

Green Economics: Young generations to help achieve future sustainability of Europe

Makedonka Dimitrova, Ilijana Petrovska and Marjan Bojadziev,

University American College Skopje

Authors Note

Makedonka Dimitrova, MPPM, School of Business Administration, University

American College Skopje, e-mail: dimitrova@uacs.edu.mk

Ilijana Petrovska, School of Business Administration, University American College

Skopje, e-mail: petrovska@uacs.edu.mk

Marjan Bojadziev, University American College Skopje,

e-mail: bojadziev@uacs.edu.mk

Abstract

This paper seeks an answer on the awareness of the *Green economics/green jobs* as a concept for sustainable growth among the young population in Europe. In order to provide basis for sustainable growth we take into consideration the essential issues into consideration. Green economics is an emerging field of economics combining knowledge from the natural sciences and economy thus offering unique insights into four areas: climate changes mitigation, businesses, political and moral. Recommendations for inclusive policy dialogue are in the focus as well.

The target is the *young people*. Therefore, this paper research a group of 30 young people from five European and one African country between 18 to 25 years old. A qualitative research combined with exploratory research has been conducted. A nine days observation of the group interaction and a follow up questionnaire was basis for this research.

Keywords: green economics, green jobs, young people, education, climate change, sustainability.

Short Bio:

Ms. Makedonka Dimitrova, MPPM from the University of Pittsburgh, is General Secretary of the Macedonian Center for Energy Efficiency and Entrepreneurship instructor at the University American College Skopje. She worked for E3 International, EnCon Sevices, Booz Allen Hamilton, MPRI, EBRD and The Rendon Group. She is educator, researcher and project developer. Her main areas of interest include sustainable development, innovation, energy and environment, energy education, competitiveness, communications & PR. She is part time consultant to the EBRD/EU Western Balkans Sustainable Energy Financing Facility.

Ilijana Petrovska, PhD., is an assistant professor and a head of the marketing department at the School of Business Administration, University American College Skopje, lecturing marketing, marketing management, advertising, integrated marketing communications and e-business at undergraduate and graduate students. Her previous working experience as a marketing manager in Stopanska Bank for six years, and also account executive in the advertising agency S Team Bates Saatchi & Saatchi for four years, is a perfect base for transferring the marketing knowledge and skills to students.

Prof. Marjan Bojadziev, PhD, is Rector, CEO, and full time professor at the University American College Skopje. His main areas of interest include finances, entrepreneurship, organizational behavior, strategic planning. He used to hold top management positions at the Macedonian Bank and the Inter Falco Holding Company. He is Harvard School of Business Trainee and EFER Alumni.

‘If everyone used energy and resources the same way we do in the Western World, we would need three more earths at least. And we have only one.’

(Mona Sahlin, former Minister for Sustainable Development, Sweden; Institutionalizing Sustainable Development, 2008)

1. Introduction

The practice, research and ongoing debates on the links between the sustainability on one hand and green economics on the other share much in common. Green economic development is essential to what sustainability advocates. The effort is not to have to wait for green economics to become hot topic as the sustainable development took over 20 years since Brundtland Commission (1987) published its landmark report to get to the World’s top issues.

Given the time and capacity needed to change the current decision makers’ domination it will be more efficient to focus on the younger generations to act responsible. The EU education policy offer opportunities to work and educate young people thus elevate their capacity to meet the growing demands of comfortable life in line with the environmental challenges.

In general, new concepts of various nature were always better accommodated in younger generation. Once they start living with it, it becomes their reality. So, the emerging concept of green economics, green jobs and carriers and green development are all aiming at greater level of sustainability.

Green economics is an emerging field of economics combining knowledge from the natural sciences and economy thus offering unique insights into four areas: *climate changes* mitigation, businesses, political and moral. The EU, reassuring the world of its leadership

position in combating climate change (European Commission (2008) is paving the way for the others. But what will it take to keep the role?

2. What the green economics and the sustainability can learn from each

In summary, by putting sustainability in simple but concrete terms, the Ecological Footprint (EF) concept provides an intuitive framework for understanding the ecological bottom-line of sustainability. This in turn stimulates public debate, builds common understanding and suggests a framework for action. The Ecological Footprint makes the sustainability challenge more transparent —decision makers have a physical criterion for ranking policy, project or technological options according to their ecological impacts (Van den Bergh, Jeroen C.J.M. and Harmen Verbruggen, 1999). The EF indexing and formulas were changed, from the originals, in a way to better reflect an individual's attitude towards the environment as a direct result of the interest in this topics.

Our Common Future reported on many global realities and recommended urgent action on eight key issues to ensure that development was sustainable, ie. that it would satisfy 'the needs of the present without compromising the ability of future generations to meet their own needs' linking the economy, society and environment (OECD AMSDE, 2003). These eight issues are: Population and Human Resources; Industry; Food Security; Species and Ecosystems; The Urban Challenge; Managing the Commons; Energy; as well as Conflict and Environmental Degradation. Once all integrated are well balanced sustainable development is under way in an environmental package. Speaking about younger generation they can implement the lessons learnt on food security by finding a way to grow food where difficult,

process waste to hinder soil pollution or knitting in the rural development into the urban practices and etc.

The EU policy is strict and binding, offering alteration to certain extent, i.e. the EU integrated energy and climate change policy demonstrates the EU's global leadership in tackling climate change while working on another front to increase the security of supply and strengthen its competitiveness. New jobs and carriers integrating the environmental aspects feed the policy (European Commission Climate action, 2007). The triple 20 actions to cut on greenhouse emission gases of the EU and candidate countries initiated green jobs such as energy auditor, thermal solar installer, photovoltaics engineer/installer and so on. These words were non-existent or offered poor description for in the world's most renowned dictionaries for ex. solar panel - solar panel is a device that changes energy from Sun into electricity (CALD, 2007)

Countries like Egypt may combine forces with EU in the area of green jobs transferring know-how and creating thousands of green jobs as direct results of it in the host country. Since January 2011, Kuraymat is hosting the first solar field of its kind in Egypt, or more precisely, the first modern one, as the world's very first parabolic trough was built in Egypt in 1912 (Solar Millennium, 2010). The 130,000-m² solar field designed by Flagsol is part of a 150-megawatt hybrid power plant that will use both solar energy and natural gas to generate electricity. There are only three plants of its kind in the world.

There are number of opportunities awaiting to be revealed and to contribute to the sustainable development of the nations across the globe, there is no culture, social aspect or moral when it come to environmental protection.

3. How green job and sustainability can be linked: a practical proposal for the EU to
keep the top position in the field

As social justice is one way to achieve sustainability (OECD, 2003), its being addressed by involvement of low-skilled as well as high-skilled workers that could therefore play a key social function in addressing Europe's unemployment crisis (Euroactive,2010).

The green jobs in the fields of Wind Power, Solar Power, Organic Farming, Natural Building, Mass Transit, Hydropower, Holistic Medicine, Green Engineering, Geothermal Power, Green Automobiles, Environmental Science, Conservation, Clean Energy, Cellulosic Biofuels, Carbon/ Co2 Emissions, Building Retrofitting are some of the ways to address the climate changes mitigation. The support to building upon these carriers is more than expected from the European Governments and funding schemes.

US Department of Energy was awarding \$2B in loan guarantees to two solar companies that will allow them to scale up their business and is expected to create 5,000 new green jobs announced president Obama at the end of 2010. The technological support behind one of the deals was a Spanish leader on the market (Safani, 2010). Therefore it's of great importance that Europe continues and assigns funding schemes for research and demonstration projects, best practices replication and support to business across Europe to better respond to the demanding customers and living environment protection.

Green Carrier for Dummies (McClelland, 2010) is the latest book that gives a new light to the green jobs quest, a book we shall all learn from. The US experience should be quickly adopted and redirected to European expectation.

4. Empirical Results and Policy Recommendations

For this paper, we implemented a qualitative research in combination with exploratory Research. Nine days observation of the group proceeding and interaction, and a follow up by ten closed end questionnaire were the basis for this research.

The research sample included – young people participating in a recent EC Directorate General for Education ‘Youth in Action Programme’ organized by the Green Economics Institute (GIE, 2010) based in UK. The group was represented by thirty young people between the ages of 20- 24 years, from five European and one African country: Egypt, Macedonia, Malta, Italy, Ireland, and the United Kingdom. The program offered exposure to green life style and communal living as oppose to the urban lifestyle of the program participants.

The questionnaire focused mostly on their perception of green economics and sustainable development offering clear and closed ended questions.

It is quite important to emphasize that the countries represented by the respondents are countries at different stage of development, some highly developed some still in transition. This may leave us with fully diverse answers to the posed questions that unfortunately due to the research method could not be grouped by countries and grow into more deep research. As the group was small is size, it has also affecting the research findings and there are still open issues to be considered in future researches in the particular field.

We have taken into account the shortcoming of the research method, when discussing the results as well.

Given that over 60% of the respondents educational background in economics does not necessarily mean that they are fully aware of the purposes for climate changes, but mostly aware of the implication of the climate changes to the local and world economics. Especially

after the Japanese catastrophic developments as a result of 'force major' making great impact on the power system and economical damage to the country.

The way our lives are structured, it is more likely that they will be preferring the comfortable lifestyle having in mind the behavior alteration and adjustment required.

The first question is regarding the perception of the concept of green economics. It is obvious that these young people are making a difference and the sustainable living and working is ninety percentages perceived as a main synonym for the green economics.

The program delivery, while in the UK, offered great range of green lifestyle and in fact communal living but the participants still tend to relate the concept of green economics to sustainable living and working or 90% of the group.

Chart No. 1 (Annex 1)

They have respected the choice of the individuals to commit to rural living and working but individually prefer more commodity and urban culture. More collectivist countries such as Macedonia, Egypt, Italy and Malta tend to the urban and technologically progressive living. This is a good starting point for jobs diversification and new profession development to better suit life expectations.

Also the personal agenda of the European countries may have played a role in enabling ground for better understanding for other people's preferences.

When young people from all around Europe were asked what the green economic is for them (Chart 2, Annex 1), half of them said that it is only a tool to achieve sustainability, and thirty-five percentages answered that it is a way to implement good environmental practice at the workplace. Only five percentages from the respondents have answered that is actually going back to the roots, to the nature and growing your own food.

Summing up the result the first and second choice narrow down to sustainable development but also reflect a misconception or poor conception of sustainability issues, which is another challenge for the young people to absorb both in their own countries and as a regional topic.

The next question (Chart 3, Annex 1), made clearly that young people think that the economic development is the main reason for climate changes, as seventy-six percentages are positive for this question and fourteen percentages think opposite. Only ten percentages are not clear, as they probably don't have appropriate awareness and knowledge on this issue.

This is a good indication, that even majority has economics, legal, social education background they are still aware of the climate changes pros and cons, which leaves us with a good basis to build upon the knowledge and implement green practices in their current or future carriers.

They also don't believe to the current economic science shall be rewritten and as presented in the Chart 4 (Annex 1), most of them seventy-one percentage are looking for changes and also twenty-four percentages from the young people are not having enough knowledge about this question.

In fact, this outcome was not our expectation in the beginning of the research, as the current economic science focuses on profit as a means for social welfare and comfortable life but the observations incline that the huge differences on the scale of economic development of the countries may be the cause for this opinion. Also, the human development indexes point out to similar state (McGillivray, M. and White, H., 1993). But this not be the real case, people in general think that if one starts all over, the new outcome may be different while the core remains the same, only the surface changes. There is no need to reshape the

current economic practices just use less resources to implement green practices leading to greater sustainability of the countries.

Furthermore, as presented in the Chart 5 (Annex 1), half of the respondents know and are aware about their personal carbon footprint, as fifty-two percentages are aware, thirty – three percentages are not aware and fourteen percentages don't know, which could be considered as a negative answer, too. The complexity of the carbon footprint calculations does not always give clear indications that one is behaving in line with the living environment or not. But what is more important is that half of the young respondents are not aware of their behavior or how their own lifestyle reflects the surrounding. This is a huge area to tackle to in future.

As a natural continuation to the previous question, the sixth question emphasis the level of willingness for making changes and improvements in their lives towards the greener world or the willingness to make changes in the way they use the natural resources in their everyday life.

Chart 6 (Annex 1) is crucial to this research and the very positive results showing high level of motivation among young people gives us a firm bases to continue developing programs and support schemes for younger population regardless their education, cultural, social and religious background.

In the next question (Chart 7, Annex 1) we are going back to the main research question though taking a deeper look of what is their perception of the green economics, as half of them forty-five percentages are seeing it as new jobs and carriers and the other half as modifications to current practices. Very small percentage from the respondents is thinking that it is about urban or rural living.

The conclusion is that all of the answers have a tight relationship with the green economics but the different perceptions gave the outlined results. It is alarming that the urban and rural living are underestimated parts of the green economics. If it was not for the rural areas our food supply will suffer and the urban living as a ground for technical advancement will disappear. All of these factors brought together make the green economics or the new way of living. However, there were some respondents that have picked out more than one answer showing their cross sector knowledge and wider awareness of the issue.

At the end the most important question regarding what kind of countries could implement the green economics is answered with equal percentages, which means that there is no clear and unique opinion about this question.

The conclusion is that the strong economies have more means to support the sustainable development through generations of new jobs and greening the existing carriers but the others may also commit to changing their own behavior which will give both an equal starting point.

Some strong economies do not have abundance of natural resources but sell know-how and keep up the pace with the others that is why Europe shall try to diminish the differences and work on a joint ground for sustainable development.

The question of green economics is also influenced by the viewpoint of the transition and advanced economies. The more developed countries have the possibility and the resources to impose a stronger legislative framework to further influence the green jobs development i.e. UK, Ireland, Germany, Sweden and etc. On the other hand, the countries in transition may take the possibility for regional development and reinforce their sustainability prospective. For example, Macedonia may also combine its resources with, Albania, Serbia, Montenegro and with more developed Greece and Bulgaria. The basis for growth is similar and exchange of know-how, best practices is much easier

and cheaper to implement. Only if we take as example, a green job of solar thermal systems installer in the Western Balkans Region, we may back up the theory. The sun radiation in the region is similar, the culture towards implementing new is alike as well, the main difference is the level of income and purchasing power. The issues may be overcome with transfer of best practices and policy changes occurring in the countries in the region already with high rate of such installation including know-how, taxation mechanisms, educational modifications, state subvention.

If the EU officials keep emphasizing that workers from all skill levels would require retraining to adapt to the green era and that the Green jobs will also mean low-skilled jobs, and millions of them, that we all need further education how to recognize them.

The policy recommendation focuses on the following:

- Well structured education program on green job and possibilities to advance in this carries offered by pioneers in the field with support from the Directorate General for Education (with realistic feedback from the beneficiaries),
- Cross border platform to allow newly skilled workers to transfer the knowledge and fight the work force migration to stronger economies,
- Cross-sector research support to reduce the brain-drain from weak economies or economies in transition,
- Social inclusion and justice to ensure all nations and people are treated equally as a base for further human capital development,
- EC Financial supporting schemes to all players with proven record of implemented best practices, and
- Wider outreach, cross border public education campaigns on the emerging jobs and behavioral change required to achieve greater sustainability both at local and regional level.

5. Conclusions

Related to the ecological footprint, there is a misconception observing the conversations and debates between participants during their stay in the UK and the survey results because an individual does not go deep into the correlation of the indicators providing information useful to making trade-offs between economic efficiency, spatial equity, and environmental sustainability as part of the concept. Therefore, the concept is usually taken as individual contribution or passive role and not as a tool to address cross border or regional sustainability issues. The effort is to reflect that sustainability is a common way not country specific.

Given the raised flag for sustainable growth there are areas where improvements regarding green economics concept have been recorded such as emerging of green procurement procedures mostly in practice in the EU countries; introduction of new standards to better reflect the production and service industry commitments to clean growth (newly introduced ISO 50001 Energy Management); education sector changes towards development of courses and specialized training schemes for green jobs and related certification schemes and much more. Most of the developments are done in the developed countries however the spillover effect towards the poorer and countries in transition is being activated thru the EU and other country specific granting schemes. The positive wave and preparedness for changes is originating from the second group of countries which contributes to enhanced adopting of best practices.

Speaking in common language, we need a systematic approach to address the current and future green jobs and carriers. The sectors of renewables and environmental protection are only to start with as there is environmental aspect related to all jobs.

Starting from the domestic behavior and interaction with children building up on the basis with the further educational system and raising policy and decision makers prepared to support the scientific progress without conditions for political compromise between

countries. The development will not stop as the human kind will continue growing and politics shall be tools to support the change and not hinder it.

Well off countries shall share the social welfare and advanced knowledge of environmental friendly growth with the countries in transition and/or poor countries, as there will be always someone lagging behind due to the scarcity of natural resources for complement the sustainable development. The individual country strategically address its current and future needs in working partnership with business and civil society while the new generation shall bring together the challenge of differences and turn it into opportunity for further growth. Let the emerging green jobs and carrier development lead the way towards the investments in the infrastructure and human capital needed for a sustainable economy. This requires a 'green new deal' but the results must be resilient and adaptable to change. Progressive economics would say that we need to practice economy that allows us to prosper while encouraging other countries to adopt sustainable economic policies and to enter into effective international agreements where the economic policies will fit a foreign policy designed to advance the vital national interests (Greenham, Johnson, Meadway, Seaford and Wallis, 2011).

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Annex 1

Chart 1. Question 1 (The first two questions in the original Questionnaire are reflecting the demographics of the group) - The concept of green economics relates to green lifestyle or sustainable living and working?

3. The concept of green economics relates to		
	Response Percent	Response Count
green lifestyle	10%	2
sustainable living and working	90%	19

Chart 2, Question 2 – What is green economics?

4. Would you say that green economics is		
	Percent	Count
tool to achieve sustainability	50%	10
way to implement good environmental practice at the workplace	35%	7
going back to the nature and growing your own food	5%	1
Other (please specify)		2

Chart 3 – Question 3

Would you agree that economic development is one of the reasons for climate changes?

yes	76%	16
no	14%	3
i do not know	10%	2

Chart 4 – Question 4

Do you think we need to rewrite the economic science to better respond the current situation		
yes	71%	15
no	5%	1
i do not know	24%	5

Chart 5 – Question 5

DownloadCreate Chart7. Are you aware of your personal carbon footprint		
	Percent	Count
yes	52%	11
no	33%	7
I do not know	14%	3

Chart 6 – Question 6

Are you willing to change the way you use electricity/gas/ ect., collect waste, at home/work		
	Percent	Count
yes	100%	21
no	0%	0
maybe	0%	0

Chart 7 – Question 7

Green economics is about		
new jobs and carriers	45%	9
modifications to current practices	45%	9
urban living	5%	1
rural living	5%	1

Chart 8 – Question 8

What kind of countries may afford sustainable development		
poor	20%	4
countries in transition	15%	3
rich	30%	6
hi-tech countries	25%	5
countries with abundance of natural resources	10%	2