, MM
3. Abdul Rahman

Kata Kunci : *Green workforce; Investment; Education; Health; Sustainable Economy.*

This study aims to analyze the effect of green labor relations in the education and health sectors on sustainable economic investment, Green labor reflects the important role of human resources in encouraging environmentally friendly practices in society, which has a direct impact on economic sustainability. The research method involves collecting primary data through a survey of workers in the education and health sectors. The data was processed using SPSS to test validity, reliability, and correlation between variables, The study was conducted for four months from July - October 2024. Furthermore, SEM was used to test the causal relationship between green labor, sustainable economic investment, and mediating variables such as education quality and health. The results of the analysis show that green labor has a significant influence on sustainable economic investment. The quality of education and health factors act as mediators that strengthen this relationship. These findings explain that emphasize the importance of green workforce development to support investment policies that are oriented towards inclusive and environmentally friendly economic growth to encourage sustainable economic investment.

BAB I

PENDAHULUAN

1.1 Latar Belakang Masalah

The achievement of the Sustainable Development Goals (SDGs) is very necessary for all organizations, both private and government, for the sustainability of the country's economic development in recent years, because it involves issues such as poverty, hunger, health, education, employment, reducing inequality, climate change (Cano & Londoño-Pineda, 2020), Cheng et al (2023), says economic development especially in countries undergoing economic transition, post COVID-19, long-term demographic and health transitions and economic strength have changed future needs around the world King et al (2021), significant changes in global economic dynamics and increasing concerns about the environmental crisis and climate change, in addition, the green transition that uses energy sources must move from pollution to clean air for society through government policies (Llorca & Rodriguez-Alvarez, 2024) Research shows that increased corporate transitions toward climate and environmental goals have significant economic impacts. This is crucial for public health, highlighting the need for a sustainable transition that involves advanced technological understanding, strong collaboration between government and private sectors, and greater awareness of environmental innovation. Dabbous et al (2024). With increasing awareness that the transition will reduce the negative impact of human activities on the environment, there is a strong push to move to a more sustainable economy.

This transition also requires special attention to a workforce that has competencies in the "green" or environmentally friendly fields, Wang et al (2023), say it is proven that more high-tech exports will directly affect the level of carbon intensity, which ultimately affects environmental sustainability to create a green workforce. Entrepreneurs in the industrial sector are carried out by prioritizing competence and reducing workers who have not achieved competence, the challenge of creating a green workforce arises in the form of a lack of understanding and skills needed to operate in a sustainable economy, Organizations to stay in tune with environmental changes, revise strategies accordingly, and quickly capture emerging opportunities, Jutidharabongse et al (2024). In identifying parts of the economy that are directly or indirectly related to the environment, preparing profiles of sectors related to the environment by explaining the structure of these sectors, and finally highlighting the importance of these sectors to a country's economy. To stay aligned with environmental changes, organizations need to adjust their strategies and quickly seize emerging opportunities, Jutidharabongse et al (2024). This includes identifying economic sectors that have direct or indirect links to the environment developing sector profiles, and emphasizing the importance of these sectors to a country's economy. The methods used in this stage include identifying economic sectors and other activities closely related to the environment, as well as conducting research and developing sector profiles. Despite the challenges, the transition to a green economy presents new opportunities for businesses and investments. Developing green workforce competencies is key to leveraging these opportunities and supporting sustainable economic growth. Therefore, the role of the government in formulating policies that support economic transition is crucial. The policy implications for green workforce competencies need to be well understood to ensure that the policy measures taken have a positive long-term impact. Positive policy innovation is considered an essential factor in enhancing corporate competitiveness and ensuring sustainability Tolstykh et al (2020). By understanding the complexity of challenges, identifying opportunities, and analyzing policy implications, the green workforce transition can serve as a driver of sustainable economic investment. Efficient workforce management provides a competitive advantage, contributes to sustainable economic development, and enhances workforce value Firera et al (2024).

A comprehensive review of previous studies shows that the sharing economy has made a significant contribution to the energy transition and sustainable development. (Zhu et al., 2023; Aqeeq et al., 2023). Therefore, the role of the workforce in supporting the transition to a green economy is the

main focus of this study. Economic paradigm shifts also have a significant impact on business and investment sustainability. The selection of this topic reflects the responsibility of the government and private sector stakeholders in formulating policies that support economic transition. Dabbous et al (2024), Implemented Green human resource management practices in industries, such as the use of renewable energy, waste reduction, and resource conservation (Dira et al., 2024). According to classical economic growth theory, capital, labor, and technology are the main factors of economic growth. Li et al (2023), From a competency development perspective, it is important to assess and evaluate strategies for building relevant skills.

BAB II

TINJAUAN PUSTAKA

LITERATURE REVIEW

This includes providing IT education and developing targeted competencies covering cognitive, operational skills, and attitudes for effective use of information and communication technologies (ICT). A literature review reveals that in the context of sustainable development, limited research exists on the impact of the digital economy as a new production factor (Lan & Tang, 2023). In recent decades these markets have undergone rapid transformation in many respects, including regulation, functionality, financial innovation and in the development of communications technologies. (Jeong et al., 2020; Botey-Fullat et al., 2023). The analysis of policy implications on green workforce competencies is expected to provide insights into how policy measures can shape an environment conducive to sustainable economic growth. Green investment is a broad concept that refers to the use of green capital mobilized from both government and industry to invest in environmental goods and services such as protecting ecosystem diversity and compensating for climate damage (Nur Cahyani & Gunawan, 2022 in Zhang & Berhe, 2022). In addition, green investment is a socially responsible investment. Green investment is an investment activity carried out by a company that is attempted as protection to reduce environmental impacts and manage the environment caused by company activities or commonly called environmental investment (Nur Cahyani & Gunawan, 2022 in Zhang & Berhe, 2022). Companies spend a certain amount of money to implement environmental conservation and management and achieve good environmental performance by implementing prevention of environmental pollution, which has an impact on increasing the company's value. Highly heterogeneous industrial productivity and economic efficiency can be attributed to the imbalance of talent and technological resources to some degree (Yin et al., 2023).

This research offers innovation through four key aspects. First, it explores specific green competencies that are rarely studied. Second, it uses predictive analytics to understand the demand for green labor and sustainable investment needs. Third, it develops a new model for building sustainable skills that can adapt to industry changes. Fourth, it analyzes how new technologies, like artificial intelligence, affect green workforce skills in developing regions. The study also focuses on innovative strategies for training green competencies. It is hoped that this research can make a significant contribution to the understanding and practice related to the green workforce transition, while currently the understanding of green workforce is limited technical progress, empirical literature on the influence of economic policy on technological progress (Wen & Okolo, 2023).

BAB III

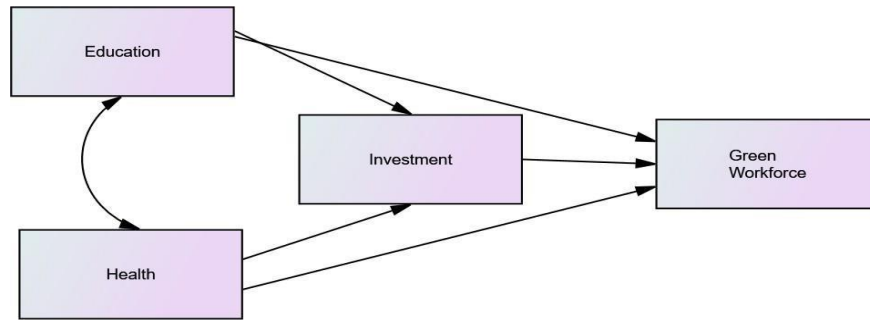
METODOLOGI PENELITIAN

The process of identifying types of green jobs involves at least two key steps to obtain representative data. The first step is to review the overall economic and employment structure to understand how various economic sectors contribute to job creation and their relationship with environmental sustainability. The second step involves using a structured method to map and connect the environment with the economy in each sector relevant to the green workforce. Research on sustainability in the green economy has been extensively conducted using approaches from various disciplines (Herrera & de las Heras-Rosas, 2020). The primary data required in this study includes the total workforce in the economy, profiles of various economic sectors such as GDP and employment shares, as well as GDP growth rates. Additionally, the study will explain the role and importance of the primary sector in relation to industrial and service sectors, such as agriculture and energy, while also analyzing the contribution of informal activities to the overall economy and investment.

This study will adopt a mixed-methods research design, combining qualitative and quantitative methods. This approach allows for an in-depth exploration of the complexities of the green workforce transition while enabling statistical analysis of the collected data. The research participants will include workers and key stakeholders involved in industrial sectors supporting the transition to a sustainable economy, such as renewable energy, energy efficiency, and green manufacturing. Data collection methods will involve statistical analysis using SPSS and Structural Equation Modeling (SEM), AMOS V.25, to gain a quantitative understanding of green workforce trends. Additionally, in-depth interviews will be conducted with key stakeholders, including workers, employers, and government representatives, to gain a deeper understanding of perceptions, challenges, and opportunities in the green workforce transition. Field surveys will also be carried out to assess workers' and industry players' awareness of the green economy. Furthermore, this study will analyze government policy documents, industry reports, and academic literature to provide contextual insights and support empirical findings. This research is planned to take place over four months, from July to October 2024. During this period, various data will be collected and analyzed to provide a comprehensive overview of the green workforce transition and its implications for economic sustainability to test the level of validity and reliability to determine whether or not there is an influence of two or more independent variables on the dependent variable, with the following equation:

$$Y = BX1 + BX2 + e \quad (1)$$

Where Y equals the Green Workforce, a is the Constant, X1 represents Education, X2 represents Health, X3 represents Investment, B is the Coefficient, and e is the Error. In estimating the right model on the quantitative approach variables and the qualitative approach to sustainable investment used in statistical data regression, the following is a research image:



Source: processed data, 2025

Figure 1. Research Model

Based on the model, this research tests the hypothesis to address the research problem. The null hypothesis (H_0) assumes that the regression weight is equal to zero, while the alternative hypothesis (H_a) assumes that the regression weight is not equal to zero. The hypotheses for the study are as follows:

H_a : There is a positive and significant relationship between the green workforce transition in education and health for sustainable investment.

H_0 : There is no positive and significant relationship between the green workforce transition in education and health for sustainable investment.

If the hypothesis test is accepted, it will provide insights into the relationship between green workforce transitions and sustainable investment.

BAB IV

HASIL PENELITIAN DAN PEMBAHASAN

Green workers in the education and health sectors generally include both employees and self-employed individuals. In education, green workers such as teachers and lecturers integrate sustainability-based curricula. In health, medical professionals like doctors and nurses apply environmentally friendly practices in healthcare facilities. Self-employed green workers include entrepreneurs in education who run eco-focused training institutions and independent health practitioners who adopt sustainable medical methods. As awareness of sustainability grows, the number of green workers in both sectors continues to rise, supported by policies encouraging environmentally friendly practices. This can be presented in the following Table 1.

Table 1. Green Workforce by Employment Status (August 2024)

Employment Status	Estimated Education (%)	Estimated Health (%)
Employee/Worker	15% of 57.45%	10% of 57.45%
Self-Employed	5% of 23.65%	3% of 23.65%
Total Estimated Green Workforce	8.62% of total workers	6.87% of total workers

Source: processed data, 2024

The table indicates that the proportion of green workers in the education and health sectors remains relatively small but is gradually increasing as sustainability policies are implemented. Previous research on the transition to a green workforce generally discusses labor shifts broadly without focusing on specific sectors. Most studies examine the impact of sustainability policies on job creation in various industries such as renewable energy, manufacturing, and agriculture, fostering effective communication and enhancing professionalism in the tourism workforce through more extensive experience (Winardi et al., 2024). Unlike previous studies, this research specifically examines the education and health sectors, which have rarely been discussed in the context of the green workforce. The main focus is on the implementation of sustainable curricula in education and the use of environmentally friendly technology in the health sector to increase the number of green workers. Thus, this study fills the gap in previous research by providing a more in-depth analysis of the green workforce transition in Bekasi Regency and the factors influencing it. Next, Validity testing will be carried out using Pearson's validity correlation or validity testing of each variable with the product-moment technique, namely giving a value for each item correlated with a total value that aims to test the correlation or relationship between one variable and another variable. The result and recapitulation of the Validity Test and the Reliability test are displayed in Tables 2, 3, 4, and 5.

Table 2. Validity Test Results

		Correlations			
		GreenWork	Health	Education	Sustainable Investment
Green Workforce	Pearson Correlation	1	.348**	.398**	.651**
	Sig. (2-tailed)		.000	.000	.000
	N	200	200	200	200
Health	Pearson Correlation	.348**	1	.336**	.430**
	Sig. (2-tailed)	.000		.000	.000
	N	200	200	200	200
Education	Pearson Correlation	.398**	.336**	1	.501**
	Sig. (2-tailed)	.000	.000		.000
	N	200	200	200	200
Sustainable Investment	Pearson Correlation	.651**	.430**	.501**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	200	200	200	200

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

Source: processed data, 2025

Table 3. Recapitulation of Validity Test

Variables	R Results	R Table	Information
Green Workforce	0.651	0.05	Valid
Health	0.430	0.05	Valid
Education	0.501	0.05	Valid
Sustainable Investment	1.00	0.05	Valid

Source: processed data, 2025

The table above shows that the green job correlation value is 0.651, the policy value is 0.430, the investment value is 0.501, and the sustainable economic value is 1 so that all variables are > Sig 5% or 0.05, so that it can be said that the variables have valid values.

Table 4. Reliability Test Results

Variables	R Results	R Table	Information
Green Workforce	0.651	0.05	Valid
Health	0.430	0.05	Valid
Education	0.501	0.05	Valid
Sustainable Investment	1.00	0.05	Valid

Source: processed data, 2025

The table above shows that the green job correlation value is 0.651, the policy value is 0.430, the investment value is 0.501, and the sustainable economic value is 1 so that all variables are > Sig 5% or 0.05, so that it can be said that the variables have valid values.

Table 4. Reliability Test Results

Cronbach's Alpha	N of Items
.611	3

Source: processed data, 2024

Table 5. Recapitulation of Reliability Test

Variables	R Results	Cronbach's Alpha (α)	Information
Green Workforce	0.611	0.6	Reliable
Health	0.611	0.6	Reliable
Education	0.611	0.6	Reliable
Sustainable Investment	0.611	0.6	Reliable

Source: processed data, 2025

In the table above, it can be seen that the reliability test has a Cronbach's Alpha value of 0.611. Following the requirements of having a Cronbach's Alpha value of more than > 0.60, it can be concluded that all variables are included in the Reliable category. Next, a classical assumption test will be carried out, including a normality test, namely to determine whether the research data can be distributed properly, under the requirements if it occurs at a significance level of $\alpha = 5\%$ or a probability value <0.05, then it is normal

and the research can be continued, here are the results of the data normality test is displayed in Table 6.

Table 6. Normality Test

One-Sample Kolmogorov-Smirnov Test		
N		Unstandardized Residual 200
Normal Parameters ^{a, b}	Mean	.0000000
	Std. Deviation	1.72926180
Most Extreme Differences	Absolute	.080
	Positive	.042
	Negative	-.080
Test Statistics		.080
Asymp. Sig. (2-tailed)		.063 ^c
a. Test distribution is Normal.		
b. Calculated from data.		
c. Lilliefors Significance Correction.		

Source: processed data, 2025

Table 6 displays the competency of green workforce transition in the education and health sectors, as well as relevant policy implications for sustainable economic investment, it can be seen that the Asymp. Sig value is 0.063 implies well distributed value per the requirements. if it occurs normal at a significance level of $\alpha = 5\%$ or a probability value > 0.05 . In the study of green workforce transition competencies in the education and health sectors, as well as relevant policy implications for sustainable economic investment. The goodness-of-fit test analysis has many criteria and from the many criteria researchers do not have to use all of these criteria, SEM will be used for confirmatory factor analysis and hypothesis testing, three factors influence the use of SEM techniques in this study, namely SEM is considered more accurate, SEM can determine the magnitude of measurement errors, and SEM can combine unobserved and observed variables, the following are the results of the model goodness-of-fit test table are displayed in Table 7 and 8.

Table 7. Results of the overall model fit criteria (Overall Model Fit)

Goodness of Fit	Cut-off Value	Results	Caption
Goodness Of Fit Indices (GFI)	$0.80 \leq \text{GFI} < 0.90$	0.90	Fit
Comparative Fit Index (CFI)	≥ 0.90	0.988	Good fit
Incremental Fit Index (IFI)	≥ 0.90	0.988	Good fit
Normed Fit Index (NFI)	$0.80 \leq \text{NFI} < 0.90$	0.90	Marginal fit
Root Mean Square Error of Approximation (RMSEA)	≤ 0.08	0.026	Good fit
Root Mean Square Residual (RMSR)	≤ 0.1	0.026	Good fit

Source: Processed data, 2024

Table 8. Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
	Delta1	rho1	Delta2	rho2	
Default model	.909	.895	.988	.986	.988
Saturated model	1,000		1,000		1,000
Independence model	.000	.000	.000	.000	.000

Source: Processed data, 2024

Based on the results of the Root Mean Square Error of Approximation (RMSEA) model fit test, which measures the deviation of the model from its population covariance matrix, it produces a value of 0.026. This indicates that the model has reached the fit criteria, which is less than or equal to 0.08. RMSEA is one of the most widely used criteria to measure the fit of a model with data, because RMSEA does not depend on the number of examples in the study and does not underestimate or overestimate. The Goodness of Fit Indices (GFI) in the analysis results has a value of 0.90, which means that the model is still in the fit category ($0.80 \leq \text{GFI} < 0.90$). GFI is an assessment used to see the overall suitability of the model by calculating the comparison between the predicted model's squared residuals and the actual observed data. Normed Fit Index (NFI), Comparative Fit Index (CFI), and Incremental Fit Index (IFI) are measures of fit that have similarities. NFI measures the comparison between the hypothesized model and the null model, which is sensitive to the number of samples, while CFI is an improvement on NFI that is not affected by the number of samples and is a fit measure to test the suitability of the model. IFI has similarities with NFI,

which is also not affected by the number of samples.

The CFI and IFI model fit criteria in the study showed results that were already fit with values greater than or equal to 0.90 (0.998 and 0.998), while NFI is still in the marginal fit stage, namely in the range greater than or equal to 0.80 to less than 0.90, the following Regression Weights test will be carried out, for the regression weights test or regression weight test is a statistical procedure used to determine whether the regression weight (regression coefficient) that connects the independent variable with the dependent variable is statistically significant or not, with the condition that the P value <0.05, so that the Ha hypothesis is accepted and Ho is rejected, the results is displayed in Table 9.

Table 9. Regression Weights: (Group number 1 - Default model)

			Estimate	SE	CR	P	Label
INV	<---	EDU	-.274	.068	-4.037	***	
INV	<---	HEALTH	.156	.071	2.191	.028	
GREEN_GROWTH	<---	EDU	-.340	.075	-4.552	***	
GREEN_GROWTH	<---	HEALTH	.148	.073	2.027	.043	
GREEN_GROWTH	<---	INV	.308	.093	3.305	***	
X1#1	<---	EDU	1.000				
X1#2	<---	EDU	.875	.081	10,746	***	
X1#5	<---	EDU	.817	.079	10,313	***	
X1#6	<---	EDU	.815	.081	10,049	***	
X1#8	<---	EDU	.762	.079	9,634	***	
X2#1	<---	HEALTH	1.000				
X2#2	<---	HEALTH	1.237	.104	11,867	***	
X2#4	<---	HEALTH	1.070	.098	10,970	***	
			Estimate	SE	CR	P	Label
X2#5	<---	HEALTH	1.035	.097	10,694	***	
X2#6	<---	HEALTH	1.013	.095	10,695	***	
X3#4	<---	INV	1.000				
X3#3	<---	INV	1.076	.110	9,771	***	
X3#2	<---	INV	1.104	.108	10,194	***	
X3#1	<---	INV	1.087	.113	9,607	***	
Y#6	<---	GREEN_GROWTH	1.000				
Y#5	<---	GREEN_GROWTH	.808	.088	9,199	***	
Y#4	<---	GREEN_GROWTH	.888	.091	9,736	***	
Y#3	<---	GREEN_GROWTH	1.051	.095	11,081	***	
Y#2	<---	GREEN_GROWTH	.982	.095	10,354	***	
Y#1	<---	GREEN_GROWTH	1.098	.098	11,173	***	

Source: Processed data, 2024

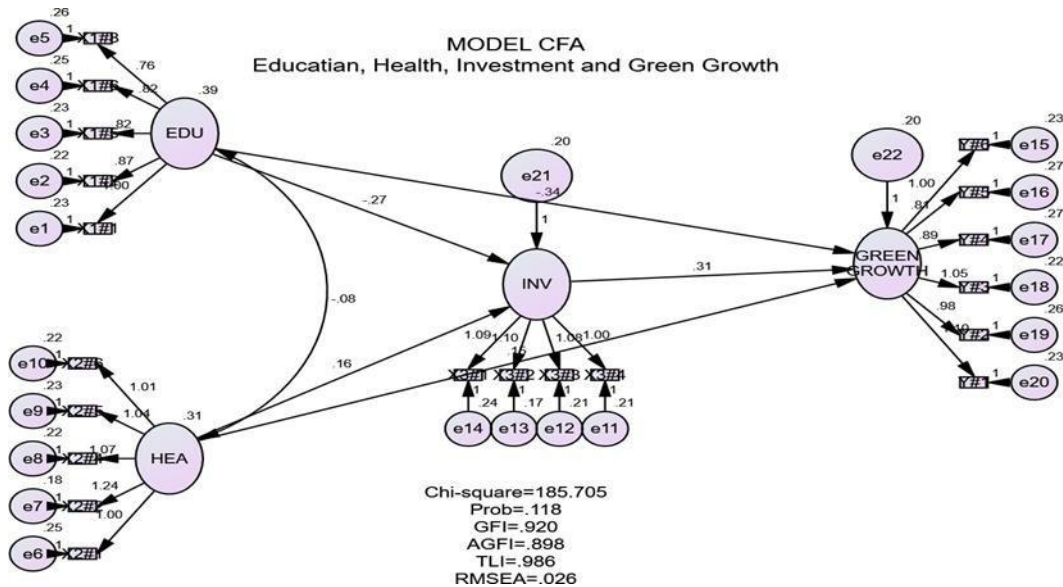
Table 9 displayed the conditions affect Probability (Prob.) with a value of <0.05, from the table above it is known that the value of INV < EDU, the investment variable does not affect the education variable with a value of -0.274, while the value of INV < HEA, the investment variable affects the health variable with a value of 0.156, while the value of Green Growth < EDU, the Green Growth variable does not affect the education variable with a value of -0.340, while the value of Green Growth < HEA, the Green Growth variable affects the investment variable (INV) with a value of 0.308, and while the value of Green Growth < HEA, the Green Growth variable affects the health variable with a value of 0.00. Next, a statistical test of Squared Multiple Correlations (SMC) will be carried out, namely Squared Multiple Correlations (SMC) or Multiple Square Correlation is a measure used in regression analysis to measure the extent to which the total variability of the dependent variable can be explained by a combination of one or more independent variables, the results displayed in Table 10.

Table 10. Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate	SE	CR	P	Label
EDU	.392	.062	6.336	***	
HEALTH	.311	.053	5.929	***	
e21	.204	.037	5.478	***	
e22	.203	.035	5.748	***	
e1	.230	.032	7.267	***	
e2	.224	.029	7.851	***	
e3	.232	.028	8.184	***	
e4	.254	.030	8.353	***	
e5	.257	.030	8.579	***	
e6	.247	.029	8.464	***	
e7	.181	.027	6.783	***	
e8	.218	.027	8.006	***	
e9	.231	.028	8.239	***	
e10	.221	.027	8.238	***	
	Estimate	SE	CR	P	Label
e11	.212	.027	7.893	***	
e12	.213	.028	7.560	***	
e13	.172	.025	6.826	***	
e14	.237	.031	7.768	***	
e15	.227	.028	8.189	***	
e16	.269	.030	9.000	***	
e17	.268	.031	8.792	***	
e18	.224	.028	7.971	***	
e19	.261	.031	8.484	***	
e20	.235	.030	7.890	***	

Source: Processed data, 2024

Table 10 indicates that r square, education and health variables have an effect on the Green Growth Success variable with a value of 0.392 or 39.2%. The following will be carried out the CFA (confirmatory factor analysis) test is a statistical method used in factor analysis to test the extent to which a factor model fits empirical data. In CFA, researchers determine the factor model that is expected to reflect the relationship between latent variables (not directly measurable) and indicators (directly measurable variables); the results



are displayed in Figure 2.

Figure 2. CFA Model

Source: Processed data, 2024

CFA (confirmatory factor analysis) in SEM statistics is able to analyze the relationship between latent variables and their indicator variables, the relationship between one latent variable and another, and also to find out the magnitude of measurement error. (Sitorus, 2013), from the image it can be seen that the prob value is 0.118, where the requirements meet the model.CFA (Confirmatory Factor Analysis) which is

a technique for determining the indicators used to enter the variables to be studied, with a value > 0.05 , so that the model CFA in the study has been met, while the RMSEA value of the image is 0.018, where the requirements for meeting the RMSEA model to measure the difference between the observed covariance matrix per degree of freedom and the predicted covariance matrix are $0.03 < \text{RMSEA} < 0.08$ so that the RMSEA value in the study is acceptable.

The role of green labor in education and health is essential for driving sustainable economic investment. These workers contribute to environmentally friendly initiatives and the preservation of natural resources, ensuring long-term economic stability. Statistical analysis indicates that investment (INV) does not significantly impact education (EDU), with a coefficient of -0.274, while it positively influences health (HEA), with a coefficient of 0.156. Green Growth (GG) does not affect education (-0.340) but positively impacts investment (0.308) and significantly influences health (0.00).

These findings confirm the hypothesis that green labor plays different roles across sectors, with health benefiting more from sustainable economic investment. In the education sector, curriculum development and training programs focused on green workforce skills help prepare individuals for evolving job markets and future challenges. In the health sector, green workers ensure sustainable healthcare services through efficient medical practices, responsible waste management, and the use of eco-friendly technology.

The contribution of green labor enhances productivity, promotes social welfare, and strengthens sustainable economic investment. By improving human resource quality and maintaining a healthy environment, investments in these sectors become more attractive and efficient, fostering long-term, inclusive, and environmentally sustainable economic growth.

BAB V

SIMPULAN DAN SARAN

Conclusion

The development of green workforce competencies is a crucial step in supporting the transition towards a sustainable economy in Bekasi. This enables the identification of strategic policies to strengthen workforce capacity in the education and health sectors while promoting environmentally friendly investments. The benefits include enhancing workforce skills, creating new job opportunities, utilizing natural resources more sustainably, and attracting investments both domestically and internationally. These efforts aim to establish policies that are more environmentally oriented and align with the vision and mission of sustainable development. The novelty of this research lies in the implementation of integrated policies that not only focus on formal education and health but also emphasize practical skill enhancement to address green economic challenges, ensuring that the workforce remains competitive. Collaboration between the Bekasi Regional Government, educational institutions in Bekasi, and the private sector including companies and community organizations will accelerate sustainable investment and economic development. Ultimately, this will improve the quality of life for the people of Bekasi while preserving the environment.

Recommendations

The findings of this research show that green workforce transition competencies in the education and health sectors have an important role in supporting sustainable economic investment. Implementation of policy strategies that focus on developing green workforce skills and knowledge, such as environmentally friendly technology-based training and educational curricula that integrate sustainable economic principles, has been proven to increase workforce capacity, while the weakness of this research is that it cannot fully and comprehensively discuss all external factors which influence the effectiveness of green workforce competency development, such as monetary, fiscal policy, industrial support, and socio-cultural and security changes. Apart from that, the limitation is that the data sample is limited to only 200 respondents, so it does not reflect broader conditions, especially in various regions with socio-economic characteristics of different work cultures. Apart from that, this research only focuses on the education and health sectors and has not looked at the relationship with other sectors, such as culture and community behavior, which also influence the success of the green workforce transition, such as the transportation sector and the socio-cultural life of the community. This research would like to thank the participation of the District Government of Bekasi and Bina Sarana Informatika University.

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