Contents lists available at Science-Gate

International Journal of Advanced and Applied Sciences

Journal homepage: http://www.science-gate.com/IJAAS.html

Economy-environment nexus for development: is Bangladesh on the right track?

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ARTICLE INFO

Article history:
Received 20 January 2016
Received in revised form
18 March 2016
Accepted 18 March 2016

Keywords:
Economic growth
Green jobs
Sustainable development
Bangladesh

ABSTRACT

Economic growth has been a well-accepted method of development, reducing poverty until the urgency of human development comes into action. The sustainable development has been recognized as the most comprehensive concept for solving the socioeconomic and environmental problems in integration as both the growth and human development approaches are individually criticized enormously for being single centric. The purpose of the study is to diagnosis the growth, development and environmental status of Bangladesh and find out suitable development strategy based on sustainability paradigm. The present study is qualitative and exploratory in nature based on a case study method. Intensive desk research has been conducted based on the secondary data collected through various newspapers, magazines, published articles, and working papers via the internet. The study revealed that the development of Bangladesh is impressive for the last two decades coupled with epidemic levels of environmental degradation in the form of pollution, deforestation, land erosions and excessive natural resource endowments. The study concludes that it is a high time for Bangladesh to up-to-date their development strategy by adopting the sustainable development framework for the lasting growth and eco-friendly inclusive development. In doing so, specifically, Bangladesh should concentrate on creating green jobs in both the production and maintenance oriented sectors.

1. Introduction

The term 'Development' has been a living topic throughout the civilized. It is a very natural instinct of human being found from the ancient age to till date when people thrive for the betterment of themselves and for the collectives. Since human beings are given the sense of welfare and capability by the almighty to change themselves with effort, people invented fire, transportation, agricultural and later industrial production gradually. Simultaneously, the policies and economic theories have replaced time to time with improved theories when the world was unable to solve the emerging problems in the path of developments. At the same time, the world has realized that the environment has ignore heavily as a parameter of national development, though in a goal environmental aspect was incorporated which seemed insignificant compared to the natural degrading rate and growth rate. Since there is a vice versa relationship between growth and development, an undernourished sector can also become a threat for sustaining such growth for a long time meaning that growth may be unsustainable in return. So, there is a new goal has been set, based on the experts research and opinion, for the countries regard as the Sustainable development goal (SDG) which is a separate pillar of development building blocks. In the sustainable development goal the environmental development goal is encapsulated with the previous blocks of economic development and human development.

Economic growth is the most powerful instrument for ensuring economic development. Economic Development is the sustained, concerted actions of policy makers and communities that promote the standard of living and economic health of a specific area. It helps reducing poverty and improving the quality of life in developing countries. Growth can generate virtuous circles of prosperity and opportunity to tackle the vicious circle of poverty. Strong growth and employment opportunities, improve incentives for parents to invest in their children's education by sending them to school. This may lead to the emergence of a strong and growing group of entrepreneurs, which should generate pressure for improved governance. The

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empirical studies (Adams, 2003; Lin, 2003; Bhanumurthy and Mitra, 2004; Arndt et al., 2006) also got the evidence that growth reduces the poverty of a country. Beside these, economic growth also improves the individual capabilities and develops the health (Bhalotra, 2006) and education (Barro and Lee, 1997) related problems. On the other hand, economic growth can leave greater environmental problems. The rigorous growth efforts lead towards taking non-environment friendly projects prioritizing development motives and accordingly policy makers neglect environmental issues. As a result environmental degradation becomes obvious in the form, in empirical studies found, of CO_2, SO_2 emissions (Boulatoff and Jenkins, 2010); urban air pollution (Esty and Porter, 2005); excessive deforestation (Ehrhardt-Martinez et al., 2002) and heavy metal contamination (Grossman and Krueger, 1994). Moreover, the rapid industrialization and economic growth prompt the excessive natural resource endowment and make sure of the growth rapidity as well as the reserves of natural resources (Birdsall et al., 2000; Gylfason, 2001) (Fig. 1).

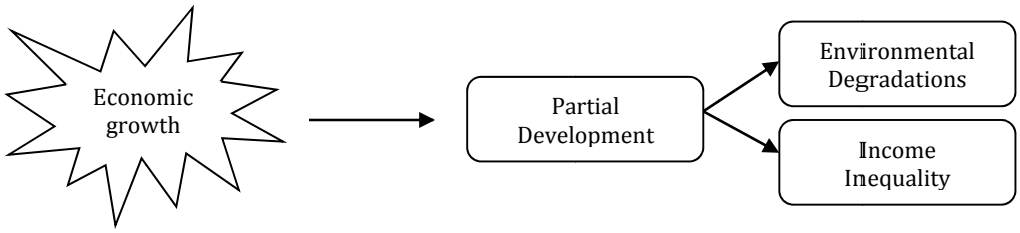

Fig. 1: The linkages of growth and developments

The purpose of the study is to analyze the essence of sustainability paradigm in the economy of any country as a development priority and in so doing; possible policy related way out would be suggested in the last section of it. The study is significant in a sense that it is trying to portray the national strategy and policy framework for development and how this framework could bring fruitful result in the path of sustainable development having the environmental and societal blocks in their strategic priority.

1.1. Bangladesh: an overview of economic growth and development

The economy of Bangladesh right now is emerging in terms of growth it attained. Since 1980s, the Bangladesh economy reformed into the market based economy with trade liberalization policy paving the way of modernization of the economy and sustainable growth. The current growth rate (6.7%) is three times in comparison with the growth rate of the 1970s and 1980s. It is noteworthy that the growth rate relatively sustained these periods even though the world economy faced havoc with Global Financial Crisis (GFC). At the same time, the GDP per capita income increased to almost three times compare to the base years (see Fig. 2). Beside these, in these periods, on an average, Bangladesh managed to keep the reign of inflation within single digit, which helped people living better livelihood and better industrialization simultaneously.

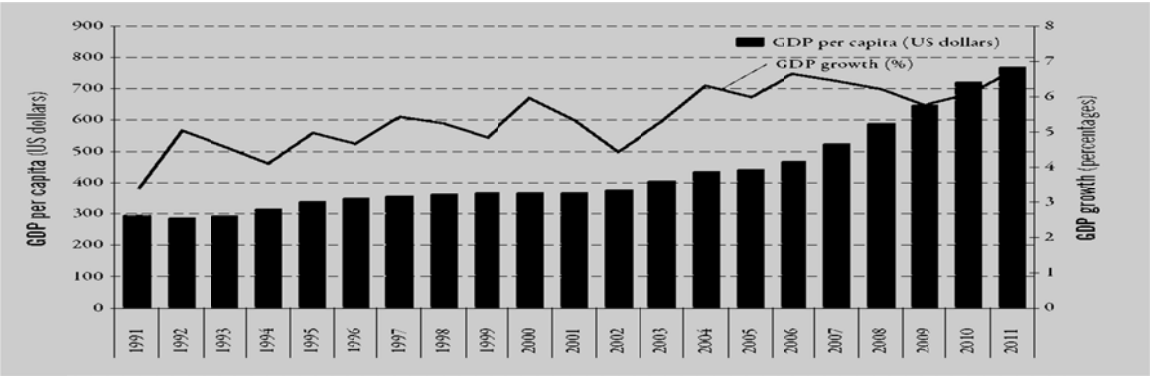

Fig. 2: GDP growth and GDP per capita for Bangladesh, 1990-2011
Source: International Labor Organization, 2013

Furthermore, some other notable improvement occurred in a few aspects of the economy. For instance; the RMG sector flourished and gave gained a tremendous shift in the employment and GDP as a whole. The contribution of RMG sector in Bangladesh's total export earnings increased from a mere 3 percent in FY1991 to 79.6 percent in FY2013 (Rahman et al., 2014). Despite the pressure on a limited amount of arable land (decreasing about 0.08 million hectares of development), the recent trend in food grain production has been quite satisfactory (Helal and Hossain, 2013). The rice production has also increased racing with the population growth rate in the last decades for becoming the sovereign country in food grain production and now it can even export to other countries. Bangladesh has achieved a

commendable progress in reaching some of the Millennium development goals (MDG, There were eight goals in MDG adopted in the United Nations Millennium summit declaration in year 2000 to be achieved by the year 2015). It has met the several targets of MDG like reducing poverty gap ratio, attaining gender parity in primary and secondary education, under-five mortality rate reduction, containing HIV infection with access to antiretroviral drugs, children under five sleeping under insecticide treated bed nets, detection and cure of TB under DOTS and others. Additionally, Bangladesh has also shown an overwhelming progress in some of the goals of MDG includes reducing the prevalence of underweight children, increasing enrollment status at primary schools, lowering the infant mortality rate and maternal mortality ratio, improving immunization coverage and reducing the incidence of communicable diseases (GED, 2013).

2. Development bottlenecks of Bangladesh

2.1. Equity

Even though Bangladesh made a commendable improvement in various indicators of development, still it has a plenty aspects to be worried off. Bangladesh has managed halving the poverty rate by two decades or so, but still it has to go a long way to eliminate the extreme poverty. Regarding the relative poverty and inequality in the income distribution, it has failed to decrease or making it stables the Gini-coefficient rate these periods. In early 1990s, the Gini-coefficient was 0.39 which has increased to 0.45 in 2000 and with further deterioration it reached to 0.47 in 2005 although it declined by 0.001 by 2010. That means the income gap between poor and rich has been rising. Besides, the disparity between urban (35%) and rural (21.3%) remain significantly along with few poverty pockets like indigenous community living area likes hill tracts which reflecting a concerning weaknesses in the economic development (Rahman et al., 2014).

2.2. Environmental degradation

The progress of Bangladesh in terms of economic growth can better evaluate based on the environmental sustainability basis. It is very alarming that its progress did not accentuate equally in each goal of MDG like the 7th goal; environmental sustainability. Only it is limited to ensuring the access of fresh drinking water and better toilets to the people. The serious degradation found in the environmental maintenance perspectives in diverse dimensions such as urban air pollution, water pollution, encroachment of rivers and other water bodies, improper disposal of industrial, medical, and household waste, deforestation, loss of open space (for recreational field), loss of biodiversity and noise pollution etc. (Islam, 1999).

2.3. Air pollution

In Bangladesh, in recent years the urban air pollution reached into an upsetting level. Urban density has been increasing parallel with unplanned urbanizations due to the excessive migration from rural areas. The CO2 emission is in an increasing mode and for the last two decades, it has more than doubled (0.34 MT) as much as in the early 1990s, having 0.14 MT, although the contribution of world CO2 emission is not significant (only 0.14% of global CO2 emission based on 2009) (Rahman et al., 2014). The presence of lead content in different cities is growing and especially air in Dhaka city is at places reported to have more than one hundred times by the UN recommended safe level is becoming a gas chamber for slow poisoning.

2.4. Water pollution

Another major concern for wild development initiatives is water contamination in both the ground and surface water level. Ground water is in danger level in different cities affecting people in various diseases while surface water, especially in the rivers becomes dump of wastages. Industry such as textile, dying around capital cities and adjacent districts disposes chemical wastages, substances due to having no effluent treatment plants (wetland). About 200 rivers of Bangladesh are linked directly or indirectly with a large quantity of untreated industrial wastes and effluent. The drainage and sewerage system is also linked to the rivers for becoming the world's worst and hazardous water channels for people, species and other business too. The tannery industry (700 in Dhaka city) is another contributor of water pollution disposing approximately 700 about 16,000 cubic meters of toxic wastes daily (Alam, 2009). Moreover, as mentioned earlier, the sovereignty in agriculture becomes possible for the indiscriminate use of chemical fertilizer and pesticide is resulting in chemical runoff to the surface water bodies. This is causing serious damage to country's fresh water fish stock (Islam, 1999).

2.5. Deforestation

Historically, Bangladesh is in scarce of the forest, though it has world's largest mangrove forest "Sundarbon". The forest degradation rate in Bangladesh is high. In 1990 the rate was 37700 hectares per year and it became nearly double (70,000 hectares per year) in 2006/7 (G.E.D, Planning Commission, BD and UNDP BD). Beside these, the famous wood for furniture *'shaal'* (Shorea robusta) tree producing forest "*Shaal Bon"* is also about to extinct. The reasons of forest and forest area degradation are the excessive logging, increased need of fuel wood for household cooking and for brick manufacturing. The development intervention like the Karnaphuli Hydroelectric project is

responsible for the critical impacts on the hill forest areas.

2.6. Excessive natural resource depletion

In Bangladesh almost 80% of the electricity is generated through burning gas and rests are the other ways like fuel, coal and hydropower based. That is why the gas reserve is running off very quickly. Beside these, other natural resource includes coal, which consists in five coal mines Barapukuria, Khalaspur, Phulbari, Jamalganj and Dighipara with reserves of 2.2 billion tons. The problem is some of remain unexplored. Beside these there is conflict about the methods to be used for exploring coal is undermined or open-pit mining. Both the options have huge environmental risks.

2.7. Unhealthy development projects

Recently the government has declared to build a coal-based thermal power plant in Rampal of Bagerhat district and a nuclear power plant in Rooppur of the Pabna district. Environmentalists suspect that these projects will cause negative impact on the environment, especially the Rampal project, which is near to the Sundarban. Expert suspects that the plant would produce sulfur dioxide, radium, chromium, mercury, nitrogen dioxide and seven hundred thousand fly ashes which will be a prospective threat for Sundarban and for its species. Besides, the faster growing ship breaking and recycling industry are also a threat to the environment from the pollution to the beaches and costal water as well as the seaside ecosystems due to spell of various chemicals such as cadmium, lead, organ tones, arsenic, zinc and chromium (Rahman et al., 2014).

3. Economy-environment nexus: the way forward

Environment is the root of all living beings which supports ecosystem; maintain food chain and supplying habitat and sequentially, it delivers interdependent elements of livings for the whole species. Nature act like an umbrella and under these protection other related systems gets security and continuity. It mediates the production process and supports factors of production which helps developing product market for the human being with the flourishes economic system. So, looking at nature only upon the anthropogenic view and in a separate manner scattered way may lead us toward the wrong directions. With increasing attention on growth- human development matters, it has been possible to make a trade off in between these. But the human-economic-development puzzle must not ignore environment as an equally important item, if we really expect a sustainable and lasting growth and development.

Sustainable development is such a way of development which gives the environment an equal status as a pillar which justifies the decision options in the light of social-environmental and economic nexus (see Fig. 3). Since it stress the use of natural resources keeping in mind of the future generation, and finding an alternative solution of the same problem to ensure justice among all the stakeholders; man to nonliving natural substances.

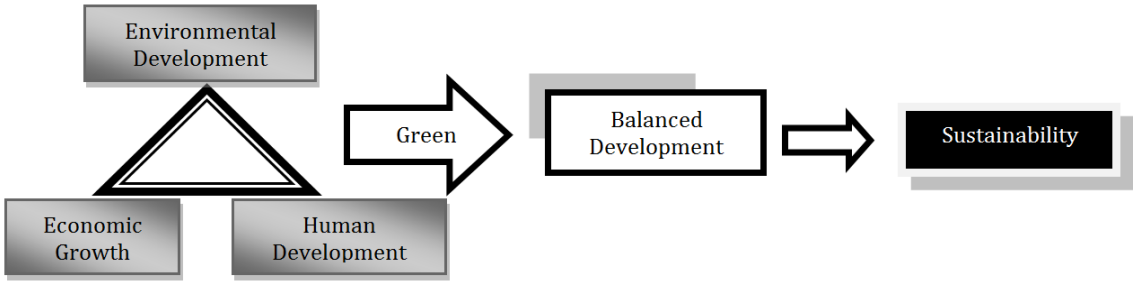

Fig. 3: The relationship between nexus development and sustainability

Many people think that environment could be emphasized later on after achieving economic development and hardcore poverty elimination referencing the Environmental Kuznets' Curve (EKC) model. However, The Nobel laureate economist Kenneth Arrow and several other reputed scientists have argued strongly against the EKC (Arrow et al., 1995; Grossman and Krueger, 1994). It is funny to think that how we can allow pollution for growth and then we go for curing. This concept is likely more unsystematic and against the universal practice. If we just accept the argument for a while, there might the successive question like how we are sure about the possibilities of brings back the degrading situation in its original state? It could be possible only for the resources which can be renewed though these sorts of resources are very limited in numbers. But, what would be for the non-renewable resources and specific species and animals? Can it be getting back? Can dinosaur be restored? Surely, these questions, seek authentic answers.

4. Concluding remarks

The objective of the paper is to analyze the essence of sustainability in national development for any country especially developing country like Bangladesh. Bangladesh has sustained economic growth so far which will capable it to become a

middle income country if it can continue up to 2020. In contrast, the cost of this achievement in terms of environment is not negligible and in frankly it is in the marginal point of further devastation. The environmental situation already has started showing its negative impact and that is why Bangladesh needs to think otherwise of the present development way out. The adoption of sustainability paradigm in each of the sectors seems to be appropriate to maintaining balanced growth, development and environmental harmony if the country really wants to sustain its development manifestation in the foreseeable future. As suggested, Bangladesh should shape and shift its economy towards a green economy. It is the latest concept under the sustainability philosophy where growth is advocated to be the inclusive growth. Inclusive growth certainly means the growth which accommodates the poor people with generating the green jobs (Khalid and Nayama, 2013). At the same time, it should rethink about the controversial development projects, especially which involved bigger investment and prospect of degradation by consulting with experts and ensuring better participation by public dialogues instead of taking hasty decision through the vague process.

Acknowledgement

This work was supported by the Arus Perdana Project Grant (project AP-2014-017 entitled "Transforming Rural Economy") headed by Emeritus Prof. Chamhuri Siwar, Institute for Environment and Development, National University of Malaysia, Bangi, Selangor, Malaysia is gratefully acknowledged.

References

Adams RH (2003). Economic growth, inequality and poverty: Findings from a new data set (Vol. 2972). World Bank Publications.

Alam GJ (2009). Environmental pollution of bangladesh–it's effect and control. Pulp and Paper, 51: 13-7.

Arndt C, James RC and Simler KR (2006). Has economic growth in Mozambique been pro-poor?. Journal of African Economies, 15(4): 571-602.

Arrow K, Bolin B, Costanza R and Dasgupta P (1995). Economic growth, carrying capacity, and the environment. Science, 268(5210): 520.

Bahauddin M and Nayma Iftakhar K (2013). Prospect and Potential of Green Jobs towards Green Economy in Bangladesh: A Situation Analysis.Global Journal of Management and Business Research, 13(4).

Barro RJ and Lee JW (1997). Determinants of Schooling Quality. Unpublished, Harvard University, March.

Bhalotra S (2006). Childhood Mortality and Economic Growth (No. 2006/79). Research Paper, UNU-WIDER, United Nations University (UNU).

Bhanumurthy NR and Mitra A (2004). Economic growth, poverty, and inequality in Indian states in the pre-reform and reform periods. Asian Development Review, 21(2): 79.

Birdsall N, Pinckney TC and Sabot RH (2000). Natural resources, human capital, and growth. Carnegie Endowment for International Peace.

Boulatoff C and Jenkins M (2010). Long-term nexus between openness, income, and environmental quality. International advances in economic research, 16(4): 410-418.

Ehrhardt-Martinez K, Crenshaw EM and Jenkins JC (2002). Deforestation and the Environmental Kuznets Curve: A Cross-National Investigation of Intervening Mechanisms. Social Science Quarterly, 83(1): 226-243.

Esty DC and Porter ME (2005). National environmental performance: an empirical analysis of policy results and determinants. Environment and development economics, 10(04): 391-434.

Grossman GM and Krueger AB (1994). Economic growth and the environment (No. w4634). National Bureau of Economic Research, 110(2): 353–377

Gylfason T (2001). Natural resources, education, and economic development. European economic review, 45(4): 847-859.

Helal M and Hossain MA (2013). Four Decades of Economic Development of Bangladesh: An Assessment. Journal of the Asiatic Society of Bangladesh (Hum), 58(2): 2013: 335-362.

Islam N (2000). Protecting Bangladesh's environment: the role of the civil society. Journal Of Social Studies-Dhaka: 34-63.

Lin BQ (2003). Economic Growth, Income Inequality, and Poverty Reduction in People's Republic of China. Asian development review, 20(2): 105-124.

Rahman M, Khan TI and Amin AM (2014). Economy of Tomorrow Socially Just, Sustainable and Dynamic Growth for a Good Society: A Case Study of Bangladesh, Friedrich Eberto Stiftung, March 2014.