

ABSTRACTS

of the scientific publications of

Ch. Assistant Professor TEODORA PENEVA, Ph.D

presented in a competition for the academic position "Associate Professor" at III-BAS, announced in the State Gazette no. no. 44/19.05.2023

The abstracts of the scientific works are listed in their order in the list of publications. The publications are in two main research areas: 1. Energy poverty and 2. Patronage care.

In area No. 1 Energy poverty, two monographs in Bulgarian are presented (publications No. 1 and No. 3 with 174 pages and 250 pages, respectively), two articles in English in scientific publications indexed in SCOPUS (publications No. 4 with 15 pages. and No.5 with 8 pages) and three articles in Bulgarian in non-refereed peer-reviewed journals (publications No.6, No.7, and No.8 with 16 pages, 9 pages, and 27 pages, respectively). The last article is co-authored, with the participation of Chief Assistant. Dr. Teodora Peneva is 17 pages, according to the separation protocol).

In area No. 2 Patronage care, a monograph in Bulgarian with 117 pages has been presented. (publication No.2).

Abstracts of Publications in Area No.1: Energy Poverty

No.1 (B.3.1) Peneva, T. (2022). Energy poverty in Bulgaria: dimensions and factors. BAS Publishing House "Prof. Marin Drinov", 2022, ISBN: 978-619-245-241-4, DOI:10.13140/RG.2.2.20410.06085, 174 pages.

(In Bulgarian: №1 (B.3.1) Пенева, Т. (2022). Енергийната бедност в България: измерения и фактори. Издателство на БАН "Проф. Марин Дринов", 2022, ISBN: 978-619-245-241-4, DOI:10.13140/RG.2.2.20410.06085, 174 стр.)

The monograph provides an in-depth theoretical and empirical analysis of energy poverty, looking at 12 indicators included in the recommendations of the EU and the Energy Poverty Observatory in Brussels. Data from the " Household Budgets Survey" of the National Statistical Institute (NSI) were used from 2014 to 2019, a survey with a nationally representative sample of 3,000 households and 7,000 people, as well as data over a period of 10 or more years for available macroeconomic indicators of household income and expenditure, GDP, inflation, employment, prices of energy resources, etc.

The research measures the extent of energy poverty in Bulgaria, assesses the influence of key factors on the dynamics of this poverty and proposes solutions related to policies in this area. In the study, the main indicators of energy poverty are systematized, the main sociodemographic and economic factors of energy poverty in Bulgaria are determined, and the relationships of the selected factors with energy poverty are investigated.

The monograph uses a wide scientific toolkit: research of literary sources, theoretical and empirical analysis, processing and analysis of anonymized statistical data from the NSI survey, etc. The statistical analysis is also based on all related secondary data on income,

energy prices and consumption. The trends in the development of energy poverty are studied through the three approaches – objective, subjective and expenditure, and within the framework of the expenditure approach, the results of eight indicators are analyzed.

Each indicator is analyzed from the point of view of: 1) scope of households, effectiveness of the scope at the lowest deciles; 2) direction and intensity of dependence on factors such as household income and energy costs, type of heating, number of children and adults in the household, as well as other macroeconomic indicators; 3) functional specifics and possibilities for annual monitoring through inclusion in research.

The results of the research indicate that the most adequate for the national specificities and a fair line of energy poverty refers to 60% of the median of the equivalent disposable net total income after (typical) energy expenditure (typical consumption). This result was taken into account and included in the development of an official definition of energy poverty in Bulgaria subsequently by the caretaker government in the period September 2022 - February 2023.

In summary, the monograph covers the following main areas:

- Clarifications of key methodological issues for the quantification of energy poverty that have not yet been resolved in the EU and in the country.*
- Measurements and assessment of the relationships of energy poverty indicators with its main factors such as income, energy costs, type of heating and type of household.*
- Proposal for a methodology for determining an official energy poverty line in Bulgaria.*
- Proposal for a system of policy measures to reduce energy poverty, coordinated at the state level and upgraded at the individual level.*

No.3 (D.5.1.) Teodora Peneva (2021) Measuring energy poverty in Bulgaria. Balkanida Publishing House, 2021, ISBN: 978-619-91712-3-3, pp. 1-250.

(In Bulgarian: №3 (Г.5.1.) Теодора Пенева (2021) Измерване на енергийната бедност в България. Издателство Балканида, 2021, ISBN: 978-619-91712-3-3, стр. 1-250)

The monograph was compiled on the basis of the author's dissertation work for awarding the educational and scientific degree "Doctor" in the doctoral program "Economics and management of industries: Energy, infrastructure and public services" in the professional direction "3.8 Economics" at the Faculty of Economics and Business Administration of Sofia University "St. Kliment Ohridski", defended in 2017.

The purpose of the monograph is to present and analyze the methods for measuring energy poverty known in science to date, to apply them as far as possible in the Bulgarian situation, to compare the results and to give a proposal for the most adequate method for measuring energy poverty in Bulgaria. Since the UK is the country with the most developed system for measuring energy poverty, the main research question of the monograph is "What are the results of the methods of measuring energy poverty developed in the UK when these methods are applied in Bulgaria, and which method of measuring energy poverty is most suitable for the situation in Bulgaria". The development begins these studies by applying

methods and tools already developed by foreign researchers in a Bulgarian environment, and analyzes the advantages and disadvantages of these methods, finally giving a proposal for choosing the most adequate set of methods for Bulgaria.

The monograph provides a secondary analysis of the energy costs and income of 2,956 households from a nationally representative sample for 2014. Data from the 2014 Household Budget Survey were analyzed using statistical methods that examine key statistical characteristics of the rows by mean values by population groups by demographic characteristics, and by correlation analysis.

For the purposes of the research, three types of energy costs are used - 1) current energy costs, in original data from the Household Budget Monitoring; 2) normative energy expenditure, created on the basis of a norm for the amount of energy per year in kWh, including energy for heating in winter and separately energy for electrical appliances all year round according to the number of members of a household, with applied energy prices of the individual electricity suppliers and heating companies in the country by regions; and 3) modeled energy expenditure created based on actual expenditure using linear regression models. On this basis, the methods for measuring energy poverty were applied, and four independent indicators were created according to the different methods. For each of the methods and each of the costs, an energy poverty indicator is created, which defines with one (1) the energy poor households, and with zero (0) the energy non-poor households. Binary logistic regression was used to examine which factors have a statistically significant effect on energy poverty, and to compare the factors across methods and different energy costs. With modeled energy expenditure, logistic regression models were compared with absolute values of energy expenditure and with a dummy variable for the type of heating used. A comparative analysis of the target groups for each of the methods was also carried out, as well as an analysis of the structure of energy poverty according to different principles - by types of households, by the number of adults and children in the households, by type of heating. The analysis aims to show the different target groups covered by the different methods. Choosing a particular method benefits different target groups.

No.4 (Г.6.1.) Peneva T., (2021). Green Deal's Impact on Energy Poverty in Bulgaria. Economic Studies journal, issue 6, 2021, p. 90-105, . ISSN 0205-3292. Scopus Q3 SJR 2021:0.2

The article examines the possible effect of the measures that the government will take to fulfill the goals set in the European Green Deal in the household sector and how this will affect the levels of energy poverty. It analyzes whether the measures will have a significant effect on the reduction of energy poverty levels and will take us out of the leading position in this indicator in the EU. The paper attempts to answer these questions by assessing the impact of a range of policies on reducing household energy poverty using anonymised data on energy income and expenditure from the 2017 Household Budget Survey, with a sample of 2,950 households .

No.5 (Г.6.2.) Peneva T., (2019). Sustainable Development and Energy Poverty - Challenges to the Governing Institutions. Economic Studies, Vol.28, Issue 1, 2019, p.174-182. ISSN 0205-3292, Scopus Q3 SJR 2019:0.2

The article presents the main challenges for the state to deal with energy poverty as one of the barriers to the sustainable development not only of the energy sector, but also of the society. The article presents the scope of energy poverty in Bulgaria, the main factors, consequences and development trends in the last three years until 2016. The article also provides a brief guide to addressing the challenges of fighting energy poverty.

No.6 (G.7.1) Teodora Peneva (2021). The fourth pillar of energy poverty in Bulgaria. "Economic thought" journal 2021/5, p.5-21 (ERIH + (ERIH Plus)).

(In Bulgarian: №6 (Г.7.1) Теодора Пенева (2021). Четвъртият стълб на енергийната бедност в България. Сп. "Икономическа мисъл" 2021/5, стр.5-21 (ERIH + (ERIH Plus).)

The article presents and analyzes the gaps in the administrative mechanisms for the protection of vulnerable energy consumers in Bulgaria. The thesis stipulates that the lack of adequate protection mechanisms causes the appearance of a fourth pillar of energy poverty - beyond the most frequently cited three pillars - high energy prices, low incomes and low level of energy efficiency of buildings. The article reviews the mechanism for access to justice for households in the energy sector in Bulgaria, starting with the national ombudsman, municipal ombudsmen, and ombudsmen in energy companies. It summarizes the main problems encountered in energy justice for households in the sector, and the way in which government institutions respond to these problems. The article concludes that citizens in Bulgaria face high levels of energy injustice, which they have to combat using ineffective consumer protection mechanisms, and that effectiveness depends on the people in charge, not on legal and administrative processes.

No.7 (D.7.2.) Teodora Peneva. (2021). The role of an official energy poverty line in Bulgaria. Proceedings of the VIII International Scientific Conference "Changes in the Global World and New Solutions", Volume 2, pp. 117-126, ISBN 978-619-7404-29-6.

(In Bulgarian: №7 (Г.7.2.) Теодора Пенева. (2021). Ролята на официална линия на енергийната бедност в България. Сборник с доклади от VIII Международна научна конференция „Промените в глобалния свят и новите решения“, том 2, стр. 117-126, ISBN 978-619-7404-29-6.)

The article is devoted to the introduction of an official energy poverty line, close to the official poverty line, which will allow the regulated and clear definition of a much larger group of vulnerable consumers and their support with special policy instruments in the conditions of rising prices of energy resources and slow growth of household incomes. The article presents arguments in support of an official energy poverty line for the purposes of liberalization of the domestic electricity market and implementation of the measures in the Green Deal.

No.8 (G.7.3.) Teodora Peneva, Emanuil Zbov, Dragovest Dzhalov. (2022) Individualna otsenka na energiyната бедност – възможности и решения. (Individual assessment of energy poverty – possibilities and solutions). Economic Thought, 67 (5), 2022, (ERIH+ (ERIH Plus)).

(In Bulgarian: №8 (Г.7.3.) Теодора Пенева, Емануил Зъбов, Драговест Джалов. (2022) Individualna otsenka na energiynata bednost – vazmozhnosti i resheniya. (Individual assessment of energy poverty – possibilities and solutions). Economic Thought, 67 (5), 2022, (ERIH+ (ERIH Plus).)

A proposal is presented for individual assessment of energy poverty through a quantitative model for assessing household energy needs, based on the expenditure-oriented approach of measuring energy poverty, which has been proven to be the most suitable for the national specifics in Bulgaria. The assessment contains a demographic and technical component and is important in determining the normalized (typical) energy expenditure of households as part of the official energy poverty line together with income and energy prices. As an element of the overall mechanism to combat energy poverty, the regulation of the energy poverty line is necessary in the application of financial schemes for crediting measures for energy efficiency of buildings and heating systems of domestic energy consumers in Bulgaria.

Post Summary in Area No.2: Patronage Care

No.2 (G.4.1.) Peneva, T. (2021). Innovative model of patronage care in Bulgaria. Balkanida Publishing House, 2021, ISBN: 978-619-91712-1-9, 111 pages.

(In Bulgarian: №2 (Г.4.1.) Пенева, Т. (2021). Иновативен модел на патронажната грижа в България. Издателство Балканида, 2021, ISBN: 978-619-91712-1-9, 111 стр.)

The monograph presents and analyzes in detail the legal framework of the home social patronage service in Bulgaria, the current state of patronage care and public canteens in Bulgaria as of 2020, the state of the service among private providers, good practices from abroad and a survey among municipal services from 2020 for the accessibility, efficiency and quality of the service.

The survey proves the main hypothesis, namely that social patronage in Bulgaria is unevenly developed and managed, and there is a need to optimize the model of offering the service. Working subtheses relate to limited service access, unevenly distributed reach and underserved user needs, disparities in service cost, and service efficiency and quality. Interviews were conducted with 26 respondents in 22 municipalities, and the total number of users served by these municipalities is over 12 thousand people, which is nearly a third of the total number of patronage care users in Bulgaria in this period - 40 thousand people.

On this basis, the strengths and weaknesses of the service, the opportunities and challenges for its development in the future are analyzed, the possible ways of managing innovations in the specific case are analyzed, and an innovative model for the development of patronage care in Bulgaria is developed.

The innovative model includes four steps – achieving service stability, expanding coverage, improving price levels, and expanding subtypes of services.