

Poverty-Environment Nexus: A Review of Environmental Sustainability

Işıl Şirin SELÇUK (<http://orcid.org/0000-0001-9559-1349>), Bolu Abant İzzet Baysal University, Turkey; e-mail: isilselcuk@gmail.com

Ali Gökhan GÖLÇEK (<http://orcid.org/0000-0002-7948-7688>), Niğde Ömer Halisdemir University, Turkey; e-mail: aligokhangolcek@gmail.com

Altuğ Murat KÖKTAŞ (<http://orcid.org/0000-0002-0911-2143>), Kırşehir Ahi Evran University, Turkey; e-mail: altugmuratkoktas@ahievran.edu.tr

Abstract

Poverty can harm the environment and natural resources, but degradation of the environment and natural resources has also an impact on the poor. Particularly the dependence of poor people on natural resources can cause this poor people to be affected more with environmental degradation and to cause more environmental damage as they are affected. Thus, this creates a situation called poverty-environment trap by causing the poor to be more affected by degrading the environment. There was a turning point for the world when the “New Development Goals” which aims to end poverty, were declared. But is it possible to overcome poverty and environmental degradation by sustainable development or the concept of green economy which come to the forefront, can help to eradicate poverty? These discussions are the main axis of this study.

Keywords : Poverty-Environment Nexus, Sustainable Development, Green Economy.

JEL Classification Codes : I30, Q01, Q50.

Introduction

17 new global “Sustainable Development Goals” and 169 sub-titles were accepted by the United Nations in New York, United States of America on September 25-27, 2015 in order to fulfil them until 2030. These goals and their sub-titles include critically important subjects for humanity and the planet for 15 years between 2015 and 2030. The core of those goals is to end all sorts of poverty. Thus, the first aim is to end poverty, which is the most major global challenge and an indispensable requirement for the sustainable development. These goals consider various aspects such as hunger, healthcare, justice and inequality, global warming and oceans. In addition, Sustainable Development Goals form a development agenda, which will be prepared through economic, social and environmental dimensions.

According to the recent studies, it has been seen that poverty could harm the environment and natural resources. However, the destruction of environment and natural resources make a significantly bigger impact on the poor. As indicated on the previous paragraph, Sustainable Development Goals clearly target to integrate environmental matters into the poverty alleviation programs. So, where do poverty and its relation to the environment take place on the international agenda? How do the multi-dimensional precautions support this agenda? These questions form the main subject of the study.

The Relation between the Poverty and Environmental Quality

Folke Henschen describes the history of humanity as the “history of poverty, filth and diseases”. According to Henschen, the life is all about fighting against poverty and diseases to survive (Hartwell, 1974: 4). In this context, the fact that poverty being as old as the history of humanity and being as real as life and being able to survive its significance until today keeps the interest on poverty. In a very basic sense, the poverty is briefly described as: “Not having the income level to afford basic needs such as food, clean water, shelter and toilet”.

Despite the global wealth increased over the years, the inequality in the distribution of welfare among individuals continues. Income injustice is a very essential issue since it is accompanied by; (i) high level of poverty, (ii) low grow rate, (iii) high unemployment rate and (iv) high crime rates (Wade, 2004).

Multidimensional Poverty Index (MPI) calculated in 2010 by UNDP by considering education, healthcare and life conditions, focused not only on monetary poverty but also the other aspects of poverty as well as other deprivations in individuals. In this context, it is possible to benefit from aforementioned index in the redistribution of resources to alleviate poverty. According to the report, 1.5 billion people in 102 developing countries suffer from multidimensional poverty and 900 million are under the risk of poverty.

The World Bank Report (2008) which is titled as “Poverty and the Environment: Understanding linkages at the household level”, is an important report that examines the poverty-environment nexus. The following key conclusions are worthwhile considering in environment-poverty relationship:

- Natural resources are a significant source of income for many households. They can also provide insurance during times of need.
- In the absence of policy reforms, economic growth is likely to increase resource use in the short to medium term. Both poor and nonpoor households will contribute to resource degradation.
- The high discount rates of the poor and high population growth will likely mean continued degradation of local natural resources.
- The impact on welfare of slow and small changes in resource availability is small, which may encourage resource degradation. As degradation occurs, households use alternate resources or obtain their resources from alternate areas. The low opportunity cost of time in poor households implies that the welfare impact of degradation is likely to be small.
- Poverty reduction will need to be linked to parallel environmental management strategies if the aim is to conserve natural resources or environmental services. Poverty reduction efforts alone will not necessarily increase environmental quality unless specific environmental reforms are undertaken (The World Bank, 2008: 9).

It is crucial to ask why the environmental quality is important at this point. Economies of many developing countries rely on natural resources. The majority of the population in those countries spend their lives by relying on those natural resources. Considering this resource dependency, it is obvious that any kind of environmental degradation in developing or poor countries will increase the poverty.

The Relation of Environmental Degradation and Poverty

Environmental degradation and poverty are two cases triggering each other since the poor could cause environmental degradation as well as being the most affected ones from any kind of environmental degradation. There are studies that argue poor people are more vulnerable to environmental degradation because they are more dependent on natural resources (Angelsen & Vainio, 1998; World Bank, 2008; World Bank, 2011; Heger et al., 2018).

According to Borghesi and Vercelli (2003), environmental degradation is inclined to make the life conditions of the poor worse and it makes them use more natural resources to survive. The relation between poverty and degradation of natural resources could be based on complex selections and changes for poor people which in the absence of capital, labor, and land markets, is affected by their access to outside employment and any natural resource endowments (Barbier, 2010).

Moreover, there is also the risk of turning environmental quality and poverty being together into a trap at some point. Environmental quality affects labour force efficiency and welfare dynamics. On the other hand, distribution of welfare determines the level of trust on technology, which has also a massive environmental load and thus, determines the evolution of environmental quality. This interaction creates a “poverty-environment trap” in which the degrading environment reduces incomes and makes environment degradation faster (Ikefuji & Horii, 2007: 1041).

As the poor are dependent on natural resources and the natural resources have been degraded (hence the natural capital) due to the poverty - environment relation as well as the poverty - environment trap, it is also very difficult to restore the damage experienced. In the report (2011) of the World Bank regarding the welfare conversion, the case is presented as follows:

“Natural capital is the source of many ecosystem services, provided as externalities without market prices; hence, these services are often undervalued and vulnerable to threats. Many forms of natural capital are nonrenewable, or renewable only under restricted management regimes. Losses and degradation of natural capital may lead to irreversible changes in the provision of ecosystem services and biodiversity, and the potential for substitution is limited (for example, in the case of the ozone layer) (World Bank, 2011: 8)”

In their study, Dao and Edenhofer (2018) have examined the poverty-environment trap with a dynamic general equilibrium model. According to this research, the effect of environmental quality on the life expectancy of the agents, enables them to determine the most appropriate savings for consumption. Their savings in terms of physical capital, will affect the environment negatively through dirty intermediate input. According to the article, the stalemate mechanism of an economy in the poverty-environment trap is as follows: Initially, a lower environmental quality reduces the life expectancy of the agents and deters them from saving. This prevents the accumulation of capital, as the agents spend more when they are young. The article recommends a tax and subvention strategy in order to reduce the production of dirty intermediate input for the allocation of the capital in the economies that are in a stalemate due to the poverty-environment trap. Therefore, it will be possible to improve the environment quality both short and long term. A better environment increases life expectancy and capital accumulation. Thus, the interaction between the environment and capital through the life expectancy channel will help the economy break the poverty-environment trap under such an appropriate periodical strategy.

The Poverty-Environment trap reveals a very complex process as well. This trap is a two-way process which makes the poor to degrade the environment as well as the increase in poverty caused by

poor conditions of the environment. However, this process does not only cause the degradation of environment. It also includes various relations such as work force opportunities, income distribution and quality of natural resources.

“In summary, the perception of a ‘poverty-environment trap’ as a two way process in which poverty drives rural households to degrade the environment, and a deteriorating environment subsequently worsens poverty, needs to be revised. Although poverty-environment traps are still prevalent, they encompass more complex relationships involving links between asset poverty, lack of income opportunities or access to key markets for land, labor, and credit, and the availability and quality of natural resources, including land, to exploit.” (Barbier, 2010: 647).

Sustainable Development and Green Economy

The concept of sustainable development is not a new notion and the term “sustainable development” associates economic development with protecting the environment by balancing them. It is evident that there is a relation between poverty and environment which is called the “poverty-environment relation”.

Ram (2012) has stated a crucial question that includes the relation between sustainable development and natural capital. According to Ram (2012), “If natural capital is important for sustainable development, why is development that is dependent on resource exploitation seemingly a failure for low and middle-income economies? The answers to these questions stem from the failure of resource-based economies to adequately capture the rents from resource exploitation, particularly where the rents are low, and to reinvest these rents in other productive activities in the economy. Another aspect of this apparent failure is that frontier land seems to serve as an outlet for the rural poor. Thus, the type of marginal mainly agricultural activity performed by the poor on frontier lands generates very little rents and provides limited opportunities to improve their livelihoods” (Ram, 2012: 45).

After heavy criticism on sustainable development concept, the concept of green economy has come to the forefront. It is not possible to give a precise definition of the green economy. The United Nations (2011) state the following in a report entitled as “Towards a Green Economy”: “In its simplest expression, a green economy can be thought of as one which is low carbon, resource efficient and socially inclusive. In a green economy, growth in income and employment should be driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services. These investments need to be catalysed and supported by targeted public expenditure, policy reforms and regulation changes.”

UNEP defines an inclusive green economy as an economy which increases welfare and reduces environmental risks and poverty. Moreover, it states that an inclusive green economy is an alternative to the dominant economical model that fortifies the inequalities in our modern life, encourages extravagancy, triggers resource scarcities and creates grave threats to the environment and human life (UNEP, 2018). UNEP has also noted that the green economy is directly in relation with the 1st, 8th, 9th, 11th and 12th sustainable development goals. These goals are as follows respectively: Ending all sorts of poverty wherever experienced, ensuring sustainable and inclusive economic development, providing complete and reproductive employment and jobs respecting the human dignity, constructing resistant infrastructure, encouraging sustainable and inclusive industrialization and new inventions, making urban areas and settlements safe, strong and sustainable, ensuring sustainable consumption and production.

Thus, an important feature of the green economy is to offer various opportunities to reduce poverty and ensure economic growth without liquidating the natural assets of a country. Moreover, natural capital is at utmost importance for the green economy and investments should be made on natural capital in terms of a green economy. Furthermore, fossil fuels should be replaced with clean energy and low-carbon technologies.

Even though the rapid development of clean energy and energy efficiency markets supports the global green economy, it still does not guarantee that a growth based on green economy will reach a sustainable economic growth. Hence, it is possible to express that there is a lot of criticism on the notion of “green economy”.

According to Barbier (2011), green growth will not mean sustainable growth as long as the problems such as degradation and loss of global ecosystem and the ecological scarcity problems in the world worsens. As long as a global policy is not adopted to overcome the financing challenges and the sustainability of the globally rising ecological scarcity, the welfare of the existing and next generations is at risk. Financing and sustainability problems are clearly linked to each other.

Brand (2012) states that there are a lot of limitations for the concept of green economy. He states that green economy will not effectively address the problems of environmental degradation and poverty and will not deal with the necessary development of new understandings and forms of wealth.

Conclusion

It was a turning point for the world when the “New Development Goals” for 2015 were declared. Increasing inequalities with globalization, deepening poverty, removal of the frontiers and the protectionism also raise a lot of question marks about this process. Moreover, the New Sustainable Development Goals target to eradicate all sorts of poverty by 2030 and the world has to work in coordination and achieve a global mutuality to be able to fulfil those goals. Hence, it is not easy to bring globalization and its problems together with sustainable development and the notion of “sustainable globalization” also gains importance to reach 2030 goals.

The underlying complex connections of the poverty-environment relation, which is emphasized in this study, demonstrate that it is crucial to have a series of relevant policies and purposes to accomplish the goal of ending global poverty. As the poor are mostly the victims of environmental degradation, the policies correcting this degradation are in their direct concern. Thus, governments should prioritize the enforcement of policies that internalize environmental externalities. This will make it possible to prevent environmental degradation and will be a step forward to end poverty.

Undoubtedly, fulfilling sustainable development goals or making the economy greener will have a cost. In this context, it is crucial to emphasize the point that Krugman (2010) has stated for this matter: “Action will have costs, and these must be compared with the costs of not acting.”

References

- Angelsen, A. & M. Ainio (1998), *Poverty and the Environment*, Bergen: Crop Publications.
- Barbier, E. (2010), “Poverty, Development, and Environment”, *Environment and Development Economics*, (15), Cambridge University Press, 635-660.
- Barbier, E. (2011), “The Policy Challenges for Green Economy and Sustainable Economic Development”, *Natural Resources Forum*, (35), 233-245.

- Borghesi, S. & A. Vercelli (2003), "Sustainable Globalization", *Ecological Economics*, 44(1), 77-89.
- Brand, U. (2012), "Green Economy - the Next Oxymoron? No Lessons Learned from Failures of Implementing Sustainable Development", *GAIA*, 21(1), 8-32.
- Dao, N.T. & O. Edenhofer (2018), "On the Fiscal Strategies of Escaping Poverty-Environment Traps Towards Sustainable Growth", *Journal of Macroeconomics*, (55), 253-273.
- Hartwell, R. (1974), "The Economic History of Medical Care", M. Perlman (ed.), *The Economics of Health and Medical Care*, London: Macmillan, 3-20.
- Heger, M. & G. Zens & M. Bangalor (2018), "Does the Environment Matter for Poverty Reduction? The Role of Soil Fertility and Vegetation Vigor in Poverty Reduction", *Policy Research Working Paper 8537*, World Bank Group, Environment and Natural Resources Global Practice.
- Ikefuji, M. & R. Horii (2007), "Wealth Heterogeneity and Escape from the Poverty-Environment Trap", *Journal of Public Economic Theory*, 9(6), 1041-1068.
- Krugman, P. (2010), "Building a Green Economy", *The New York Times*, 07 April 2010.
- Ram, J. (2012), "Distribution and Sustainable Development in a Natural Resource-Based Economy", *Thesis for the Degree of Doctor of Philosophy*, London: The London School of Economics and Political Science, July.
- The World Bank (2008), *Poverty and the Environment: Understanding the Linkages at the Household Level*, Washington DC, ISBN: 978-0-8213-7223-4, DOI: 10.1596/978-0-8213-7223-4.
- The World Bank (2018), *The Changing Wealth of Nations 2018: Building a Sustainable Future*, Glenn-Marie Lange, Q. Wodon & K. Carey (eds.), Washington, DC, doi:10.1596/978-1-4648-1046-6.
- UNEP (2011), *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication - A Synthesis for Policy Makers*, <www.unep.org/greeneconomy>, 05.05.2018.
- UNEP (2018), *UN Environment's Green Economy Initiative (GEI)*, <<https://www.unenvironment.org/explore-topics/green-economy/why-does-green-economy-matter/what-inclusive-green-economy>>, 05.05.2018.
- Wade, R.H. (2004), "Is Globalization Reducing Poverty and Inequality?", *World Development*, 32(4), 567-589, <https://doi.org/10.1016/j.worlddev.2003.10.007>