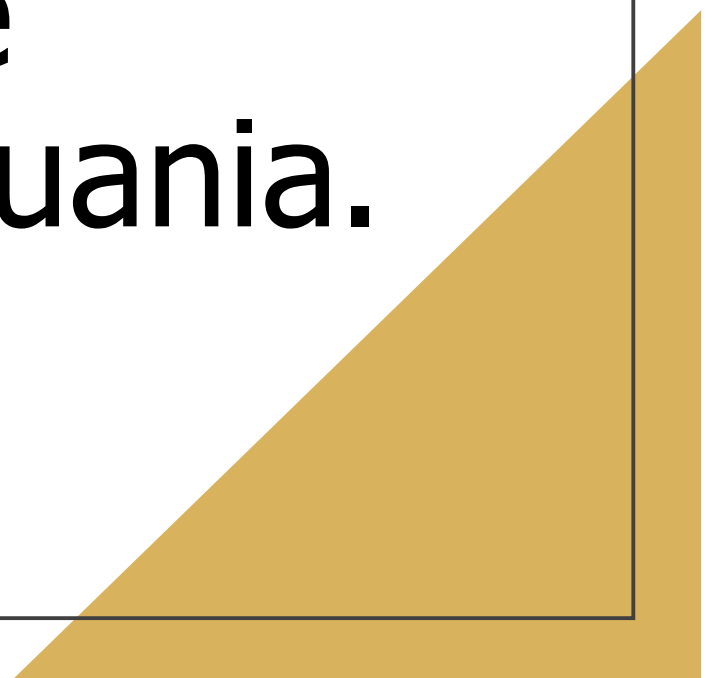


# The impact of informational, convenience, social, and financial tools on waste sorting behavior in Lithuania.

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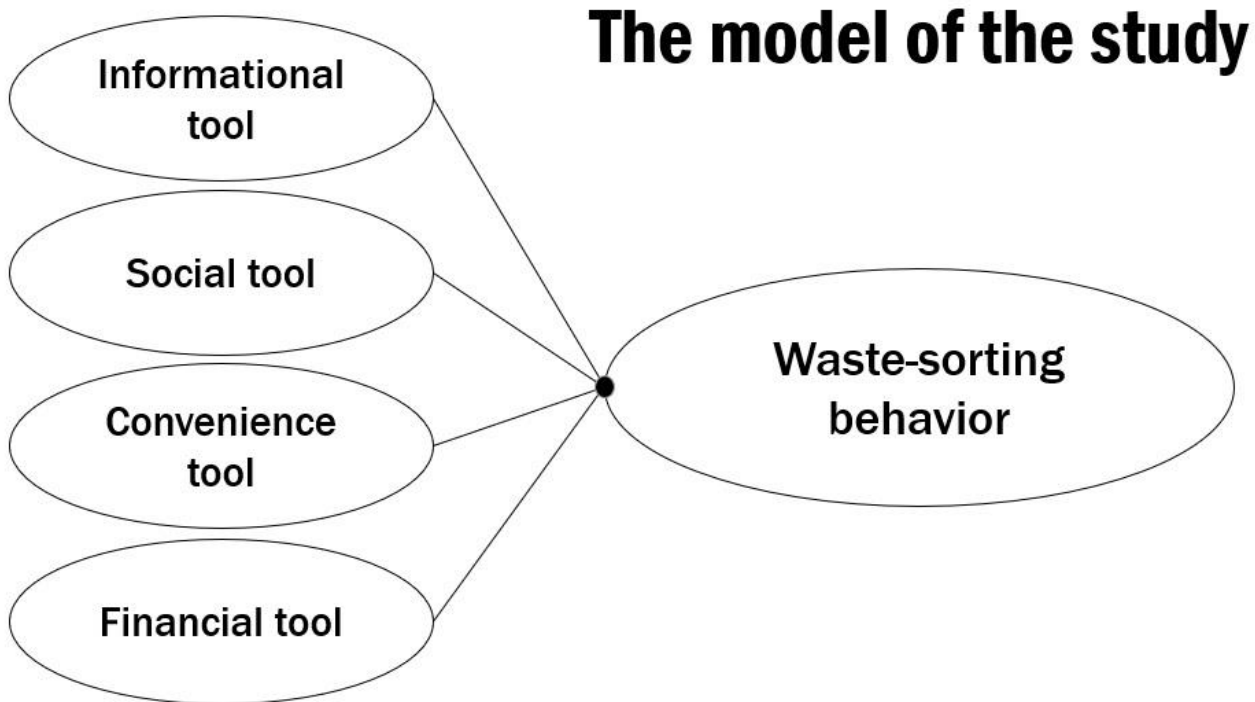
Two billion of tons of waste are generated every year.

Only 14% is recycled, while 37% end up on the landfill

According to our findings around six percent of Lithuanians do not sort at all.



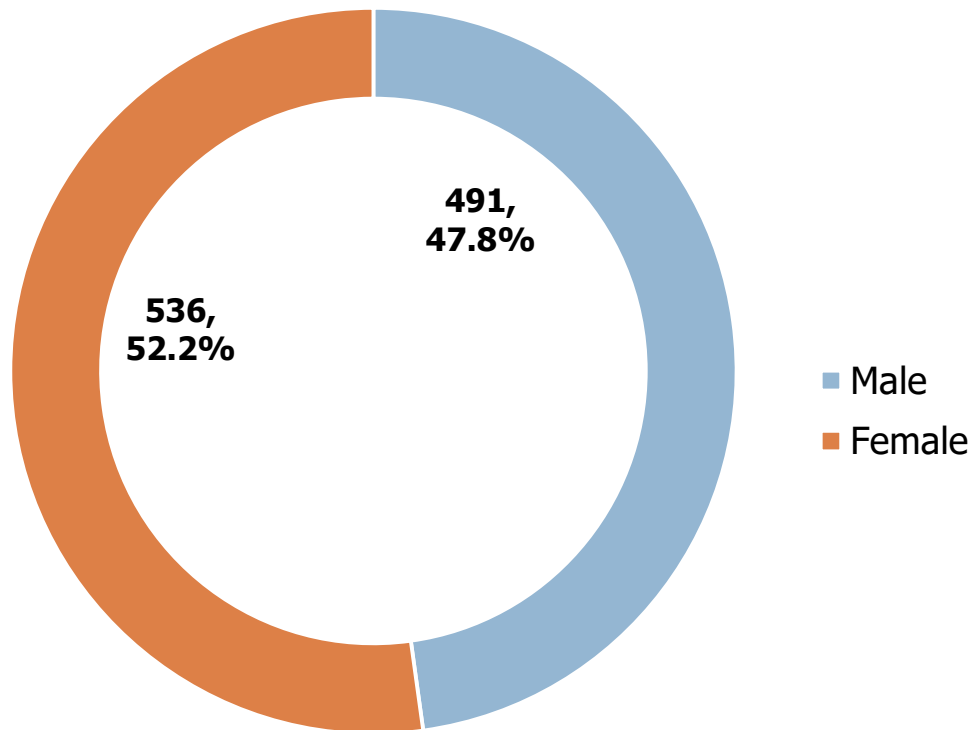
The popularization of waste sorting among households helps to minimize landfill usage, lower waste disposal charges, reduce raw material usage through recycling programs.



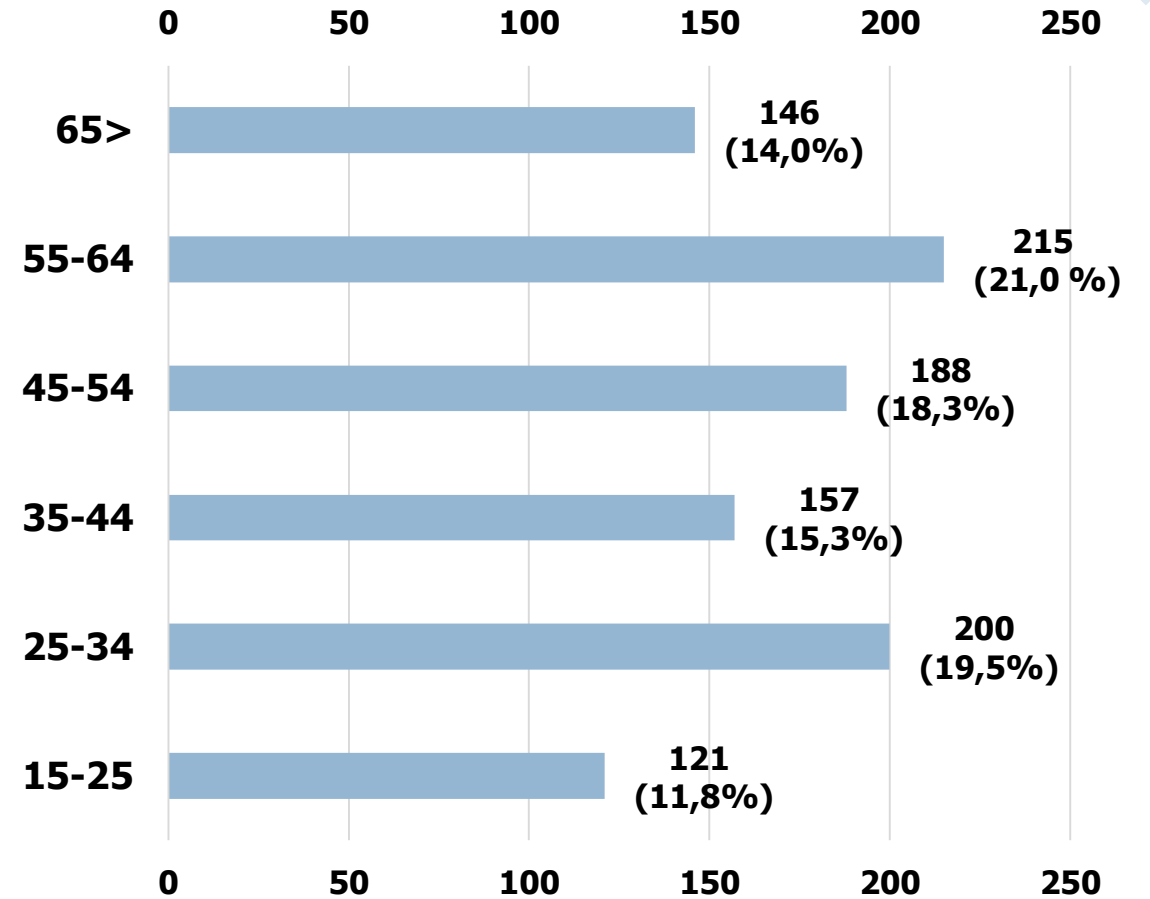
The aim of the study is to investigate what tools are most effective in promotion of waste sorting behavior in Lithuania, according to the public opinion.

# Demographics

## Gender

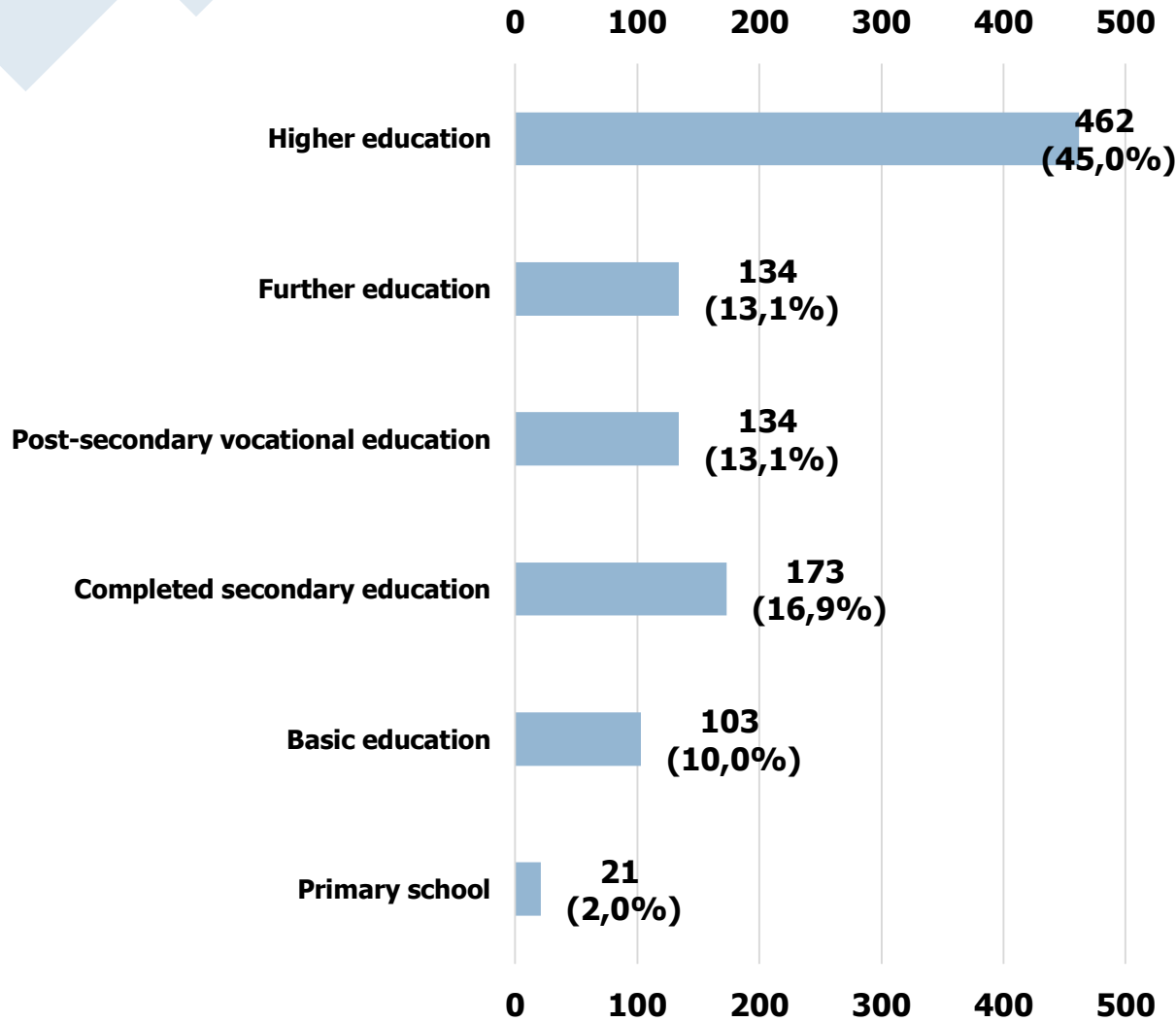


## Age

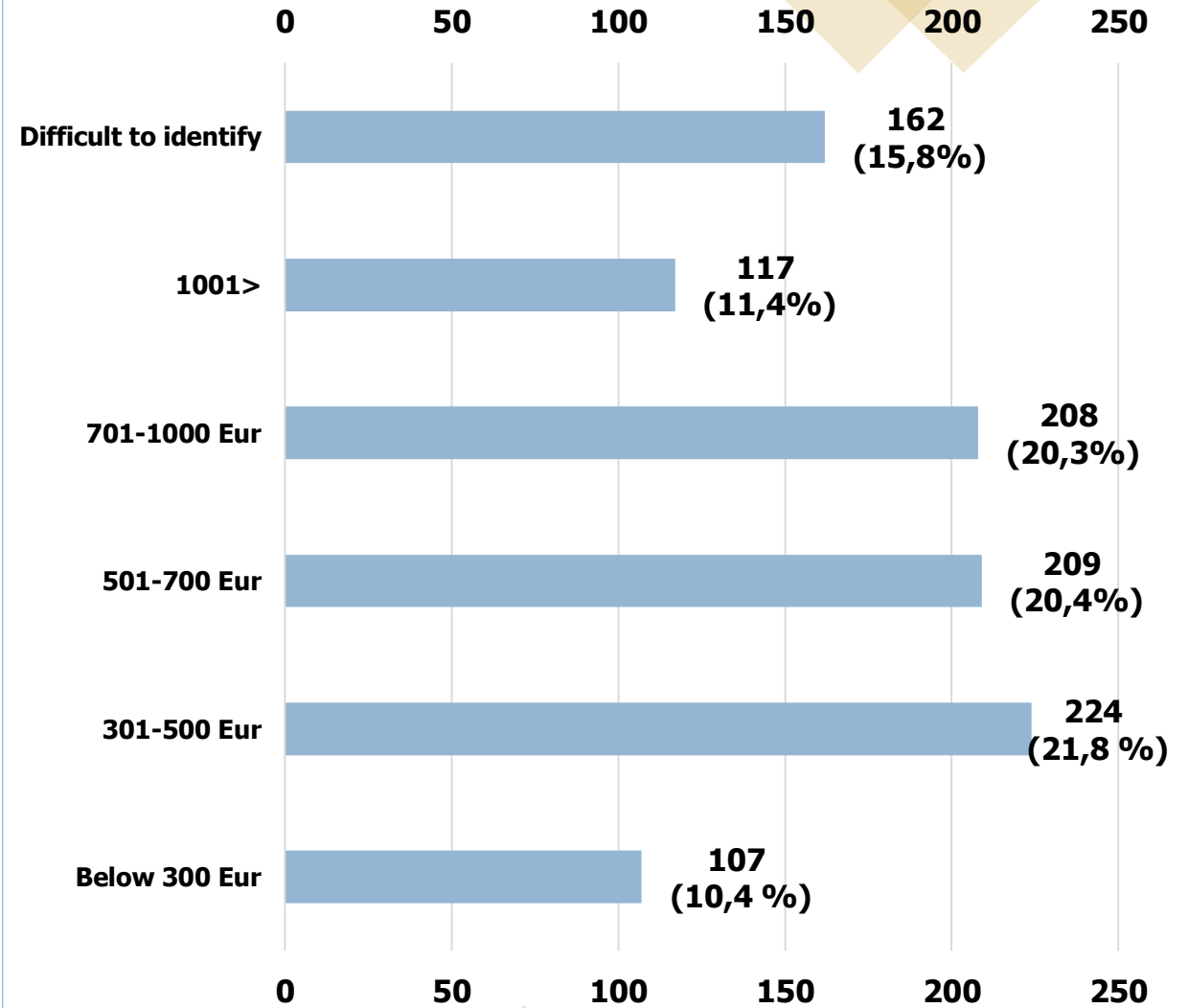


\*total number of survey participants 1027

## Education



## Income



\*total number of survey participants 1027

# Factor analysis

Table 1. Rotated component matrix of analysed constructs, reliability statistics and mean score

		Loading coefficients	Variance explanation (%)	Cronbach alpha	Mean	Standard deviation
Informational tool			16.19	0.867	3.27	0.69
	Information provision about waste sorting promotes waste sorting behavior	0.707			3.26	0.81
	Information provision that sorting waste is being recycled promotes waste sorting behavior	0.75			3.34	0.77
	Information provision that waste sorting reduces natural depletion problem promotes waste sorting behavior	0.72			3.26	0.82
	Raising environmental awareness promotes waste sorting behavior	0.69			3.23	0.83
Convenience tool			3.94	0.71	3.38	0.63
	Waste containers near home promote waste sorting behavior	0.51			3.53	0.69
	Frequent waste removal promotes waste sorting behavior	0.69			3.26	0.81
	Convenience to sort at home promotes waste sorting behavior	0.79			3.35	0.82
Social tool			8.57	0.79	2.83	0.81
	Negative attitude of society towards non-sorters promotes waste sorting behavior	0.64			2.95	0.97
	The example of famous people who separate waste promotes waste sorting behavior	0.85			2.52	1.08
	My family and friends can promote waste sorting behavior	0.68			3.01	0.91
Financial tool			4.87	0.65	3.56	0.61
	Reduced taxes for sorting waste promotes waste sorting behavior	0.65			3.58	0.68
	Financial incentives for sorting waste promote waste sorting behavior	0.86			3.56	0.72
Waste sorting behavior			39.8	0.92	3.21	0.82
	I sort waste	0.91			3.17	0.89
	I sort paper	0.87			3.18	0.92
	I sort plastic	0.89			3.26	0.88
	I sort glass	0.88			3.24	0.92

KMO = 0.92, Sig. of BTS <0.001, Cum. Var. Explained (%) = 68.43%.

\*Varimax rotation. Cronbach Alfa 0.65-0.92. Loading coefficients >0.5.

# Pearson Product Correlation and Linear regression analysis

Table 2. Correlation matrix

	<b>Convenience tool</b>	<b>Financial tool</b>	<b>Social tool</b>
<b>Informational tool</b>	0.529*	0.574*	0.646*
<b>Convenience tool</b>	1	0.593*	0.456*
<b>Financial tool</b>	0.593*	1	0.312*
<b>Social tool</b>	0.456*	0.312*	1

\*p<0.05

Table 3. Regression results of intention to sort waste and Test of collinearity.

Factors/determinants	Beta coefficient	t	Sig.	Tolerance	VIF
<b>Informational tool</b>	0.28	5.99	<0.01	0.56	1.76
<b>Convenience tool</b>	0.04	0.94	0.34	0.52	1.94
<b>Financial tool</b>	0.10	2.61	0.001	0.57	1.75
<b>Social tool</b>	-0.03	-0.70	0.48	0.39	2.55

R<sup>2</sup>=0.13 dependent variable – waste sorting behaviour



# Conclusion

- The results showed that among declared tools, only informational and financial ones had a significant impact on waste sorting behavior.
- Social and convenience tools insignificantly affected this behavior.
- Respondents are sure that the most effective motivator of sorting is a financial tool (incentive, tax reduction).
- Compared to previous tools, the informational tool is less important, particularly in terms of increasing environmental awareness.
- Meanwhile, the provision of information indicating that sorted waste is recycled was deemed critical.