PUBLIC GOVERNANCE STUDENTS' OPINION ABOUT THE ROLE OF THE GOVERNMENT IN ENVIRONMENTAL RESPONSIBILITY

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Abstract
Solving environmental problems goes beyond the scope of natural and engineering sciences. Social issues must be considered since people are the ultimate beneficiaries or sufferers of the related decisions. Due to the complexity of the problems and the required toolset of the solution, social aspects cover several questions. The role of the government is remarkable in financial, policy-making, and other aspects. The study deals with the individual judgment on the role of the government. The scope is limited to Hungarian higher education students as a pilot study. The results show competing patterns that can contribute to a better understanding of personal opinions.

Introduction
The government has a complex role in managing society and the economy. It is to note that the definition of government is multifaceted indeed [1]. The government can be considered as having to serve the citizens by providing rules and interventions if social interest requires it. According to the economic policy, it covers assuring the legal and institutional background, allocation in producing goods and services, redistribution of the incomes, and stabilization [2]. Of course, it is impossible to serve all concerned equally; weighting is necessary considering the policies, goals, and the availability of resources. There are more or less pro-active national policies [3]. In general, the emphasis on environmental protection and sustainability has been appreciated in recent decades. Kulin and Sevä [4] found that enhancing public support for environmental policies can be improved if people think protecting the environment is the government's responsibility.
The Good State and Government Report [5] in Hungary uses six impact areas that can be considered as the social responsibility of the government, including sustainability and public well-being. The report of 2019 noted growth in the performance of positive expectations regarding climate change, while the need for development is still marked for energy and water management, emissions, and social sustainability. Unfortunately, a more recent assessment is not available to show the impacts of the COVID-19 pandemic and the energy crisis in 2022. The main conclusion of the report and the literature in the field is that the government has a versatile set of tasks.
However, it seems to be an oversimplification to focus only on environmental issues, but holistic explanatory research in the field may contribute to the body of knowledge and can support policymakers in the future. Learning the individual perceptions of the government's role in the field can be considered a pilot study.
The research question can be formulated as what the ranking order of people is about the government's most important environmental responsibilities. A second question is whether the ranking orders differ by gender and CSR knowledge.

Experimental

The study uses a limited scope in data collection. It aims to explore the public governance students' opinions about the role of the government about its contribution to solving environmental problems. These students continue their special 5-year studies at the University of Public Service, Budapest. A voluntary online survey was prepared to investigate student opinions about sustainability and social responsibility. The questionnaire includes seven statements (listed in Table 1) about the government's responsibility for environmental issues. The respondents were asked to prioritize the list items.

This paper is based on the responses of the public governance master students in 2022. 160 responses were available for the analysis. The mean values of the rank numbers describe the priority orders, and the distribution of the rank numbers is presented. Kruskal-Wallis H test was applied to check the impact of grouping factors such as gender, CSR knowledge level, and categorization. The statistical analysis is based on [6]. The study attempts to explore patterns of opinion by cluster analysis.

Results and discussion

The respondents kept the most important item establishing a legal, economic, and technical regulatory framework to achieve environmental objectives, and second, providing economic and financial funding for environmental protection (Figure 1).

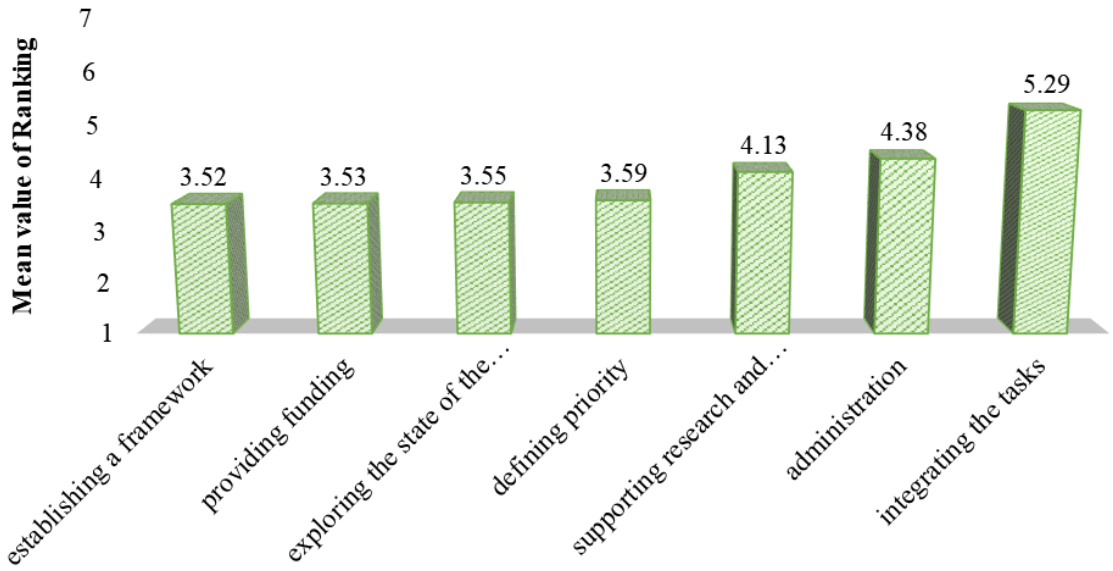

Figure 1. Mean values of the rank orders (lower value means more important issue), total sample

The mean values of the rankings are near each other, and the standard deviation is lower in the second case, suggesting a greater consensus on the importance of providing funds (Table 1).

The analysis of variance shows few significant differences by the grouping factors. Female and male opinions differ significantly from each other about Establishing a legal, economic and technical regulatory framework to achieve environmental objectives (Kruskal-Wallis H=7.533, d_f=1, sig.=0.006). According to the CSR knowledge level, respondents with more CSR knowledge believe less that the government's responsibility is exploring the quantitative and qualitative characteristics of the state of the environment and defining the state to be achieved (Kruskal-Wallis H=6.807, d_f=2, sig.=0.033).

The patterns of opinions were explored by hierarchical clustering. Ward method was applied to find minimum variance within the clusters [6]. A dimension reduction of the 7 survey items was performed by principal component analysis to filter the correlations between the evaluations. The method suggested four independent factors, saving 77.5% of the total variance. The results show a four-cluster solution (Figure 2). The clustering shows significant differences at a 95% confidence level in the evaluations of the items, except for the ranking supporting research and development.

Table 1. Mean values of the evaluations by sub-samples

	Total sample		**Gender**		**CSR knowledge**		
	Mean	*Std. Dev.*	Female	Male	None	Superficial	Detailed
Establishing a legal, economic and technical regulatory framework to achieve environmental objectives (establishing a framework)	*3.52*	*1.893*	**3.86**	**3.02**	3.74	3.14	3.35
Providing the economic and financial funding for environmental protection (providing funding)	*3.53*	*1.773*	3.36	3.78	3.51	3.21	4.17
Exploring the quantitative and qualitative characteristics of the state of the environment and defining the state to be achieved (exploring the state of the environment)	*3.55*	*2.133*	3.6	3.48	**3.8**	**3.55**	**2.52**
Defining the priority tasks for environmental protection (defining priority)	*3.59*	*2.072*	3.58	3.62	3.42	4.07	3.43
Defining and ensuring the performance of research, technical, development, training, and information activities in the field of environmental protection (supporting research and development)	*4.13*	*1.917*	4.03	4.29	4.16	4.05	4.17
Performing public administration tasks in the field of environmental protection (administration)	*4.38*	*1.832*	4.34	4.44	4.19	4.48	5
To enforce and integrate environmental requirements in other tasks of the government (Integrating the tasks)	*5.29*	*1.703*	5.24	5.38	5.19	5.5	5.35
n	*160*		97	63	95	42	23

Table 2 and Figure 2 show that differences in the mean values of the ratings by clusters are the lowest on enforcing and integrating environmental requirements in other tasks of the state and defining and ensuring the performance of research, technical, development, training, and information activities in the field of environmental protection.

A more scattered picture is about the other items, especially administrative tasks and establishing a framework. It is to be noted that lower mean values on the axis of Figure 2 mean the more important role than higher ones.

Table 2. Rank orders by clusters

Rank	Cluster 1 (n=34)	Cluster 2 (n=54)	Cluster 3 (n=34)	Cluster 4 (n=38)
1.	establishing a framework	establishing a framework	defining priority	exploring the state of the environment
2.	administration	providing fundings	exploring the state of the environment	providing fundings
3.	integrating the tasks	supporting research and development	establishing a framework	defining priority
4.	defining priority	exploring the state of the environment	supporting research and development	administration
5.	supporting research and development	administration	providing fundings	supporting research and development
6.	providing fundings	defining priority	integrating the tasks	integrating the tasks
7	exploring the state of the environment	integrating the tasks	administration	establishing a framework

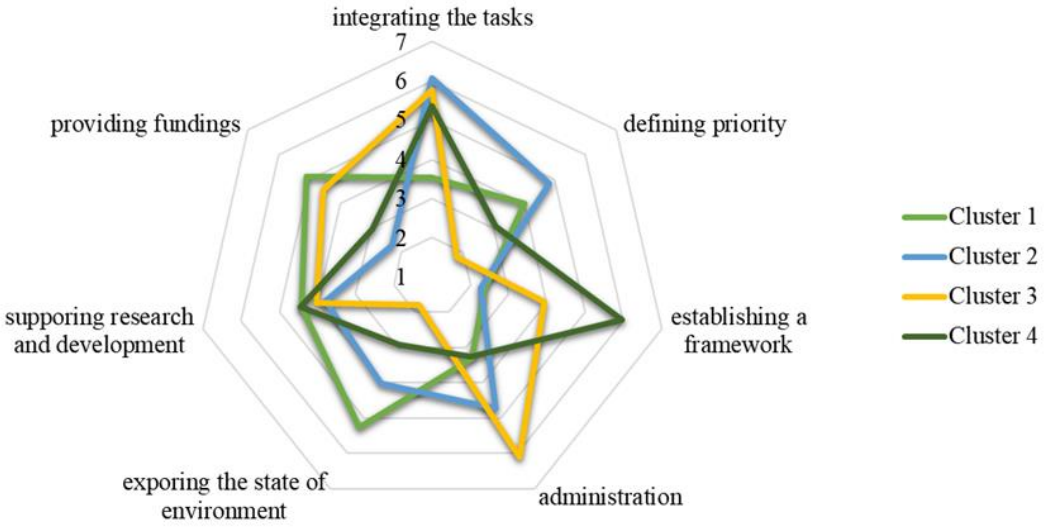

Figure 2. Mean values of the rankings by clusters

Cluster 1 includes the most balanced opinions about the government's role based on the mean values. The members expect to establish a framework, integrate the tasks, and focus on administration while supporting R&D, providing funds, or exploring the state of the environment. Cluster 2 emphasizes providing funds next to establishing a framework, but other factors are equally less important. The members of Cluster 3 agree the most that defining priorities and exploring the state of the environment are the primary governmental tasks. Cluster 4 emphasizes defining priorities and providing funds.
There is a high-level agreement among the factors in the integrative role of the government and supporting R&D.

Conclusion

However, the respondents were master-level students in the field of governmental studies; there is no unambiguous consensus among the students. The results show that there are competing opinions about the role of the government in managing environmental problems. The number of cluster members is higher in the case of Cluster 2. That cluster strongly believes that providing a framework and funding environmental problem solutions are the primary governmental tasks. Another strong opinion is presented in the case of Cluster 3, which emphasizes practical tasks in defining priorities and an active engagement of the government in exploring the state of the environment. The respondents do not highlight the integrative and administrative roles.
The results can be considered partial completion. Involving students from other faculties is planned as future research to find that these opinion patterns are limited to the sample or can be generalized. Although a hypothesis was not formulated since the study is explorative, according to the roles of the government described by the literature, the outcome differs from the author's expectations. The NIMBY phenomenon [7] seems to be reflected in the majority opinion, which needs to be changed for comprehensive results.

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