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RESEARCH ARTICLE

The Runner Green Finance, New Financial Investments and Holdings Impact in The Green Economy

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Abstract

According to the United Nations, when companies provide supply based on demand, environmental pollution occurs, and natural resources are depleted. Therefore, the green economy is a name given to the initiatives that develop to keep a tight rein on this image. These entrepreneurial activities must be structured depending on macroeconomic leadership under money and technology. The OECD accepts this definition partially and adopts drawbacks to green finance being created only by supra-firm entities; this investment needs to be directed from the companies to the green economy. But we have precisely no method in the literature that calculates green finance. We suggest a new accounting index for catchable green finance. In this context, new financial investments were determined over a difference from the subtraction of aggregate current assets from the aggregate fixed assets for any firm. Hence, that the difference is multiplied by a country's end-of-year policy rate to realize the OECD's concept angle below the macroeconomic (the state) lead makes sense. This equation creates a cross-section. The Turkish model of green finance has been generated by considering Turkish holdings in this paper. We extract the accounting index named new financial investment(s) from the annual reports of 16 Turkish holdings comprehensive for 2021. We start the cross-section methodology and consecutively configure the monetary amount of new financial investment(s) against the environmental expenditures and ecological taxes in TUIK 2020-2021 statistics.

Keywords: *Green economy, Accounting, Financial investment, Firms, Marginal cost*

Jel Codes: *Q51, Q56, G17*

Yakalanamayan Yeşil Finans, Yeni Finansal Yatırımlar ve Yeşil Ekonomide Holdingler Etkisi

Özet

Birleşmiş Milletlere göre firmalar, arzı, talep kanununa bağlı olarak sağlamakta iken çevre kirliliği meydana gelmektedir ve doğal kaynaklar tükenmektedir. Dolayısıyla, yeşil ekonomi bu tabloyu kontrol altında tutmak üzere gelişen girişimlere verilen bir isimdir. Bu tür girişimler para ve teknoloji olarak makro ekonomik kurumların öncülüğüne göre belirlenebilir ve yapılandırılabilir. OECD bu tanımlamayı yarı yarıya kabul ederek yeşil finansın yalnızca firma üstü oluşumlar tarafından belirlenmesinin son tahlilde yeterli olmadığını benimsemektedir. OECD'ye göre yeşil finansın firmalardan yeşil ekonomiye tam olarak yönlendirilmesi gerekmektedir. Ancak literatürde yeşil finansı kesin olarak hesaplayan bir denklem bulunmamaktadır. Yakalanabilir yeşil finans için yeni bir muhasebe indeksi öneriyoruz. Bu kapsamda yeni finansal yatırımlar, herhangi bir firma için toplam duran varlıklardan toplam dönen varlıkların çıkarılması ile varlık kazanmış bir fark değeri üzerinden belirlendi. Bu fark değerinin, OECD'e ait kavram algısının, makro ekonomik (devlet) öncülüğünün altında gerçekleşmesi amacıyla, bir ülkenin yıl sonu politika faizi ile çarpılması önerilmektedir. Bu, bir kesit verisi (cross-section) oluşturur. Bu çalışmada yeşil finansın Türkiye örneği adına Türk holdingler dikkate alınmaktadır. Öncelikle 16 holdingin faaliyet raporlarından 2021 yılına ilişkin yeni finansal yatırımlar çıkarılarak kesit verisi (cross-section) metodolojisine dahil edilmiştir. Ardından Türkiye örneğinin yeşil finansı, yeni finansal yatırımlar üzerinden kanıtlanmıştır. TÜİK 2020-2021 istatistiklerinde yerleşik çevre harcamaları ve çevre vergileri ile yeşil finans kategorileştirilmiştir.

Anahtar Kelimeler: *Yeşil ekonomi, Muhasebe, Finansal yatırım, Firmalar, Marjinal maliyet*

Jel Kodu: *Q51, Q56, G17*

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1. INTRODUCTION

A green economy is summarized in the United Nations environmental program: a green economy is defined as low-carbon resource efficiency and is socially inclusive. In a green economy, employment and income growth are provided by society, and private investments in green economic activities are sustained by financial assets that reduce carbon emissions and pollution.[1] According to the United Nations, when companies provide supply based on demand, environmental pollution occurs, and natural resources are depleted. Therefore, the green economy is a name given to the initiatives that develop to keep a tight rein on this image. Accordingly, the green economy might be admitted as an economic region that creates employment and trade opportunities because of having a self-interior loop. Differently, the necessary and infinite consequence is that: the initiatives belonging to the green economy start after environmental pollution occurs. In this context, the works of the United Nations on the green economy, or, by another name, *the economics of natural resources and the environment*, are collected under three main titles.

1. *Advocacy of macro-economic approach to sustainable economic growth through regional, sub-regional, and national fora,*
2. *Demonstration of Green Economy approaches with a central focus on access to green finance, technology, and investments,*
3. *Support to countries in terms of development and mainstreaming of macro-economic policies to support the transition to a Green Economy*[2]

Remark a|*: The brown economy is currently a dominant variant in the globe as far as the brown (green) economy is concerned.*

Each collocational matter above (with the remark a|) reports the transition period to the green economy and the active period with an optimistic assumption (in the way that the green (brown)) of the green economy, and the United Nations accurately advocates macroeconomic leadership; however, the green economy has required collective vigilance together with the Brundtland paper (*Our Common Future*) which was published in October 1987 by the United Nations (Azazi & Uzma, 2022), (Gürer, 2020), (Naimoğlu, 2022). The stress intended for the permanence of the lead of macroeconomic agencies takes part at this point. Differently, matter (2) is the focal point as the United Nations proves the seriousness of the green economy by putting green finance forward. It is admitted there that the monetary source for green finance during the active period of the green economy, and firstly the transition period to the green economy, must be determined by the government or international macroeconomic agencies. Accordingly, the green economy might achieve green economic aims thanks to direct investments in technologies that keep a tight rein on environmental pollution. It goes ahead; and shall be controlled by money and technology sorted under the leadership of the supra-firm entities. Again, in the economics literature, there are often pieces of research about firms, regions, and pollution within the scope of the green economy definition discovered by the United Nations. That the description is a constant based on the supply-ethics loop for all macroeconomic agencies having environmental responsibility stakeholders causes a question mark about how much repair and control investment transfer to the green economy of the firms. There is consistency in the view of the United Nations in this context. However, advocating that environmental pollution and natural resources famine might be prevented only by the macroeconomic agencies drastically means a hidden encouragement that supports the firms which do more of the same business. Therefore, the ecological responsibility stakeholders of the macroeconomic agencies are the firms. At this point, the incentive wants the pollution relative to the

[1] Web address: https://www.unep.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/green-economy
[2] Web address: https://www.unep.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/green-economy

brown (*green*) economy that creates employment and trade opportunities. Frankly, the remark a| is not intentional.

1.1 The Green Finance and New Financial Investments

OECD emphasizes, as an international macroeconomic agency, the necessity of investing in both two phases of the green economy to achieve targets of sustainable economic development and the treaty of Paris. OECD took a significant and authoritative step by establishing a Centre on Green Finance and Investment in 2016.[1] OECD adopts that the action of a collection of finance depends on increasingly crucial analysis and convincing analysis types for the decision-makers. The decision-makers are not only the macroeconomic agencies; the concept also includes the firms, the investors, and the civil society organizations. In this case, it is effortless to understand that the business of a gathering of green finance parallels many difficulties. Hence, the responsible macroeconomic agencies approve the green (brown) economy with its exact definition. However, advocating that environmental pollution and natural resources famine might be prevented only by the macroeconomic agencies does not accurately belong to the OECD. According to the United Nations, the entrepreneurial activities under the four collocational matters previously (with the remark a|) must be structured depending on macroeconomic leadership under money and technology. The OECD accepts this definition partially. And investments need to be directed from the companies to the green economy. In this context where the United Nations and OECD diverge, our criticism suggests a novel firm-focused financial investment approach to green finance as we have precisely no method in the literature that calculates green finance, which becomes a monetary amount.

1.2 The Methodological and Theoretical Contribution

As seen in the previous two sections, the United Nations and OECD diverge, and the conciliatory hypothesis should become an equation that calculates the monetary amount of green finance while a firm is in question in this investigation. Its name shall be an OECD-focused green finance orientation under macroeconomic leadership adopted by the United Nations. On the other hand, a firm's balance sheet has two pieces of monetary assets. In green economy literature, if there is no information on any direct investment by an accounting index related to green technologies, whether these belong to the firm or not, within the balance sheet, then a novel financial asset approach or a novel firm-focused financial investment approach to green finance must be valid. Therefore, this paper affirmatively aims to produce an accounting index targeting aggregate fixed assets instead of looking for concrete data in the balance sheets, depending on the scope of the balance sheet. That two agencies diverge also proves the critique. In the name of the green finance equation, a subtraction method of the aggregate current assets from the aggregate fixed assets is proposed. This reasoning is a new financial investment or green finance that cannot be caught due to the singular deduction theorem. And polite_8 reports the short-term policy rate of the elected country at the end of the relevant year as far as the generalized deduction theorem is concerned. Namely, the catch provides an OECD-focused green finance orientation under macroeconomic leadership adopted by the United Nations. By using new financial investments, a state supplies the marginal cost of investment to the outside (green economy) by providing an interest outflow as if there is an investment from outside. Of course, the way to do this is to get the related marginal cost from the companies and take it out.

$$\underset{\text{cross}-\text{section: year (ysene)}}{\text{country}\left[\text{firm}\left[\text{grefin}_9 = \left(\beta_0 + \beta_1 \text{fixed}_{ij} - \beta_2 \text{flow}_{i+1j} + \bar{u}\right) * \text{country}[\text{polite}_8]\right]\right]}, \qquad ij = 1, \dots, k \quad (0)$$

[1] For more information, please see the civil web address: https://www.oecd.org/cgfi/ and https://www.oecd.org/cgfi/about/.

In the second step of this paper, after proving the equation (0), the sample of Turkey shall be determined to investigate the relationship between the firm and green finance in line with the previous aims. New financial investments shall be configured by researching the catchable novel and green investments in the sixteen holdings' annual reports according to equation (0), which these holdings hold the best capital margins in Turkey (Table.1 on page 10). The sum of the total current assets of the elected sixteen holdings for 2021 corresponds to 19.45% of 2021's Turkey's gross domestic product. It must have sufficient proof value.

2. LITERATURE REVIEW

Again, in green economy literature, if there is no information on any direct investment by an accounting index related to green technologies, whether these belong to the firm or not, within the balance sheet, then a novel firm-focused financial investment approach to green finance can be valid. The generalized research question upon much green economy literature is answered in this review.

Wiseman (1982) has done an honest firm analysis between the firm-based explanations of the firm with environmental friendship and the ecological contribution success of the firms by using the annual reports of twenty-six firms. The result shows that an honest firm does not contribute to the analysis.

Christmann (2004) has gotten three hypotheses of the environmental policies performance of international chemistry companies in the USA. This paper sets three affirmative relation claims as good ecological investment performance, good operational environment policies performance, and consistent environmental communication methods for each elected firm (including its subsidiaries) according to the exact investing amounts to get a profit; however, the research does not prove the claim of good ecological investment performance. The other two hypotheses are true. Investments of the chemistry companies in the USA are not for the environment.

Saha & Darnton (2005) have sought answers to questions like are the companies green? and or are they acting like such? This paper uses a qualitative data collection and interview method and has the data of selected thirteen companies. The research result shows that a green-conscious company does not contribute to a tangible consequence.

Bilen et al. (2008) completed a case study in Turkey on energy production and power consumption for sustainability development and environmental pollution. This paper has a green aim, such that the research that renewable energy sources increase pollution in an exact observable region. The result emphasizes the insufficiency of renewable energy sources.

Albino, Balice, & Dangelico (2009) have provided the gauge of general observation intended for sustainability-focused firms in ecological strategies and the production of green yield. This paper uses the firm scale in different production fields suggested by the Dow Jones Sustainability World Index (DJSWI). According to the research result, some companies maintain green products in their supply movements in the various production domains, and the groups constitute close to fifty percent of the sample.

Dangelico & Pujari (2010) have asked, Why and how are companies integrating environmental sustainability in mainstreaming green product innovation? This paper simultaneously made a life revolution analysis containing micro and macroecological problems. However, the research result aimed to suggest the dissemination of green product information, especially in company disclosures, because true innovation reflects the environmental culture and includes the concept of innovation.

Petraru & Gavrilescu (2010) have completed a cost-utility analysis with a microeconomic approach. The research technique concludes that the companies in the paper sample should invest in green

technologies to prevent ecological pollution. And they must show this within the balance sheet. There is a sign that the firm annual report should have an accounting index.

Ite, Ibok, Ite, & Petters (2013) have conducted discovery on petroleum exploration and production by liting past and present environmental problems in the Niger delta to contribute to the global green economy. The research result is that the export-based industrialization tactic made in the name of economic development causes environmental pollution. The ecological breakdown parallels the necessity of getting total utility.

Prechel & Touche (2014) have investigated environmental activities and government environmental policies of USA-based energy companies with sulfur dioxide pollution. The research result adopts associating the firms with poor marginal pollution control costs with higher pollution levels. A positive correlation makes sense between the capital profit margins of the firms and environmental pollution. The second consequence presents the abandonment of green investments.

Amberg & Magda (2018) have evaluated whether the environmental protection measures taken by international cosmetics companies affect the demand for cosmetics through the concept of sustainability. This paper has also drawn attention to the changes in the marginal cost volumes of sensitive cosmetics companies to the green environment. The research result shows that cosmetics firms started walking to the green road to aim a profit.

Chen, Wang, & Feng (2018) have explored an environmentally oriented accounting control system compatible with low-carbon green product assessment using the optimization (maximization) effect. This paper has combined statistical methods with accounting records. The research method uses linear regression analyses in the supervisory accounting model by determining a positive correlation between supervisory accounting standards and environmental pollution factors. The research result shows that green-conscious firms should use statistical accounting models to maintain control.

Chen & Liu (2020) have conducted a spatial analysis of fiscal decentralization on environmental pollution. This paper has constituted a pollution control accounting methodology that audits both the investments of large companies and environment-oriented state investments. Accordingly, the method includes environmental public capital goods while going ahead with the positive correlation research on the scale of large firms. The research technically shows that a positive U-shaped autocorrelation settles between environmental regulations and environmental pollution after the method of Moran's I. The research result recommends state intervention.

Çınar, Korkmaz, & Şişman (2021) have analyzed the green complexity index and air pollution through NUTS-3 regions in Turkey. This paper has cited the numerical scarcity of studies on green yield complexity at the country and regional levels. The research technique determines the null between the complexity indexes of 81 regions and air pollution. The research result shows that coming to a degree at the point of supplying green yields and positively affecting the environment does not have any linear correlation. There is proof that the money and technology processes associated with the green economy began later.

Wang, Hu, & Lin (2021) have worked on the Dixit-Stiglitz model. This paper has reached that landscaping has a U-shaped impact on the skill premium, and landscaping has an inverted U-shaped impact on environmental pollution. The research result shows that the effect of skill bonuses on environmental pollution is negative. And green innovation and the skill premium are compatible.

Deng et al. (2022) have found the asymmetric interactions of foreign direct investment, financial development, and globalization on environmental pollution. Accordingly, the research result shows that predictable ecological pollution comes. The literature review proves the first and second kinds of stages of the investment approach to green finance, which took place well-formed in the first stage, but there is not precisely the same achievement in the second phase. Hence, a new system is critical.

3. DATA AND METHOD

Panel data analysis has a cluster of econometric and statistical methodologies to form the regression equation models, including economic factors diversity (Davies & Lahiri, 1995), (Hsiao & Yanan, 2007), (Baltagi, 2008), (Wooldridge J. M., 2010), (Beine, Defoort, & Docquier, 2011), (Seetaram & Petit, 2012). According to equation (0), the cross-sectional analysis as a subset of panel data must make sense in the methodology. The equation (0) was formed as against (Aussenegg, Götz, & Jelic, 2016) by targeting the increase in fixed assets and as compatible with (Wooldridge J. M., 2010). At this point, the novel financial investments were determined over a difference from the subtraction of aggregate current assets from the aggregate fixed assets for any firm. Consider the uncatchable green finance by assuming the general asset swap ((supply maximization in the new commercial era)) in a year attached to the scope of the balance sheet. There is no alternative other than those remaining when conceiving an accounting index targeting aggregate fixed assets for the runner green finance according to the exactly considered annual cross-section item. Thus, the cross-sectional data model equation over a single year point: $\langle \hat{Z} = \beta_0 + \beta_1 Y_{ij} - \beta_2 X_{i+1j} + \bar{u} \rangle$ is processed in the method. This paper's tactic shall first start with putting a show that the mathematical consistency of equation (01) is always valid due to our green finance theory taking place in the future, not in the past, consistently.

$$\text{country}\left[\text{firm}\left[\text{grefin}_9 = \left(\beta_0 + \beta_1 \text{fixes}_{ij} - \beta_2 \text{cuts}_{i+1j} + \bar{u}\right) * \text{country}[\text{polite}_8]\right]\right], \quad ij = 1, \dots, k \quad (01)$$
$$\text{cross} - \text{section: year (ysene)}$$

Equation (7) above is a regression model without constant term, different from usual; especially is a non-classical regression equation model that seems like $\langle \hat{Z} = \beta_0 + \beta_1 Y_{ij} - \beta_2 X_{i+1j} + \bar{u} \rangle$. Accordingly, just one proof needed at this point bends to the mold of *β_0 is zero* because the runner green finance stays fixed as a non-stochastic known value, which the subtraction suggestion becomes fixated for the runner green finance; much more; this process is a necessity to turn it into the deterministic-mathematical familiar within the scope a proof. An evidentiary strategy deals with frames as follows.

$$classical\ regression\ equation \vdash \hat{Y} = \beta_0 + \beta_1 \hat{X}_i + \bar{u}, \quad i = 1, \dots, n \quad \overrightarrow{theoretical\ frame} \quad (02)$$

$$the\ choice\ functions \vdash \zeta(\hat{Y}) = f(\beta_0) + \rho(\beta_1 \hat{X}_i) + \tau(\bar{u}), \quad i = 1, \dots, n \quad \overrightarrow{mathematical\ frame} \quad (03)$$

$$the\ generalized\ theory \vdash \xi\left(\zeta(\hat{Y}), f(\beta_0), \rho(\beta_1 \hat{X}_i), \tau(\bar{u})\right), \quad i = 1, \dots, n \quad \overrightarrow{logical\ frame1} \quad (04)$$

As far as equation (04): the first logical frame is concerned, there exists at least one that the second theory which stays beneath the 2nd generalized choice function $\xi\left(\zeta(\hat{Y}), f(-\beta_0), \rho(-\beta_1 \hat{X}_i), \tau(-\bar{u})\right)$, hence, as far as equation (Ⱶ6): the second logical frame is concerned, there exists at least one that the third theory which stays beneath the 3rd generalized choice function $\xi\left(\zeta(\hat{Y}), f(\beta_0), \rho(-\beta_1 \hat{X}_i), \tau(\bar{u})\right)$.

$$the\ first\ generalization \vdash \xi\left(\zeta(\hat{Y}), f(\beta_0), \rho(\beta_1 \hat{X}_i), \tau(\bar{u})\right), \quad i = 1, \dots, n \quad \overrightarrow{logical\ frame1} \quad (Ⱶ5)$$

$$second\ generalization \vdash \xi\left(\zeta(\hat{Y}), f(-\beta_0), \rho(-\beta_1 \hat{X}_i), \tau(-\bar{u})\right), \quad i = 1, \dots, n \quad \overrightarrow{logical\ frame2} \quad (Ⱶ6)$$

$$the\ third\ generalization \vdash \xi\left(\zeta(\hat{Y}), f(\beta_0), \rho(-\beta_1 \hat{X}_i), \tau(\bar{u})\right), \quad i = 1, \dots, n \quad \overrightarrow{logical\ frame3} \quad (F7)$$

The axiom of choice from the Zermelo-Fraenkel set theory does logically one-to-one correspondence between a choice act and only one number. Accordingly, the mathematical frames of evidence occur.

$$the\ classical\ requation \vdash \zeta(\hat{Y}) = f(\beta_0) + \rho(\beta_1 \hat{X}_i) + \tau(\bar{u}), \quad i = 1, \dots, n \quad \overrightarrow{theoretic\ frame} \quad (08)$$

$$the\ regressionalx' \vdash \langle\left(\zeta(\hat{Y}) + f(-\beta_0) + \rho(-\beta_1 \hat{X}_i) + \tau(-\bar{u})\right)^2\rangle^{0.5} = z_{min}^{0.5} = 0, \quad i = 1, \dots, n \quad (X9)$$

$$regressionaly' \vdash \zeta\left(\hat{Y}\right) + f(-\beta_0) + \rho\left(-\beta_1\hat{X}_i\right) + \tau(-\bar{u}) = z_{min}^{0.5} = (0\ \widetilde{or}\ z'_{max}), \qquad i = 1, \dots, n \quad (10)$$

$$regressionalz' \vdash f(\beta_0) + \zeta\left(\beta_1\overline{Y}_{ij}\right) + \rho\left(-\beta_2\hat{X}_{i+1j}\right) + \tau(\bar{u}) = z_{min}^{0.5} = \left(\dot{Z}\ \widetilde{or}\ 0\right), \qquad ij = 1, \dots, k \quad (11)$$

As far as equation (08): $the\ classical\ requation$ is concerned, there exists at least one that the fourth theory which stays beneath the 4th generalized choice function Ⱶ12: $\xi\left(f(\beta_0), \zeta\left(\hat{Y}\right), \rho\left(\beta_1\hat{X}_i\right), \tau(\bar{u})\right)$. As far as equation (10): $regressionaly'$ is concerned, there exists at least one that the fifth theory which stays beneath the 5th generalized choice function Ⱶ13: $\xi\left(f(-\beta_0), \zeta\left(\hat{Y}\right), \rho\left(-\beta_1\hat{X}_i\right), \tau(-\bar{u})\right)$. As far as equation (11): $regressionalz'$ is concerned, there exists at least one that the sixth theory which stays beneath the 6th generalized choice function F15: $\xi\left(f(\beta_0), \zeta\left(\hat{Y}\right), \rho\left(-\beta_1\hat{X}_i\right), \tau(\bar{u})\right)$. It's following.

$$prior\ maximization\ value' \vdash {}_0^4\Sigma\left(f(\beta_0), \zeta\left(\hat{Y}\right), \rho\left(\beta_1\hat{X}_i\right), \tau(\bar{u})\right), \qquad i = 1, \dots, n \quad \overrightarrow{math\ frame1}\ (Ⱶ12)$$

$$the\ minimization\ value' \vdash {}_0^4\Sigma\left(f(-\beta_0), \zeta\left(\hat{Y}\right), \rho\left(-\beta_1\hat{X}_i\right), \tau(-\bar{u})\right), \qquad i = 1, \dots, n \quad \overrightarrow{math\ frame}\ (Ⱶ13)$$

$$the\ relative\ median\ value' \vdash {}_0^4\Sigma\left(f(-\beta_0), \zeta\left(\hat{Y}\right), \rho\left(\beta_1\hat{X}_i\right), \tau(-\bar{u})\right), \qquad i = 1, \dots, n \quad \overrightarrow{log\ frame}\ (Ⱶ14)$$

$$the\ limitation\ vequation' \vdash {}_0^4\Sigma\left(f(\beta_0), \zeta\left(\hat{Y}\right), \rho\left(-\beta_1\hat{X}_i\right), \tau(\bar{u})\right), \qquad i = 1, \dots, n \quad \overrightarrow{math\ frame2}\ (F15)$$

$$the\ limitation\ process \vdash {}_0^4\Sigma\left\langle f\left(\lim_{\exists\beta_0\forall x\to\hat{0}}\beta_0\right), \zeta\left(\hat{Y}\right), \rho\left(-\beta_1\hat{X}_i\right), \tau\left(\lim_{\exists\bar{u}\forall y\to\hat{0}}\bar{u}\right)\right\rangle, \qquad i = 1, \dots, n \quad (Q16)$$

Remark b|*: The ratio of equations (F15) and (Q16) from the collocation of five valuables is always* ***two****. The sorting makes precise sense from the relative min((Q16) or (F15)) to relative max((F15) or (Q16)).*

Proof: consider $\forall a, b, c, d \in \mathbb{R} - \{0\}$, *such that* $\langle\langle Fr.(03)\ and\ Fr.(08) \Longrightarrow (a = b + c + d) \Longrightarrow \xi\left(\zeta\left(\hat{Y}\right), f(\beta_0), \rho\left(\beta_1\hat{X}_i\right), \tau(\bar{u})\right)\rangle \Longrightarrow (Ⱶ12)\rangle \Longrightarrow b + a + c + d$, *then secondly* $\xi(a - b - c - d) \Longrightarrow -b + a - c - d$, *then thirdly* $\xi(a - b + c - d) \Longrightarrow -b + a + c - d$, *then consecutively* $\xi(a + b - c + d) \Longrightarrow b + a - c + d$, *not for the sake of contradiction:* $b + a + c + d = \widetilde{2a}$, *hence secondly* $-b + a - c - d = \tilde{0}$, *hence thirdly* $-b + a + c - d = \widetilde{2c}$, *here, finally, there exists at least one epistemic modifier outside* $\Sigma(a + b - c + d) \Longrightarrow b + a - c + d$. *A sub-proof is:* $b + a - c + d = 2(b + d) \Longrightarrow 2(a - c) = 2(b + d) \Longrightarrow 2(a - c) = \widetilde{2a} \pm \tilde{0} - \widetilde{2c} \Longrightarrow b + a - c + d = 2(a - c)$. *Proofs show that the ratio of equations (F15) and (Q16) from the collocation of five valuables is always two. The relativity is admissible* ***Q. E. D***[1]

$\langle upon\ being\ noncommutatively\rangle$ Hence, equation (X9): $the\ regressionalx' \vdash relative\ limit\ \dot{Z}$ is ceteris paribus applied to outframe of the regression domain. Hence, β_0 and $\bar{u}$ might be numerically zero at the limit point. A theoretical gap is gotten for the $X, Y,$ and Z under an assumption that these are deterministic known data after β_2 occurs deterministic obscure. β_2 coefficient math is as follows.

$$estimation\ lemma\ coefficient' \vdash f(\beta_0) + \zeta\left(\beta_1\overline{Y}_{ij\varepsilon}\right) + \rho\left(-\beta_2\hat{X}_{i+1j\varepsilon}\right) + \tau(\bar{u}) = \Lambda\left(\lim_{\forall\beta_0\forall\bar{u}\to\hat{0}}\dot{Z}\right) \quad (16)$$

$$estimation\ factor\ variable\ (1)' \vdash f(\beta_0) + \zeta\left(\beta_1\overline{Y}_{ij\varepsilon}\right) + \Lambda\left(-\lim_{\forall\beta_0\forall\bar{u}\to\hat{0}}\dot{Z}\right) + \tau(\bar{u}) = \rho\left(\beta_3\hat{X}_{i+1j\delta}\right) \quad (17)$$

$$estimation\ factor\ variable\ 2' \vdash f(\beta_0) + \rho\left(-\beta_2\hat{X}_{i+1j\varepsilon}\right) + \Lambda\left(-\lim_{\forall\beta_0\forall\bar{u}\to\hat{0}}\dot{Z}\right) + \tau(\bar{u}) = \zeta\left(\beta_4\overline{Y}_{ij\delta}\right) \quad (18)$$

$$\beta_2' = \beta_{2m+1}\bigwedge_{m=1}^{M\approx 2} e^{i\pi}\left(|-1|\frac{\rho\left(-\beta_2\hat{X}_{i+1j\varepsilon m}\right)}{\rho\left(\beta_3\hat{X}_{i+1j\delta m}\right)}\right)^{'\hat{v}} \vdash \beta_1' = \beta_{1n+1}\bigwedge_{n=1}^{N=M} e^{i\pi}\left(|-1|\frac{\zeta\left(\beta_1\overline{Y}_{ij\varepsilon n}\right)}{\zeta\left(\beta_4\overline{Y}_{ij\delta n}\right)}\right)^{'\hat{t}} \vdash \sum_{p=1}^{N-1}\dot{Z} \quad (19)$$

[1] *Let's consider* $\forall 17,23,5,-11 \in \mathbb{R} - \{0\} \subseteq \langle(17 = 23 + 5 - 11) \Longrightarrow (Ⱶ12) \Longrightarrow \Sigma\left(f(\beta_0), \zeta\left(\hat{Y}\right), \rho\left(\beta_1\hat{X}_i\right), \tau(\bar{u})\right)\rangle \Longrightarrow 23 + 17 + 5 - 11 = 34$, *hence secondly* $-23 + 17 - 5 + 11 = 0$, *hence thirdly* $-23 + 17 + 5 + 11 = 10$, *hence fourthly* $23 + (17 - 5) - 11 = 24$; *this is over.*

Accordingly, there is a novel theoretical gap as a cross-section over exactly gotten the equation (F7). $\langle \hat{Z} = \lim_0 + \beta_1 Y_{ij} - \beta_2 X_{i+1j} + \overline{\lim_0} \rangle$'s $\langle \text{grefin}_9 = (\beta_0 + \beta_1 \text{fixes}_{ij} - \beta_2 \text{cuts}_{i+1j} + \bar{u}) * \text{country}[\text{polite}_8] \rangle$. Proof, the cross-sectional fixed asset result: '$\Sigma\text{grefin}_9 = \left(\hat{v} * \hat{t} * \breve{g}\text{refin}_{8\,\delta p}\right) * \text{polite}_8 = \Sigma\text{grefin}_9$ or 0'. Hence, the Boolean product runs the zero function for each ratio of unequal terms defined in $\mathbb{R} - \{1\}$.

Table 1: The Cluster of Research Data

Firm Data and Firm Qualifications y2021	**Fixed Assets** *(fixed)* TRY	**Current Assets** *(flow)* TRY	**New Financial Investments** *(new I)*
Eczacıbaşı Trust Company Holding INC	3676463630	410717180	3265746450
Hacı Ömer Sabancı Holding INC	354474326000	465289463000	-110815137000
Koç Holding INC	414578711000	605974596000	-191395885000
ENKA Holding	53257955000	68067033000	-14809078000
Borusan Holding	24811975578	34267576590	-9455601012
Eti Maden General Directorate	4096000000	5896000000	-1800000000
NET Holding INC and Subsidiaries	16163717640	1588933221	14574784419
Zero (Origin)	0	0	0
Ülker INC and Subsidiaries	7478685000	18764940000	-11286255000
Fina & Fiba Holding INC and Subsidiaries	35902253000	36102308000	-200055000
BİM	16401000000	14011000000	2390000000
AG Anadolu Group Holding	73765000000	38051000000	35714000000
Doğuş Automotive	1186000000	3410000000	-2224000000
Zorlu Holding	101685895000	33925330000	67760565000
Çalık Holding INC	69937637000	68756247000	1181390000
Opet Petroleum Business INC	4579017000	10085577000	-5506560000
Alarko Holding INC	4697866964	2433953798	2263913166

Source: 2021 annual reports were gotten from the civil web addresses of the relative holdings.

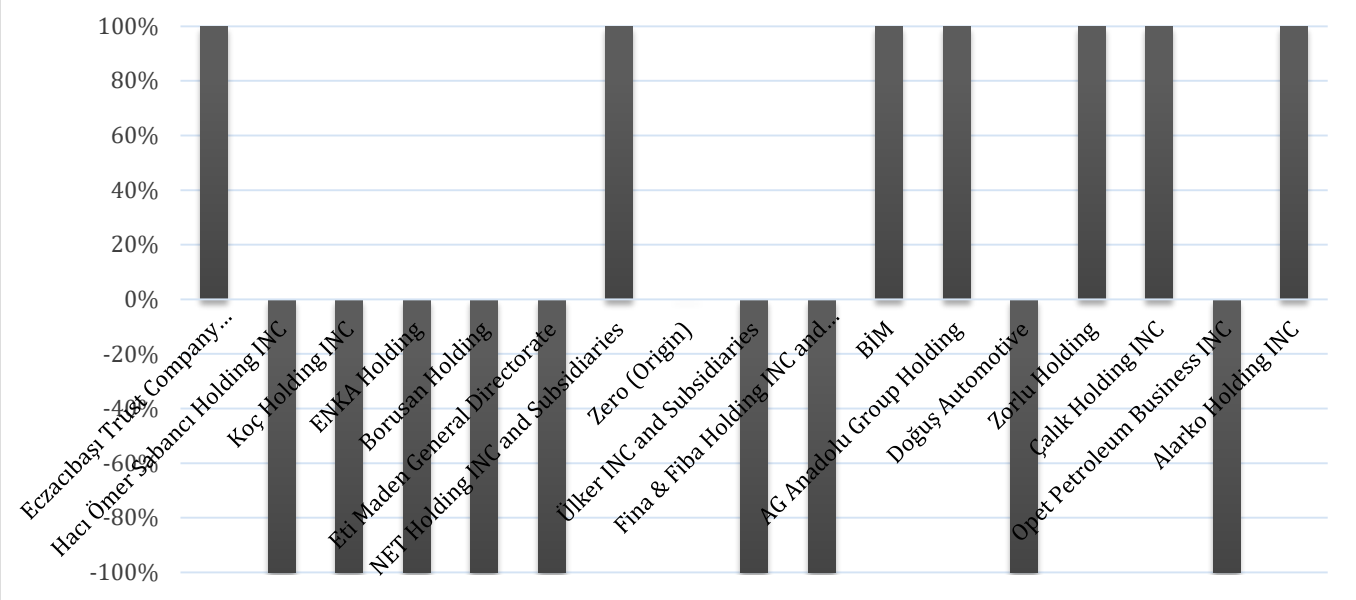

Figure 1: New Financial Investments Grayscale Dispersion

The methodological strategy has proved the mathematical consistency of the green finance equation and the theory of green finance, such that grefin$_9$ has become a deterministic-mathematical known. However, this second strategy admits the grefin$_9$ as a stochastic known value. In this context, the data of the cross-sectional equation from the Republic of Turkey sample are statistically appropriate to use the least squares methodology. Differently, the policy interest rate for Turkey: 12.50 percent, was accepted and applied by the monetary policy on 17 December 2021. The first regression is as follows.

Table 2: Regression Statistics Data1 <the dependents fixed and current assets, the independent new financial I_S>

Regression Statistics	**Multiple R**	**R Square**	**Adjustable R Square**	**Standard Error**	**Observation**
	1	1	1	1,47E-05	17
ANOVA	**df**	**SS**	**MS**	**F**	**Significance F**
Regression	2	5,26E+22	2,63E+22	1,21E+32	2,1E-219
Difference	14	3,03E-09	2,17E-10	-	-
Total	16	5,26E+22	-	-	-

Summary Output	Coefficients	Standard Error	(t) Stat	(P)-value	Low 95%	High 95%
Intercept	0	4,48E-06	0	1	-9,6E-06	9,6E-06
Fixed Assets	1	1,67E-16	5,98E+15	2,9E-214	1	1
Current Assets	-1	1,18E-16	-8,5E+15	2,3E-216	-1	-1

Table 3: Novel Statistical Local Sequence <Seventeen>

Firm Data and Firm Qualifications y2021	**Fixed Assets** *(fixed)* TRY	**Current Assets** *(flow)* TRY	**New Financial Investments** *(new I)*
ENKA Holding	53257955000	68067033000	-14809078000
Borusan Holding	24811975578	34267576590	-9455601012
Eti Maden General Directorate	4096000000	5896000000	-1800000000
NET Holding INC and Subsidiaries	16163717640	1588933221	14574784419
Eczacıbaşı Trust Company Holding INC	3676463630	410717180	3265746450
Zero (Origin)	0	0	0
Hacı Ömer Sabancı Holding INC	354474326000	465289463000	-110815137000
Koç Holding INC	414578711000	605974596000	-191395885000
Zorlu Holding	101685895000	33925330000	67760565000
Ülker INC and Subsidiaries	7478685000	18764940000	-11286255000
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Alarko Holding INC	4697866964	2433953798	2263913166
BİM	16401000000	14011000000	2390000000
Çalık Holding INC	69937637000	68756247000	1181390000
AG Anadolu Group Holding	73765000000	38051000000	35714000000
Fina & Fiba Holding INC and Subsidiaries	35902253000	36102308000	-200055000
Doğuş Automotive	1186000000	3410000000	-2224000000

Source: 2021 annual reports were gotten from the civil web addresses of the relative holdings.

Perhaps, the discernible disposition of this investigation is to take an interest in the permutational cross-section analysis, and it is that the null hypothesis makes sense, especially in this section. As a result, owing to the strategical condition of the noncommutative cross-sectional regression equation, this strategy does not wait for the p-value and t-statistics to become the constant values. In this context, the property has been tried many times (approximately eighty-seven cross-sectional permutations by Excel 365 and combinatorics open-source code library based on Java programming language). Therefore, only two coefficients and the R square data have been with the same in Table.2.

Table 4: Regression Statistics Data3 <the dependents fixed and current assets, the independent new financial I_s>

Regression Statistics	**Multiple R**	**R Square**	**Adjustable R Square**	**Standard Error**	**Observation**
	1	1	1	8,03E-06	17
ANOVA	**df**	**SS**	**MS**	**F**	**Significance F**
Regression	2	5,26E+22	2,63E+22	4,08E+32	4,3E-223
Difference	14	9,02E-10	6,44E-11	-	-
Total	16	5,26E+22	-	-	-

Summary Output	Coefficients	Standard Error	(t) Stat	(P)-value	Low 95%	High 95%
Intercept	1,53E-05	2,44E-06	6,250817	2,12E-05	1E-05	2,05E-05
Fixed Assets	1	9,11E-17	1,1E+16	6E-218	1	1
Current Assets	-1	6,44E-17	-1,6E+16	4,6E-220	-1	-1

All tables controlled (almost eighty-seven images) are sensible according to the ANOVA significance F test. Regression Statistics Data1 means the straight succession of Table.1, and regression Statistics Data3 means the meaningful sequence of Table.3. As the intercept converges to zero in the tables, the null hypothesis must be accepted in the last significance image concerning the p-value and t-statistic.

- $h_{ypo}0$: The dependent variable new financial investments, remain dependent on the horizontal subtraction created on the independent variables. *<this is a valid hypothesis>*
- $h_{ypo}1$: The dependent variable new financial investments, does not remain dependent on the horizontal subtraction created on the independent variables.

The graph of the distribution of data in the Table.3 is as follows. Please, see the appendix for more. The p-value for ranking makes sense as the title. The graph has the standard distribution consistency.

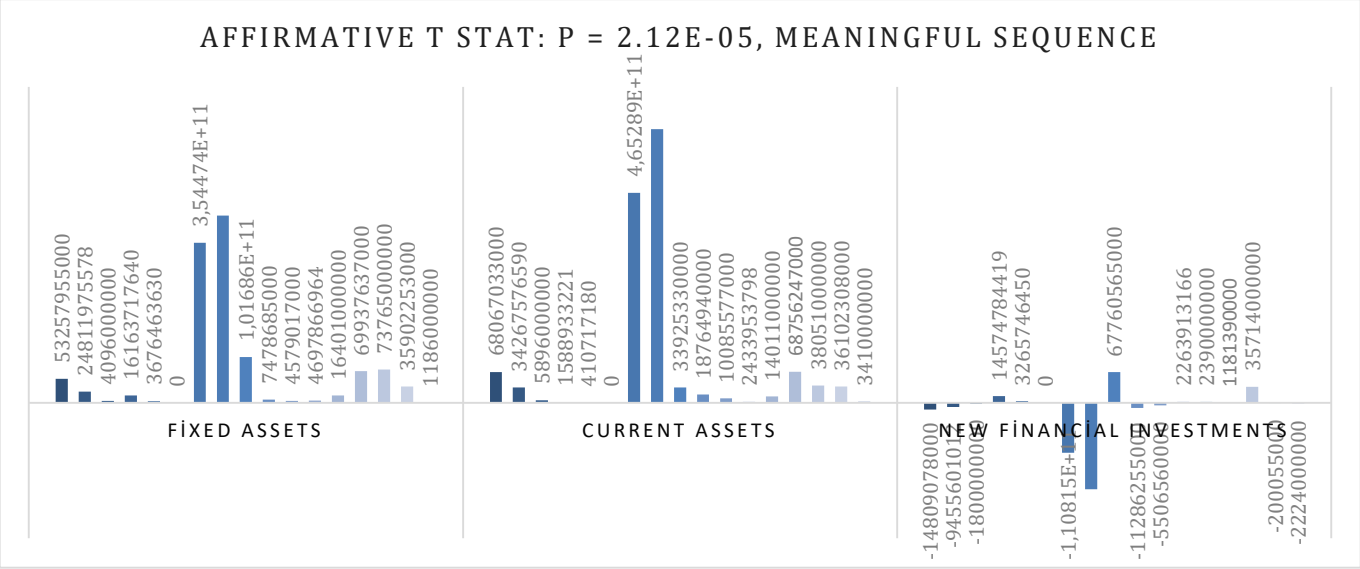

Figure 2: Triple Statistics Distributions

Table 5: Illustrative Statistics Data

Fixed assets		**Current assets**		**New financial investments**	
Average	6,98E+10	Average	8,28E+10	Average	$(_{Guarantor}-1)$ *-1,3E+10
Standard Error	2,98E+10	Standard Error	4,21E+10	Standard Error	1,39E+10
Standard Deviation	1,23E+11	Standard Deviation	1,74E+11	Standard Deviation	5,74E+10
Total	1,19E+12	Total	1,41E+12	Total	$(_{Guarantor}-1)$ *-2,2E+11

It may be reminded that Table.1 and Table.3 common values' illustrative statistics data are in Table.5. The sum of the new financial investments of 16 holdings is considered as 2,2E+11 in the outcome estimation as regression coefficients provide equation: '$\Sigma grefin_9 = (\hat{a} * \hat{b} * \acute{c}) * polite_8$'. Differently, the dollar exchange rate is almost 13.329 TRY on 31.12.2021, and $polite_8$ is 12.50 percent. New financial investments were *methodologically* obtained as ⟨+p2.063.170.530⟩USD. The result must be defined as green finance that might be directed to the green economy over sixteen Turkish holdings. However, the methodology guarantees *payment* for both affirmative-looking and negative-looking investments. In this case, conclusions are still supported by the environmental statistics from TUIK (TUİK 2021 Environmental Expenditures Statistics, TUİK 2020 Environment, Energy Taxes Statistics).

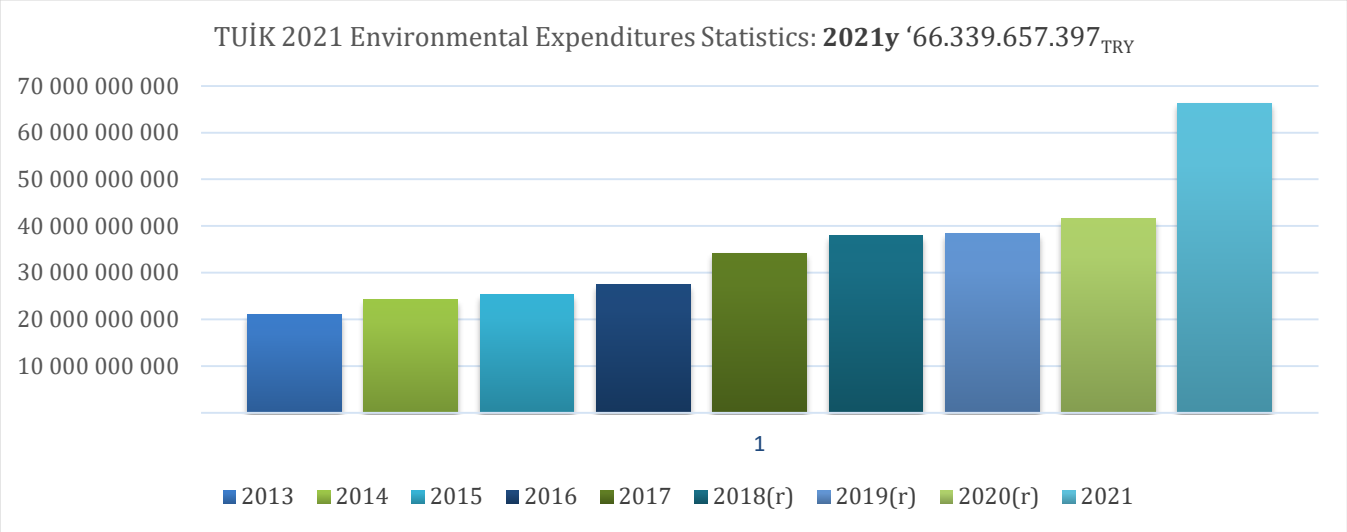

Figure 3: TUİK Environmental Expenditures

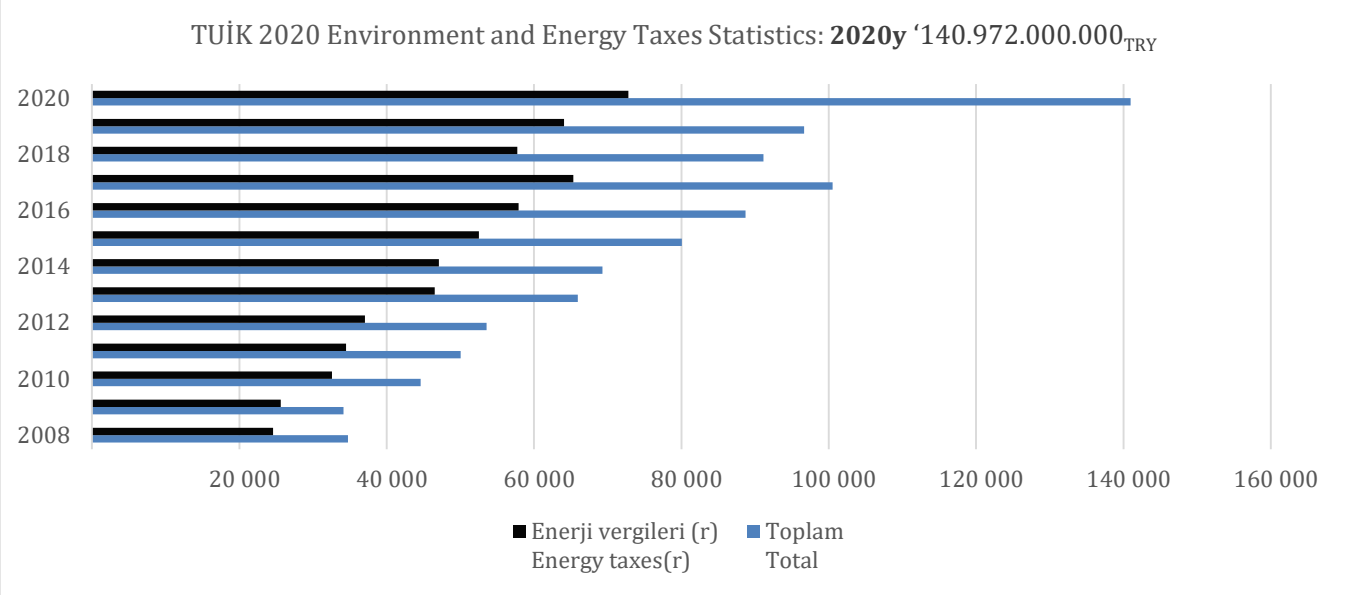

Figure 4: TUİK Environmental Taxes

4. FINDINGS

The finding methodologically reflects the monetary amount of green finance that might be received from the companies only for 2022, with ecological taxes collected in 2020 and consumed in 2021. It is a new idea. It is correct through our method and the statistics of TUIK Environmental Expenditures.

Environmental Protection Expenditures	Environmental Taxes	New Financial Investments and 1st Time Frame
2021y ‘66339657397$_{money}$	**2020y** ‘140972000000$_{taxe}$	**2021 to 2022y** ‘⟨+p27.500.000.000⟩TRY

5. CONCLUSION AND DISCUSSION

This essay evaluated the deduction of new financial investments and discovered the green finance equation. The technical finding proves the availability of green finance both generally and in the sample of Turkey by going beyond the point predicted by research (Petraru & Gavrilescu, 2010). The equational meaning and our proof reflect an OECD-focused green finance orientation under macroeconomic leadership adopted by the United Nations. This procedure creates a cross-sectional value and affects a methodology that might carry out the green finance calculation in the literature. We have suggested a new accounting index for catchable green finance. The novel financial investments were determined over a difference from the subtraction of aggregate current assets from the aggregate fixed assets for any firm. Differently, the circumstances of the finding of this investigation parallel against TUIK 2020-2021 statistics virtually remain in negative qualify without the guarantor multiplier, see Table.5. And the detection is forward-looking because of our green finance theory taking place in the future, not in the past, exactly. However, the divergence of the catchable and runner qualifications of new financial investments or green finance does not guarantee payment within the two categories. Hence, by using the runner green finance, a government supplies the marginal cost of investment to the outside (green economy) by providing an interest outflow as if there is an investment from outside. And the way to do this is to get the related marginal cost from the companies and take it out. This paper has proved it. Our evidence reaches the result that the green economy appears for green finance and technologies with environmental friendship (Tacchella, Cristelli, Caldarelli, Gabrielli, & Pietronero, 2012), (Agan, Acar, & Borodin, 2013), (Anne, Burskyte, & Balciunas, 2015), (Çınar, Korkmaz, & Şişman, 2021). Namely, our finding is firstly compatible with the determination of environmental pollution because of the necessary maximum production (Tacchella, Cristelli, Caldarelli, Gabrielli, & Pietronero, 2012). It is secondly compatible

with the optimism of small and medium-sized enterprises about the green environment (Agan, Acar, & Borodin, 2013). It is thirdly parallel with the increase in the demand to get more profit, especially in times of economic crisis (Anne, Burskyte, & Balciunas, 2015). And it is finally parallel with the proof that the money and technology processes associated with the green economy began later (Çınar, Korkmaz, & Şişman, 2021). That Our Common Future report, published in October 1987, was not thought or could not be thought according to (Christmann, 2004) and (Ite, Ibok, Ite, & Petters, 2013) might be determined automatically as a research question. That the companies do not furthermore nullify environmental breakdown for profit is continually valid. Finally, our methodology with remark a|, remark b|, the green finance equation, and the theory of green finance advance the differentiation of the advocacy class of green finance instead of macroeconomic leadership. It is not an unexpected elaboration in the frame that the green (brown) economy is.

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APPENDIX

Methodologically, the significance property of the permutational cross-section analysis has been tried many times (approximately eighty-seven cross-sectional permutations by Excel 365 and combinatorics open-source code library based on Java programming language). One straight, three meaningless, and two significant sequences of graphic representations in almost eighty-seven images are as follows. Each graphic is an econometrically test result and causes a consecutive convergence for the statistical significance, which means the standard distribution consistency. The p-value for each ranking makes sense as the title. Circulation is in question. Circulation shows an arrangement or regularity corresponding to the theoretical measurement framework of the p-value reason.

Figure.5. First Chosen Element of The Circulation in Approximately 87 Images

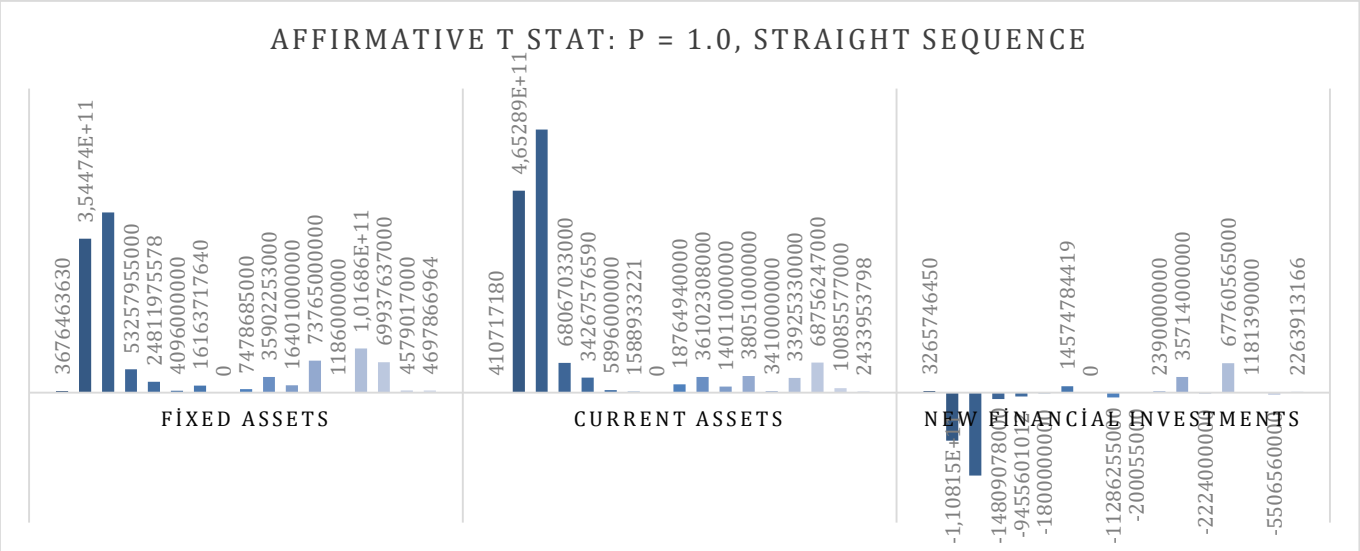

Figure 6: Second Chosen Element of The Circulation

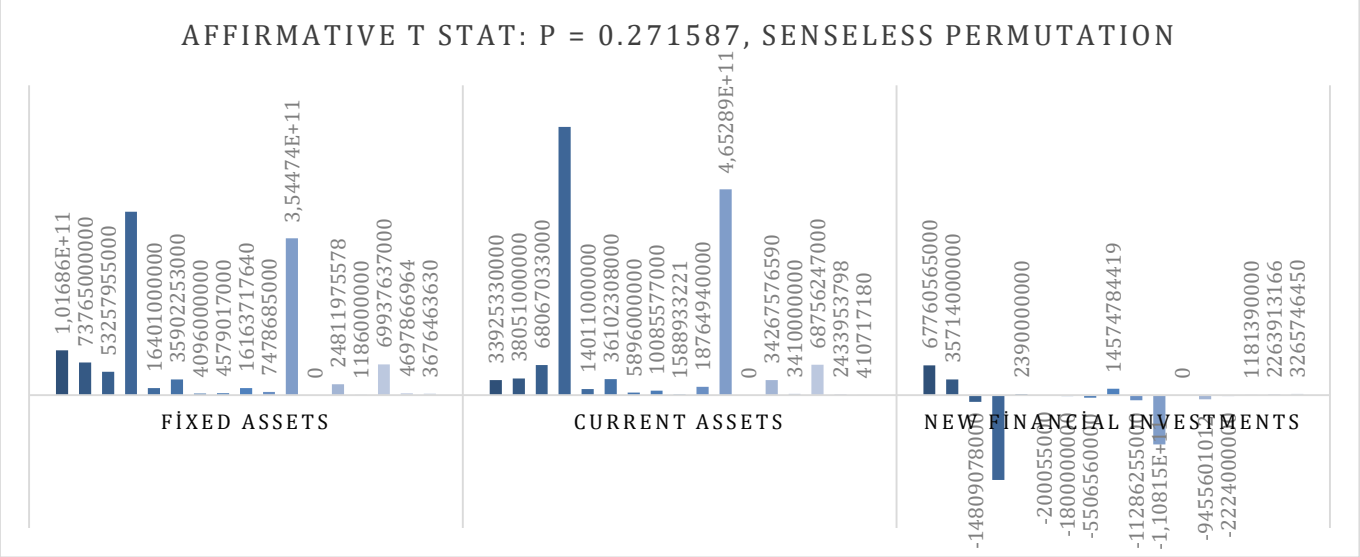

Figure 7: Third Chosen Element of The Circulation

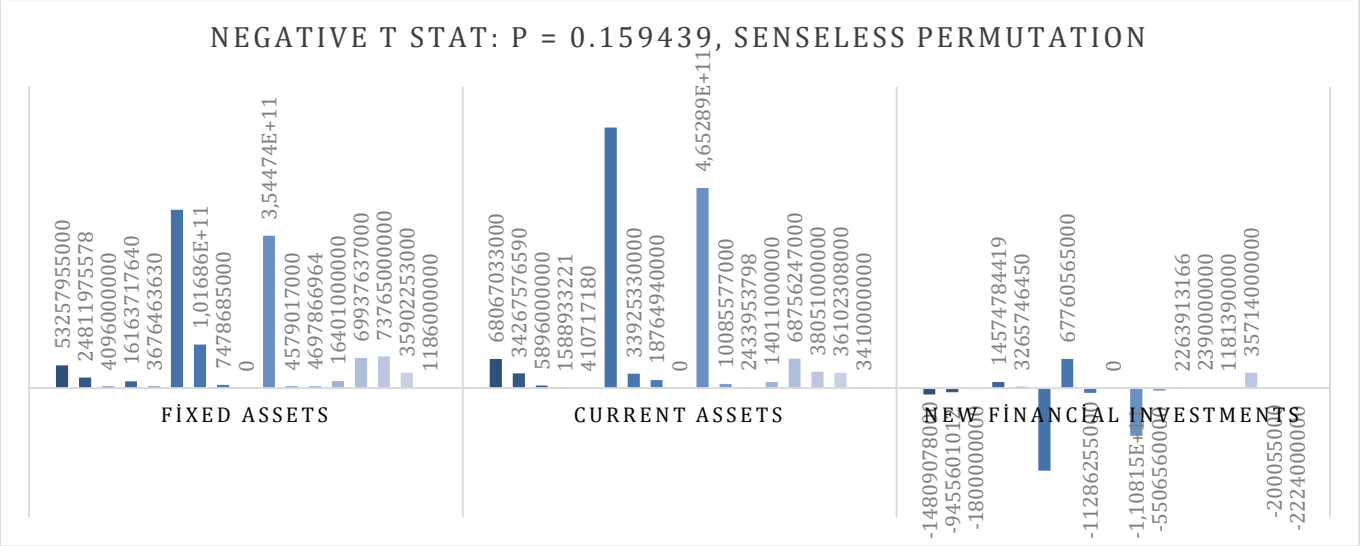

Figure 8: Fourth Chosen Element of The Circulation

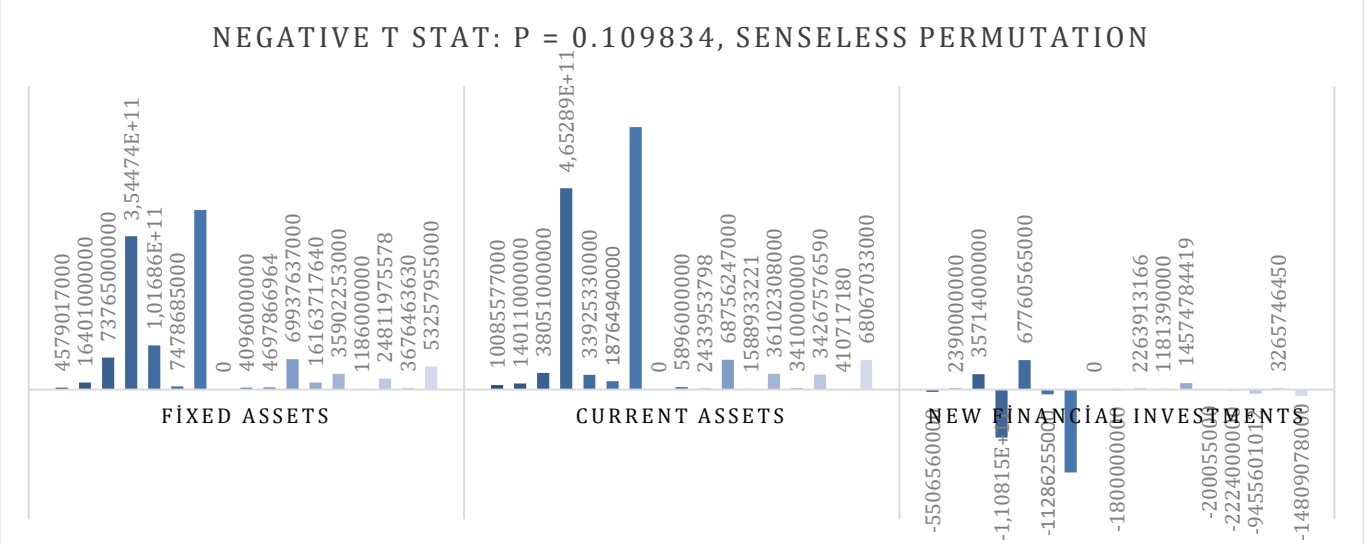

Figure 9: Fifth Chosen Element of The Circulation

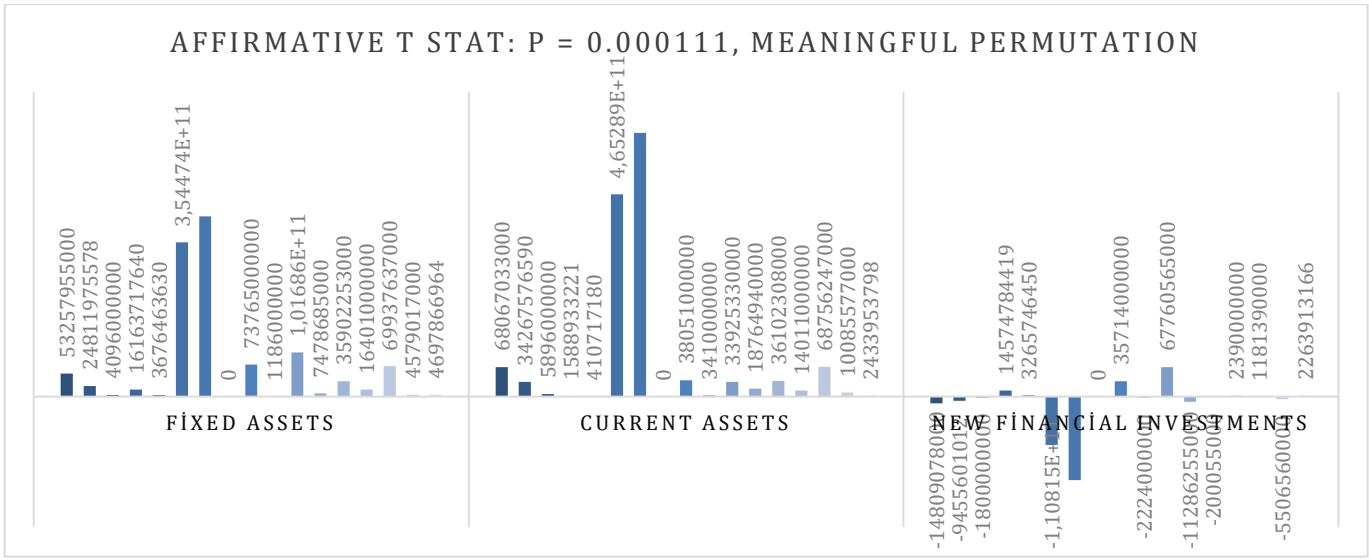

Figure 10: Sixth Chosen Element of The Circulation