Oct 28th, 8:00 AM - Oct 29th, 6:00 PM

Green Economy Induces Energy Crisis Case: Europe

Ardian Uka
University for Business and Technology - UBT, ardian.uka@ubt-uni.net

Erzana Uka
Management Partners and Consulting, Prishtina Kosovo

GREEN ECONOMY induces ENERGY CRISIS

Case: **Europe**

Ardian Uka[1], Erzana Uka[2]

[1] UBT – Higher Education Institution, Lagjja Kalabria, 10000 p.n., Prishtinë, Kosovo

[2]Management Partners and Consulting, Prishtina Kosovo

Abstract

The green economy is a rapidly growing sector that has the potential to drive sustainable economic growth and development. However, the growth of the green economy can also have unintended consequences, including exacerbating existing energy crises. This study focuses on the relationship between the green economy and energy crisis in Europe, exploring the impact of the green economy on energy supply and demand and the ways in which it exacerbates energy crises. The study will utilize a combination of primary and secondary data sources, including government reports, academic studies, and expert interviews, to gather information on the green economy and energy crisis in Europe. The data will be analysed using a range of statistical and econometric techniques to identify patterns and relationships between the green economy and energy crisis. The findings of this study will provide valuable insights into the interplay between the green economy and energy crisis and will inform policy discussions around the development of sustainable energy systems. The results of this study will also be of interest to business leaders and investors in the green economy, as they consider the potential risks and opportunities associated with the growth of this sector. Additionally, the findings of this study will be of interest to policymakers, as they develop strategies to promote sustainable economic growth while addressing energy security concerns.

Keywords: green economy, energy, energy crisis, demand, supply, price.

JEL classification codes: O5, O52, Q2, Q21, Q27, Q28, Q3, Q31, Q4.

Paper type: Research article.

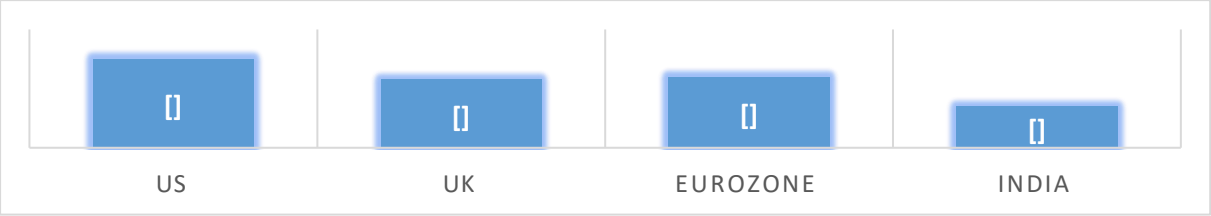
Introduction

As a significant challenge for households and businesses alike. In addition, energy shortages can also lead to reduced economic activity, as businesses are forced to cut back on production and households are forced to spend more on energy and less on other goods and services. The green economy, while offering potential solutions to these problems, can also contribute to the energy crisis if it is not properly managed. For example, if the growth of renewable energy sources is not accompanied by sufficient investment in energy infrastructure, it can lead to an overburdened energy grid and exacerbate existing energy imbalances.

The goal of this study is to understand the complex relationship between the green economy and energy crisis in Europe, and to provide insights into how this relationship can be managed to ensure sustainable economic growth and energy security. The results of this study will inform policymakers, business leaders, and investors, helping them to make informed decisions about the development of the green economy and to find solutions to the energy crisis. Ultimately, this study aims to contribute to the creation of a sustainable energy system that balances the needs of the green economy with the need for energy security.

The energy misbalanced between high aggregated demand and low aggregated supply leads the energy prices to go up and this also influences everyone's budget, the increase of energy cost is presented below at figure 1:

Figure 1 Energy Cost %



Source: Author (IEA, Key energy statistics, 2019, 2022)

As shown above in figure 1, the energy cost has exceeded two digits of the percentage of the price increase in energy costs.

Materials and methods

Literature Review – The Energy Supply: the Green Economy or Green Transition induces the energy crisis. Nevertheless, this is not the only aspect that causes the energy crisis; there are many other causes that had an impact on the energy crisis; however, we will focus at the most significant factors that caused the energy crisis. In the other hand, renewable energy is increasing year-by-year but so is the total world energy as presented in the figure 2 below:

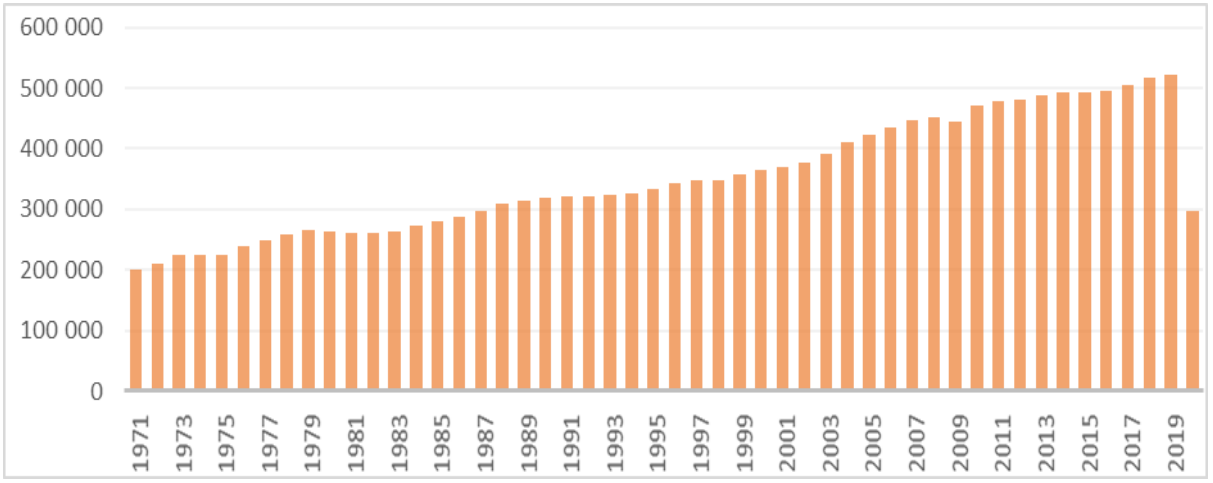
Figure 2 Renewables and Waste: total energy supply (PJ)

Source: Author (IEA, Key energy statistics, 2019, 2022)

The increase of the total energy supply is low compared to the increased total energy demand, therefore one can easily state that this approach is not promising fast transition from fossil fuel to green energy.

The basic factor that had an impact on this energy crisis is the Global pandemic era 'Covid-19', during the early pandemic era the most of economies had face the lock-down (Uka A. , 2020). The 'lock-down' had reduced the movement of people and business drastically; which lead the reduction of the aggregated demand for energy too. In a direction of the producers of fossil fuel had to push their brakes accordingly, they stopped digging for oil, shorten their natural gas and in some cases they closed the coalmines.

Figure 3 Renewables and Waste: total energy supply (PJ)



Source: Author (IEA, Key energy statistics, 2019, 2022)

The figure 3 above presents the total energy supply-increasing trend of the fossil fuel (Coal peat and oil shale, Crude, NGL and feedstock; Oil products; Natural Gas; Nuclear; Electricity; Heat), whereas in 2020 during the 'Covid 19' the production fell down by over 43%.

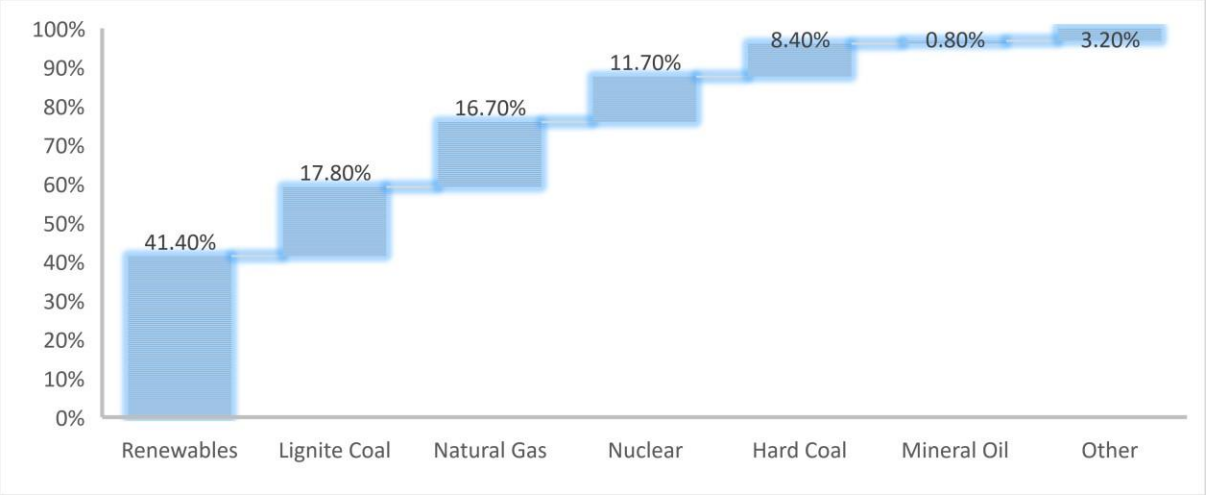
Today, (mid 2022) in the course of the post pandemic era. the economies are on track to run their business. Getting back on track for business caught aggregated energy suppliers unready, and not just them but much more sectors too. Since, the aggregated demand has bounced back for energy, and the aggregated supplies are far behind to fulfil the market needs we are facing energy shortage that led to an energy crisis. Furthermore, (Cornago, 2022) stated: "…economy has been picking up again, after COVID-19 crises; we've seen a higher energy demand from various economic sectors". Hence, elaboration made by (Gloystein, 2022) regarding the situation he pointed out that: "…hopefully we'll be coming out of this COVID-19 pandemic at some point, but the long term fallout that we really didn't think about when we were all in lockdown, how to sort everything out again".

The energy crisis from fossil fuel is a challenge once again, and the substitution by the green energy (renewable energy) which has been pointed out as a target from pompously statements (thinking) is farther than it seems. Looking at the statement made by (Modi, 2021): "By 2070 India will achieve the target of net-zero emissions". In addition, more promises were made in the statement

by Kenyan President (Kenyatta, 2022): “We are on course to achieve our goal, our target of 100% use of clean energy by 2030”. Strengthened pronouncements made by (Kerry, 2021) regarding the climate change was: “We are in fact closer than we have ever been before, to avoiding climate chaos”. Nevertheless, the up-mention statement regarding the eco-friendly environment, it seems to be far from reality because looking at the current situation one can state that the Globe is highly dependent on fossil fuels. Whereas, according to (Baran, 2016):“EU focuses on sustainable development, supporting economy which is more efficient, “greener” and competitive” (p.9).

The energy crisis calls attention to the phrase “think globally act locally” (Geddes, 1915) which is proven wrong, since there were a local thinking (to increase the renewable energy) and we now face the Global act (price increasing). In other words, we think Globally to reduce the pollution and act locally by increasing the energy price.

Figure 4 Germany Energy



Source: Author (IEA, Key energy statistics, 2019, 2022)

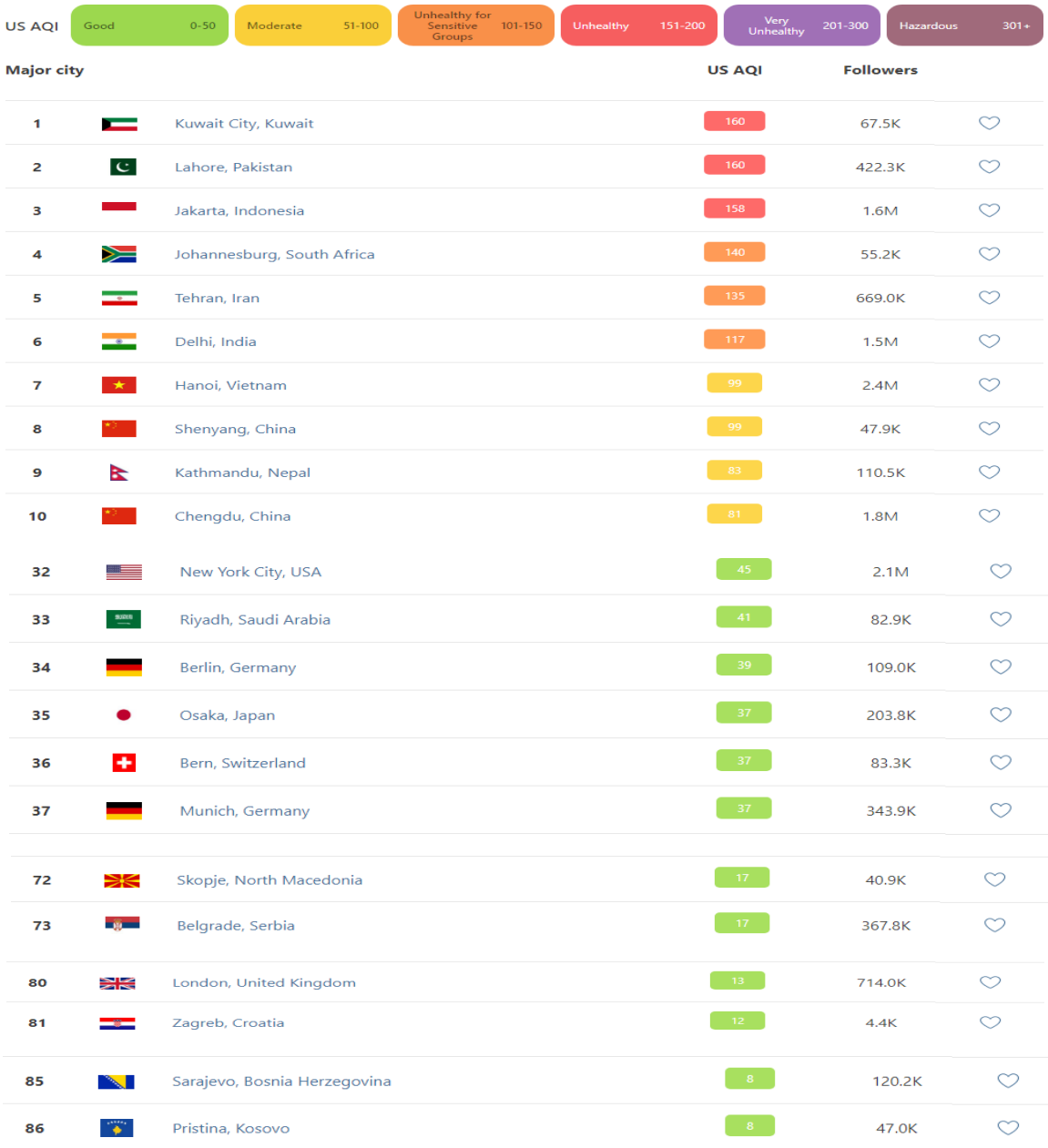
Looking at the figure above, Germany’s Energy with a reputation of a climate leader, got most of its energy from non-renewable sources during the year 2021. Hence, the (Sen, 2022) pointed out: “the underlying issue is demand, it takes a long time for demand to switch from fossil fuels”, furthermore (Sen, 2022) smartly elaborated by stating a sample: “In year 1981 the demand for oil, gas and coal accounted for 84% of total energy demand. Last year that share is still the 84%”. Therefore, clearly one can stated that there is continuous increase of demand for energy.

If one should really see the impact of the energy demand increase, one of the first countries that started to face energy shortage during this period was China. Since, the China economy was the first country to start to perform after the pandemic "lock-down" due to the demand for its goods from other countries, the Chinese factories started to operate in its maximum capacity to overcame the shortages of their goods that were faced due to pandemic, so this led the necessity for vast amount of fuels which mainly is coal and in China this is considered as sector that is dependable and is responsible for over 70% of electricity generation. According to the (IEA, Oil Market Report
- June 2022, 2022) clearly stated: "While higher prices and a weaker economic outlook are moderating consumption increases, a resurgent China will drive gains next year, with growth accelerating from 1.8 mb/d in 2022 to 2.2 cmb/d in 2023" (p.1). So we are facing the increase over 22%, which is exponential high compared to the trend for renewable energy.

However, a number of factors, from a 'de-facto' ban on Australian coal to strict electricity pricing, meant that the supply could not fulfil the demand. In the third quarter of the year, 2021 China was facing an energy crisis, which led Government to intervene and request that cold mines increase production instead of choosing the option to close their factories. The shutdowns and energy reductions to main industries had a great impact into their economy, by inducing Beijing to double their usage of coal. Nevertheless, other criticize that this will expose China's climate aims which was stated that "China to cut fossil fuel use to below 20% by 2060".

Therefore, the insufficiency of China to act accordingly within its capacity enables addressed international for supply, especially the natural gas market in order for them to keep ongoing their factories. The huge amount of demand for the energy rippled accordingly to global energy and Europe too. Furthermore, the China demand switched from coal to natural gas, in order to reduce pollution, which is great, nevertheless is not renewable energy. However, all steps that reduce the air pollution are in concern, since many cities are facing unhealthy air, therefore all alternative are inapplicable.

Figure 5 Air quality and pollution city ranking

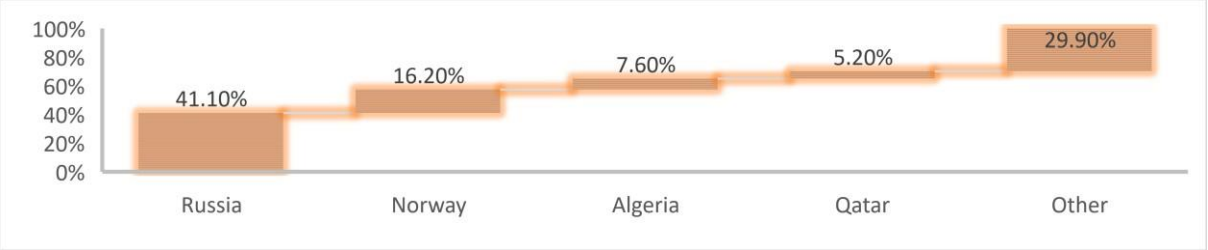


Source: (IQAir, 2022) (measured by author in 11.07.2022)

In the mid of the year, one can examine the databases that rank countries based on their pollution or poor air quality and one can state that the most polluted countries are those that had a low focus in maintaining an eco-friendly environment, and also the negative industry impacts the air quality. However, in the winter all green cities in the above list presented in the figure 5 are becoming cities with high pollution which are dealing/facing with unhealthy air quality, since there is an increase

in energy usage, especially for the purposes of heating which presents matter for concern too, and in order to reduce rapidly the air pollution most of the countries are focusing on a fast solution such as natural gas, and this product is now heading towards China, which leaves the rest of the continents dealing with shortages of natural gas which includes Europe too. Therefore, China focusing on reducing the air pollution by using the natural gas with large demand in recent years pushed the congestion on Globe and Europe too.

Figure 6 EU's Natural Gas

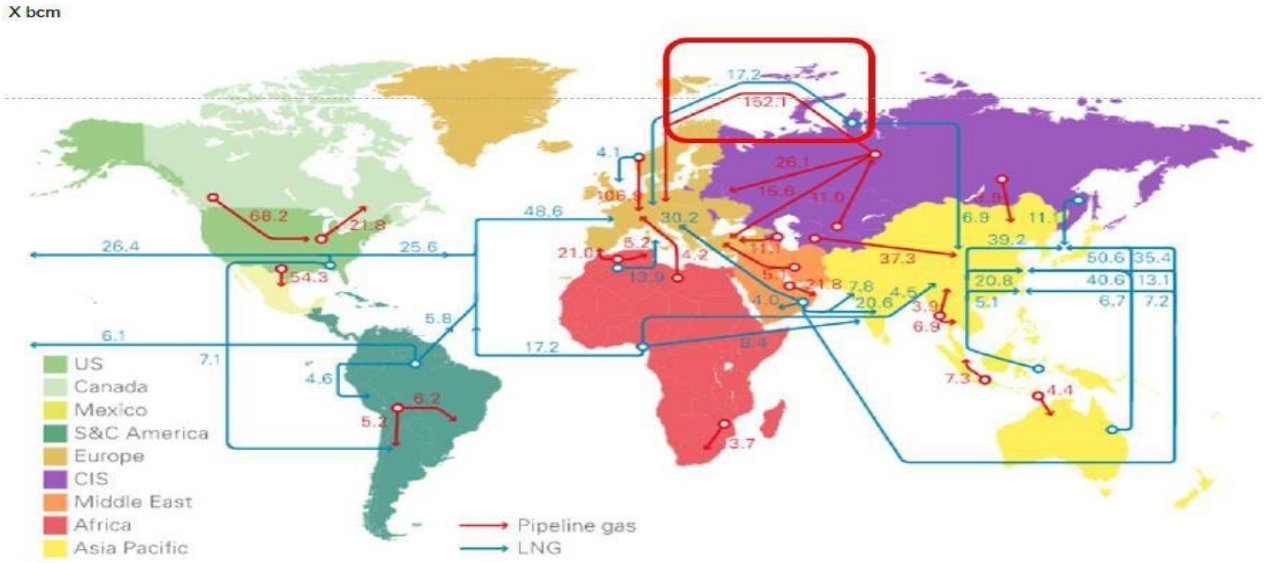


Source: Author (IEA, Key energy statistics, 2019, 2022)

Looking at the graph above, one can see that the main suppliers for Europe with Natural Gas are the countries abroad or we can state clearly from other continents too. Furthermore, as the paper is written and the war between Russia and Ukraine is on and the embargo that is placed for the Russian products; it seems to be obvious that the energy crisis is deeper than we know or we have faced since Russia is one of the world's top third oil and natural gas producer (WEO, 2020). In addition, the ban of Russian Gas especially from Germany which is considered the main consumer, it occurs that natural Gas is trading in higher prices globally price since the Germany will look for alternative energy and suppliers too.

The energy crisis also made Brussels to step for diversification of the supplier's natural gas priority, by turning to liquefied natural gas (hereinafter LNG) which is sent via tankers instead of the pipelines. In 2019, so pre pandemic LNG accounted for about 22% of EU natural gas consumption. This led to competition between China and Europe for LNG that had been building over years, however in year, 2021 the energy crisis led to an all-out bidding war, where Europe is losing compared to Asia. The flow of the LNG presented on the figure 7 and one can see that the main flow of LNG is towards Asia compared to Europe.

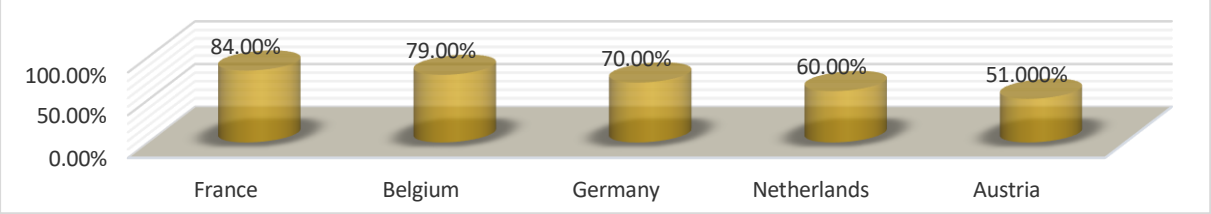
Figure 7 Natural gas major trade movements 2020 – trade flows worldwide



Source: (Sandra & et al, 2022)

Furthermore, the greatest energy problem for EU is Russia, since EU began importing Natural Gas over 60 years now. The problem is not importing, but the problem is currently that the various pipelines connections across Europe are abandoned due to the war between "Russia-Ukraine". The dependence of EU from Russian gas has always been a long worried subject, and feared that one day will face a block. Building the pipelines is known sometimes as the "building bridge" between the Supplier and Demand, whereas such an approach between Russia and EU did fail poorly. In order to fulfil the Natural Gas Demand most of the countries did settle the storage.

Figure 8 EU Gas Storage Levels



Source: Author (IEA, Key energy statistics, 2019, 2022)

As presented on the above figure one can spot that the countries like France and Belgium achieved to have a gas storage level around 80%, and storage tanks of Austria are almost half after the cold winter depleted stockpiles. The situation got worse, when Russia had been slow to send additional

gas to Europe during the year 2021, despite the critical shortage of the stocks. However, the doubts mention by (Gloystein, 2022): "There are credible signs that Russia itself is struggling to meet all of the gas demand".

Hence, Russia firstly supplied its market with natural gas due to cold winter, then the residue that is left got sold to Europe. Nevertheless, there were some doubts that the Russian limited deliveries linked with above statements and they accused Moscow of exploiting Europe's energy weakness (Sen, 2022). Furthermore, (Gustafson, 2021) pointed out the new dilemma regarding the climate change and gas: "Russian spent a fortune….an entire new natural gas province, and as a result of which the Russians are positioned for the next generation of gas supply in Europe. Well, what happens if Europe than as a part of its climate policy cuts back on natural gas consumption? What's becoming of that investment then?!".

Furthermore, the natural gas between Russia and Germany was doubling their interest by increasing the new pipelines through the sea, where this also increased the fear that the EU will be more dependent on Russian gas. In this matter there was a skepticism about how the bypass Ukraine where much of the Russian Gas to Europe now flows though Ukraine which brings in billions of euros to Kyiv every year. However, one should understand that about 40% of the Russian Government Revenues are dependable from oil and gas export every year. Furthermore, as the paper is written, Germany has placed a ban to all Russian Gas, which makes a full gas puzzle more complicated.

However, the Russia alone is not a picture of the whole puzzle that is confronting a future where its biggest export are no longer needed. In this course it is also the group of oil production that along with Russia, is known as OPEC+[1] (Organization of the Petroleum Exporting Countries Plus). This cartel has resisted increasing oil production despite the rising prices. OPEC has blamed uncertainty about demand and the pandemic. Whereas, some critics understand the massage in its refusal to bend to the demands. Moreover, according to fossil fuel producers' financial behaviour are motivated to try to make money while still can.

[1] OPEC+ aims to regulate the supply of oil in order to set the price on the world market. is a loosely affiliated entity consisting of the 13 OEC members and 10 of the world's major non-OPEC oil-exporting nations.

The green economy steering is at fault for this current crisis, since many countries were overly ambitious with their targets to reduce emissions that resulted from fossil fuel before renewables were fully ready to take up the load. According to this swap of energy to clean energy the fossil fuel investment are falling and the investment on the green energy to keep up with the rising energy demand needs to go up by four times about like 100 trillions of Dollars, and this money is nowhere (Sen, 2022). However, according to (Baran, 2016) pointed out that: "… the renewable energy sector is still being created and carbon remains the main source of energy." (p.9). Therefore, energy poverty versus green energy and countries like China and India there will not be any doubts that simply not choose energy poverty (Sen, 2022). Contrary, other are more optimistic that renewable energy could soon replace the fossil fuel.

However, due to price increasing on oil and gas, many western countries including US idled coal plants are being put back online and all this in order to help gasoline prices to go down for consumers, this will achieve to slow down the rapid price increase and in best opportunity to reduce the price of fossil fuel. Nevertheless, the renewable energy from wind and sun are essentially limitless resources where they can insulate countries from geopolitical. The reliance on fossil fuel such as natural gas has shown that it can end up in very high prices. Therefore, the transition is needed away from that and into a system of natural resources that are renewable and whose cost is virtually zero (Sen, 2022).

Many governments are seizing this crisis as a chance to push for more investment in renewable energy, whereas building the infrastructure is needed a large amount of money Euro 100billion and will take many years. Therefore, in the current situation it seems one of the very few alternatives to overcome the energy crisis is more fossil fuels. The China had renewed its commitment to coal, whereas in Europe where many countries pledged to give up coal in coming decades, currently the idled coal plants are being put back online again. Bottom line many customers are frustrated and furious, at the risk of not being able to cover their energy need. The use of energy reminds the cartoon of "Popo' many years ago: "We have met the enemy and he is us". Moreover, the Kosovo Electricity Distribution Company J.S.C. (KEDS) at their recent advertisement during midyear 2022, clearly states "You are the source of energy![2]". However, the green transition looks currently

[2] Original in Albania "Burim i energjisë jeni ju!"

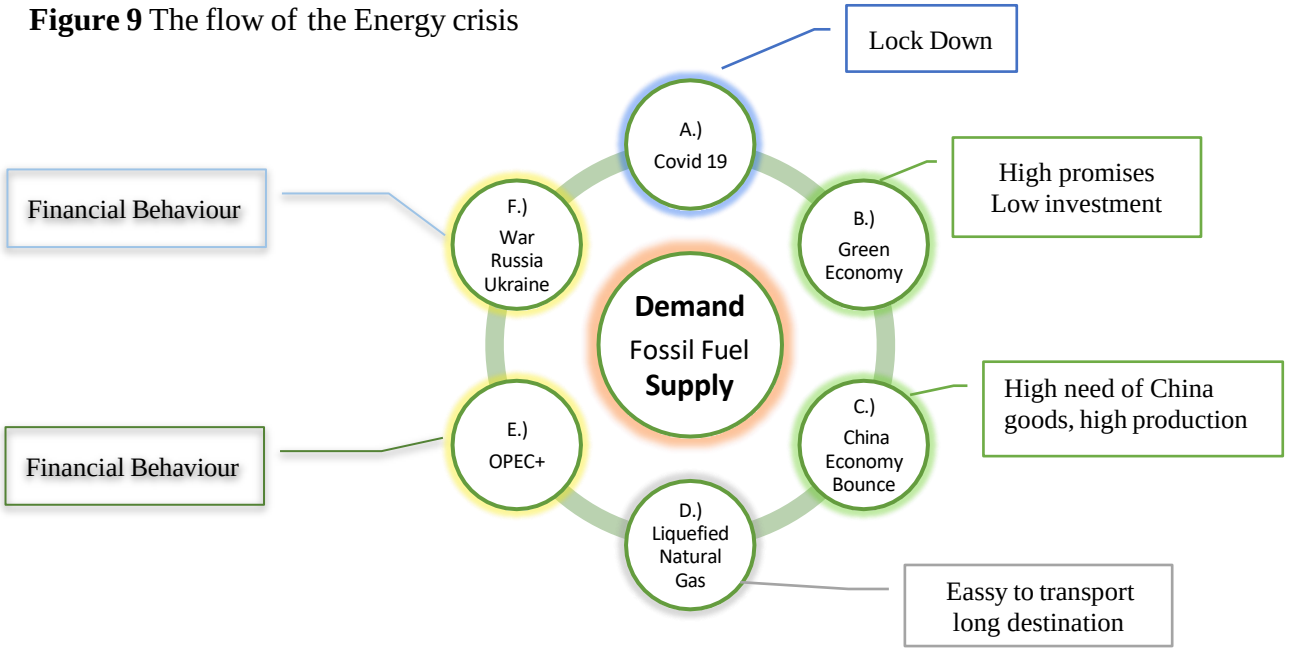
as a fancy bubble, while fossil fuel still powers our lives. Hence, until the green economy takes charges, the fossil fuel and the countries that produce them will continue to determine how much it costs to keep the lights on.

Methodology – This paperwork focuses on elaborating how countries that acted towards green economy and induced the global thinking, lead the economy into an energy crisis. The analysis used data to testify the research question. The independent variable of this paper is the green economy that enforces the main dependable variable energy crisis. The countries' devotion to reduce pollution induces the fossil fuel's suppliers to act in prices and the increase of demand for energy is what this paperwork inquires. In order to achieve the full clarification, this paper work focuses on secondary research that mainly involves worldwide institutions that elaborated the components that had an impact on the aggregated demand and supply. The paper work consciously brings to the surface the impact of the policy for green energy that induces the energy (fossil fuel) crisis. The main data gathered through the internet and UBT college library accordingly with the research objectives/question

Results and discussion

Data Analysis and Results - The flow of the energy crisis presented at the figure below:

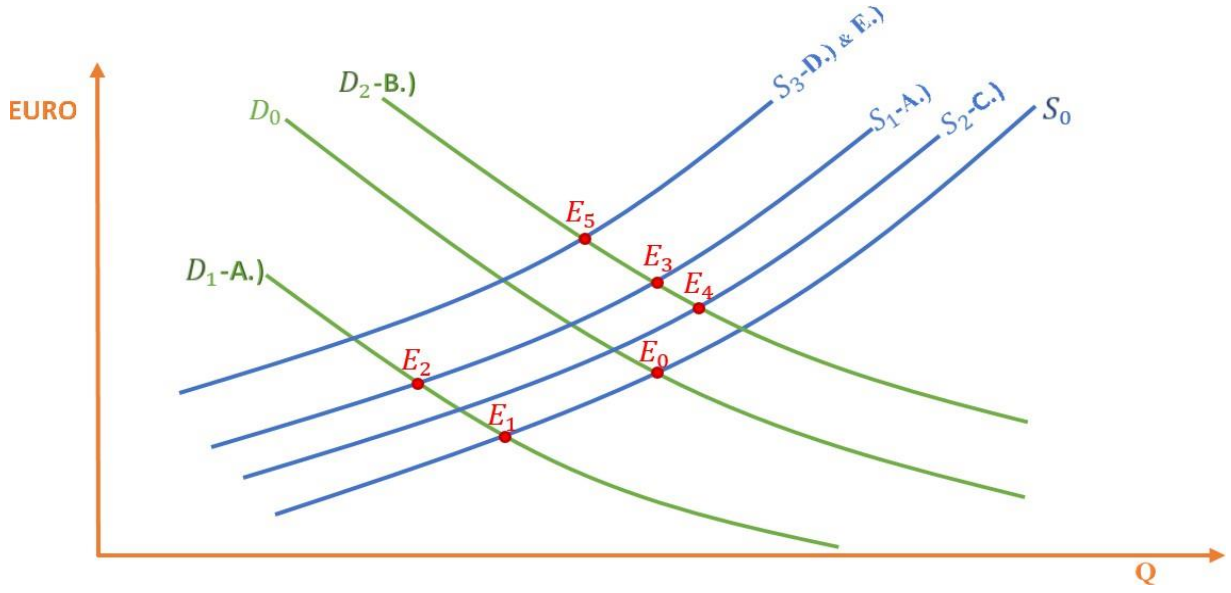
Figure 9 The flow of the Energy crisis



Source: Author (2022)

The figure 9 above presents the main factors that influence the energy crisis that are linked over past three years period. A.) The impact of Covid-19 towards lock down and high reduction in aggregated demand reflected on the aggregated supply to brake on production, in some cases they even closed the coal mines. B.) The diversification of the supplier's natural gas to liquefied natural gas and not through pipelines, enable the producer to sell at the highest price since it can deliver through tanks and not only through pipelines, this increased the aggregated demand highly and with it the price too. C.) The impact of Green Economy by increasing the Ecosystem through natural capital and renewable energy is highly recommended as the main target of every country. Nevertheless, the capital dedicated for such an investment is not, will not fulfil the current aggregated demand, and by any means the increase of the exponential trend for energy in future it seems unachievable approach yet. D.) The China bounced economy especially from the increased aggregated demand for their goods from other countries, pushed China to seek for further energy and this made the global order to switch, especially at liquefied natural gas at higher price, and this reflects on increasing other final product's price too. E.) & F.) The OPEC+ seeing all picture of events around the globe, and knowing that their enormous investment in digging the fossil fuel and the return on investment it is in long term. By understanding the situation that countries are calling on green economy, which they know that will not fulfil the aggregated demand almost never, then the Russian and Ukraine war will also ban one third of market supplier, which is Russian, OPEC+ can increase price to fulfil the aggregated demand and this would fulfil their behaviour of finance. They are so powerful that the rest are only spectators, including all governments, what is the issue to be in concern that, Russia and OPEC+ are in line with behaviour of finance and they are inappropriately using their power.

Figure 10 Market Equilibrium



Source: Author (2022)

Looking at the figure above, one can see that the price down of fossil fuel was only during the Covid-19 (E_1), followed by the lock down of the coal mines which made the price to go up (E_2), increase of demand for energy in China made the price up (E_3), then the price went slightly down when the government made a call for reopening the coal mines (E_4). However the financial behaviour of OPEC+ and Russia seem to be tandem which reflected for energy price to go high as never before (E_5). Furthermore, the intention that the green economy induces the energy crisis is only the excuse by the main player that their investment is high and they need to take care regarding their return on investment is a wholly blind, but the status is currently in focus into achieving high return. Therefore, one cane state that the green Economy had no impact on price energy directly, but had an impact one the fossil fuel producers to state that they are induced by green economy, which is blind statement.

Discussion

Green economy and energy crisis are two interconnected topics that are often discussed in the context of sustainable development and environmental protection. A green economy is defined as an economy that is low-carbon, resource-efficient, and socially inclusive. It aims to reduce the negative impacts of economic activities on the environment and to promote sustainable growth. In order to achieve a green economy, it is necessary to shift from the traditional linear model of

production and consumption, characterized by the extraction of natural resources, the production of goods and services, and the emission of waste, to a circular model that emphasizes the efficient use of resources and the reduction of waste. One of the key components of a green economy is the transition to renewable energy sources, such as wind, solar, and hydro power. This shift is necessary to reduce the dependence on fossil fuels, which are the main source of greenhouse gas emissions and contribute to climate change. However, the transition to renewable energy can also lead to energy crisis if not properly managed. An energy crisis can occur when there is a shortage of energy supplies or when the demand for energy exceeds the available supply. In the case of a transition to renewable energy, there can be a crisis if there is a lack of infrastructure or investment to support the growth of renewable energy sources.

Conclusion

In conclusion, the shift to a green economy is not properly managed, therefore this lead to energy crisis. It is important to ensure that the transition to renewable energy is accompanied by the necessary infrastructure and investment to support its growth, and that there are sufficient backup systems in place to address the intermittency of renewable energy sources.

Hence, the conclusion of this paperwork brings clearly into surface the impact of the green economy towards energy crisis based on the secondary data, however the energy crisis has its origin in financial behavior, therefore the hypothesis question are to confirm as follow:
Since it is clear that most of the countries “act” towards green economy induces the global “think” economy into energy crisis because it is a financial behavior reflection of the fossil fuel producers.

HQ Green Economy induce the Energy Crisis?

According to the analysis one can clearly state that the green economy is not a factor that influences directly the energy crisis, and can stated that green economy has not a direct significant impact towards energy crisis. However, partially the fossil fuel producers had used green economy as the factor to focus their operation to increase their prices, since green economy may affect their return of investment, which is used as wholly blind based on financial behavior.

The energy crisis is on and Europe will face difficulties especially during winter period, this will further weaken the economy of Europe since it is dependable from external European factors as presented in this paperwork. The fossil fuel price stability will clarify the European future not just in relation to fossil fuel but other products as well.

In conclusion, the implementation of green economy initiatives has the potential to mitigate the effects of energy crisis and promote sustainable development. However, significant challenges and limitations must be addressed in order to achieve these goals. Based on the limitations discussed above, the following recommendations are made to support the transition to a green economy and address the energy crisis:

- Increase investment in renewable energy sources and energy efficiency: Governments, private sector, and international organizations should increase investment in renewable energy sources and energy efficiency technologies to reduce reliance on fossil fuels and improve energy security.
- Promote public awareness and engagement: Efforts should be made to educate the public about the benefits of a green economy and to encourage individual and collective action to support these initiatives.
- Encourage political commitment: Governments should demonstrate strong political leadership and commitment to green economy initiatives, including setting ambitious targets for reducing greenhouse gas emissions and increasing the use of renewable energy.
- Foster interdisciplinary collaboration: Interdisciplinary collaboration between experts from various fields, including economics, energy, environmental science, and policy, is needed to develop comprehensive strategies for addressing the energy crisis and promoting sustainable development.
- Monitor and evaluate the impacts of green economy initiatives: Regular monitoring and evaluation of the impacts of green economy initiatives is necessary to ensure that they are delivering the desired outcomes and to identify areas for improvement.

By implementing these recommendations, the transition to a green economy can be accelerated, and the effects of the energy crisis can be mitigated, promoting sustainable development and a better future for all

Limitations and Future Studies – The implementation of green economy initiatives has several limitations that must be addressed in order to achieve sustainable development and prevent energy crisis. Some of these limitations include:

- Financial constraints: The transition to a green economy requires significant investment in renewable energy sources, energy efficiency, and sustainable infrastructure. This can be a challenge for countries with limited financial resources.
- Technological constraints: The development and deployment of new technologies and infrastructure necessary for a green economy is still in its early stages, and further research and development is required to make them more efficient, cost-effective, and widely accessible.
- Resistance to change: The transition to a green economy also requires changes in consumer behavior and business practices, which can be difficult to achieve due to a lack of awareness and resistance to change.
- Lack of political commitment: The transition to a green economy requires strong political commitment and leadership, but political support for these initiatives may be limited in some countries due to conflicting interests and competing priorities.

In order to address these limitations, future studies must focus on developing innovative solutions to overcome financial and technological constraints, increasing public awareness and engagement, and encouraging political commitment to green economy initiatives. Additionally, further research is needed to assess the economic, social, and environmental impacts of green economy initiatives, and to develop strategies for managing the energy crisis while promoting sustainable development. This will require interdisciplinary approaches that bring together expertise from various fields, including economics, energy, environmental science, and policy.

References

Baran, B. (2016). The idea of green economy in the EU vs. perspectives of renewable energy development in Poland. Research Papers of the Wroclaw University of Economics, 9-16.

Begg, I. (2020). The economic consequences of Covid-19. European Politics and Policy or the London School of Economics. https://blogs.lse.ac.uk/europpblog/2020/04/06/the-economic-consequences-of- covid-19/[visited at: 18.06.2020].

Cornago, E. (2022). EU Energy Researcher Centre for European Reform. Frankfurt: DW. Geddes, S. P. (1915). Cities in Evolution. London: Williams.
Gloystein, H. (2022). Director Enery, Climate & Resources Eurasia Group. Frankfurt: DW. Gustafson, T. (2021). Klimate: Russia in the Age of Climate Change. US: Harvard University . IEA. (2022). Key energy statistics, 2019. Paris: Iea.org.
IEA. (2022). Oil Market Report - June 2022. IEA, https://www.iea.org/reports/oil-market-report-june-2022, Paris.

IMF. (2020). Policy Responses to Covid-19. This policy tracker summarizes the key economic responses governments are taking to limit the human and economic impact of the COVID-19 pandemic. The tracker includes 196 economies. Last updated June 12, 2020. https://www.imf.org/en/Topics/imf-and- covid19/Policy-Responses-to-COVID-19#K [visited at: 19.06.2020].

IQAir. (2022). Air quality and pollution city ranking. Switzerland: First in Air Quality.

Jung, C. (2020). Carsten Jung The economic response to COVID-19 is not austerity: Four pillars for strong public finances. LSE British Politics and Policy, nor of the London School of Economics and Political Science. https://blogs.lse.ac.uk/politicsandpolicy/covid19-strong-public-finances/[visited at: 18.06.2020], 1.

Kantor, B. (2016). The Beliefs of Central Bankers About Inflation and the Business Cycle—and Some Reasons to Question the Faith. Journal of Applied Corporate Finance, Vol 28, No.1,, 114-125.

KEDS. (2022, 7, 26). KEDS Advertisment. Pristina, Kosova. Kenyatta, U. (2022). Kenyan President. Grasgow: Breakthroughs.
Kerry, J. (2021). US Climate Envoy. United Nation : UN Climate Change. Modi, N. (2021). Indian Prime Minister. United Nation: UN Climate Change.
Sandra , P., & et al. (2022). Global Monthly - Will the European economy survive a Russian gas cut-off?. ABN-AMRO Group Economics, 1-2.

Sen, A. (2022). Director of Research Energy Aspects. Frankfurt: DW.

Uka, A. (2020). COVID-19 Recession through policymakers hibernate economy. 9th International Conference on Business Technology and Innovation, Online, UBT-Higher Education Institution, Pristina, Kosova, 33-40.

Uka, A. (2022). Lecture Externalities, Economy and Public Finance - UBT Lecture, 1-20.

Uka, A. F. (2018). Central Bank of Kosovo impact into its economic cycle. Journal of Academic Research in Economics (Vol 10, No 1) ISSN 2066-0855 http://www.jare-sh.com/downloads/abstract_mar_2018/uka.pdf, 41-54.

WEO. (2020). World Energy Outlook. Paris: International Energy Agency.

Wilmot, N. A., & Taivan, A. (2021). Examining the Impact of Financial Development on Energy Production in Emerging Economies. Journal of Risk and Financial Management, 1-17.