

PEST Analysis of Green Jobs in Bulgaria

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Summary

Green growth is a form of sustainable development and green jobs support this process. EU outlines plan for maximizing employment opportunities in green sectors and relevant staff in order economy to become “greener”. “Green jobs” involves working with information, technology and materials that help the environment to be sustainable. The paper analyzes and evaluates the current conditions of creation of green jobs in Bulgaria. It is proposed analysis of the requirements in Bulgaria about the eligible criteria to apply for funding under the measurement of green jobs.

The main aim of the paper is to analyze and evaluate the external environment in which green jobs in Bulgaria are created and functioning. On the assessment of the environment are systematize findings, conclusions and policy recommendations. The publication has the following tasks: 1) Analyze of the theories of factors which influence creation of green jobs; 2) Assessment of factors by PEST methodology into working framework of green job creation which divides external environment into distant and the near surroundings; 3) Based on the aggregated and analyzed information will be offered policy recommendations and general conclusions. Findings and conclusions in the paper are based on the results of university researched project Green jobs – tool of ecologization of Bulgarian Economy. The survey was conducted in 2015. Information is summarized on the basis of meetings with experts from municipal and regional structures and stakeholders involved in the implementation of green jobs in the country.

Key words: Green job, PEST analysis, policy recommendation

Анализ PEST на зелените работни места в България

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Резюме

Зеленото развитие е форма на устойчиво развитие и зелените работни места подпомагат този процес. ЕС очертава план за максимизиране на възможностите за създаване на работни места и подходящ персонал в зелените сектори, с цел превръщане на икономиката в „по-зелена”. „Зелените работни места” означават да се работи с информация, технологии и материали, които подпомагат устойчивостта на заобикалящата среда. Докладът анализира и изчислява текущите условия за създаване на зелени работни места в България. Предложен е анализ на изискванията в България относно допустимите критерии за приложение при финансиране на измерването на зелените работни места.

Главната цел на доклада е да анализира и изчисли външната среда, при която зелените работни места в България се създават и функционират. При оценката на средата са систематизирани изводи, заключения и препоръки за политиката. Публикацията има следните задачи: 1) Анализиране на теориите за факторите, влияещи на създаването на зелени работни места; 2) Оценка на факторите чрез методология PEST в работеща рамка от създадени зелени работни места, която разделя външната среда на отдалечена и близка заобикаляща среда; 3) На базата на събрана и анализирана информация ще се предложат препоръки за политиката и общи заключения. Констатациите и заключенията в

доклада са на базата на резултати от разработен в Университета за национално и световно стопанство – София, проект: Зелените работни места – инструмент за екологизация на българската икономика. Изследването е проведено през 2015 г. Информацията е обобщена на базата на срещи с експерти от общински и регионални структури и заинтересовани лица, включени в създаването на зелени работни позиции в страната.

Ключови думи: зелени работни места, PEST анализ, политически препоръки

Literature Review of Factors Influenced on Creation and Development of Green Jobs

Many factors have a direct or indirect impact on the creation and development of green jobs. They can be classified as 1) political – government policy to support ecologization of economic activity, legal framework for green jobs sector, the attitude of local authorities towards green employment; 2) economic – access to the labor market, financial sources etc.; 3) technological – availability of new technologies and innovations, technical assistance, availability of information; 4) social – programs for qualification of labour forces with required new competences and skills, consulting services; 5) environmental – reducing pollution, enterprises that bring environmental standards, sustainable development of forests, conservation and restoration of biodiversity.

According to some authors (Apollo Alliance, 2008) local governments play a key role in the transformation of traditional jobs to green one and upgrading of the immediate built and natural environment. The legislation is a key political factor of green economic growth. Other research (Workplace Research Centre, 2007) shows that local policy makers and economic actors have an important role to play in removing the barriers hindering the emergence or expansion of greener economies. Hannam (2008) consider that the need for government regulation is very important political factor for creation and development of green jobs. This challenge requires need for improved government policies, subsidies and laws. Without these it will be difficult for some green sectors (renewable energy) to prosper.

Martinez-Fernandez, Hinojosa, Miranda (2010) consider that the spatial structure of labour markets is a key element to be taken into account

when analyzing the impacts of a green economic restructuring. At the same time the growing labour demand requires sustained training policies to cope with need of good skilled labour force. (CEDEFOP, 2012). Other authors as Fankhauser, Sehlleier, Stern (2008) suggest that jobs could be stimulated by the shifts to higher labor intensity sectors, “where the higher intensity of labor might be a feature of the first period of the green economy path”. Bowen, Kuralbayeva (2015) consider that financial sources are very important economical factor for development of green economy, because without the finance, the job creation will not be forthcoming.

Among political and economic factors, technological factors as innovation can have a positive or negative effect on the creation of green employment (Cecere, Mazzanti, 2015). According to research conducted by the International Chamber of Commerce (2011) innovation lead to overcoming the economic, environmental and social challenges and create new opportunities for creation of green jobs. Social innovation allows raising awareness, ecological increase the efficiency use of resources and innovation in the economic field lead to creation of open and competitive markets. Technological progress is a factor with positive role in creating new green jobs and new industries. By this process is observed transformation of traditional jobs and established companies and industries transforming its operations to green one (Miteva et al. 2014).

Social factors with essential importance for the practical implementation of the green economy are appropriate education and skills (ICC, 2011). According to some authors (Martinez-Fernandez, Hinojosa, Miranda, 2010) immediate action needs to be taken by labour market institutions and employers in order to provide the ad-

equate workforce training. Green skills in the workforce are a key social factor for creating sustainable green job sector. Specific sectors in different countries have already reported difficulties in finding trained labour for green-related jobs. At the same time, a report published by the European Commission (ECORYS, 2008) states that specific skills will be needed for the growth of the green economy such as knowledge of sustainable materials, carbon foot-printing skills and environmental impact assessment skills.

According some authors (Martinez-Fernandez, C. et al., 2010) restructure local economies around environmental activities and sustainable practices is important ecological factor for managing transition to green growth and broader scale actions have to be taken. New environmental policy instruments and social change mechanisms emerge, and are implemented at local levels by local authorities. At the same time local branding; eco-innovation networks and combined reporting on state of the environment and economic development are factors with significant importance for development of green job sector (Potts, 2010).

Literature Review of PEST Analysis

PEST is created by Harvard professor Francis Aguilar in 1967 and is a common method for analysis of organizations. The method is relatively easy for application, but is connected with the provision of multiple information. PEST is an acronym for political, economic, social, and technological – external factors that commonly affect businesses which are directed to implementation of a green activities and performance by using green employment. The external environment is divided into distant and the near surroundings. Inner circle has a direct impact on the system, and distant – indirectly. The distant external environment (or macro-environment) often has universal character to all organizations, but the reaction of any particular organization is specific and reflects by its characteristics and particular situation (Лапыгин, 2002).

The method can be used for analyzing industry (R.H. Cui, Z.Y. Wang, W.Q. Wen, 2007), analyzing a sector, transforming to E-governance (Song Yingfa, Yin Hong, 2010) or on firm level (Koumparoulis, 2013) and etc. The use of PEST analysis can be seen effective for business and

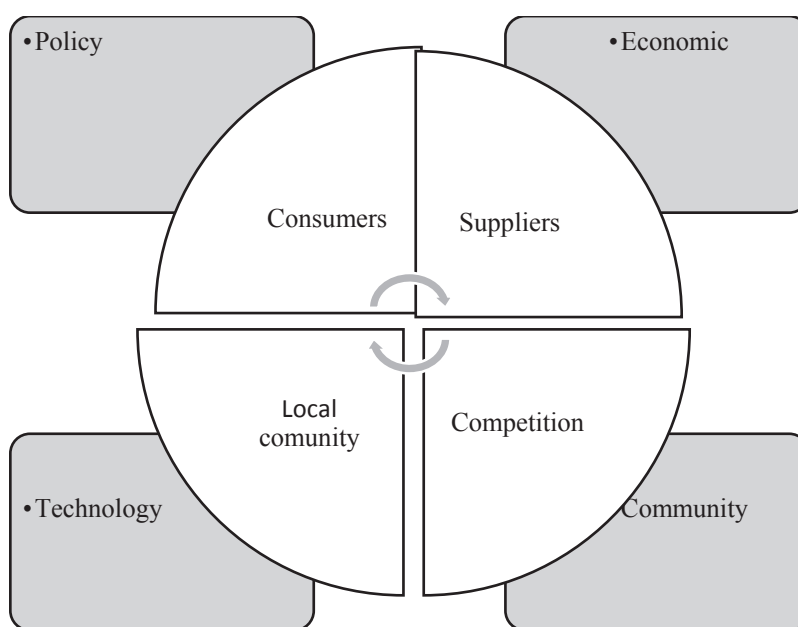


Fig. 1. Distant and near surroundings of external environment - PEST framework
Source: Adaptation by (Лапыгин, 2002).

strategic planning, marketing planning, business and product development and research reports. PEST also ensures that company’s performance is aligned positively with the powerful forces of change that are affecting business environment (Porter, 1980). Other authors use PEST method as an evaluation of the risk factors (KAHN, 1979).

Pest tool for analysis is having different modifications which includes specific factors, as environmental, legal (PESTEL), cultural, demographic etc. As well some of the modifications are directed on different levels – local, regional, national, international etc. (LONGPESTLE).

The specific role of green jobs for the environment requires the usage of PESTEL analysis. The composition of PESTEL analysis will take a part in the methodological frame and includes factors

affecting green jobs- creating and sustainability of green employment.

Methodological Framework

Creation of green jobs in Bulgaria depends on suitable and stable external environment.

The main aim of the paper is to analyze and evaluate the external environment in which green jobs in Bulgaria are created and functioning. Reaching the aim contains the following tasks: 1) Analyze of the theories of factors which influence creation of green jobs; 2) Assessment of factors by PEST methodology into working framework of green job creation which divides external environment into distant and the near surroundings; 3) Based on the aggregated and ana-

Table 1. PESTEL factors connected with evaluation of the external business environment

	Analyzed factors	Distant surroundings	Near surroundings
Political	Local authorities and support to creation of green jobs		✓
	Assessment of state policy to support the green economy and particularly green jobs	✓	
	Assessment of cooperation of local state authorities and Labour Offices for the development of green jobs	✓	✓
Economic	Funds		✓
	Financial support connected with creation of green jobs		✓
Social	Labour market, access to programs for vocational training and retraining,	✓	
	Qualified and experienced personnel	✓	
Technological	New technology, innovation	✓	
Environment	Pollution and reducing of pollution	✓	
	Preservation of the environment	✓	
Legal	Legislation process of state of green jobs in Bulgaria	✓	
	Requirements of receiving funds under green jobs measure	✓	
	Administrative capacity		✓

Source: Own findings.

lyzed information will be offered policy recommendations and general conclusions. Influence of the factors connected with creation of green jobs based on literature review is systematized by PESTEL method. The analysis and evaluation of the external business environment to create green job places in the composition of the factors in table 1. Factors are divided in two groups – distant and near surroundings. The distribution is made by expert analysis of local authorities which take a part of the research. They evaluate the effect of the external environment.

Findings and conclusions in the paper are based on the results of university researched project Green jobs – tool of ecologization of Bulgarian Economy. The survey was conducted in 2015. Information is summarized on the basis of structured interviews with experts from municipal and regional structures and stakeholders involved in the implementation of green jobs in the country.

PESTEL Analysis of Green Job External Environment

PESTEL analysis used in the paper is based on a survey. The main factors were divided ac-

ording to the obtained methodological framework as follows:

Political factors

Political factors are very important for creation of green jobs. Bulgarian policy makers adapted special measure for creating such an employment. The implementation of the measure depends on local administrative services which have to support the local business to be a part of the program for green employment in the country. Respondents evaluated the state policy of the possible perspectives to support the green economy and in particular of green jobs (Figure 2).

In Figure 2 respondents marked the importance of the state policy factor. Highest share of respondent are having opinion that current state policy doesn't help enough to create green jobs and even impedes the processes (67%). As well they give an evaluation of the help by state policy and the assessment is 50% of all respondents.

Economic factors

Evaluations of economic factors indicate that they rather appear as constrains on the creation and development of green jobs. As a barrier to opportunities for creation of green jobs in Bul-

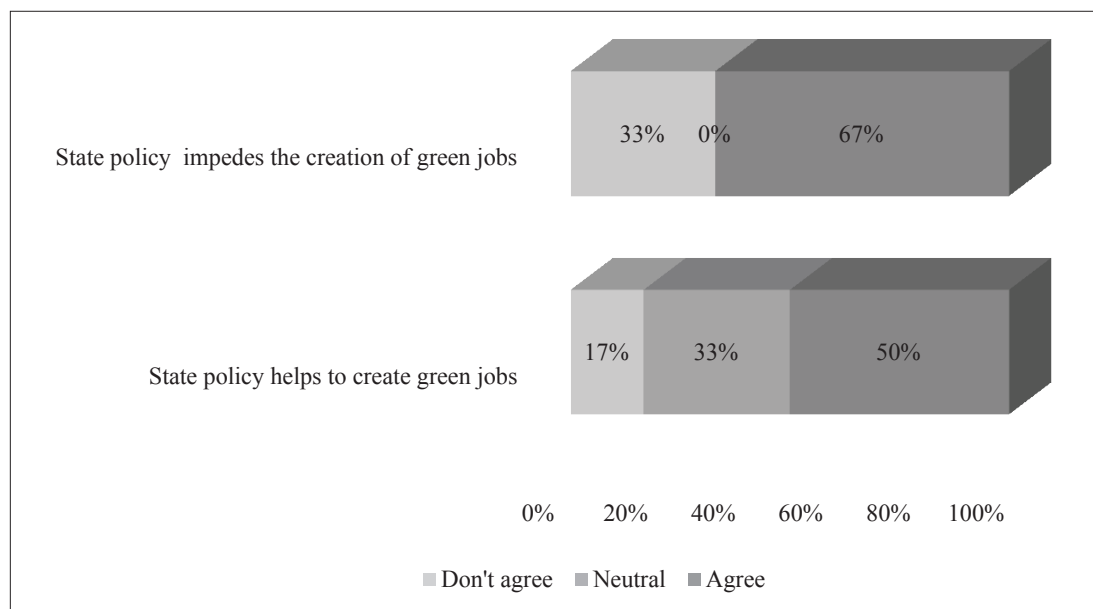


Fig. 2. Perspective-green jobs to be supported by state policy

Source: Research project, NID NII-6/2014.

garia are defined financial factors. 17% of experts indicated financial barriers as constrain to creation and development of green jobs. 23% of respondents evaluate the difficulties in the use of consultants as a reason that impedes application for funding from European and national funds to promote green jobs. At the same time 15% believe that higher prices for consulting services are a barrier to the creation of green jobs.

Social factors

Social factors as participation in programs for education and training, improving professional qualification and availability of qualified and experienced staff are important for respondents in regard to development of green jobs.

Inclusion of the working population in programs for education and training for acquiring new competencies for green employment in accordance with the demand of the labor market is “definitely an important” factor for the development of green jobs for 50 % of the respondents (Table 2). Other 50% of the surveyed experts consider that it is “rather important” factor.

Organized training for professional qualification of unemployed people for green jobs in the municipality is defined as “definitely important factor” from 50% of the respondents, 33.3% believe it is “rather important factor” and only 16.7% define it as “rather unimportant”. The ma-

majority of respondents gave positive assessments on the importance of the factor “implementation of programs for green jobs”. 83.3% consider that it is “definitely important” factor and 16.7% believe it is “rather important” factor.

Availability of qualified and experienced personnel in the field of environmental protection and tourism services is important factor for each of the respondents. 66.7% define it as “definitely important”, 33.3% as “rather important” factor.

Technological factors

Technological factors from one side are very important for every sector, but on the other side the sector of creating a green employment doesn’t depend on. The experts in the survey ranked that factor on last place with 8%. They stress on the opinion that technology and innovation are not a barrier neither a preposition for creating a green job. As well some of the respondents’ point that even not very important factor it is still a driving force for possibility for future positive development of green jobs. Here were pointed the required standards and certification which the firms need to obtain for reaching the level where they can use the program for green jobs.

Ecological factors

Environmental factors are also important for the development of green jobs in the surveyed

Table 2. Evaluation of social factors for development of green jobs

Social Factors	Definitely unimportant	Rather unimportant	Rather important	Definitely important
Inclusion of the working population in programs for education and training for acquiring new competencies for green employment in accordance with the demand of the labor market	0%	0%	50%	50%
Organized training for professional qualification of unemployed people for green jobs	0%	16,7%	33,3%	50%
Implementation of programs for green jobs	0%	0%	16,7%	83,3 %
Availability of qualified and experienced staff in the field of environmental protection and tourism services	0%	0%	33,3 %	66,7%

Source: Research project, NID NII-6/2014.

municipalities. Table 3 presents the opinion of the respondents on the importance of environmental factors for the development of green jobs.

Most of the respondents – 83.3% share that reducing pollution through promoting green jobs is “definitely important” factor, while only 16.7 percent consider the opposite. 66.7% of the experts define preserved natural environment and available ecotourism infrastructure as “definitely important” factor, 33.3% as “rather important” factor. Similarly is the opinion of respondents on the importance of ecological factors “sustainable development of forests and forest infrastructure” and “conservation and restoration of biodiversity through green jobs”. Maintenance the structure and conservation of soil and the development of organic farming is defined as important factor for all involved in the survey.

Legal factors

Other part of the policy factor is connected with legal frame work of green jobs. Big part of respondents has no opinion regarding the evaluation of legislation for environmental protection (66% have no opinion on the allegation that there are contradictory texts in various legal documents, 33% in respect of that there are a large number of laws regulations and 50% have no opinion on the allegation that it was good).

Positive opinion regarding the legislation on environmental protection has 67% of the experts which consider that legal frame work it is good, but from them 50% did not get the maximum score. The given explanation is that there are too many laws, ordinances and regulations which are often change. 1/3 of the respondents consider that there are contradictory texts in separate regulations in green job legal frame work.

Conclusions and Recommendations

Based on the evaluation of the external environment in which green jobs in Bulgaria are created and functioning could be made conclusions and recommendations, as follows:

Conclusions

- Political factors are important for crating of green jobs. The policy connected with green employment is not working proper and the results are not sustainable.

- Economic factors are defined rather like constrains on the creation and development of green jobs. Financial factors are considered from the experts as a barrier to opportunities for creation of green jobs in Bulgaria. At the same time high evaluations become economical factor “use of consultants”. It is perceived as a reason that impedes application for funding from European

Table 3. Evaluation of ecological factors for the development of green jobs

Ecological Factor	Definitely unimportant	Rather unimportant	Rather important	Definitely important
Reducing the pollution through promoting green jobs	0%	16,7%	0%	83,3%
Preserved natural environment and available ecotourism infrastructure	0%	0%	33,3%	66,7%
Maintenance of the structure and the conservation of soil and development of organic farming	0%	0%	83,3%	16,7%
Sustainable development of forests and forestry infrastructure	0%	0%	33,3%	66,7%
Conservation and restoration of biodiversity through green jobs	0%	0%	33,3%	66,7%

Source: Research project, NID NII-6/2014.

and national funds to promote green jobs. High prices for consulting services that could stimulate the creation of green jobs is evaluate as one of constrains for green employment

- Social factors are defined as important for the development of green jobs. Factors such as the inclusion of the working population in programs for education and training for acquiring new competencies for green employment in accordance with the demand of the labor market, organizing courses for professional qualification and training for green jobs of unemployed people in the municipality, implementation of programs for green jobs receive positive evaluations by experts.

- Technological factors are not constraining green employment. They are mostly associated with innovation of the sector and bringing effects reflecting in all sectors and the influence is indirectly.

- Ecological factors also have high evaluation of importance for creating green employment. They are associated with pollution reduction, preservation of natural environment and available eco-tourism infrastructure, sustainable development of forests and forest infrastructure and conservation and restoration of biodiversity through green jobs. Average degree of importance receive ecological factor – “maintenance of structure and conservation of soil and the development of organic farming”.

- Legal factors are defined as important ones, which are having impact of creating green jobs. The Ordinances, Regulations and laws in are of green jobs are contradictive and the results of the implanted measure in Bulgaria is negative.

Recommendations

- According to high evaluation of social factors is seen that they should be encouraged by undertaken of specific programs to support professional education and qualification of unemployed workers threatened by industrial change. At the same time to improve the professional qualification and increase the availability of qualified and experienced employment in the field of environmental protection and tourism services have to be undertaken specialized training courses.

- High evaluation of ecological factors requires different stimulus and financial support to be offered by the state level under combination of different measures. This could be financial sources from the national and European support programs for reducing the pollution, maintenance of the structure and the conservation of soil, supporting development of organic farming and green practices, conservation of biodiversity.

- The negative effect of economic factors is defined as constrains for creation and development of green jobs. They could be overcome through improvement of some of the financial credit instruments of environmental policy. Together with the stimulus from state support for development of green jobs could be supported by financial resources from other ecological funds as Enterprise for management of activities for conservation of environment.

- The funds from this type of ecological support could also be used for overcoming the barriers connected with access of consulting services.

- The negative effect of legislation and policy in the field of green job should be reviewed and revised. If policy makers want this measure to have a positive impact on employment, social sphere, and increased eco effect on environment should support it by changed measure, applying procedures and simplify the business to be involved in.

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