

## GREEN PUBLIC PROCUREMENT: CASE STUDY OF LATVIAN MUNICIPALITIES

Inese PELŠA

*University of Latvia, Riga, Latvia*  
*Corresponding author's e-mail: ik17163@lu.lv*

---

**Abstract.** Green public procurement (GPP) is an instrument for public institutions that have made sustainable consumption and financial aids savings, particularly taking into consideration expenses of the total life cycle of the agreement, not just the procurement price. Municipalities are important to promotion of sustainable consumption through their positive effects on citizens and other stakeholders. The present paper analyses the contribution of municipalities of the Republic of Latvia in developing sustainable consumption through GPP.

The aim of the paper is to explore the development of GPP in municipalities, analysing influencing factors. By analysing data from the Procurement Supervision Agency and the State Regional Development Agency, the proportion of GPP is explored. The paper includes data collected in a survey of municipalities of Latvia aiming to identify the main factors that promote the development of GPP and the ones that are obstacles for implementing the GPP. The conclusions show that GPP is a relatively new activity in Latvia, especially in relation to sustainable consumption. Analytical, graphic, statistical research methods as well as other qualitative and quantitative research methods have been used in the research.

**Keywords:** *Green public procurement, Latvian municipalities, Sustainable consumption.*

**JEL Classification:** Q001; Q58.

---

### INTRODUCTION

According to Reichel, De Schoenmaker and Gillabel (2016), global economic growth is projected to decline from 2010 to 2050, but it is foreseen that the use of resources may double by 2030. As indicated in a prognosis of the United Nations, the total world population will exceed 11 billion at the end of the 21st century (UN DESA, 2015). The European burden on the ecosystem is considerable, despite the fact that the use of resources has become more efficient and the emissions of greenhouse gases and pollutants have been reduced (EEA, 2015). Although consumption is a choice of each individual, it is influenced by behaviour and culture, and supported by public authorities and enterprises (O'Rourke & Lollo, 2015).

Sustainable consumption is a normative concept that calls for individuals, corporations, and nations to reduce their resource footprints in the interest of

environmental protection and ecological integrity (Anantharaman, 2018). Vergragt *et al.* (2016) note that more than 50 % of the world's population lives in cities where technological and innovation centres are emerging and sustainable and non-sustainable lifestyle conditions are applied. Oosterhuis, Rubik and Scholl (1996) point out that GPP is a growing trend towards a sustainable green lifestyle that seeks to address environmental concerns in the face of consumer responsibility and promote sustainable consumption, eco-production and all together sustainable development by the enormous purchasing power (Gilg, Barr & Ford, 2005). On 17 February 2015, the Cabinet of Ministers approved the Green Public Procurement Support Plan 2015–2017, which determined that in 2015 the amount of procurements planned from the state budget and to which green procurement requirements should be applied had to be at least 15% of the financial means of the total state and municipal institution procurement volume, in 2016 it should be 20%, and in 2017– 30%. In the paper, the proportion of the GPP is analysed, as well as the proportion of GPP in projects of the EU Structural and Investment Funds\* (ESI) and the proportion of GPP in Latvian regions are evaluated that have not been done before. The object of the research is the proportion of GPP in municipalities of the Republic of Latvia. The aim of the paper is to explore the development of GPP in municipalities, analysing influencing factors.

In order to evaluate the proportion of GPP and the factors that affect the development of GPP, the author has proposed a hypothesis: the development of GPP is significantly influenced by the use of GPP requirements in projects of the EU Structural and Investment Funds.

The methods of the research are analytical, graphic, statistical research methods as well as other qualitative and quantitative research methods. The survey data were analysed within the research. For analysing the proportion of GPP, the data of the Procurement Monitoring Bureau (PMB) and the State Regional Development Agency (SRDA) about the public procurement performed in Latvia from 2015 to 2017 were used. The strategic documents on GPP of the EU and Latvia were analysed. The data collected from the PMB about the public procurement in the period from 2015 to 2017 was also analysed. The survey about the municipalities of Latvia that participate in the implementation of GPP was performed.

The articles were analysed in the following journals: Journal of Public Procurement, Research Policy, R&D Management, Natural Resources Forum, Futures, etc.

The paper is structured as follows: first, an overview of GPP, its legal framework and uptake in the EU is provided. The subsequent section shows the main findings emerging from the literature related to the proposition of the study. Subsequently, the data set and the estimation methodology are described. After discussion and the results, in the final section of the paper conclusions, proposals and recommendations are provided.

---

\*Cohesion Fund, European Regional Development Fund, European Social Fund, European Agricultural Fund for Rural Development and European Maritime and Fisheries Fund.

## 1. THEORETICAL BACKGROUND

### 1.1. Background of GPP in Europe

With a view to increasing sustainable consumption over the past 25 years, several initiatives have been developed. The United Nations World Commission on Environment and Development developed the Concept of Sustainable Development “Our Common Future (1987)” that was widely used in the context of the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992. Sustainable development concept was defined at the international event in 1995 in Oslo as follows: “use of goods and services that respond to basic needs and bring a better quality of life, while minimizing the use of natural resources, toxic materials and emissions of waste and pollutants over the life cycle, so as not to jeopardize the needs of future generations” (Giulio *et al.*, 2014). The Organization for Economic Co-operation and Development (OECD) made “green growth” its 2011 slogan (Lorek & Spangenberg, 2014). At the United Nations Conference on Sustainable Development Rio+20 held in 2012, a focus was put on the green economy as a response to the sustainability dilemma (Barbier, 2012).

The challenges of sustainable development are increasingly being addressed by supply chain management practitioners and researchers (Carter & Rogers, 2008). Preuss (2009) points out that its purpose is to make a significant contribution to the development of knowledge by conducting research with which public contractors focus on sustainable development. O’Rourke and Lollo (2015) emphasise that sustainable consumption is based on increasing the consumption efficiency and its release in terms of energy and resource use. Lorek and Spangebergs (2014) forecast that global gross domestic product would increase by 2–3 % per year, which means that the average per capita income will rise significantly by about 300 % by 2050.

O’Rourke and Lollo (2015) point out that in the light of economic performance, developed countries are responsible for most of the environmental impacts of consumption, Giulio *et al.* (2014) emphasise that consumption and sustainability are a complex issue that needs to be seen in a complex way and cannot be reduced to a choice of consumer goods. Nissinen, Parikka-Alhola and Rita (2009) highlight GPP as an essential policy tool for sustainable consumption development. The green economy, after the adoption of the Europe 2020 strategy, has become a very important European and international target. As Lundberg *et al.* (2015) mention, public spending in many countries is a significant part of the economy that can have an impact on production and consumption, and GPPs are a driving force for reducing environmental impacts. Day (2005) emphasises that as public authorities choose green public procurement, they have a positive impact on the protection of the environment encouraging and persuading also others to opt for green procurement. According to the EC (2016), public spending, excluding utilities and defence, across Europe in 2015 will reach 13 % of European GDP. Astonishing Testa *et al.* (2016) points out that the use of environmental criteria in public tenders has undergone a downturn in the past ten years. Cheng *et al.* (2018) mention that the introduction of GPP has recently included new industries, and there is also a growing trend in the implementation of GPP. Belgica and Jose (2016) analysed the

potential problems encountered by European municipalities in introducing sustainable procurement, in particular eco-labelled ethics and fair trade products. GPP is defined in the EC's Communication as "a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared that would otherwise be procured" (EC, 2019). The basic concept of GPP relies on integrating environmental criteria for public product and service procurement (Evans *et al.*, 2010). Cheng *et al.* (2018) note that profitability assessment tools are a key factor for assessing purchases in terms of efficiency. As it is stated by the OECD (2015) and McCrudden (2004), the EU countries are implementing public procurement to promote economic growth, also addressing social issues. On 26 February 2014, the Council of the European Union and the European Parliament adopted two directives (Directive 2014/24/EU and Directive 2014/25/EU) aimed at simplifying public procurement procedures and making them more flexible. The requirements of the directives stipulate that the provided options are balanced with the necessity to follow the general principles as stated in Paragraph 3 of the Community Foundation Agreement about openness, equal approach, proportionality of the requirements and free flow of goods and services (competition) (EU, 2012). Cheng *et al.* (2018) indicate that public procurement, where environmental requirements are applied, can quantify energy consumption and CO<sub>2</sub> reduction.

## 1.2. Background of GPP in Latvia

The international commitments and regional processes of Latvia required Latvia to develop a National Long-term Strategy for Sustainable Development until the Johannesburg Conference, which was held in September 2002 (Cabinet of Ministers, 2002). The Latvian Sustainable Development Strategy 2030 envisages that "state and local government procurement tender criteria should include energy efficiency and product life-cycle analysis considerations (Cabinet of Ministers, 2015). As mentioned in the Sustainable Strategy 2030, the programme should strengthen the development of the green economy and sustainable use of natural capital (Saeima, 2010). The Latvian National Development Plan 2014–2020 envisages "wider provision of energy-efficient and ecological products and services ("green public procurement") in public procurement". In 2011, the Saeima adopted the Spatial Development Planning Law, which aimed at ensuring such spatial development planning that would raise the quality of the living environment, ensure sustainable, effective and rational use of territories and other resources, as well as targeted and balanced development of economy. The Spatial Development Planning Law determines that the Sustainable Development Strategy should be implemented at the national, regional and local levels (Saeima, 2011).

As Clement *et al.* (2003) point out, purchases made by municipalities account for about 50 % of government spending in the European countries. Rainville (2017) points out how important it is for GPP to use environmental criteria that include eco-labels, emission standards, and environmental management system certification, and precisely the application of these criteria makes GPP a decisive factor in success. In the Republic of Latvia, the Ministry of Finance is in charge of procurement policy development. The Procurement Monitoring Bureau (PMB),

under the supervision of the Ministry of Finance, is responsible for ensuring the compliance of procurement with legal requirements and conflicts of interest. PMB draws up annual reports on procurement supervision and activities. In addition, the PMB acts as a first-instance review body for complaints regarding public procurement. It also carries out ex-ante controls before the start of procurement procedures in cases of projects co-financed by ESI funds. SRDA is responsible for promoting and managing e-procurement in the country. Procurement from e-catalogues is imperative for central government authorities. The Ministry of Environmental Protection and Regional Development (MoEPRD) is responsible for the procedures regarding the implementation, monitoring, and evaluation of green procurement. Based on the Directive 2004/18 in Latvia, on 1 May 2006, the Public Procurement Law came into force, which foresaw a possibility that green procurement requirements could be included in a public procurement – the title and the subject of the contract, technical specifications, tender selection criteria, and special conditions for the performance of the contract. One of the obstacles to the application of GPP is the principle of the lowest price. On the basis of the Directive 2004/17/EU, amendments were proposed in order to include requirements for the application of green procurement in the Law on Procurement for the Needs of Public Service Providers. This was a significant incentive for green procurement requirements to be applied in public procurement.

In 2008, a work group coordinated by the Ministry of Environment developed an “Informative Notice about Recommendations on Promotion of Green Public Procurement in Municipal and State Institutions and Recommendations on Promoting Environment-friendly Constructions”. The recommendations developed in 2008 for the promotion of green public procurement have been used by the MoEPRD in open competitions for projects financed by the Climate Change Financial Instrument, which also affected the growth of GPPs in 2011 and 2012, respectively; in 2012, the proportion of GPPs in public procurement reached 19.2 % (MoEPRD, 2017). By consistently applying the green procurement principles in construction, it is possible to reduce greenhouse gas emissions by as much as 70 %, while also achieving financial savings. This explains why green purchases play a significant role in all the competitions in the Climate Change Financial Instrument (Osis, 2010).

The e-procurement system established in Latvia is centralised and applies only to e-notification of contracts and less to e-access to procurement documentation. All contracts are a subject to mandatory e-notification for the national e-procurement portal. In 2010, “green” catalogues were included into the EPS. In 2013, when the GPP program requirements were not applied in the projects of the Climate Change Financial Instrument, the share of GPPs significantly decreased to 7.1 % (MoEPRD, 2017). The topic of implementing GPP in Latvia was actualised in 2014 in the National Plan, which defined that one of the Government’s tasks was to develop and implement a “green procurement” principle for state and municipal procurement enhancing the increase of proportion of healthy food and local materials (including wood) (Cabinet of Ministers, 2015). In 2014, Cabinet Regulations No 673 were accepted about the applying of environment criteria for food and catering services procurement. The Regulations had a great influence on

increasing proportion of GPP as it enhanced imposing the environmental requirements. The next step of GPP development was when the MoEPRD in cooperation with stakeholders elaborated the Green Procurement Support Plan for 2015–2017. The plan was approved by the Cabinet of Ministers in February 2015, where the following aims were determined: GPP in 2015 had to reach 15 %, in 2016 – 20 %, and in 2017 – 30 % from the amount of public procurement performed (Cabinet of Ministers, 2015). Cheng *et al.* (2018) point out that although different terms are used in each country, regardless of their definitions, an emphasis is placed on a demand-driven policy instrument in order to achieve environmental objectives through the use of public procurement. On 20 June 2017, the Cabinet of Ministers approved Regulations No 353, which determined the process of application of GPP, its implementation, supervision, evaluation, as well as control and mandatory groups of goods and services, which GPP was applied to. According to Regulations No 353, seven groups of goods and services to which GPP is obligatory applied are as follows: office paper, printing devices, computer hardware and infrastructure of information and communication technologies, food and catering services, cleaning products and services, internal lighting, street lighting and traffic lights (Cabinet of Ministers, 2017).

After the administrative territorial reform of local municipalities that ended with the municipal elections on 6 June 2009 in Latvia, there are one-level municipalities – 110 counties and 9 republic cities (Riga, Jurmala, Liepaja, Ventspils, Daugavpils, Rezekne, Jekabpils, Valmiera and Jelgava), with population ranging from about 1 300 inhabitants to more than 500 000. Given large differences in size, it is reasonable to assume that at least some of smaller municipalities lack sufficient resources and expertise on environmental topics as well as on purchasing (legislation). The territory of Latvia is divided into five regions that consist of counties and cities. Latvia has the following regions: Riga region, Kurzeme region, Vidzeme region, Zemgale region and Latgale region. In the evaluation of the proportion of GPP, the following institutions were included: county municipalities, city municipalities, education institutions.

## 2. METHODOLOGY

The data collection was performed in two stages. First, the proportion of GPP in the data arrays of the PMB and SRDA about public procurement performed in Latvia from 2015 to 2017 was analysed. In order to evaluate the proportion of GPP in public procurement, the author summarised information about public procurement that was performed according to the Public Procurement Law (PPL), the Law On Procurement for the Needs of Public Service Providers (LPNPSP) and procurement that performed using the Electronic Procurement System (EPS). According to the requirements of PPL and LPNPSP, purchases made in compliance with the requirements of these laws, annually submitted by 1 April, the statistical reports to the PMB indicating procurements are subject to environmental requirements. However, the PMB collects only those purchases of state and municipalities that require a procurement procedure.

According to PPL requirements, the procurement is performed by municipal and state institutions, as well as merchants, if according to legislation requirements PPL must be applied. According to Cabinet Regulations No 353, it is applied to state and municipal institutions, and these requirements do not apply to merchants as Cabinet Regulations No 353 are issued based on PPL and LPNPSP (according to Paragraph 19 of PPL and Paragraph 28 of LPNPSP). In this part, the total proportion of GPP performed by applying PPL is evaluated, as well as that proportion of GPP is evaluated to which requirements of Cabinet Regulations No 353 apply, respectively, the volume of procurement performed by municipal and state institutions. Holding consultations with PMB, it was found out that the data did not correspond to the MoEPRD, as in the informative notice by the MoEPRD about GPP the data on procurement included additional CPV<sup>†</sup> codes. In cases when a definite CPV code is indicated as additional subject CPV, the total contract amount is taken into consideration (as in the publication the contract amount is not indicated for each CPV code separately). This means that contract amount can be duplicated. In order to show the proportion of GPP more precisely, the author does not include procurement with additional subject CPV codes in her research in the calculation of the proportion of GPP. The main motivation for the data analysis was to obtain an understanding of GPP proportion in PPL, LPNPSP and EPS municipalities and counties in Latvia and GPP proportion in ESI fund projects. The proportion of GPP in the regions of Latvia has not been evaluated yet, and the proportion of GPP in the ESI funds has not been determined yet.

Second, a questionnaire was constructed. It was sent to all municipalities in Latvia – a total of 119. The survey was web-based. All municipalities received an email from the author explaining the background of the study as well as collaboration with the author of this paper. The web page was active in the period from 28 March to 13 April 2018. During this period, 55 responses were received (a response rate of 46.2 %). The questionnaire included questions about municipalities' practice and experiences regarding GPP, e.g., the type of goods and service groups purchased, and the obstacles faced in the procurement process and the inclusion/non-inclusion of GPP in purchases of ESI fund projects (a total of 7 questions). The results of the survey showed what should be improved in the development of GPP. The questionnaire also included some general questions, such as the size of the municipality and the number of procurement specialists in the municipality.

---

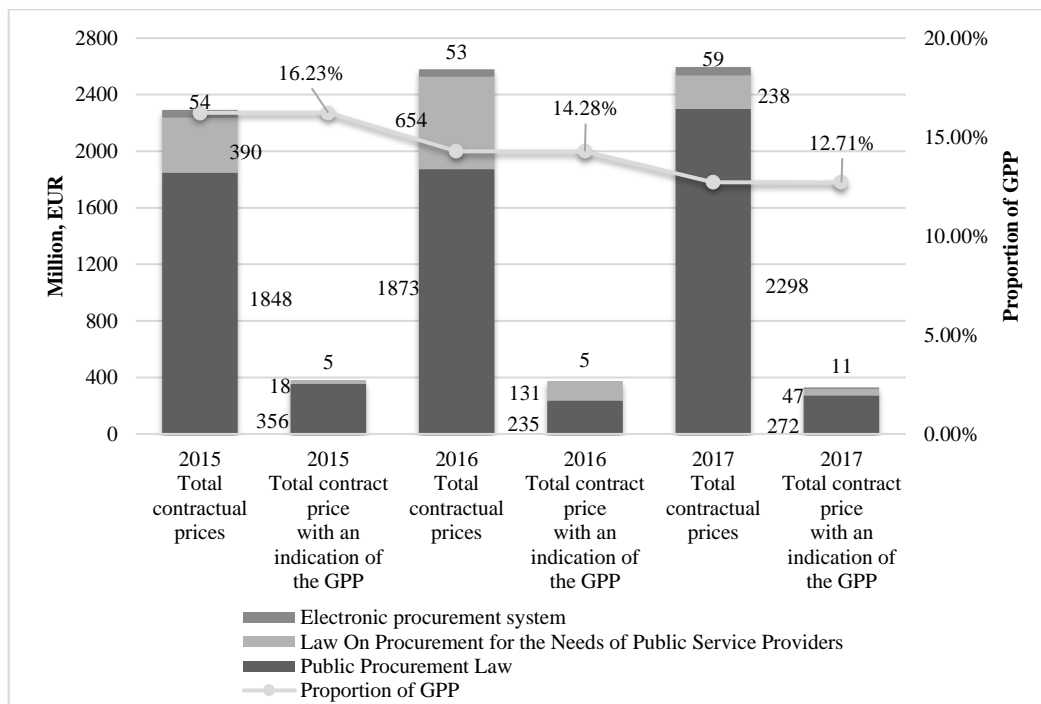
<sup>†</sup>CPV (Common Procurement Vocabulary) is a main classification defined by Commission Regulation (EC) No 213/2008 (28 November 2007), which amends Regulation of the European Parliament and Council (EC) No 2195/2002 about common public procurement vocabulary (CPV) and Directive of the European Parliament and Council 2004/17/EC and Directive 2004/18/EC about public procurement procedures related to review of CPV. CPV classification is applied to public procurement in order to standardise directions, which are used by the contract institutions when indicating the subject of the procurement.

### 3. RESEARCH RESULTS AND DISCUSSION

#### 3.1. GPP Proportion in Public Procurement in Latvia in 2015–2017

The scientific literature analyses GPP implementation criteria. Clement, Plas and Erdmenger (2003) note that human enthusiasm is a key aspect of the successful development and implementation of GPP. D'Amato (2007) emphasises good cooperation among municipalities, for example, between environmental and procurement departments. Michelsen and Boer (2009) point out that GPP needs to have at least minimal knowledge of acquisitions and environmental issues. Melissen and Reinders (2012) emphasise that eco-label criteria are the most common way of defining technical requirements in GPP.

During the period from 2015 to 2017, 42 669 purchases were carried out in the framework of PPL, of which 2593 purchases were GPP. The proportion of GPP in the number of purchases made during PPL from 2015 to 2017 was only 6.08 % or 26 purchases in this period. The proportion of GPP in the number of purchases made during LPNPSP from 2015 to 2017 was only 7.07 %.



**Fig. 1.** Proportion of GPP in procurement performed by PPL, LPNPSP and EPS in 2015–2017 (developed by the author based on the data from PMB and SRDA).

From 2015 to 2017, the total amount of public procurement (PPL, LPNPSP, EPS) increased from 2310 million EUR in 2015 up to 2595 million EUR in 2017. Despite the fact that the total amount of procurement in financial expression increased during this period, total GPP amount in financial expression decreased from 375 million EUR in 2015 to 330 million EUR in 2017. The total GPP proportion from 2015 to 2017 had a downside trend – 16.23 % in 2015, 14.28 % in



2016 and the lowest point – 12.71 % in 2017. GPP proportion in procurement made within EPS in 2015 was 9 %, in 2016 – 8 %, but in 2017 – 19.10 %. The largest number of GPPs was made under the Public Procurement Law, on average 82 % of the total amount of GPP. In 2017, the municipalities' GPPs accounted for 53.2 % (EUR 141.8 million) in line with the requirements of the Law on Public Procurement in relation to the total amount of purchases of GPPs carried out under this Law.

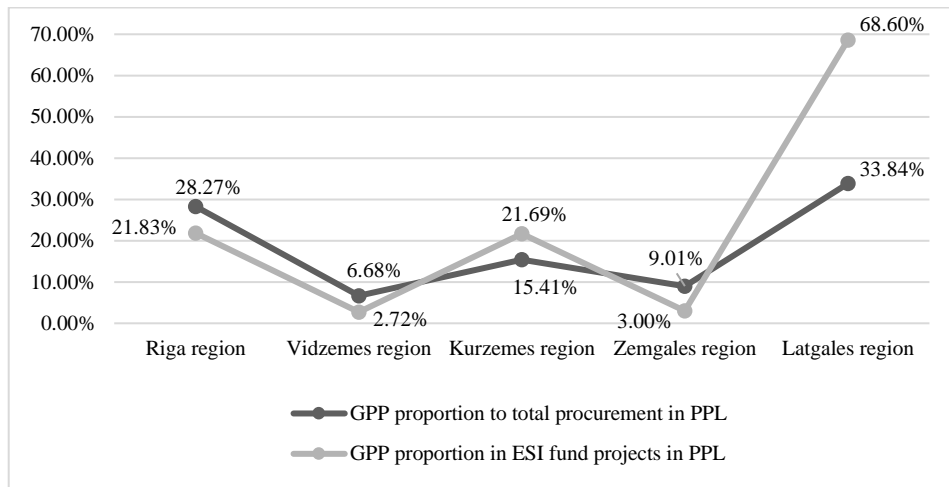
The GPP Support Plan 2015–2017 states that green procurement and GPP requirements are applied and integrated into implementation process of EU Structural Funds and Cohesion Fund (MoEPRD, 2015). By fulfilling the EU financed projects, one of the horizontal principles is “long-term development” – GPP is one of the programme implementation supervision criteria, i.e., it is included into several specific selection criteria of supporting aims (Central Finance and Contracting..., 2017). In line with the Partnership Agreement (Cabinet of Ministers, 2014), the EU has planned to support Latvia financially with 4.418 billion EUR that together with national financial support will amount to an investment plan in the Latvian economy worth 5.192 billion EUR during the period of 2014–2020. This means that in the period Latvia is going to rank as the fourth from the top among the net beneficiaries of European Funds among all the EU Member States (Ministry of Finance, 2015). In the data analysis, apart from the EU funds, other external financing is also taken into consideration, for example, FEAD, ES, Twinning, and IAEQ. Analysing the structure of external financing to which GPP is applied, one must conclude that 80 % of it has been EU fund financing.

### 3.2. The Distribution of the Proportion of GPP among Regions of Latvia

As Clement, Plas and Erdmenger (2003) point out, municipalities are more likely to be instigators and carry out a research on procurement as well. However, as it is stressed by Brander *et al.* (2003), municipalities are not able to make full use of it, as many municipalities are too small to create innovation and new product development.

Procurement in Latvia performed by municipal institutions to total PPL procurement in 2017 was 27.19%, which is 623.7 million EUR. It is significant that out of the total GPP amount performed within the terms of PPL, the GPP performed by municipal institutions is 53.2 %, which is 141.8 million EUR that is a significant impact on the development of GPP. Taking into consideration this great proportion in GPP, the procurement performed by municipal institutions and its distribution in the regions of Latvia will be further analysed.

If one should analyse the information for regions, the total proportion of GPP of total municipal procurement performed within PPL was 22.74 %. Figure 2 demonstrates that total municipal GPP performed within the ESI funds was 46.57 % of the total GPP proportion of the ESI fund procurement within PPL in financial expression. The greatest proportion of GPP was in Latgale region – 33.84 % out of total procurement within the terms of PPL in the region. GPP requirements are applied to 68.60 % of the total EU fund project procurement in Latgale region, which is several times greater than in other regions of Latvia.



**Fig. 2.** Municipal GPP performed with PLL, its proportion and GPP proportion in ESI fund projects (calculated by the author based on PMB data).

If one should analyse the proportion of the ESI fund GPP to the total proportion of GPP in Latgale region, the parameter is also the second highest – 66.90 %. The second GPP implementation region is Riga region with the proportion of GPP 28.27 %. GPP in the ESI fund procurement to the total GPP in Riga region is 77.24 % that proves significance of GPP implementation in the ESI fund projects. The proportion of GPP in Kurzeme region is 15.41 % to total procurement. The proportion of GPP within the EU funds in Kurzeme region is 21.69 %. A surprise is GPP proportion in Zemgale region, which is 9.01 %, and in Vidzeme region – 6.68 % to total procurement in financial expression. As a result of the calculation, the correlation between the proportion of GPPs in ESI fund projects and the overall share of GPP is 0.88. Given that the coefficient is above 0.7, the correlation between these two indicators is close.

The equation for the correlation coefficient is as follows:

$$\text{Correl}(X, Y) = \frac{(x - \bar{x})(y - \bar{y})}{(x - \bar{x})^2(y - \bar{y})^2}, \quad (1)$$

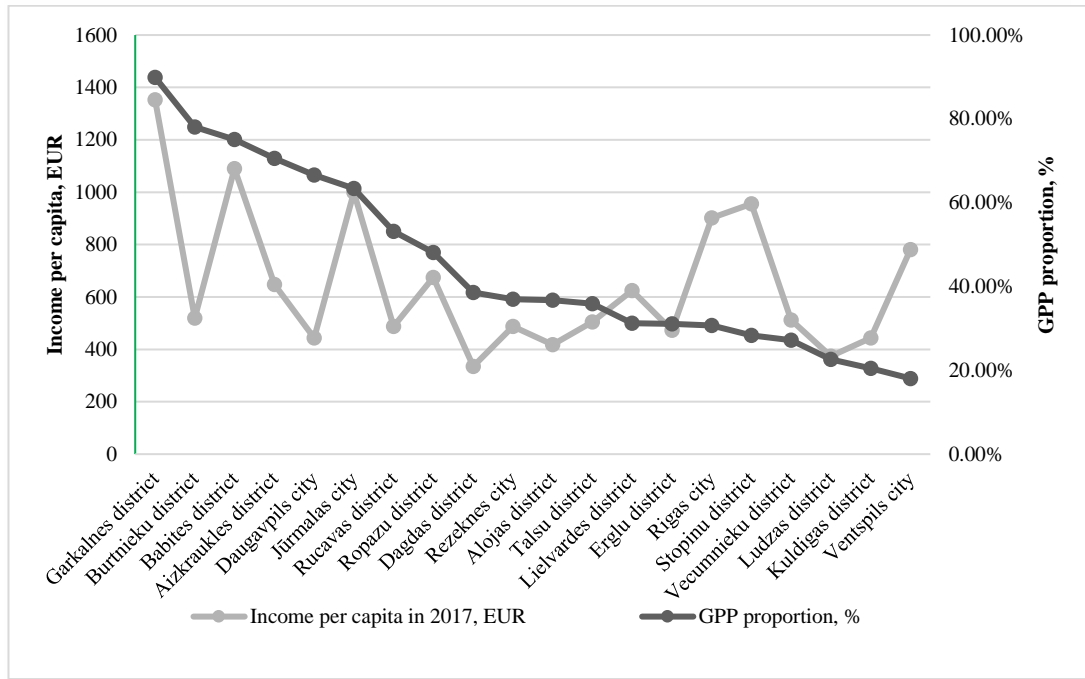
where

$\bar{x}$  is an average array of GPP proportion in regions of Latvia in PPL, 2017;

$\bar{y}$  is an average array of GPP proportion in ESI fund projects in regions of Latvia in PPL, 2017.

Figure 3 shows the proportion of GPP in municipalities and income per capita. When analysing purchases by local governments in 2017, GPP was financially the largest in Garkalne district – 89.92 %, followed by Burtnieki district with 78.03 % and Babite district – 75.05 %. When assessing the purchases that were made by the municipalities of Latgale region, it is evident that the most prominent leaders are the city of Daugavpils with a share of GPP 66.62 %, Dagda district – 38.55 %, Rezekne city – 36.93 %. In the second place, there is Riga region with the proportion of GPP 28.27 %, where Garkalne district is a GPP leader with 89.92 %, Babite district – 75.05 %. Despite the fact that in Burtnieki district that is located in

Vidzeme region the proportion of GPP is the second highest in Latvia – 78.03 %, in the region of Vidzeme there is the lowest proportion of GPP in Latvia – only 6.68 %.

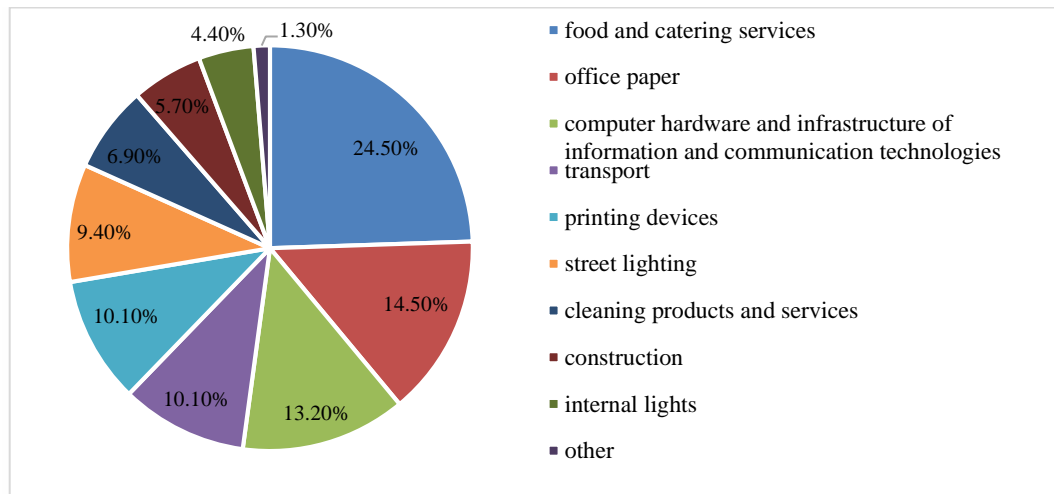


**Fig. 3.** GPP proportion in Latvian municipalities and revenue per capita (developed by the author based on data from PMB and regional development indicators module).

It is essential that each region has counties with a GPP percentage of 0 %, which has a significant impact on the overall percentage of GPP in the region. The calculations show that not always rich municipalities are those where the proportion of GPP is the largest. In order to assess the importance of the share of GPP in total municipal income per capita, calculations were made where the correlation between these two characteristics was found to be moderate,  $r = 0.46$ .

### 3.3. Factors Influencing the Development of GPP

For GPP to be successful, Testa, Iraldo and Frey (2016) stress that knowledge and information play a very important role. Cheng *et al.* (2018) note that institutions lack knowledge in order to integrate environmental requirements into procurement criteria successfully. However, Igarashi, de Boer and Michelsen (2015) indicate that the environmental criteria have a little impact on final decisions on suppliers.



**Fig. 4.** GPP goods and service groups in Latvian municipalities (developed by the author based on the data from the survey).

In order to evaluate the factors that influence development of GPP, the survey was conducted in municipalities of Latvia. 55 municipalities were surveyed in total, and the following answers about the factors that influence GPP were received. The survey showed that the most active interest was attracted in Vidzeme region (32 %), Latgale region (22 %), and Zemgale region (18 %). 38 % of the municipalities have a total population of up to 5000 inhabitants, while 30 % – from 5001 to 10 000 inhabitants. 50 % of municipalities responded that there was only one procurement specialist who needed both routine and green purchases, while 36 % of municipalities had even three specialists. As provided in Fig. 4, 26 % of the respondents indicated that GPP was performed within food and catering services and 14 % – office paper, which could be explained by the fact that GPP in the food product field was regulated by Cabinet Regulations No 673. The third GPP implementation field with 13 % was printing devices and computer hardware. Answering the question of why the GPP was chosen, 42 % of the answers indicated that the procurement had to be performed by applying Cabinet Regulations No 673, No 353 and other legal acts, and 21 % of respondents mentioned buying more environmentally friendly products or services.

Answering the question about the reason of GPP use in ESI fund projects, 55 % of respondents stated that implementing European projects it was possible to get more points that would allow them to rank higher in the project evaluation process and only 23 % mentioned the environmental impact. However, there is no experience regarding GPP implementation. More than 30 % of those who abstained from the application of GPP in ESI funds pointed out that financial correction would be applied in the event of a failure to comply with the GPP, and 28 % acknowledged that there was a lack of knowledge. Many did not hide that it was complicated to assess, as well as the GPP increased the cost of the project. The way in which environmental criteria are embedded into the GPP process strongly depends on the features of adopted standards (e.g., Parikka-Alhola, 2008). Regarding the question of obstacles to the GPP procedure, 34 % indicated a limited budget for procurement.

As the second largest obstacle, 26 % mentioned the lack of support tools for the application of GPP (life cycle costing methodology and ready-to-use procurement documentation, expert advice on green procurement), and 21 % mentioned a lack of good green procurement professionals. Regarding the question of the potential improvements to promote the development of GPP – 33 % indicated that GPP support tools should be improved, 23 % proposed that a consultation point (help-desk) on the application of GPP should be set up, and 23 % mentioned the need for practical seminars with experts from different fields. The municipalities indicated that they needed model regulations, a description of evaluation criteria with assessment points, as well as more procurement specialists in the municipality because procurement documentation, which contained the GPP conditions, was complicated and time-consuming.

## CONCLUSION

Taking into consideration the aim set by the Green Procurement Support Plan 2015–2017, GPP proportion was achieved in 2015. However, in 2016 the proportion of GPP was lower by 5.72 % and in 2017 – by 17.39 % out of the planned proportion. The proportion of GPP was evaluated separately within PPL, LPNPSP and EPS. Municipal procurement to total PPL procurement in 2017 was 27.14 %, i.e., 623.7 million EUR. The total GPP proportion in regions to total municipal procurement within PLL is 22.74 %. It is significant that of the total GPP volume within PPL terms GPP performed by municipalities is 53.2 % or 141.8 million EUR that is a significant impact on the development of GPP. Latgale region is a good example that demonstrates that the application of the GPP requirements in the ESI fund projects can significantly increase the total GPP proportion in the region as the ESI fund projects are financially capacious. The author confirms the proposed hypothesis – a great contribution in the development of GPP is ensured by municipal procurement, and the development of GPP is significantly influenced by the use of the requirements of GPP in the ESI fund projects. Regarding the question about the factors that might discourage from applying GPP in the ESI fund projects, 30 % of respondents mentioned financial corrections applied in the case of non-fulfilment of GPP, and 28 % indicated a lack of knowledge about the implementation of GPP. Answering the question about the obstacles within the GPP procedure, 34 % noted a limited budget to fulfil the procurement, which was the reason not to choose GPP. 26 % lacked support instruments in applying GPP (lifecycle cost methodology and ready-to-use procurement documentation samples, consultation spot (expert consultants) for the implementation of GPP) and 21% of respondents indicated the insufficient provision of procurement specialists.

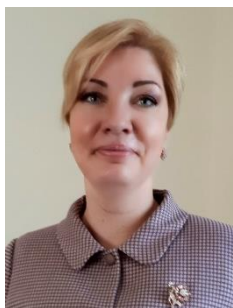
## REFERENCES

- Anantharaman, M. (2018). Critical sustainable consumption: a research agenda. *Journal of Environmental Studies and Sciences*, 8(4), 553–561. <https://doi.org/10.1007/s13412-018-0487-4>
- Belgica, P. B., & Jose, B. C. M. (2016). Green public procurement as an initiative for sustainable consumption. An exploratory study of Spanish public universities. *Journal of Cleaner Production*, 133, 648–656. <https://doi.org/10.1016/j.jclepro.2016.05.056>

- Barbier, E. (2012). *Towards green growth: monitoring progress*. Paris: OECD.
- Brander, L., Osthorn, X., Oosterhuis, F., Führ, V. (2003). Triggering innovation. In: Erdmenger, C. (Ed.), *Buying into Environment: Experiences, Opportunities and Potential for Eco-procurement*. Greenleaf, Sheffield, 94–113. [https://doi.org/10.9774/GLEAF.978-1-909493-31-5\\_7](https://doi.org/10.9774/GLEAF.978-1-909493-31-5_7)
- Cabinet of Ministers of the Republic of Latvia. (2002). *Strategy for Sustainable Development of Latvia*.
- Cabinet of Ministers of the Republic of Latvia. (2014). *Partnership Contract for the 2014-2020 EU Funds Programming Period*. Cabinet Order Number 313, accepted: 19.06.2014. *Latvijas Vēstnesis*, 123(5183), 27.06.2014.
- Cabinet of Ministers of the Republic of Latvia. (2015). *Green procurement support plan 2015-2017*, *Latvijas Vēstnesis*, 35(5353).
- Cabinet of Ministers of the Republic of Latvia. (2017). *Cabinet of Ministers Regulations No 353 Requirements and Application of the Green Public Procurement*, *Latvijas Vēstnesis*, 129(5956).
- Central Finance and Contracting Agency of the Republic of Latvia. (2017). *Information on the use of Green Public Procurement in European Structural and Investment Funds projects*. Retrieved on 2 February 2018 from <http://www.cfla.gov.lv/lv/jaunumi/2017/jauni-noteikumi-zala-publika-iepirkuma-veiksana?month=12&year=2017>
- Carter, C., & Rogers, D. (2008). A framework of sustainable supply chain management: Moving toward new theory. *International Journal of Physical Distribution and Logistics Management*, 38(5), 360–387. <https://doi.org/10.1108/09600030810882816>
- Cheng, W., Apolloni, A., D'Amato, A., Zhu, Q. (2018). Green Public Procurement, missing concepts and future trends – A critical review, *Journal of Cleaner Production*, 176, 770–784. <https://doi.org/10.1016/j.jclepro.2017.12.027>
- Clement, S., Plas, G., & Erdmenger, C. (2003). Local experiences: green purchasing practices in six European cities. In: Erdmenger, C. (Ed.), *Buying into the Environment: Experiences, Opportunities and Potential for Eco-procurement*. Greenleaf, Sheffield, 69–93. [https://doi.org/10.9774/GLEAF.978-1-909493-31-5\\_6](https://doi.org/10.9774/GLEAF.978-1-909493-31-5_6)
- Day, C. (2005). Buying green: the crucial role of public authorities. *Local Environment*, 10(2), 201–209. <https://doi.org/10.1080/1354983042000388214>
- D'Amato, A. (2007). Environmental issues in public procurement: how much decentralization. In: Piga, G., Thai, K.V. (Eds.). *The Economics of Public Procurement*. Palgrave, Basingstoke, 207–232.
- European Commission (EC). (2019). *What is GPP*. Retrieved on 15 September 2019 from [https://ec.europa.eu/environment/gpp/what\\_en.htm](https://ec.europa.eu/environment/gpp/what_en.htm)
- European Commission (EC). (2016). *Public Procurement Indicators 2015*. Retrieved on 15 April 2019 from <http://ec.europa.eu/DocsRoom/documents/20679>
- European Union (EU). (2012). Consolidated versions of the treaty on European Union and the treaty on the functioning of the European Union. *Official Journal of the European Union*, C 326/1.
- European Environment Agency (EEA). (2015). *The European environment — State and outlook 2015: Synthesis report, State of the environment report*, European Environment Agency.
- Evans, L., Nuttall, C., Mouat, A., Ewing, D. (2010). *Assessment and comparison of national green and sustainable public procurement criteria and underlying schemes*. Final Rep.
- Gilg, A., Barr, S., & Ford, N. (2005). Green consumption or sustainable lifestyles? Identifying the sustainable consumer. *Futures*, 37(6), 481–504. <https://doi.org/10.1016/j.futures.2004.10.016>
- Giulio, A. D., Fischer, D., Schäfer, M., Blätzel-Mink, B. (2014). Conceptualizing sustainable consumption: toward an integrative framework. *Sustainability Science Practice and Policy*, 10(1), 45–61. <https://doi.org/10.1080/15487733.2014.11908124>
- Igarashi, M., de Boer, L., & Michelsen, O. (2015). Investigating the anatomy of supplier selection in Green Public Procurement. *Journal of Cleaner Production*, 108(part A), 442–450. <https://doi.org/10.1016/j.jclepro.2015.08.010>
- Lorek, S., & Spangenberg, J. H. (2014). Sustainable consumption within a sustainable economy – beyond green growth and green economies. *Journal of Cleaner Production*, 63, 33–44. <https://doi.org/10.1016/j.jclepro.2013.08.045>
- Lundberg, S., Marklund, P. O., Strömbäck, E., Sundstrom, D. (2015). Using public procurement to implement environmental policy: an empirical analysis. *Environmental Economics and Policy Studies*, 17(4), 487–520. <https://doi.org/10.1007/s10018-015-0102-9>
- Nissinen, A., Parrikka-Alhola, K., & Rita, H. (2009). Environmental criteria in the public purchases above the EU threshold values by three Nordic countries: 2003 and 2005. *Ecological Economics*, 68(6), 1838–1849. <https://doi.org/10.1016/j.ecolecon.2008.12.005>
- McCrudden, C. (2004). Using public procurement to achieve social outcomes. *Natural resources forum*, 28(4), 257–267. <https://doi.org/10.1111/j.1477-8947.2004.00099.x>
- Mellissen, F., & Reinders, H. (2012). A reflection on the Dutch sustainable public procurement programme. *Journal of Integrative Environmental Sciences*, 9(1), 27–36. <https://doi.org/10.1080/1943815X.2012.658815>

- Michelsen, O., & de Boer, L. (2009). Green procurement in Norway; a survey of practices at the municipal and county level. *Journal of Environmental Management*, 91(1), 160–167. <https://doi.org/10.1016/j.jenvman.2009.08.001>
- Ministry of Environmental Protection and Regional Development (MoEPRD). (2017). Informative Report “On the Green Procurement Support Plan 2015–2017”, p.14.
- Ministry of Finance of the Republic of Latvia. (2015). *EU funds 2014-2020*. Retrieved on 14 July 2019 from <http://www.esfondi.lv/es-fondi-2014---2020>.
- OECD. (2015). *Size of public procurement, in Government at a Glance 2015, Organisation for Economic Co-operation and Development*, p. 214.
- Oosterhuis, F., Rubik, F., & Scholl, G. (1996). Product policy in Europe: New environmental perspectives. *International Journal of Life Cycle Assessment*, 1(3), 179–179. <https://doi.org/10.1007/BF02978950>
- Osīs, L. (2010). *What is a green procurement, how to understand it and take it*. Retrieved on 15 February 2019 from <http://www.lvportals.lv/visi/skaidrojumi/222957-kas-ir-zalais-iepirkums-ka-to-izprast-un-veikt/>
- O’Rourke, D., & Lollo, N. (2015). Transforming consumption: from decoupling, to behaviour change, to system changes for sustainable consumption. *Annual Review of Environment and Resources*, 40(1), 233–259. <https://doi.org/10.1146/annurev-environ-102014-021224>
- Parikka-Alhola, K. (2008). Promoting environmentally sound furniture by green public procurement. *Ecological Economics*, 68(1-2), 472–485.
- Preuss, L. (2009). Addressing sustainable development through public procurement: the case of local government. *Supply Chain Management*, 14(3), 213–223. <https://doi.org/10.1108/13598540910954557>
- Rainville, A. (2017). Standards in green public procurement – A framework to enhance innovation. *Journal of Cleaner Production*, 167, 1029–1037. <https://doi.org/10.1016/j.jclepro.2016.10.088>
- Reichel, A., De Schoenmaker, M., Gillabel, J. (2016). *Circular economy in Europe*. EEA Report/No 2/2016. Luxembourg: Publications Office of the European Union.
- Saeima of the Republic of Latvia. (2010). *Sustainable Development Strategy of Latvia until 2030*.
- Saeima of the Republic of Latvia. (2011). Spatial Development Planning Law, Latvijas Vēstnesis, 173(4571).
- Testa, F., Iraldo, F., & Frey, M. (2011). The effect of environmental regulation on firms’ competitive performance: the case of the building and construction sector in some EU regions. *Journal of Environmental Management* 92(9), 2136–2144. <https://doi.org/10.1016/j.jenvman.2011.03.039>
- Testa, F., Iraldo, F., Frey, M., & Daddi, T. (2016). What factors influence the update of GPP practices? New evidence from an Italian survey. *Journal of Cleaner Production*, 112(Part 3), 1893–1900. <https://doi.org/10.1016/j.jclepro.2014.09.092>
- Vergragt, P., J., Dendler, L., de Jong, M., Matus, K. (2016). Transitions to sustainable consumption and production in cities. *Journal of Cleaner Production*, 134 (Part A), 1–12. <https://doi.org/10.1016/j.jclepro.2016.05.050>
- UN DESA. (2015). *World Population Prospects: The 2015 Revision, Key Findings and Advance Tables, Working Paper No ESA/P/WP.241*, United Nations, Department of Economic and Social Affairs, Population Division, New York.
- United Nations. (1992). United Nations Conference on Environment and Development, Rio de Janeiro, Brazil, 3–14 June 1992. Retrieved on 14 July 2019 from <http://www.un.org/geninfo/bp/enviro.html>

## THE AUTHOR’S SHORT BIOGRAPHY



**Inese Pelša** has a Master’s degree in Business in 2011. Since 2018, she has been studying for a PhD in Economics at the University of Latvia. Since 2019, she has been a Researcher at the University of Latvia. Since 2014, she has been working on green public procurement issues at the Ministry of Environmental Protection and Regional Development.

The author’s research interests include green public procurement, sustainable development, circular economy, and life cycle costs.

E-mail: [inese.pelsha@gmail.com](mailto:inese.pelsha@gmail.com)