

Packaging tax in Latvia¹

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Brief summary of the case

The packaging tax in Latvia is part of the all-inclusive natural resource tax. However, the packaging tax is only applied in limited circumstances. It is used as an incentive to join producer responsibility organisations which require producers and retailers to pay a fee to ensure their packaging obligations are discharged by these organisations. Organisations that choose to do so receive a packaging tax break. Therefore revenues from the packaging tax are relatively small and declining as the implied rates are effectively punitive.

Latvia does not have a deposit refund system in place, so along with participation in extended producer responsibility organisations, the packaging tax is the main economic instrument applied to stimulate a decrease in the consumption and increase in the recovery of packaging materials. However, there is little evidence that the packaging tax has influenced producer and consumer choice of packaging materials and design. The recycling and recovery targets set have been a more important influencing factor.

1 Description of the design, scope and effectiveness of the instrument

1.1 Design of the instrument

Latvia was one of the first countries in Eastern Europe to introduce a packaging tax in **1996** as one element in the all-inclusive natural resource tax¹. The aim of the packaging tax was to generate revenues while at the same time minimising the amount of packaging waste and stimulating recycling. The tax was calculated using four different calculation methods (per piece, per weight of packaging, per weight of product and according to the customs tax) for paper, glass, plastic and metal packaging. Tax rates were not differentiated according to the environmental impact of the packaging or recycling costs.

In 2000 **producer responsibility organisations** were introduced requiring producers and retailers to join these schemes and pay a fee to ensure their packaging obligations are met. Companies joining these schemes could receive up to an 80% packaging tax break depending on the packaging recovery rates (after 2005/6, this was increased to 100%). In each case, these tax breaks were decided by the Packaging management board, set up by the Ministry of Environment.

To encourage the development of the recycling industry, in 2002 the government increased the tax rate for polyethylene terephthalate (PET) packaging. This stimulated increased recycling of PET bottles and a recycling factory (PET Baltija) was built in Latvia in 2003. But after a while the tax rate for PET was decreased to the same level as other plastics.

¹ The natural resource tax also currently covers waste disposal, water abstraction, aggregates, air and water pollution, harmful goods and coal, coke and lignite.

This system was in place until Latvia joined the EU and had to change its regulation. In **2005** a new Law on Natural Resource Tax (in force since 2006) and the Packaging law were adopted, transposing the EU waste (94/62/EC) and packaging (2004/12/EC) Directives. Since then, tax rates are differentiated between packaging materials depending on their recycling costs - the rate is set 2-3 times higher than the recycling costs of a particular material (see the changes in the tax rates in Figure 2) and the government also changed the **calculation method** to be based solely on the weight of the packaging.

The Packaging Regulations in Latvia apply to all producers. Companies who only handle small quantities of packaging (up to 300 kg a year) may pay only the tax, but many have also joined **producer responsibility schemes**. Businesses engaging in producer responsibility schemes pay a license fee to producer responsibility organisations. These fees are set on a per kg basis according to different types of packaging materials, and also apply to disposable cutlery/tableware. The fees differ among companies and are set based on the principle of covering collection and recycling costs. There are several companies that provide packaging management for producers, the biggest being Latvijas Zaļais punkts, Zaļā Josta, and Zaļais centrs (LVAFA, 2016).

The tax is used as an incentive to join these schemes as organisations that choose to meet their obligations through such schemes now receive 100% packaging tax breaks. Therefore the aim of the tax is to eliminate the problem of 'free riders' or companies not participating in these schemes. The tax also stimulates the use of goods in reusable packaging (e.g. wood pallets and plastic boxes, glass bottles) as organisations using such packaging have to pay the tax only once, provided that the type and weight of the reusable packaging material can be justified with documentary evidence.

In 2008 the government introduced a special tax on disposable plastic bags which for buyer's conveyance or advertisement purchases are distributed by dealers with packaged or unpackaged goods. These rates are higher than those for other plastic packaging. The tax rate differs from 3.7 EUR/kg (for plastic bags where the weight of one bag does not exceed 3 g/1,000 bags does not exceed 3 kg) to 1.14 EUR/kg (for plastic bags where the weight of one bag exceeds 3 g/1,000 bags exceeds 3 kg). Tax rates for plastic bags manufactured from bioplastics or oxy-degradable plastics are the same as for any other packaging manufactured from bioplastics or oxy-degradable plastics. This approach aims to reduce consumption of all single-use plastic bags, which would also result in less packaging waste being generated.

From 2010 a higher tax rate (1.56 EUR/kg compared to 1.22 EUR/kg for other plastics) was applied to polystyrene as it cannot be recycled in Latvia. From 2014, the packaging tax rates were increased again by 25%. Only the tax rate for plastic bags stayed the same. According to the Law on Natural Resource Tax (likumi.lv, 2016b) the sale of materials used for packaging and plastic bags are currently taxed on a per kg basis as follows:

- Glass-source materials: €0.44 / kg;
- Plastic-source materials, except 'bioplastic' and oxy-degradable plastic source materials: €1.22 / kg;
- Polystyrene-source materials: €1.56 / kg
- Metal-source materials: €1.10 / kg;

- Wood-, paper-, cardboard- and other natural fibre- and bioplastic-source materials: €0.24 / kg;
- Oxy-biodegradable plastic materials: €0.70 / kg;
- Plastic bag (weight per bag less than 3 g): €3.70 / kg; and
- Plastic bag (weight per bag more than 3 g): €1.14 / kg.

1.2 Drivers and barriers of the instrument

Following the collapse of the Soviet Union and Latvia gaining its independence in 1991, production and consumption patterns started to change. The amount of packaging steadily increased with glass and paper packaging replaced by plastics. These changes led the government to set up a new waste management system. Latvia and Hungary were the first countries in Eastern Europe to introduce a packaging tax, borrowing this idea from western EU countries where such a mechanism already existed.

Another driver of change was the **EU accession process**. Latvia joined the EU in 2004 but before that had to change its regulation in line with EU waste and packaging Directives. Latvia introduced a producer responsibility scheme in 2000 for managing packaging and started to set recovery and recycling targets later fixed by the EU Packaging Directive.

The EU Packaging Directive sets recycling targets for individual Member States. However, in 2005 the initial recycling targets for new EU Member States were very high and countries negotiated extensions to reach the set targets (see Table 1). Latvia was granted the longest adaptation period – until 2015. The main arguments used by the government to support the extension of the deadline in Latvia were poor road infrastructure and low population density which made waste collection expensive.

Table 1. Recycling and regeneration targets and results for Latvia

| | | Glass | Plastic | Paper | Metal | Wood | Total |
|-------------|------------------|-------|---------|-------|-------|------|-------|
| 2012 | Recycling target | 50 | 20 | 60 | 42 | 13 | 51 |
| | Recycled | 55 | 24 | 75 | 58 | 37 | 51 |
| | Recovery target | 58 | 37 | 79 | 46 | 27 | 56 |
| | Recovered | 55 | 39 | 76 | 62 | 39 | 55 |
| 2013 | Recycling target | 55 | 21 | 60 | 46 | 14 | 53 |
| | Recycled | 55.1 | 24.5 | 74.7 | 56.6 | 36.4 | 51 |
| | Recovery target | 61 | 39 | 81 | 48 | 28 | 58 |
| | Recovered | 56 | 36 | 75.4 | 56.6 | 40.7 | 54.5 |
| 2014 | Recycling target | 58 | 22 | 60 | 48 | 14 | 54 |
| | Recycled | 61 | 36 | 82 | 52 | 32 | 55 |
| | Recovery target | 63 | 40 | 82 | 49 | 28 | 59 |
| | Recovered | 61 | 39 | 82 | 52 | 42 | 58 |
| 2015 | Recycling target | 60 | 22,5 | 60 | 50 | 15 | 55 |
| | Recovery target | 65 | 41 | 83 | 50 | 29 | 60 |
| 2025 | Recycling target | 75 | 55 | 75 | 75 | 60 | 65 |
| 2030 | Recycling target | 85 | 55 | 85 | 85 | 75 | 75 |

Source: recycling and recovery targets are from Cabinet Regulations No 983 (likumi.lv, 2016c); recycling and recovery rates are from Eurostat (2016b); future recycling and recovery targets are from EC (2015).

An important driver influencing the design of the packaging tax system in Latvia was the willingness of the government to support the national recycling industry as part of the overall industrialization process.

Another important initiative which would have had a significant impact on the established packaging waste management system is a **deposit refund system**. Article 18 of the Law on Packaging (likumi.lv, 2016d) stipulates that a goods manufacturer using re-usable packaging has to establish a packaging deposit-and-return system. The application of the system is voluntary and is aimed at glass bottles and plastic crates for storing bottles. Cabinet Regulation No 414 of 22 July 2003 on the application of a deposit-and-return system for re-usable packaging describes the conditions of application of the deposit-and-return system in more detail. Since 2004 when the voluntary deposit system was introduced there has been an ongoing discussion on whether a compulsory system should be established. So far there has not been significant progress in this respect as it would require significant changes to the existing system. These changes are mostly opposed by the producer responsibility organisations who are not willing to lose part of their market share.

1.3 Revenue collection and use

According to an assessment by government officials, around 92-93% of all eligible businesses have joined producer responsibility organisations. Therefore revenues from the packaging tax are small and decreasing as the implied rates are effectively punitive. Similarly, WEEE producers prefer to join voluntary management schemes rather than pay the tax.

Between 2009 and 2014 **revenue** from the packaging tax decreased by 53% and in 2014 was less than one million EUR (Table 2) or 5% of the total Natural resource tax revenues (see Figure 1).

Table 2. Revenues from the Natural resource tax in Latvia

| Year | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |
|----------------------------------|----------|----------|----------|----------|----------|--------|
| Packaging tax revenues (th. EUR) | 2,029.81 | 1,314.17 | 1,183.12 | 1,147.82 | 1,067.71 | 962.57 |

Source: State revenue service, 2016

Until 2006, revenues from the natural resource tax (including packaging tax) were **earmarked** for environmental protection activities. These funds were distributed for open call environmental awareness projects and to co-fund EU environmental infrastructure projects via the Environmental protection fund (www.lvafa.gov.lv) managed by the Ministry of Environment. However, in 2006 the government eliminated all special budgets and now revenues from the natural resource tax are divided 60/40 between the municipal budget and the state budget, although in the case of the packaging tax, all revenues are collected by the state. In a recent report commissioned by the European Commission, it was estimated that

the potential additional revenue from the packaging tax, if the rates were increased in Latvia, would be 0, taking into account the characteristics of the tax (Hogg et.al. 2016).

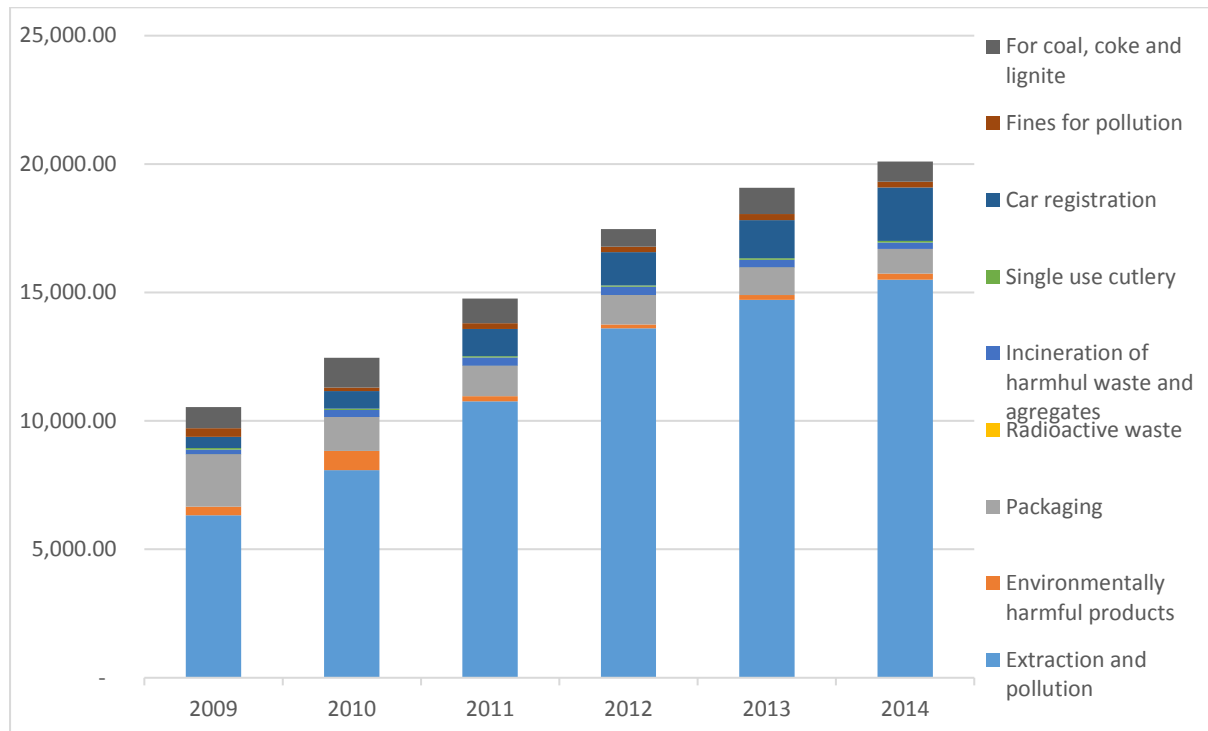


Figure 1. Revenues from the natural resource tax (th. EUR).

Source: State revenue service, 2016.

Fines for administrative offences in packaging waste management are also applied. Fines for natural persons are lower, ranging from 70 to 700 EUR, while for legal persons fines range from 430 to 1,400 EUR (likumi.lv, 2016a). For polluting the environment with waste or illegal transportation of waste, the vehicle involved in the illegal act may also be confiscated. Fines are collected from the taxpayer for the amount of packaging sold or used for ensuring economic activities thereof not indicated (hidden) in reports.

1.4 Environmental impacts and effectiveness

The general aim of the packaging tax is to decrease the amount of waste generated and encourage recycling. It is hard to assess the effectiveness of the packaging tax on **waste minimisation** as the tax mostly affects producers and product design. Latvia has a small market, therefore the packaging tax has limited impact on the design of imported products. However, according to MoE officials, the tax has a positive impact on national producers who are looking for ways to minimise expenses by minimising packaging and looking to use environmentally friendly packaging materials.

Since the introduction of the tax on **plastic bags** in 2008, according to MoE officials, the number of plastic shopping bags used fell rapidly and the number of people using reusable textile shopping bags for their daily purchases increased. Currently, the consumption of plastic bags has stabilised so the government should look for additional stimulus to further reduce usage.

Recycling is another aim of the packaging tax. Currently, there are limited possibilities for recycling in Latvia. In recent years, two major recycling factories (for paper (Līgatnes papīra fabrika) and glass (Grīziņkalna stikls)) were closed. There are several companies dealing with preparation of glass for re-use, but there are no recycling facilities for glass in Latvia. Thus, there is currently only a plastic (PET, LDPE, HDPE) recycling facility (PET Baltija) operating in Latvia. The level of metal packaging waste collection and recycling is low, while the collection and recycling of metal-containing waste is well developed. However, the government is planning to stimulate recycling and has planned funding for this through the EU Structural Funds.

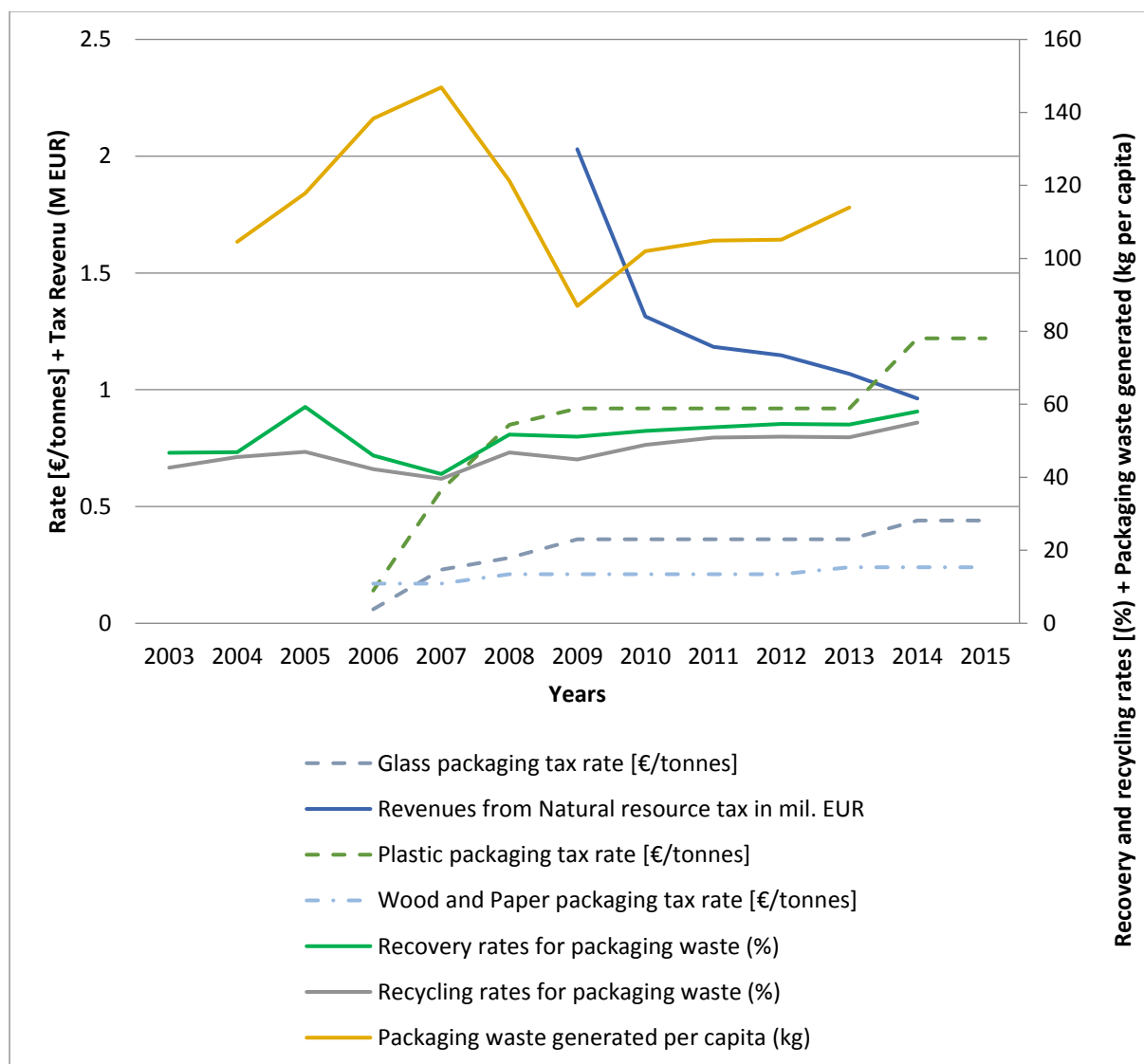


Figure 2. Packaging tax rates and amount of packaging generated

Note: Tax rates are from the Law on Natural resource tax; Revenues from Natural resource tax were obtained from State revenue service (2016); Waste generation, recovery and recycling rates come from Eurostat (2016b).

Cabinet Regulation No 983 of 19 October 2010 sets out recovery and recycling targets for all packaging waste (see Table 3), outlines a procedure for registration, the submission of reports

and forms, requirements to be fulfilled by commercial companies in order to be registered as packaging managers, and examples of the application of the criteria defining packaging and exceptions in relation to heavy metal content in packaging.

Table 3. Amounts of packaging materials to be recovered and recycled (targets for Latvia)

| Amounts of packaging materials to be recovered by 31 December of the relevant year (%) | | | | | | | | | | |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Paper and cardboard packaging | 62 | 67 | 74 | 76 | 77 | 78 | 79 | 81 | 82 | 82 |
| Glass packaging | 32 | 35 | 40 | 45 | 50 | 55 | 58 | 61 | 63 | 65 |
| Metallic packaging | 27 | 30 | 38 | 42 | 44 | 45 | 46 | 48 | 49 | 50 |
| Plastic packaging | 18 | 21 | 28 | 32 | 35 | 36 | 37 | 39 | 40 | 41 |
| Wood | 21 | 24 | 25 | 25 | 26 | 27 | 27 | 28 | 28 | 29 |
| TOTAL | 46 | 50 | 51 | 52 | 54 | 55 | 56 | 58 | 59 | 60 |
| Amounts of packaging materials to be recycled by 31 December of the relevant year (%) | | | | | | | | | | |
| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| Paper and cardboard packaging | 56 | 59 | 59 | 59 | 59 | 59 | 60 | 60 | 60 | 60 |
| Glass packaging | 32 | 35 | 38 | 40 | 45 | 48 | 50 | 55 | 58 | 60 |
| Metallic packaging | 27 | 30 | 32 | 34 | 38 | 40 | 42 | 46 | 48 | 50 |
| Plastic packaging | 14 | 15 | 16 | 16,5 | 18 | 19 | 19,5 | 21 | 22 | 22,5 |
| Wood | 8 | 10 | 10 | 10 | 11 | 12 | 13 | 14 | 14 | 15 |
| TOTAL | 42 | 45 | 46 | 47 | 49 | 50 | 51 | 53 | 54 | 55 |

Source: Cabinet Regulations No 983 (likumi.lv, 2016c).

1.5 Other impacts

Although the packaging tax seems to have had some impact on eco-design and environmental innovation in Latvia, this has been limited to a few examples and is not considered as the major innovation driver. There are examples of good packaging design, e.g. the packaging association (Latvias packaging association, 2016) grants awards to the most ecological packaging. However, these awards are not aimed at the minimisation of packaging, but rather to award the use of natural materials (e.g. wood) and sometimes also even double packaging (e.g. glass bottle in a paper box). To our knowledge, there are no studies available in Latvia looking at the impact of packaging tax on employment or competitiveness.

Theoretically a packaging tax has a greater impact on low-income households since they are more sensitive to the direct effect of the price increase. However, there is little evidence of the packaging tax having had a direct impact on consumer behaviour given the low tax rates applied. According to Eurostat (2016b), from 2004 to 2013 the overall amount packaging in Latvia increased by 9% from 105 to 114 kg of packaging per capita with the largest increase (by 26%) relating to the use of plastic packaging.

It should be noted that producer responsibility organisations have to invest part of their income in consumer education activities. These usually concern the provision of information

to businesses and households explaining waste recycling, campaigns for school students on separate waste collection etc. However, very little attention has been paid to waste minimization activities to date.

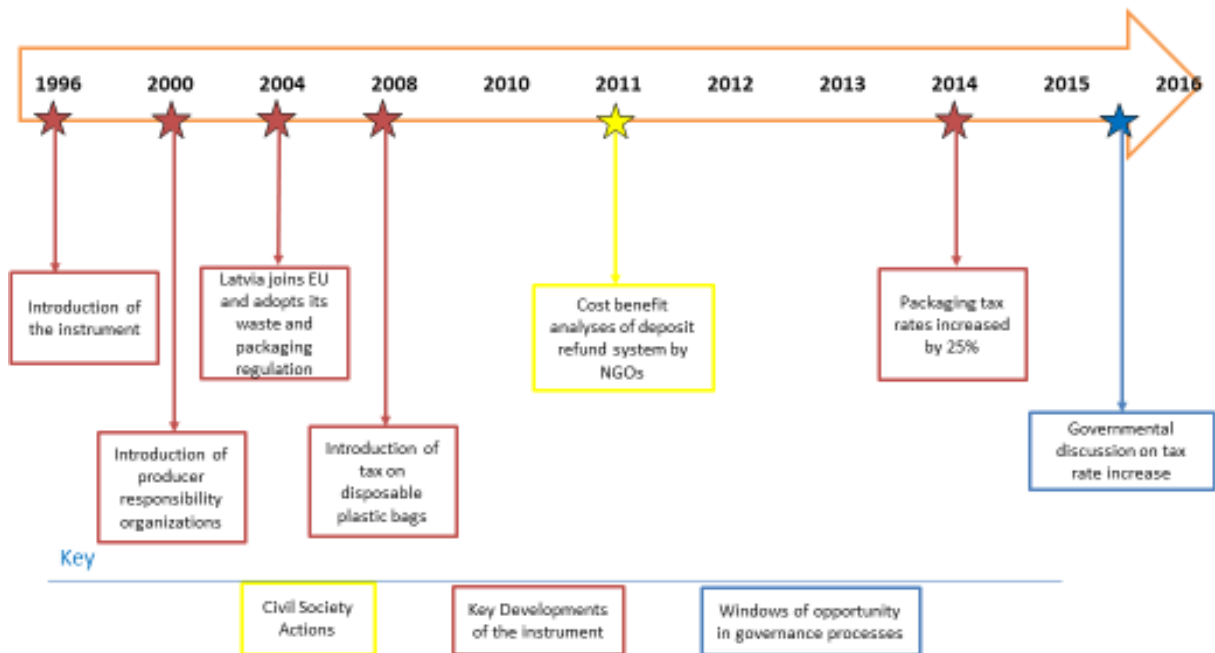
As most of the household waste in Latvia is landfilled (Eurostat, 2016a), households also have to pay waste management costs (packaging comprises more than one-third of total waste generated). Therefore landfilling tax and gate fees would also have an impact on waste generation and recycling. During recent years, waste disposal taxes in Latvia have increased but this has not had a significant impact on the waste collection costs for households.

2 Stakeholder engagement

The packaging tax was initiated by the Ministry of Environment and several stakeholders have been involved in shaping the tax throughout the years. These include:

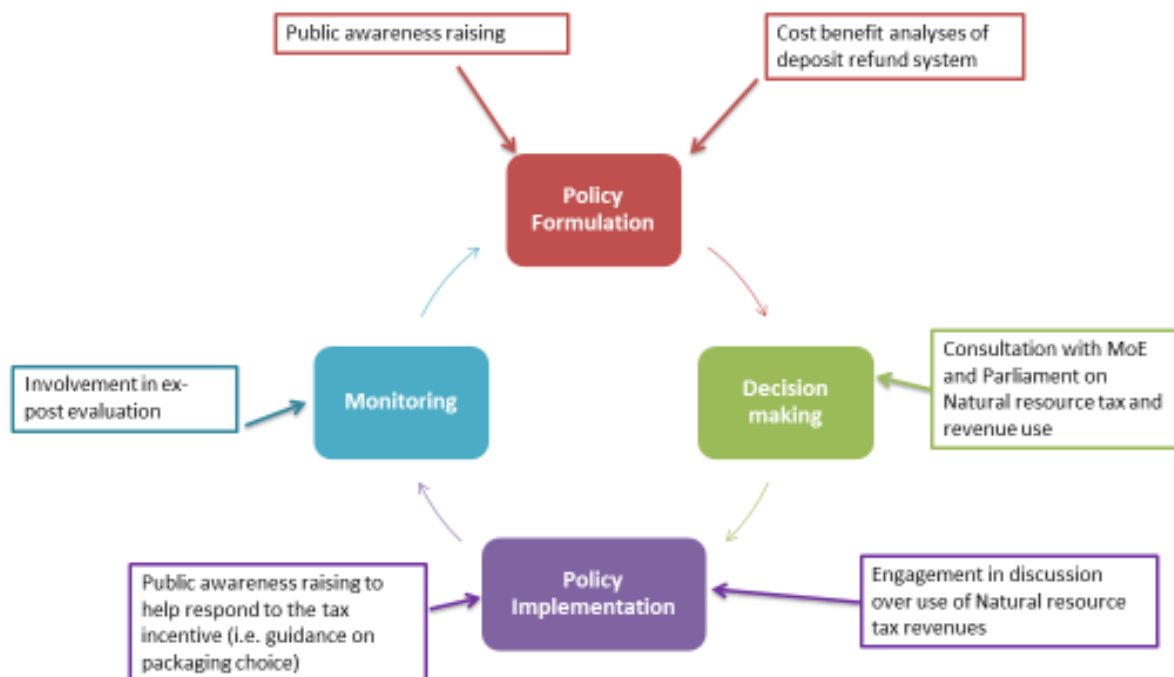
- **Latvian Packaging Association** which has been advocating for business interests and has probably been the most visible in shaping the packaging tax. The Association has also actively promoted environmentally friendly solutions for packaging and organizes annual competitions where prizes are awarded to the most environmentally friendly packaging;
- **Producer responsibility organisations** are interested in extending their business and attracting as many businesses as possible while keeping the recycling and recovery target low. They have also been most vocal against the introduction of a deposit refund system in Latvia;
- **Environmental consultation board** consisting of 20 annually elected NGOs working with environmental policy issues has been involved in commenting on the effectiveness of the Natural resource and packaging tax and necessary policy change. One of the main demands from NGOs has been to reintroduce a special environmental budget where revenues from Natural resource tax recycle back to environmental action, and to increase recovery and recycling rates. However, environmental NGOs have been divided on the need to introduce a deposit-refund system in Latvia;
- **Waste management associations** (Waste Management Association of Latvia - www.lasa.lv and Latvian Association of Waste Management Companies - www.lasua.lv) which advocate the interests of waste management companies;
- **Waste management companies** and **landfill management companies** who are responsible for waste collection, recycling and actively organize information campaigns on recycling;
- **Latvia's retailer's association** and **Latvia's beverage producer associations** are also involved in discussion over the packaging tax;
- **Latvia's packaging certification centre** (www.lisc.lv) is consulting businesses on packaging design.

Timeline of Key Developments in Packaging tax



3 Windows of opportunity

Civil society engagement with Packaging tax



4 Insights into future potential/reform

4.1 Actual Planned reforms and stakeholder engagement

The government is planning to increase recovery and recycling rates for packaging waste after the European Commission decides on a revised Packaging Waste Directive setting new recovery and recycling targets. According to NGOs in Latvia, these rates have to increase significantly to reach levels which a deposit refund system could ensure. However, MoE is concerned that the currently proposed targets for Latvia are too ambitious and a longer time period is needed to reach them.

The MoE is planning to assess whether the packaging tax should be differentiated by type of plastic. However, there is no fixed timeline for this. With regards to plastic bags, the MoE is planning to increase the tax (to the same level as for other plastic packaging) and possibly introduce restrictions on the free distribution of bags (there are no plans to ban the use of plastic bags altogether).

The packaging tax has not been a sufficient instrument to decrease overall packaging waste generation, recovery and recycling in Latvia. A more important driver of change in Latvia has been the EU Packaging Waste Directive which set recovery and recycling targets replicated in national legislation and enforced by producer responsibility organisations. It's clear that the packaging tax alone is not enough to stimulate recycling and waste minimization. One study suggests that the packaging tax should be combined with effective eco-design policies to reach significant material efficiency and a low waste generation rate, thus extending the lifetime of landfills (Dace et al., 2014). The same study shows that doubling packaging tax rates causes a decrease in the amount of materials used per product unit, and consequently the annual amount of generated packaging waste can be reduced by 24% in comparison to scenario 1² and by 6% in comparison to the Base scenario in 2030. It is important to note that for a packaging tax to be effective, consumers must react to an increase in the price by flexibly decreasing demand and switching to alternatives.

The government also has to ensure adequate control of the implementation of the regulation so that companies report correct amounts and materials of packaging. Monitoring and enforcement of the packaging regulation in Latvia is done by Vides valsts dienests (The State Environmental Service).

4.2 Suggestions for future reforms – instrument design and civil society engagement

The packaging regulation and tax should focus more on the steps to ensure prevention in packaging generation, which is a key element when looking at resource efficiency because avoided consumption of packaging is better than other alternatives.

² Scenario 1 sets the highest rates for sorted and recycled fractions of waste compared to the other scenarios tested.

The government should consider differentiating the packaging tax for packaging made of recycled and virgin material. A lower rate for recycled material would increase the demand for recycled packaging materials and stimulate their production and use in packaging.

There is a growing body of research in Latvia on new recycling methods, waste management, biodegradable plastics etc. However, more research is needed on the effectiveness of the packaging tax and its impact on the economy and environment as well as to determine the environmental effectiveness of different types of packaging materials used and packaging designs which use the perspective of life cycle environmental impact assessment.

There is also a need for more public discussion on how to reduce packaging and which packaging materials are more environmentally friendly and under which circumstances to create greater public awareness on the issue of packaging.

Civil society organizations should follow developments of the packaging tax more closely especially looking at its environmental effectiveness and potential in reducing waste, as this is the hardest objective to achieve and there are currently no good advocates for this in Latvia.

4.3 Suggestions for replicability

When ensuring high recovery and recycling rates, a packaging tax in combination with producer responsibility schemes could be a cost-effective tool to provide necessary incentives for packaging waste collection and recycling. However, it has limited impact on waste prevention.

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ⁱ This case study was prepared as part of the study 'Capacity building, programmatic development and communication in the field of environmental taxation and budgetary reform', carried out for DG Environment of the European Commission during 2016-2017 (European Commission Service Contract No 07.027729/2015/718767/SER/ENV.F.1) and led by the Institute for European Environmental Policy (www.ieep.eu). This manuscript was completed in December 2016.