THE ECONOMIC POLICY OF WASTE MANAGEMENT IN GEORGIA: ON THE PATH TO EU INTEGRATION

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Abstract
Municipal waste management is one of the major challenges worldwide that is closely linked with other environmental issues as well. Since the natural environment plays an important role in economic development, environmental, historical, demographic and other factors should be taken into consideration when studying the socio-economic profile of any country.
Waste is a part of the economy, since a productive economic activity, along with an efficient waste management system, is fundamental prerequisite for the country's development in the long run.
The article aims to analyze the challenges of municipal waste management in Georgia. We make a comparative analysis using the examples of the EU Member States, which have achieved significant success in developing effective waste management policy by implementing proper reforms and putting the theory into practice.

Keywords: *Municipal waste management, economic policy, environmental protection, European Union, Georgia*

JEL Classification: *Q50, Q51, Q53, Q58*

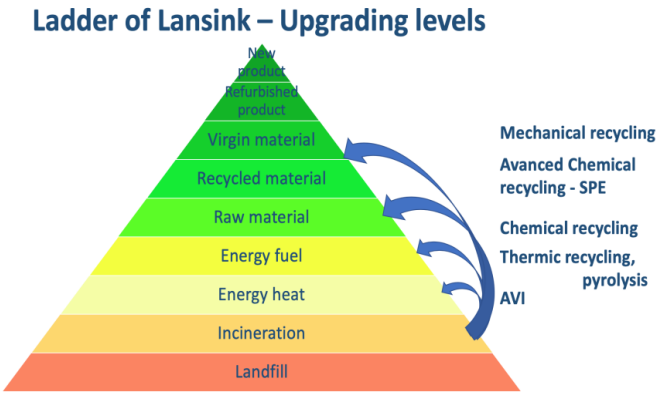
I.INTRODUCTION

One of the most important aspects of waste collection and disposal is the reduction of negative impacts of waste. The European Commission's 2008 directive defines waste management policy as a single waste collection, transportation, disposal and recovery system; in other words, it is a series of measures aimed at preventing waste generation through radicalization and recycling (European Comission, 2008)

According to Gregson & Crang's (2015) theory, wrong approach to waste management can pose a serious threat to humanity. Especially if the main method of waste management is landfills, since landfills cause global warming and climate change by releasing large amounts of methane into the air (UN. HABITAT, 2010).

In addition, landfills have a negative impact on public life due to the creation of an anti-sanitary condition, as various types of contagious diseases are spread out of the landfill, not to mention the unpleasant smell left by them. Due to this issue, there was a need to ban landfills, but they still remain the most common and traditional way of disposing of waste due to its low operating cost (Nabegu, 2010).

Under the circumstances of rising public awareness and public resistance to landfills, the Dutch government has faced a major challenge in dealing with increasing amount of waste in the country following the economic boom in the 1960s. Thus, the Dutch government had to introduce a completely new waste management method that would not only have a positive impact on the country's economy, but would also have great public support. As a consequence, Dutch politician and public figure Adrianus Lansink has taken a completely innovative approach and initiated the so-called "Landing Staircase" (Parto et al., 2017).



Source:https://obbotec.nl/en/technologies/selective-plastic-extraction/

Lansink's ladder was the basis for the development of a fundamental concept of waste management, which was later formulated by the European Commission, as a directive on the waste management hierarchy. One of the key requirements of the European Commission's 2008 directive was to tackle waste using a method that would neiter harm human health, nor pollute the environment in urban areas.

II. DIFFERENT APPROACHES OF WASTE MANAGEMENT POLICY IN EU MEMBER COUNTRIES

As a result of great efforts of the European Commission, a unique waste prevention method has been developed in a number of EU states. Waste management hierarchy clearly demonstrates the effectiveness and uniqueness of this method. In addition, the European Commission has set the so-called "pre-waste" project by bringing together 10 EU member countries which seek to share successful waste management practices among them. This is apparently the best example of how to productively develop effective and innovative waste management methods (European commission, 2008).

Despite the aforementioned, number of scholars criticized the effectiveness of the system. For instance, researchers, Mazzanti, Nicolli & Zoboli (2014) argued that the directive lacks necessary mechanisms without which it is practically impossible to create a single effective waste management system.

It is extremely important to where the waste is stored. That is why we must show extreme caution while dealing with waste. More specifically, industrial waste, such as: liquids, solids, food etc. Burying is another effective way of rational waste management, since through this method significant amount of electricity is generated.

The result we get from recycling waste is effective in many ways. Scientific research, for example, has shown that producing new products from recycled paper requires 50% less energy and 90% less water, rather than making it from wood pulp (Jung, 2016).

One of the major benefits of waste recycling is the reduction of waste areas. As a result of the constructive utilization of waste, landfills are gradually reduced. Since the population on our planet in daily increasing, it creates a danger of littering the beautiful landscape of nature. Additionally, landfills are not able to withstand the growing amount of waste which in turn leads to contaminate the environments, causes health problems in humans etc.

The second important benefit of waste recycling is the preservation of natural resources. Scrap cars, old bottles, rubber tires and other dumps are found around daily. Waste recycling allows them to be recycled instead of exploiting the resources needed for their re-production, since all these seemingly useless items contain the necessary natural resources such as coal, oil, gas, timber, and more. Therefore, the most industrial organizations actively support programs where they can procure large quantities of different types of recycle materials (Milios et al., 2014).

The third important benefit of waste recycling is the availability of more employment opportunities in the community. Thousands of people work in waste sorting-management services, which is a very time-consuming activity in developed countries. Of course, one of the main benefits of waste recycling is the creation of jobs; however it also ensures the entire process of growing industry stability. In many developed countries, waste recycling service offers real money-making opportunities. Governments develop policies that provide financial benefits to groups of people who take an active part in waste management. Many young people use this method to get additional financial benefits. Old newspapers, tools, plastics, rubber, copper or steel items can also be sold for cash.

A further benefit of waste recycling is to reduce greenhouse gas emissions. It is well known that greenhouse gases cause global warming. Waste recycling saves energy, which in turn, results in less greenhouse gas emissions (Kweku et al., 2017).

However, the main benefit of waste recycling is energy saving. For example, recycling aluminum jars save 95% of the energy. Another example is a glass bottle. The energy gained from recycling one glass bottle is enough for a light bulb to work for four hours.

Waste recycling helps stimulate the use of green technologies in society. It helps us conserve natural resources, but also plays a major role in preventing biodiversity loss. Loss of ecosystem and tropical forests, erosion and water pollution, which in turn protects plants and animals (Conserve energy future, 2019).

However, the main obstacle facing local government in municipal waste management is the understanding of the real costs of waste. Therefore, the authorities should first of all clarify the waste management system and identify the various costs related to it. In order to effectively describe the municipal waste management mechanisms, it is important to clarify the compatibility of the waste management system in different zones. The number of residential, commercial and institutional units in different zones is determined on the basis of existing cadastral and commercial registers. This is the main prerequisite for shaping the quality of current services (Taherzadeh & Radendran, 2015).

While dealing with the issue of rational municipal waste management, the main objective for the local governments are to systematically monitor waste management costs by consulting with regional authorities to ensure that local cost recovery is in line with the rational regulations undertaken, along with other economic instruments.

The EU Member States are obliged to maximum reduce the amount of municipal waste directly dumped on landfills by 2020. One of the leading countries is Sweden, which has achieved considerable improvement over the past few years and places only a small amount of waste on landfill. We have a different picture of reality in Baltic States, where a large proportion of the waste, generated by the population still goes to landfills. However, it should also be highlighted, that even in those countries waste recycling models are actively being implemented (European environmental agency, 2018).

III. WASTE MANAGEMENT POLICY AS A ESSENTIAL TOOL FOR ECONOMIC DEVELOPMENT

Waste management policy is a key part of the economy that ensures efficient use of raw materials. The main challenge in economic policy in the context of waste economy, requires a sound market system for businesses and households, and therefore needs a more efficient and effective choice of waste management.

Number of impeding factors, such as greenhouse gases, air quality changes, water pollution, noise, etc., are highly affected by the waste management system. There are also impacts associated with specific waste types, such as hazardous waste that is directly related to greenhouse gas emissions; however, parameters at different levels of the waste hierarchy may have radically different global impacts (Choi, 2016).

The sustainability of the waste management system is closely linked to the level of economic development of the country. Naturally, the economic development requires material or intangible resources, which not all countries can provide. It should also be noted that environmental concerns begins after the country has tackled vital issues of primary importance such as education, health care and more.

Research studies show that some EU countries have achieved considerable success in developing an effective waste management by initiating structural reforms and implementing them in practice, in which the society itself plays a crucial role. In developed countries, for instance, the population actively supports the so-called "reparation" approach, which means that they significantly contribute to environmental protection of their towns at the expanses of their own labour and efforts (Cleanup Georgia, 2012).

Developed countries are widely using the above-mentioned methods of waste management; however, they may also be radically different from each other. One of the most widespread approaches is the so-called “Electronic Paramagnetic Resonance”- (EPR), which obliges the manufacturer to reduce waste management during the recycling process and take responsibility of recovering and disposing procedures after the product has been transformed into water (Klare, 2013).

According to the studies conducted by the European Environment Agency, Germany is one of the most successful European countries that have achieved significant success in waste management. Germany started active implementation of the mentioned policy back in 1991, which obviously resulted in a reduced amount of waste in the country.

According to the 2013 study conducted by the Japanese Ministry of Environment, Japan has developed extremely effective and sophisticated waste management system as well. Recently the country has been working on refining a design of waste transport.

International municipal waste management is one of the key commitments under Georgia's agreements with the European Union. The aforementioned commitment simply means the reduction of landfill sites in

Georgia. In addition to the landfill arrangement, the new standards also include sorting of household garbage, minimizing environmental damage and constructing a modern standard non-hazardous sites for waste disposal.

The law on the waste management code in Georgia entered into force on 15 January 2015 and complies with the obligations under the Association Agreement with the European Union. The purpose of the code is to provide legal bases in the field of waste management, to promote waste prevention and their re-use (including recycling, recovery of waste energy, safe waste disposal). The main purpose of the code is to protect the environment and human health (Ministry of environmental protection and agriculture of Georgia, 2018).

IV. CONCLUSION

As bas been demonstrated, according to the directives and regulations initiated by the European Commission, which have been developed for the last twenty years, one of the main objectives of the EU Member States are to develop an effective waste management policy. The results we get from recycling and reusing materials are impressive in many ways;such as: reducing the amount of waste, restoring and preserving natural resources, creating more employment opportunities for local people, decreasing greenhouse gas emissions and most importantly, saving energy through recycling.

In the era ofglobalization, with the boom in industrial production, natural resources are becoming more and more scarce. Since nature and its resources are essential for the human existence and development of the society, waste recycling is one of the most important preconditions of the environmental protection in a long-term perspective.

Georgia faces significant challenges in municipal waste management. The country, which has only 28 years of independence, actively aspires to the EU for an economic, political and social stability.

Following the “Association agreement” signed between the European Union and Georgia in 2014, Georgia took another significant step towards European integration.

The examples of the EU countries show that they have achieved significant success in developing an effective waste management system. Whilst, To the path of EU integration Georgia adheres to fundamental norms and standards of the European Union which at are essential for the country's economic development.

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