

PARTICULAR ASPECTS OF CONSUMER PROFILE OF THE PUBLIC GOODS GENERATED IN A REGION WITH EXTENSIVE AGRICULTURAL ACTIVITIES: THE CASE OF DORNA VALLEY AREA OF ROMANIA

Costică MIHAI*, Mariana HATMANU**

Abstract

The market of public goods is one of the most particular institutions because both the suppliers and consumers are very heterogeneous. In one of the richest, from public goods point of view, area of Romania, the region of Dorna Valley in the North East of Romania, we find both local and external consumers, which have different perspectives on the utility of public goods. The region is characterized by extensive activities, especially in agriculture and forestry, and many of the public goods are related to the environmental dimensions, the reason why many of the consumers are in the position of tourists and consumer of local private goods. The analysis of the consumer profile enabled us to understand the particularities of the demand and the causes of different willingness to pay to benefit from different public goods. Such parameters as age, professional status, level of income or level of education have been used to describe the classes of consumers and their propensity to consume public goods. The used methodology includes a cluster analysis based on the data obtained by a survey conducted in the North-East of Romania. The utility of results is obvious for the general interest of scientists and practitioners to understand the necessity and intensity of public goods provision.

Keywords: public goods, consumer profile, cluster analysis, demand characteristics

Introduction

Economic and social development of rural localities is a deep process in development requiring the existence of a set of initial and sufficient conditions. Operations in rural areas aim to provide both private goods and services needed to meet current and future needs of the population and to record a specific level of public goods and services, based on the principle of externalities, contributing to shaping the income of the inhabitants and people found temporarily in the region (Benedek and Lembcke, 2017).

* Costică MIHAI is professor PhD at Alexandru Ioan Cuza University of Iași, Romania; e-mail: ticu@uaic.ro.

** Mariana HATMANU is associate professor PhD at Alexandru Ioan Cuza University of Iași, Romania; e-mail: mariana.hatmanu@uaic.ro.

The nature of public goods involves a set of specific features compared to private goods: non-rivalry and non-excludability. These basic features have a strong impact on their consumers, not being able to influence or exclude other consumers from consumption. In other words, “a public good, as defined by economic theory, is a good that, once produced, can be consumed by an additional consumer at no additional cost” (Holcombe, 1997 p. 1).

In the analysis of public goods production, the economic discourse should be built around the idea of demand and its features: „The belief that consumer satisfaction is the ultimate economic goal and that the economy is fundamentally ruled by consumer desires is called consumer sovereignty”.

In his seminal work “The Wealth of Nations” Adam Smith states that “consumption is the sole end and purpose of all production and the welfare of the producer ought to be attended to, only so far as it may be necessary for promoting that of the consumer” (Smith, 1937, p. 625). We cannot understand the way an economic relationship between economic agents works if consumer’s feature and the specificity of demand for the goods under this relationship have not been fully investigated.

Current evolution of needs is unlimited, consumers feeling the need for new products as their income and social status grow: “we can apparently never have enough to be satisfied, because there is always someone with more than we have” (Goodwin *et al.*, 2008, p. 17). Consumption growth and diversification are the stimulating factors for the production of goods meeting these needs. Going over a specific level of knowledge and awareness generates also a consumption of public goods, especially of goods related to environment and society.

Due to these features, there is a need for a specific analysis of the profile and demands of public goods consumer, an analysis that would be used to develop incentives for developing practices and activities with high potential for public goods production (Baldock *et al.* 2011).

But “the public domain appears as a residual category, with states performing tasks that markets cannot. But as noted, “private” can no longer simply be equated with markets, and “public” with states. Both contribute, among others, to the public and private domains” (Kaul and Mendoza, 2003, p. 78).

The issue of public or private goods delivery is very important and should be analysed considering producer’s level of remuneration and the need to satisfy the demand for different goods and services: “conventional market allocative and distributive criteria may be violated both in the case of conventionally ‘public’ and ‘private’ goods, makes it clear that these criteria cannot guide the choice between public and private provision” (Niedermayr *et al.* 2018). A theory of public goods should provide an “explanation of why the distributive implications of a divergence between price and marginal benefit which may be observed both for traditionally public and private goods are significant in some cases, while they are not, and can be left to the play of market forces, in others” (Marmolo, 1999, p. 30).

National public or community companies are especially interested in encouraging public and private goods production supplied by each region of the European Union. Taking into account that market economy should operate freely



and not be conditioned by public measures, policies targeted at ensuring normal conditions for business operation and relationships among economic agents also contribute to providing public services to society. Their volume is generated in relation with region's features and the intensity for public goods required by local providers and consumers.

The main aim of the paper is to identify the consumer profile and explain the particularities of the demand for the different public goods. The socio-economic features of public goods consumers are very diverse. Starting with age structure and professional category and ending with aspects related to degree of awareness regarding public goods and the willingness to pay for the goods to benefit from them, the profile of consumers is important in order to understand who they are and how intense are their preferences. In fact, this is the main argument that producers of public goods and services take into account in developing sustainable strategies for their operations.

1. The context of analysis

This study has been conducted using the case of Dorna Valley in the North-East of Romania. This is a widely recognized area for its environmental and rural characteristics. The existence of a beautiful mountain landscape, pure high-quality mineral waters recognized nationally and internationally, maintenance of high quality of air, soil and local ground water, biodiversity specific to high quality ecosystems, as well as the features of well-developed rural area made us choose this area as a topic for the research project funded by the European Union through Horizon 2020 Programme. The area was chosen during workshops organized within this project, it has been earlier mentioned as one of the areas in the North-East region where most public goods are located both in terms of quality and quantity. One of the aims of the project is to provide solutions for improving the supply of public goods, and the most important stage of the project provided an analysis of the demand for public goods and conducted their assessment.

The Dorna Valley surpasses other areas of the North-East Region of Romania with regard to the availability of public goods. Many of the farms in this region conduct their activities using traditional, extensive practices. Thus, the main agricultural activities in the region are focused on livestock, primarily cattle, but also sheep.

The public goods investigated are: natural landscape, farmland biodiversity, water availability and quality, air quality, soil functionality, climate stability, Resilience to flooding, landslide and wildfire, rural vitality and cultural heritage, food security and quality and farm animal wealth or welfare. (Vanni, 2014). From the workshops, it was observed that the stakeholders have considered those public goods like essential resources in the Dorna Valley region (the Hotspot of the research), due to the direct impact on the tourism sector and indirect impact on the agro-food sector. Tourists usually visit Dorna in order to benefit from nature walks, outdoor sports and relaxation. The agro-food businesses in the region benefit from the forested mountainous environment by generating high quality food products,

which are then sold to consumers who associate the “*Vatra Dornei*” brand with healthy food due to the natural landscape. All of these activities are essential parts of the local economy and its perspective for sustainable development.

Public good quality of natural landscape is affected by several activities in the region, including illegal deforestation, conversion of natural pastures to farmland, as well as increased urbanization and real estate development. Such activities can be curbed if local entrepreneurs were provided with consultancy or education services which would provide knowledge regarding successful sustainable farming and forestry practices and consultancy on leveraging funding opportunities for green businesses. In addition, the provision of AES payments would help in vectoring their efforts for improving farming practices and provide a financial motivation for such activities.

The demand for public goods in the Dorna Valley is directly correlated to elements of its attractiveness. The residents of this area are interested in the public goods of the region as they impact their daily life. The region is environmentally clean, with high natural productivity, able to generate sustainable products of high quality. In addition, rural vitality is high, the population being stimulated to maintain its customs, traditions and daily activities in an attractive socio-economic environment. There have been maintained both primary and secondary activities related to farming and forestry, and also tertiary tourist and craft-making activities have been growing contributing to improving the life conditions of people living in rural areas of the region.

On the other hand, “visitors” to this have been attracted by the natural features of the mountain landscape, by the beauty of the scenery, and by the quality of products and services in the region.

As long as the offer of private goods is dictated directly by their market, the provision of public goods is not just the responsibility of one of the economic agents in the area. It has been observed that the market lacks the capacity to manage properly the production of public goods. Still, the public discourse is far from being clear: “the conventional justification for the public provision of goods is market failure. Conversely, market-oriented critics of public goods theory hold that market failure is, more often than not, wrongly diagnosed. In any case, it is a lesser evil as compared to government failure. The ill consequences of the latter are, in fact, compounded by the coercive nature of public action. All these arguments focus on the allocative properties of public and market outcomes” (Marmolo, 1999, p. 28).

In practice, the interest of economic agents in the area has been stirred by the awareness that the used technology, the management of activities, the choice of resources, and even the transmission and application of good business practices providing a higher volume of public goods could increase substantially their total income. They responded to the demands for public goods even in the absence of a clear market for these.



2. Data and methodology

The population of the survey regarding the demand for public goods (PGs) (consisted of approximately 70.000 people (inhabitants of the hotspot and yearly tourists visiting the area). The sample consisted of 102 responses. The main evaluation tool included in the in the questionnaire based survey consisted of a Contingent Valuation exercise based on the item presented below.

To perform this study, we have used a quantitative methodological approach. In this regard, the descriptive statistical methods and cluster analysis were used to identify and highlight the characteristics of the public good demands and to cumulate different characteristics of the consumer in homogeneous groups. This way we can understand the profile of the consumers grouped in different clusters based on interferences between different characteristics. This allowed us to extend the analysis to relationships between these variables and benefits of PGs provided by the hotspot under study.

Description of questionnaire and analysed data. Data needed for research was collected by means of a questionnaire applied in the North-East Development Region of Romania. The statistical questionnaire was divided into the:

- first part which includes an introduction presenting the aim and scope of the case study;
- second part includes questions aimed to identify preferences of consumers for public goods;
- third part aims to collect information on the willingness of residents to pay for improved public services;
- fourth and fifth part aims to discover the views of consumer on the need, opportunity and also limitations of being provided public support for generating public goods;
- last part includes questions on socio-demographic characteristics of respondents.

The questionnaire was completed by a sample of 102 individuals. As 5 outlier points were identifies for some statistical variables, these have been eliminated and the statistical analysis was applied to 97 individuals. To reach the aim, we have selected the following variables on the basis of database built using the collected data:

- payment willingness for moderate improvement of PGs provided in the Dorna Valley (*Mod_improv*). The question matching this variable includes 12 variants of response, from 0 to 33 Euro, growing approximately by 2 Euro. The questionnaire comprised degraded areas in the Dorna Valley. To understand the range of improvements for public goods (landscape, quality of water, rural vitality, soil quality, biodiversity, ...), respondents have been given (visually and by description): an area they may know: centre of Vatra Dornei Municipality. So, the objective for improvement could be afforestation of an area equal to seven times bigger an area as to show the rural landscape and other public goods derived from afforestation of degraded areas; a litre of

water in which the concentration of nitrogen compounds were reduced from 2,8 to 1 mg/l in order to reflect the quality of water; a locality in which the number of young people and newly built houses would grow by 3% to reflect rural vitality.

- Age (*Age*)
- Gender (*Gen*)
- Last graduated school (*Educ*). The question matching this variable includes 6 levels of education (1 – primary, 2 – secondary, 3 – high school, 4 – undergraduate, 5 – master, 6 – PhD).
- Professional status (*Prof_stat*), with variants: 1 – Employed indefinitely, 2 – Employed period, 3 – Entrepreneur, 4 – Looking for a job, 5 – Student.
- Total income of household (*Income_level*), with variants: 1 – low income (income up to 2000 lei), 2 – medium income (income between 2000 and 5000 lei), 3 – high income (income higher than 5000 lei).
- Awareness of environmental issues taking into account the daily behaviour of the individual (*Envir_aware*), with variants in descending order of the degree of awareness from 1 – Not aware of environmental issues, up to 5 – Absolutely aware of environmental issues.

The research is based on qualitative and quantitative statistical methods of analysis. As this research topic displays a low degree of consumer awareness, the analysis should be theoretically grounded in order to understand how the consumers interpret and use the public goods. Besides these methods, statistical methods were used to interpret and analyse data obtained from the distributed questionnaire:

1. Graphic and descriptive analysis of analysed variables

2. Identification of relationships/associations between the willingness to pay for improved public goods and the socio-demographic characteristics of respondents. Given the nature of the variables analysed, methods specific to non-parametric statistics have been applied, such as Spearman and Kendall correlation analysis, Mann-Whitney and Kruskal-Wallis tests for independent samples (Bluman, 2004, pp. 623-662), but also multivariate statistical analysis methods, such as Correspondence Factorial Analysis.

Shaping the profile of public goods consumer in the Dorna Valley based on analysed characteristics, was carried out by and Two-step Cluster analysis (Pintilescu, 2007, pp. 109-260).

3. Results of graphic and descriptive analysis of analysed variables

To underline the characteristics and structure of the analysed questionnaire, we use the graphic analysis (Figure 1) and calculate the descriptive statistical indicators (Table 1) for variables mentioned above.

The variable "The amount paid for moderate improvement of public goods, euro" is analysed both in its initial form provided for in the questionnaire, with 12



variants of response, as it has been described above, and in its regrouped version, by three categories, with variants 1 – the amount at least equal to 10 euros, 2 – the amount between 10 and 20 euros, 3 – the amount more than in amounts up to 20 euros, the average amount being of 12.25 euros, with a high standard deviation equal to 7.7 euro. A percentage of only 20.6% of respondents are willing to pay annually more than 20 euros. It is due mainly to a relatively low level of income in Romania, where public goods are viewed as marginal, the main willingness being to pay for private goods.

Table 1. Descriptive statistics indicators

	The amount paid for moderate improvement of public goods, euro	The amount paid for moderate improvement of public goods	Age	Level of education	Individual's environment awareness (self-assessment)	Professional status	Household Income
N	97	97	97	97	97	97	97
Valid	97	97	97	97	97	97	97
Missing	0	0	0	0	0	0	0
Mean	12.243	1.814	29.588	3.928	4.0206	3.052	1.752
Median	11.000	2.00	26.00	4.00	4.00	3.00	2.00
Mode	11.00	2.00	23.000	4.00	5.00	5.00	2.00
Std. Deviation	7.696	0.755	10.527	0.820	0.957	1.827	0.677
Minimum	0.00	1.00	19.00	3.00	2.00	1.00	1.00
Maximum	33.00	3.00	66.00	6.00	5.00	5.00	3.00

Source: Own processing with SPSS Software

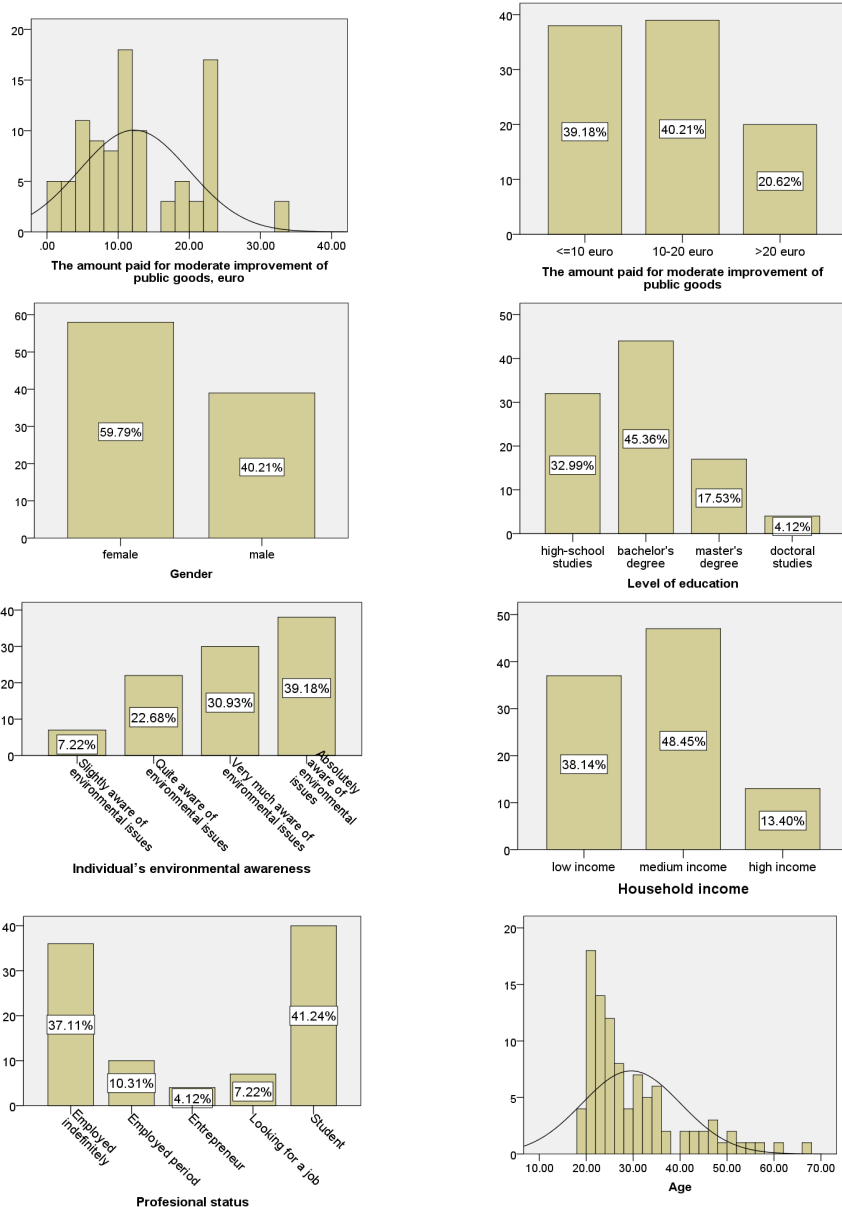
In terms of gender, 59.79% of respondents are females, and 40.21% are males. Compared to official statistics for the North-East region, masculine population is 9% lower in the questionnaire, while the female population is higher. It may be explained by the number of people, who emigrated abroad and are mainly males.

The structure of the analysed questionnaire regarding the variable last graduated level of education shows a concentration in high school (32.99%) and undergraduate education 45.36%). One of the conditions for taking part in the interview referred to understanding the studied area, the Dorna Valley. The population knowing the area comprises people with education above the average, so that people with undergraduate and secondary education occupy the first two positions in this structure. The low number of people with master and doctoral education may be explained by low percentage of these categories in total population.

As for professional status, 39.11% of respondents are students 37.11% are employed indefinitely and 4.12% are entrepreneurs. We expect to discover significant differences between willingness to pay by categories of professional status, closely correlated with total income of households

The data regarding Individual's environmental awareness are encouraging as 39.18% of respondents say that they are "Absolutely aware of environmental issues", 30.93% are "Very much aware of environmental issues", and no person is "Not aware of environmental issues".

Figure 1. Distribution of socio-economic variables of public good consumers



Source: own representation with SPSS software



The average age of individuals in the analysed sample is around 30 years, a relatively young age, open and long-term oriented towards the need for public goods. Many young people are open to tourism, understand what the public goods are and express their own views on this issue.

4. Identification of influence factors for the willingness to pay for moderate improvement of public goods quality

The identification of factors influencing the willingness to pay is made by the nature of analysed variables using such methods as: non-parametric correlation analysis, non-parametric equality of means tests for independent samples, chi-square test with correspondent factor analysis.

The analysis of the relationship between willingness to pay and individual's age is made by nonparametric correlation using Spearman and Kendall coefficients and correspondent factor analysis.

Table 2. Non-parametric correlation coefficients between willingness to pay and age

Coefficient	Coefficient value	Prob.
Spearman	0.203	0.046
Kendall	0.14	0.052

Source: own processing with SPSS software

Values of the two nonparametric correlation coefficients show a weak positive relation between the two variables with a risk of 5% and 10%, respectively. It means that the willingness to pay increases with aging.

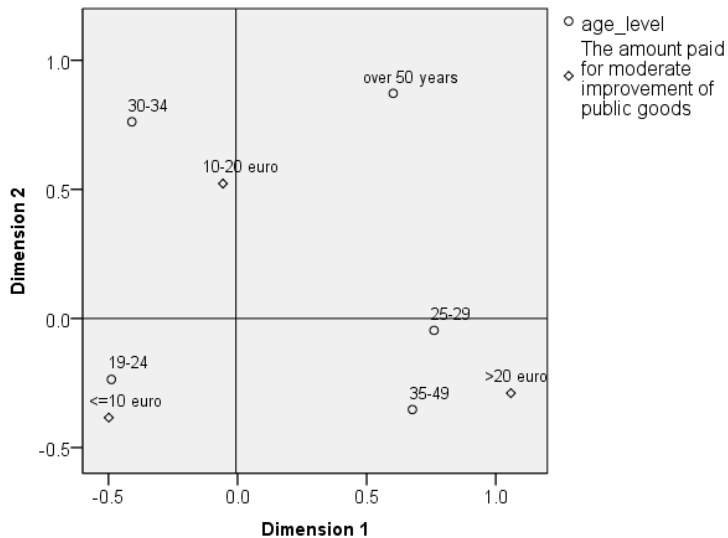
Correspondence Analysis is applied to two variables that have been recorded as follows: 5 categories for the age variable (1 for 19-24 years, 2 for 25-29 years, 3 for 30-34 years, 4 for 35 – 49, 5 – over 50 years), and the variable willingness to pay was considered in the regrouped version of 3 categories as it has been presented above. Chi-square test of independence of variables is significant with a risk of 10% ($\chi^2=13.86$; Prob.=0.085), therefore there is a relation between willingness to pay and age.

First factorial axis explains 76.1% of variation of point cloud so the results are interpreted in relation with this axis. The graphic representation above shows significant differences between the amounts paid by very young individuals, in the group of 19-24 years, who are willing to pay less than 10 Euro, and the age categories 25-29 years and 35-49 years, willing to pay more than 20 Euro.

The graphic analysis of the relation between willingness to pay and awareness of environmental issues by means of boxplot diagram (Figure 3) shows the increase in willingness to pay with increase of the degree of awareness of environmental issues. The numeric verification of this hypothesis is made by non-parametric Kruskal Wallis test for independent samples. The calculated value of the test ($\chi^2=11.052$) and its probability (Prob.=0.011) indicate the rejection of the

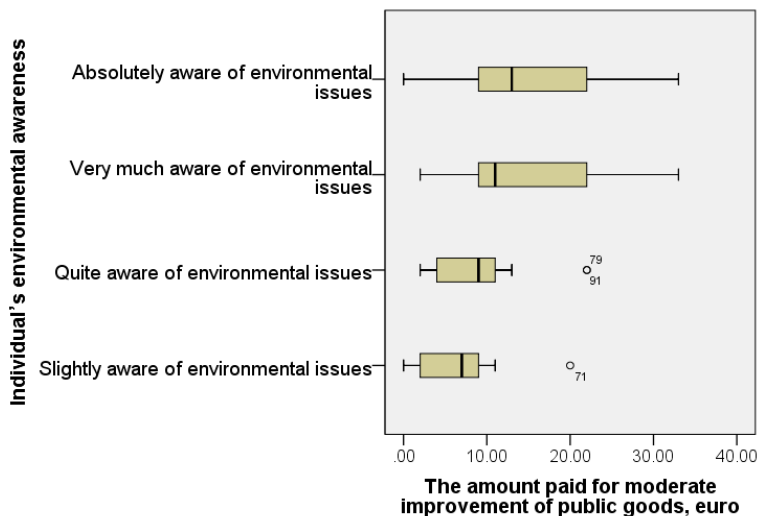
null hypothesis, so there are significant differences between willingness to pay and the degree of awareness of environmental issues, with a risk of 5%.

Figure 2. Representation of categories of variables willingness to pay and age in the system of the two factorial axes



Source: own representation with SPSS Software

Figure 3. Distribution of willingness to pay in relation with awareness of environmental issues

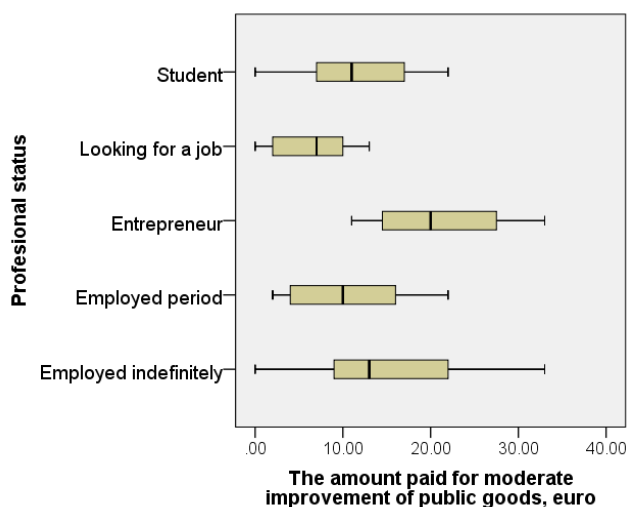


Source: own representation with SPSS software



The graphic representation of distribution of willingness to pay in relation with professional status (see Figure 4) shows the existence of differences between willingness to pay by professional categories. Therefore, it is obvious that the highest average amount to be paid corresponds to the category of entrepreneurs, and the lowest to the category of individuals looking for a job.

Figure 4. Distribution of willingness to pay in relation with professional status



Source: own representation with SPSS software

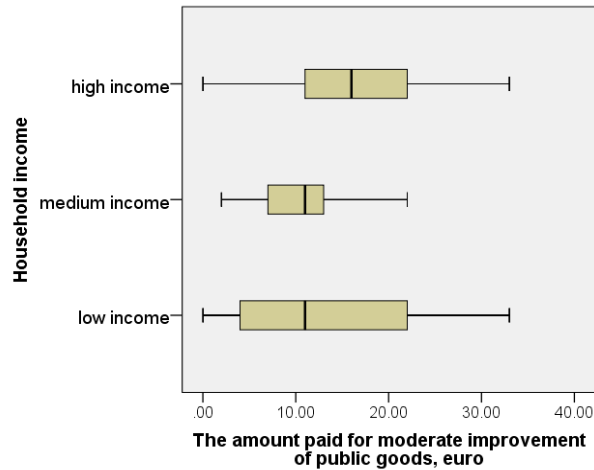
The Kruskal Wallis test is applied to independent samples. The calculated value of the test is ($\chi^2=10.103$) and its probability (Prob.=0.039) indicate the rejection of the null hypothesis, so there are significant differences between the willingness to pay and the professional status, with a risk of 5%.

The graphic analysis of the willingness to pay in relation with the level of total income of households shows that, as it has been expected, the highest average willingness corresponds to the category with the highest income. It is surprising to discover the tendency of low income category to pay higher amounts.

We check the hypothesis of existence of a statistical relation between the willingness to pay and the level of income using the correspondent factor analysis. The Chi-square test of independence is significant with a risk of 5% ($\chi^2=9.948$; prob=0.041), so there is a relation between the willingness to pay and income.

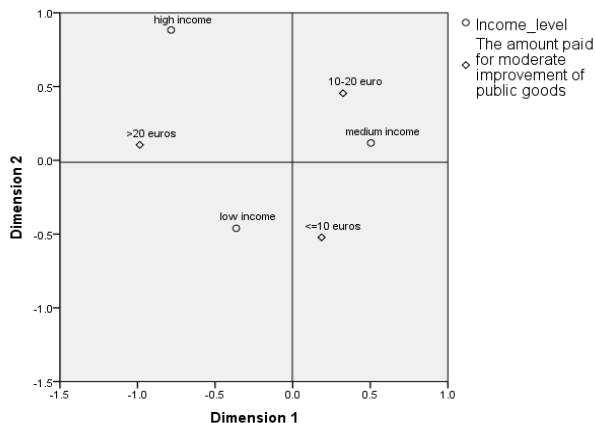
The first factorial axis explains 63.9% of variance of point cloud, less than 70%, so the results are interpreted in relation with the two factorial axes. Graphic representation above shows associations on the first factorial axis between the category of respondents with high income and the category of respondents willing to pay more than 20 euros. On the other hand, on the second factorial axis, there is an association between individuals with low income and the category of individuals willing to pay less than 10 euros.

Figure 5. Distribution of willingness to pay in relation with the level of total income of households



Source: own representation with SPSS software

Figure 6. Representation of categories of variables willingness to pay and income of households in the system of the two factorial axes



Source: own representation with SPSS software

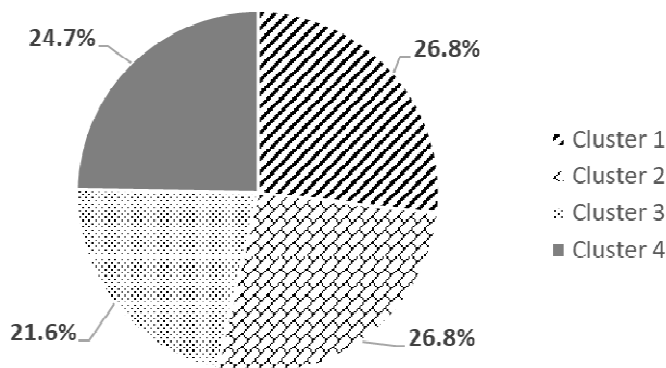
The results show that the variables age and level of education do not influence the willingness to pay for the improved quality of public goods. The hypothesis of the existence of significant relations of willingness to pay in relation with the following variables has been confirmed: age, professional status, awareness of existence of a link between the environmental issues and total income of household. These variables have been used for shaping the profile of public goods consumer of the Dorna Valley by applying the method Two-step cluster analysis.



5. Identification of public goods consumer profile of the Dorna Valley

Two-step cluster analysis has been applied to create homogenous groupings of individuals defined by their willingness to pay and its influence factors defined above. We have obtained 4 clusters with weights indicated in Figure 7. The quality of identified cluster solution is average, close to 50%, showing that there are resemblances among statistical units included in the analysis.

Figure 7. Sample structure by cluster



Source: own representation with SPSS software



















The analysed variables show a different level of importance in the way the statistical units are grouped into clusters.

Therefore, age and total income of households have the highest income on the grouping of over 95%. Also, professional status and willingness to pay for improved public goods influence the organization by cluster in the amount of 85-95%.

Table 3a. Cluster comparison

Cluster	Age	Total Household Income		
C1			medium income	high income
C2		low income		high income
C3		low income		high income
C4		low income	medium income	

Table 3b Cluster comparison – Continuation

Cluster	Professional status					The amount paid for moderate improvement of public goods		
C1	Employed indefinitely	Employed period	Entrepreneur	Looking for a job	 Student	 ≤10 euro	 10-20 euro	 >20 euro
C2	Employed indefinitely	Employed period	Entrepreneur	Looking for a job	 Student	 ≤10 euro	 10-20 euro	 >20 euro
C3	 Employed indefinitely	Employed period	Entrepreneur	Looking for a job	 Student	 ≤10 euro	 10-20 euro	 >20 euro
C4	 Employed indefinitely	Employed period	Entrepreneur	Looking for a job	 Student	 ≤10 euros	 10-20 euros	 >20 euros

Source: own representation with SPSS software

Cluster 1 includes low-income youth, students willing to pay less than 10 euros for improved public goods services. Although there is willingness to pay sustained by the awareness of importance of public goods, the student status reduces significantly the willingness to pay.

Opposed to Cluster 1, individuals included in Cluster 2, being also students with medium-income per household, they are willing to pay between 10 and 20 euros to contribute to improved quality of public goods. This observation is very important for defining the consumer profile as low income does not significantly influence the consumer's inclination to pay for the public goods it benefits from. If the consumer understands the importance of benefits that may be obtained for itself and for current and future generations, then it is willing to pay even if its financial status is poor. Another explanation for this category of consumers is related to the fact that some students/young people come from medium or high income families that also have a higher level of culture infused by the educational system and the family which is reflected in higher quality needs.

Cluster 3 shows that older individuals with medium level of income and a stable employment are willing to pay between 10 and 20 euros for improved public goods. So, the category that resembles Cluster 3, in terms of its willingness to pay, and has its own and medium income at society level. It is the less generous category compared to its position in society. As it is believed that medium income individuals are the potential and engine of an economy, so this category should be more concerned about paying for public goods. The issue of cost of life in Romania may explain this deviation of attention of individuals in this category from public to more private issues.

Compared to individuals in Cluster 3, those included in Cluster 4 also have stable employment but are younger and have higher income giving them the



opportunity to invest more than 20 euros in improved public goods. This cluster falls perfectly into the description of demands for public goods, in the sense that marginal income generates increases of higher marginal demand than the income growth rate. So, public goods take amounts from luxury goods, with higher allocation from higher income. Habit, fashion, examples and sometimes snobbery in its positive sense could possibly influence the preferences and needs of individuals when basic needs are covered and are not a daily concern for individuals

The clustering of the interviewed population shows that standard of living and societal development by means of education and healthcare boost the growth in preference for public goods and the degree of willingness to sustain their production. Public policies sustaining public goods production together with better degree of information provision and education may be the key solutions to make all categories of consumers align to providing support to public goods production.

In this respect, the political decision-makers should formulate public policies considering, in general, the profiles of the local residents and, particularly, focusing on the profiles of consumers of public goods for enhancing the production of this kind of goods. The analysis regarding the level of preferences' intensity correlated to the impact assessment of the public instruments is the solution for stimulating and improving the level and the quality of public goods within a region. In the same time, attention is needed for ensuring the conformity between socio-economic policies and those sustaining the agricultural activities, taking into consideration that aspects like income or socio-professional status influence the tendency of individuals to be more oriented on issues related to the quality of environmental and social context.

Conclusions

The analysis of consumer and demand for goods has been deeply researched in economic science. If the investigation moves towards public goods, the issue becomes a key concern for both public and private interest. Proving its strategic orientation, The European Union by its joint policies encourages the provision of public goods maintaining also performance and sustainability criteria for main operations. The Provide project funded by Horizon 2020 funds aims to identify practices that through measures and efforts could generate most effects at society level. The study of the profile of public goods consumer in the Dorna Valley using a questionnaire and statistical analysis of secondary data of the North-East Region of Romania showed several homogenous categories of consumers, for which a package of effective and adequate measures may be developed for stimulating the demand for public goods. In fact, stimulation of demand is a liberal measure able to stimulate sustainably public goods production even by farmers and foresters, being a majority in the studied area.

The consumer profile benefited from a statistical analysis that revealed four representative and homogenous clusters, with important characteristics for developing measures stimulating public goods production.

In terms of consumer characteristics, we have drawn the following conclusions:

- Individuals have a complex background, a varied socio-economic status dividing the profile into several distinct layers;
- Low level of income does not necessarily cause a low preference for public goods; high degree of awareness may stir the interest for the advantages generated by public goods;
- Social categories with stable medium income do not reflect at least a medium level willingness to sustain public goods production; the socio-economic context, in which these people live, impact their inclination to allocate their budget to private goods even if the need for public goods is at the same level as for private goods.
- It has been confirmed that high income individuals, with high social status, prefer private and public goods at the same level.

In the context of Romanian economy, with internal and external gaps in terms of income and economic performance, and in the availability of high quality public goods derived from the intensity of regional farming and forestry, consumers dominated by diverse needs and preferences become real conductors of public goods production. The characteristics of consumers and their observed preferences are opening a promising path for a natural, economic and socially effective environment, with high reproductive capacity.

Acknowledgements: This work was supported from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation program (Grant Agreement No. 633838), project title "Providing smart Delivery of public goods by EU agriculture and forestry (PROVIDE)". This work does not necessarily reflect the view of the EU and in no way anticipates the Commission's future policy.

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