

**LAPORAN AKHIR  
PENELITIAN SKEMA PENELITIAN DASAR**

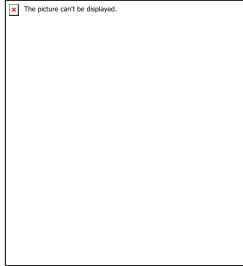


**THE ECONOMIC UNCERTAINTY POLICY AND THE VOLATILITY OF  
GLOBAL SUSTAINABLE INVESTMENT**

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Prof Wing Keung Wong

**UNIVERSITAS MUHAMMADIYAH YOGYAKARTA**

Dibiayai Oleh Lembaga Penelitian, Publikasi dan Pengabdian Masyarakat (LP3M)  
Universitas Muhammadiyah Yogyakarta  
Tahun Anggaran 2020/2021



# UNIVERSITAS MUHAMMADIYAH YOGYAKARTA

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## PROTEKSI ISI LAPORAN AKHIR PENELITIAN

Dilarang menyalin, menyimpan, memperbanyak sebagian atau seluruh isi laporan ini dalam bentuk apapun kecuali oleh peneliti dan pengelola administrasi penelitian.

## LAPORAN AKHIR PENELITIAN

### Informasi Data Usulan Penelitian

#### 1. IDENTITAS PENELITIAN

##### A. JUDUL PENELITIAN

The Economic Uncertainty Policy and the Volatility of Global Sustainable Investment

##### B. SKEMA, BIDANG, TEMA, DAN TOPIK PENELITIAN

Skema Penelitian	Bidang Fokus Penelitian	Tema Penelitian	Topik Penelitian
Penelitian Dasar	Sosial Humaniora - Seni Budaya - Pendidikan	Ekonomi dan sumber daya manusia	Sumber daya manusia dalam lingkup organisasi industri

##### C. KOLABORASI DAN RUMPUN ILMU PENELITIAN

Jenis Kolaborasi Penelitian	Rumpun Ilmu 1	Rumpun Ilmu 2	Rumpun Ilmu 3
Kolaboratif Luar Negri	ILMU EKONOMI	ILMU EKONOMI	Ekonomi Pembangunan

#### 2. IDENTITAS PENELITIAN

Nama	Peran	Tugas
Susilo Nur Aji Cokro Darsono, S.E., M.R.D.M	Ketua Pengusul	
Dyah Titis Kusuma Wardani, S.E., MIDEK.	Anggota Pengusul	Menyusun Kerangka Teori dan Analisis Data
Hafsah Fajar Jati	Mahasiswa Bimbingan	Data Management
Prof Wing Keung Wong	Pakar Bidang	Mereview naskah publikasi hingga memastikan artikel terpublikasi di jurnal internasional terindeks SSCI

### 3. MITRA KERJASAMA PENELITIAN (JIKA ADA)

Pelaksanaan penelitian dapat melibatkan mitra kerjasama, yaitu mitra kerjasama dalam melaksanakan penelitian, mitra sebagai calon pengguna hasil penelitian, atau mitra investor

Mitra	Nama Mitra	Kepakaran
Asia University Taiwan	Prof Wing Keung Wong	Finance

### 4. LUARAN DAN TARGET CAPAIAN

#### Luaran Wajib

Tahun	Jenis Luaran
1	Prosiding terindex SCOPUS/WOS

#### Luaran Tambahan

Tahun	Jenis Luaran
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### 5. ANGGARAN

Rencana anggaran biaya penelitian mengacu pada PMK yang berlaku dengan besaran minimum dan maksimum sebagaimana diatur pada buku Panduan Penelitian dan Pengabdian kepada Masyarakat.

Total Keseluruhan RAB Rp. 15,000,000

Tahun 1 Total Rp. 15,000,000

Jenis Pembelanjaan	Komponen	Item	Satuan	Vol.	Harga Satuan	Total
PENGUMPULAN DATA	FGD Persiapan	FGD 1	Paket	1	Rp. 2,500,000	Rp. 2,500,000
PELAPORAN, LUARAN WAJIB, DAN LUARAN TAMBAHAN	Publikasi Artikel di Jurnal Internasional	Proofreading	Paket	1	Rp. 3,000,000	Rp. 3,000,000
PELAPORAN, LUARAN WAJIB, DAN LUARAN TAMBAHAN	Publikasi Artikel di Jurnal Internasional	Subsidi APC Jurnal terindeks SSCI	Paket	1	Rp. 5,000,000	Rp. 5,000,000
PENGUMPULAN DATA	HR Sekretariat/Administrasi	HR Sekretariat	OB	1	Rp. 1,500,000	Rp. 1,500,000
PENGUMPULAN DATA	HR Pembantu	HR Pembantu Penelitian	OJ	1	Rp. 500,000	Rp. 500,000

Jenis Pembelanjaan	Komponen	Item	Satuan	Vol.	Harga Satuan	Total
ANALISIS DATA	HR Pengolah Data	HR Analis Data	Per Penelitian	1	Rp. 1,500,000	Rp. 1,500,000
PENGUMPULAN DATA	Uang Harian	HR Data Management	OH	1	Rp. 1,000,000	Rp. 1,000,000

## 5. LEMBAR PENGESAHAN

### HALAMAN PENGESAHAN LAPORAN AKHIR PENELITIAN SKEMA:

Judul : The Economic Uncertainty Policy and the Volatility of Global Sustainable Investment  
 Peneliti/Pelaksana : Susilo Nur Aji Cokro Darsono, S.E., M.R.D.M  
 NIDN : 0515049301  
 Jabatan Fungsional : Asisten Ahli  
 Program Studi/Fakultas : Ekonomi Pembangunan  
 Nomor HP : 08565022013  
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#### Anggota

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 Program Studi/Fakultas : Ekonomi Pembangunan

Nama : Hafsah Fajar Jati  
 NIM : 20160430055  
 Prodi : Ilmu Ekonomi

Nama : Prof Wing Keung Wong  
 NIK : E4677619B  
 Institusi : Asia University

Mitra : Asia University Taiwan  
 Nama Mitra : Prof Wing Keung Wong  
 Kepakaran : Finance

Biaya : Rp. 15,000,000

Yogyakarta, 04 Agustus 2021

Mengetahui,  
Kepala LP3M,



## **6. RINGKASAN**

This study aims to examine the effect of economic policy uncertainty (EPU), financial stress and global macroeconomics on volatility and sustainable investment returns globally. This study uses panel data in the form of stock prices from sustainable investments in 22 around the world that have Sustainable Stock Exchanges. Quantitative research design will be used in this research. The data collection method uses secondary data obtained from the Thomson Reuters Datastream for stock data, economic policy uncertainty data from the EPU database and the World Bank database for macroeconomic data collection. The first step to testing the variables is to double-sort the economic policy uncertainty index, financial stress index, macroeconomic variables and stock prices. Then the last one is doing dynamic statistics, namely ARCH-GARCH..

## **7. KEYWORDS**

**Sustainable Investment, Economic Policy Uncertainty, Market Volatility, Sustainable Stock Exchanges**

## **8. HASIL PELAKSANAAN PENELITIAN**

This study uses a quantitative method research design with secondary data collection through a stock database. This study uses continuous stock data from the Thomson Reuters Datastream and Bloombergs databases. The sample used is the monthly share price data from January 2015 - December 2020. All stocks included in the list of sustainable stocks (Socially Responsible Investment) on the stock exchanges of each country. There are 22 countries that have sustainable stock exchanges that will use in this research. Macroeconomic conditions data from 22 countries that listed will be downloaded from World Bank Database.

Data on economic policy uncertainty is obtained from the Economic Policy Uncertainty database created by Scott R Baker, Nick Bloom and Steven J. Davis (Baker, Bloom, Davis, et al., 2016). The EPU index is based on the frequency of coverage of the newspaper in 10 leading newspapers. The digital archives of each newspaper were searched for the monthly number of articles using a particular string of keywords. For example, the articles must include a trio of words such as: "uncertain" or "uncertainty;" "economy" or "economic;" in addition to any of the following terms: "deficit," "Congress," "Federal Reserve," "Regulation," "Legislation," "White House." In short, the EPU index refers to economic policy problems, anticipated (or actual) changes in government policy and related issues.

## Panel Data Regression results

### Oneway (individual) effect Random Effect Model (Swamy-Arora's transformation)

Call:  
plm(formula = Stocks ~ EPU + GPR, data = Panel\_Data\_Stocks\_EPU\_GPR,  
model = "random")

Balanced Panel: n = 14, T = 134, N = 1876

Effects:

	var	std.dev	share
idiosyncratic	2335972	1528	0.136
individual	14834483	3852	0.864

theta: 0.9657

Residuals:

Min.	1st Qu.	Median	3rd Qu.	Max.
-4973.699	-451.453	-40.829	341.134	11160.228

Coefficients:

	Estimate	Std. Error	z-value	Pr(> z )
(Intercept)	2868.27549	1034.71913	2.7720	0.005571 **
EPU	1.91422	0.43864	4.3640	1.277e-05 ***
GPR	3.67071	1.97727	1.8565	0.063388 .

---

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Total Sum of Squares: 4439500000

Residual Sum of Squares: 4376400000

R-Squared: 0.014231

Adj. R-Squared: 0.013179

Chisq: 27.04 on 2 DF, p-value: 1.3438e-06

## Fixed Effect

1	2	3	4	5	6	7	8	9	10	11	12	13
-1044.99	-2427.54	-2740.60	4942.76	-3083.60	-2191.57	-2435.44	6057.38	-2872.38	2263.18	-2783.00	278.96	8719.43
14												
-2682.57												

Estimate Std. Error t-value Pr(>|t|)

1	-1044.99	251.86	-4.1490	3.49e-05 ***
2	-2427.54	183.66	-13.2177	< 2.2e-16 ***
3	-2740.60	270.65	-10.1260	< 2.2e-16 ***
4	4942.76	149.79	32.9981	< 2.2e-16 ***
5	-3083.60	155.36	-19.8478	< 2.2e-16 ***
6	-2191.57	139.63	-15.6951	< 2.2e-16 ***
7	-2435.44	264.10	-9.2215	< 2.2e-16 ***
8	6057.38	145.06	41.7564	< 2.2e-16 ***
9	-2872.38	139.55	-20.5836	< 2.2e-16 ***
10	2263.18	191.48	11.8195	< 2.2e-16 ***
11	-2783.00	262.51	-10.6014	< 2.2e-16 ***
12	278.96	208.89	1.3354	0.1819

```

13 8719.43 141.49 61.6273 < 2.2e-16 ***
14 -2682.57 151.95 -17.6545 < 2.2e-16 ***
---
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

## Twoways effects Random Effect Model (Amemiya's transformation)

```

Call:
plm(formula = Stocks ~ EPU + GPR, data = Panel_Data_Stocks_EPU_GPR,
     effect = "twoways", model = "random", random.method = "amemiya")

```

Balanced Panel: n = 14, T = 134, N = 1876

Effects:

```

      var std.dev share
idiosyncratic 2003219 1415 0.126
individual 13490310 3673 0.850
time 372069 610 0.023
theta: 0.9667 (id) 0.473 (time) 0.4729 (total)

```

Residuals:

```

      Min. 1st Qu.  Median 3rd Qu.  Max.
-4454.371 -399.233 -24.041  296.122 10097.578

```

Coefficients:

```

      Estimate Std. Error z-value Pr(>|z|)
(Intercept) 3232.717112  988.628698  3.2699 0.001076 **
EPU         0.600740   0.451409  1.3308 0.183252
GPR        -0.048054   1.929540 -0.0249 0.980131

```

```

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Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

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Total Sum of Squares: 3755900000
Residual Sum of Squares: 3752300000
R-Squared: 0.00096711
Adj. R-Squared: -9.966e-05
Chisq: 1.81316 on 2 DF, p-value: 0.4039

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## 9. KESIMPULAN PENELITIAN

The main contribution of this research is to examine the effect of economic policy uncertainty and global politic risk on sustainable investment in global market. In the literature, some research had examined the correlation of economic policy uncertainty and global political risk on investor behavior, investor decision, stock market volatility, stock returns, and etc. However, their approaches were rarely applied to test the effect of culture on stock returns under the context of sustainable stock indices. Most of the study on sustainable investing has concentrated on the American market and the European market, which first has a sustainability ranking. Thus, an innovative approach was proposed in this paper to analyze the influencing factors of cultural dimensions on sustainable stock returns using FGLS fixed-effect model.

Secondly, this research used the feasible generalized least square (FGLS) fixed effect model to identify the influencing factors of sustainable stock returns. Empirical research found that the following economic political risk (EPU) and global political risk (GPR) are significant ( $p < 0.01$ ). These factors are filtered as the main factors to examine the correlation between culture and sustainable stock returns. Finally, to find the robust result, empirical results were tested by using ordinary least square (OLS) regression, FGLS regression, FGLS regression with id fixed effect, and FGLS regression with time fixed effect. The results of all regression methods were shown to be consistent with the empirical analysis.

**10. STATUS LUARAN WAJIB**

Proses penulisan naskah publikasi

**11. DOKUMEN LUARAN WAJIB**

Naskah publikasi

**12. LINK LUARAN WAJIB**

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**13. STATUS LUARAN TAMBAHAN**

.....

**14. DOKUMEN LUARAN TAMBAHAN**

.....

**15. LINK LUARAN TAMBAHAN**

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**16. PERAN MITRA (JIKA ADA)**

Membantu penulisan dan penerbitan naskah publikasi di jurnal internasional terindeks scopus

**17. DAFTAR PUSTAKA**

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**18. LAMPIRAN-LAMPIRAN**

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