

Chapter 4

Financial education in Estonia

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4.1 The past situation in Estonia with respect to financial literacy

4.1.1 Evolution in the levels of financial literacy

Financial literacy levels of students

The 2012 PISA financial literacy (FL) test gave the first indication about the level of knowledge of Estonian students in comparison with other participating countries (Estonia did not participate in the 2015 PISA FL study). More recently, PISA 2018 also studied the FL in the participating countries, but as these data are not yet available, the following description relies on the analysis of the 2012 test results¹. While Shanghai-China came out as having the highest FL score in this achievement test, it was followed by the Flemish Community of Belgium and Estonia (see Figure 1). Moreover, it revealed that there is less variance among the test scores in Estonia than among the OECD countries in average – performance gaps between students scoring high and low in FL are small.

Although the 2012 PISA results have been reported by the OECD (2014) as well as by some other authors, several observations should be made, some more general and others more specifically about the Estonian results. First, only a small proportion (16%) of the variation among the participating countries' mean FL scores is explained by per capita GDP. This empirical insight suggests that there is no strong association between country level economic prosperity and knowledge of FL – supporting the argument that it is influenced by micro-institutional, rather than macroeconomic, factors. As Lusardi (2015: 648) states “the fact that students in advanced economies do not score higher than students in less rich countries underscores the importance of having a well-functioning educational system”. However, debate around what constitutes a well-functioning education system remains ongoing, due to the heterogeneity of countries and their educational practices.

Second, the FL scores for Estonia in the 2012 PISA test were better than its students' performance in mathematics and reading would allow to predict. As one might expect, the achieved test results in mathematics are more strongly correlated with the FL score than reading, though both are correlated with it (see correlations in Figure 2). Nevertheless, it is interesting to note that in the Estonian case, the achieved test score in mathematics has less predictive power with regard to the FL score than in many other OECD countries.

¹ In Estonia the Ministry of Finance has initiated and supported data collection.

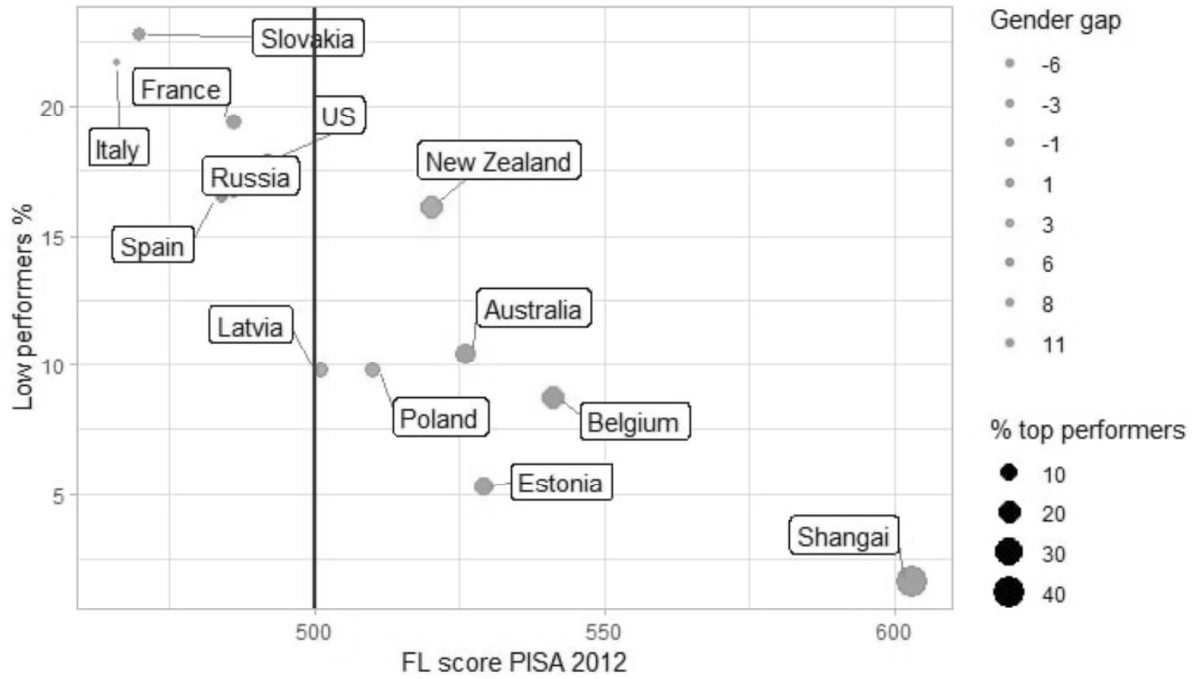


Figure 1. Estonian PISA financial literacy score in comparison with selected countries
 Source: PISA 2012, OECD (2014)

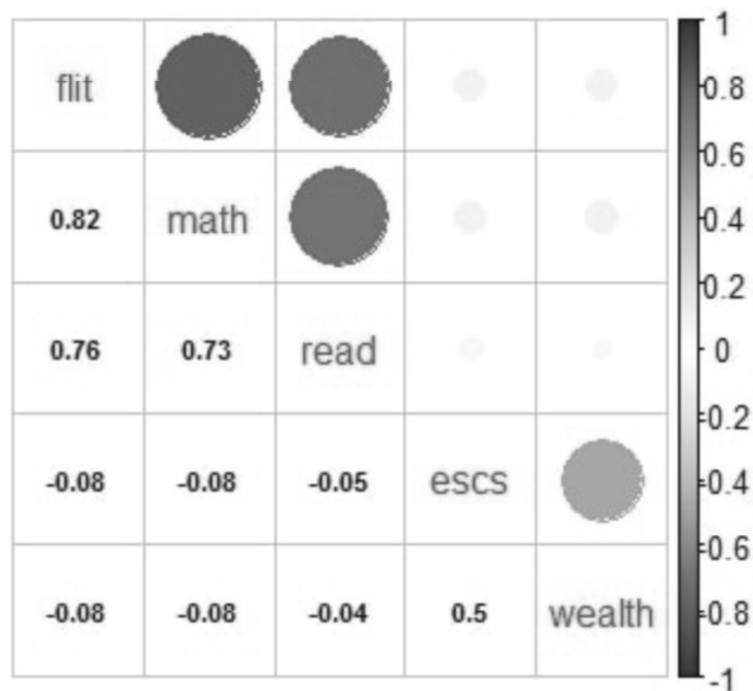


Figure 2. Pearson correlations between indicators of socio-economic status and PISA scores

Source: authors calculations based on PISA 2012

Notes: flit = financial literacy; math = mathematics; read=reading; wealth=family standardised index of wealth; escs =family socio-economic status standardised index

Third, Estonia was the only participating country in PISA 2012 where the above-average general performance and small within and between school variance was combined with a weaker-than-average association between FL performance and socio-economic status (see Figure 1). This finding is very interesting in the context of the widely shared position that students from economically better-off families generally perform better in FL (see e.g. Atkinson and Messy 2012) as well as from the more general observation that socioeconomic status and wealth tends to explain a large part of students' educational achievements. Indeed, Riitsalu and Põder (2016) found that instead of the traditional indicators of socio-economic status – the number of books at home – the proxy for cultural capital used in PISA studies was the main predictor of the FL score in Estonian context.

Fourth, there are important differences in FL scores between genders as well as among students from different ethnicity in Estonia. On the one hand, there is a gender-based gap in FL performance in Estonia where girls perform better than boys. On the other hand, this difference is not statistically significant and there are, at the same time, more boys at the highest FL proficiency level than girls. Furthermore, it is interesting to note that the gap between immigrant and non-immigrant students is larger than the OECD average in Estonia (see also Riitsalu and Põder 2016 and Table 1 and Table 2).

Table 1. PISA 2012 financial literacy, reading and mathematics test results and school language gap

PISA test scores	Number of observations	Mean	Standard error	Min	Max
Financial literacy					
Students of Estonian-language schools	824	538.88	76.88	295.16	755.79
Students of Russian-language schools	224	498.43	74.69	294.02	700.56
Mathematics					
Students of Estonian-language schools	824	538.54	94.88	250.43	799.57
Students of Russian-language schools	224	522.25	87.41	275.88	777.28
Reading					
Students of Estonian-language school	824	525.11	86.74	245.92	741.38
Students of Russian-language schools	224	505.74	84.41	280.00	713.29

Source: Riitsalu and Põder (2016)

Fifth, as the majority of students own a bank account in Estonia (the coverage is above 80% amongst students between 15 and 16 years of age, and close to 90% in the age group of 15–24), this indicator is not a significant predictor of FL. Nevertheless, Riitsalu and Põder (2016) have shown that holding a debit card is still predictive of higher FL levels.

Table 2. Immigrant status and Russian school effect (OLS and hierarchical school random effect model (HLM))

	Dependent variable: Financial literacy score			
	OLS		HLM	
Immigrant status	-10.050***	(-2.281)	-8.869***	(-2.164)
Russian language school	-33.680***	(-5.756)	-34.860***	(-7.966)
Gender	-0.928	(-4.626)	0.134	(-4.357)
Constant	551.162***	(-4.174)	548.015***	(-4.746)
Observations	1,088		1,088	
Adjusted R2	0.055			
Log Likelihood			-6,210.154	
Akaike Inf. Crit.			12,432.310	
Bayesian Inf. Crit.			12,462.260	
Residual Std. Error	75.724	(df = 1084)		
F Statistic	22.197***	(df = 3; 1084)		

Note: *p<0.1; **p<0.05; ***p<0.01. Standard errors in brackets
Source: authors' calculations based on PISA 2012

Sixth, despite the high FL results in the PISA 2012 achievement test scores in comparison to some other participating countries, availability of financial education in Estonian schools is difficult to estimate. On the one hand, approximately 75% of students did not have any regular financial education at school at the time of the PISA 2012 data collection, and only some 10% of students had received more than two years of financial education in schools, mostly taught as a separate subject (see also Riitsalu 2014). On the other hand, the comparatively high PISA 2012 FL scores might reflect the success of integrated curriculum where topics related to FL are introduced in the compulsory subjects like mathematics and citizenship and supported in the elective courses on entrepreneurship and/or principles of economics. More on these issues below.

Financial literacy level of the adult population

The above presented picture of comparatively high FL levels among Estonian students were further confirmed in the more recently conducted OECD financial literacy survey (OECD 2015) among the participating OECD countries adult populations. While this may appear satisfactory, some scholars (e.g. Riitsalu 2019) have argued that the knowledge tested in these comparative studies does not always transfer to behaviour. Indeed, the empirical data presented in Figure 3 indicate that average scores of knowledge, on the one hand, and the composite scores of attitudes and behaviour, on the other, can differ considerably.² Although the indicators of FL knowledge and behaviour in the 2015 data have both improved compared to 2010, attitudes have made less progress and there is

² For further details, see Veeret (2016).

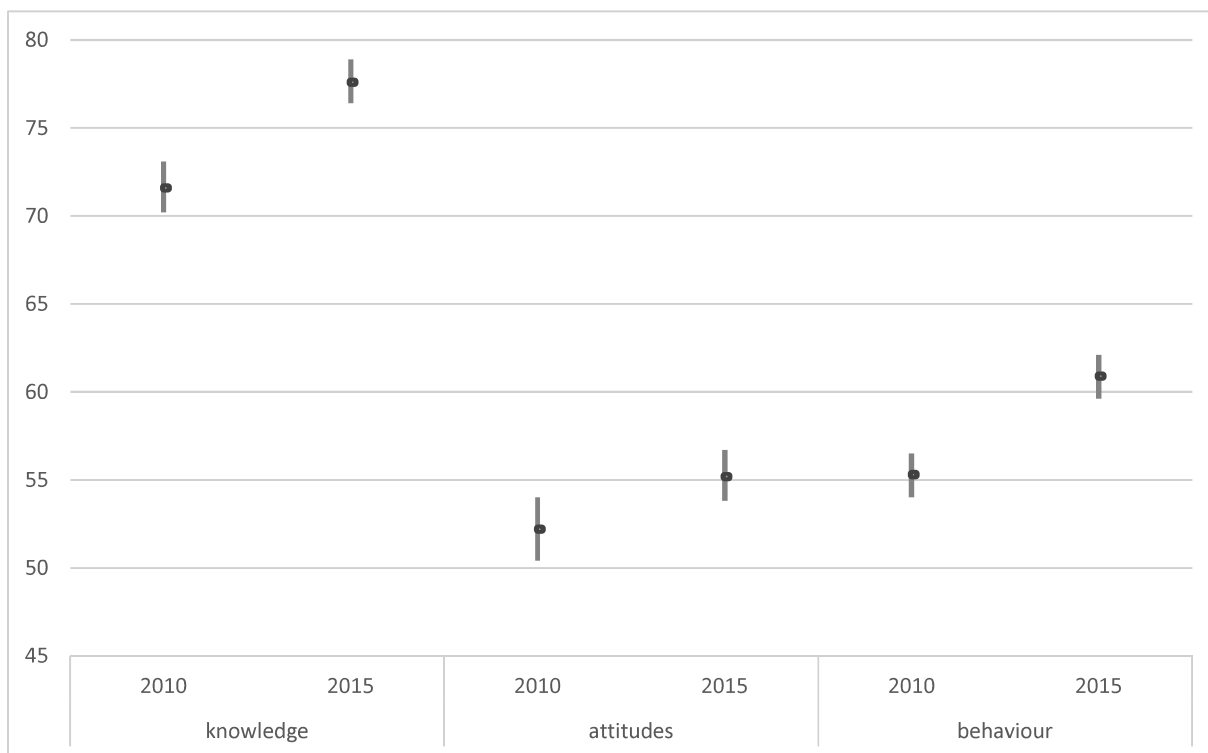


Figure 3. Estonian mean knowledge, attitude and behaviour score in 2010 and 2015

Note: Mean score expressed as percentage of maximum score, on the 95% confidence interval.

Source: Riitsalu (2019 based on Veeret 2016)

still a substantial gap between the respective scores of knowledge and behaviour. The OECD is collecting new data based on the same measurement toolkit in 2019; Estonia is participating in that international survey for the third time.

Indeed, individuals do not plan their finances or save for the long term as much as their knowledge of financial matters and income would allow. Meriküll and Rõõm (2016: 30), in their analysis of the Eurosystem's Household Finance and Consumption Survey data, found that mutual funds and securities are owned by only a small fraction of Estonian households (only 5.8% of families own these types of financial assets). Moreover, they (ibid) state that such a low level of stock and bond market participation is not in accordance with economic theory, which suggests that all households which have accumulated savings should hold part of their wealth in stocks.

Three comments that need to be added to the observations presented above about FL level of the Estonian adult population. First, unlike the picture presented above on financial knowledge, Estonian behaviour scores are among the bottom six lowest among participating OECD (2016) countries. It has been estimated that less than half of the population in Estonia plans their finances for the short- and long-term, and only 40% are actively saving money, compared to the OECD average of 60% (Table 3). To make sense of this mismatch between high test scores on knowledge and low results when it comes to behaviour, Riitsalu and Murakas (2019) have suggested in a recent study that subjective financial knowledge (self-assessment of financial knowledge) and behaviour are more significant predictors of financial well-being than objective financial knowledge.

Table 3. Proportion of population regarding financial behaviour

Financial behaviour indicator	Estonia	OECD average
	%	%
Carefully considers purchases	76	79
Timely bill payment	87	84
Keeps watch of financial affairs	76	73
Long-term financial goal setting	40	50
Responsible for and has a household budget	41	52
Active saving	40	60
Has not borrowed to make ends meet in 12 months	85	76

Source: Riitsalu (2019)

Table 4. Regression models for three Estonian financial literacy components, parameter estimates

	Knowledge	Attitudes	Behaviour
Intercept	6.013***	3.488***	6.363***
Gender: Male	0.264**	-0.078	-0.284*
Nationality: Estonian	0.694***	0.272**	-0.167
Education (Tertiary = ref):			
Less than secondary	-0.794***	-0.239*	-0.854***
Secondary	-0.365**	0.059	-0.163
Net Income per family member (more than 500 € = ref):			
Less than 300 €	-0.504**	-0.081	-0.692***
301–500 €	-0.199	-0.030	-0.480**
Professional status (other = ref):			
Manager/entrepreneur	0.494*	0.170	0.320
Employee	0.288	0.035	-0.022
Pensioner/unable to work	-0.016	-0.051	0.137
Number of household members (4 or more = ref):			
1	-0.135	-0.118	-0.882***
2	-0.040	-0.077	-0.539**
3	0.098	-0.049	-0.470*
Risk tolerance (not risk taker = ref):			
“Risk-taker”	0.061	-0.457***	-0.087
<i>Number of observations</i>	848	848	848
<i>R-Squared</i>	0.199	0.102	0.106
<i>Adjusted R-Squared</i>	0.176	0.077	0.081

Note: *p<0.1; **p<0.05; ***p<0.01. Included control variables: age, dwelling and region.

Source: Riitsalu, Murakas and Veeret (2019) based on OECD (2016) data.

Second, unlike the more general tendency identified in above mentioned study that revealed a negative age and education gap in knowledge, the education gap was relatively insignificant in the Estonian case. However, Hüps (2015) demonstrates weak evidence for the gender effect (male performance is better) in tertiary level of education, including some education effect.

Third, analysis of the data originating from the International Survey of Adult Financial Literacy Competencies conducted by the OECD (2016) reveals that the only socio-economic factor significantly related to all three elements of FL (knowledge, attitudes and behaviour) in Estonia is education. As shown in Table 5, there are gender differences in both knowledge and behaviour, but in opposite directions. Women have lower knowledge score than men, but higher behaviour score. That contradicts previous research showing women as the vulnerable group. The Estonian case demonstrates the opposite – women manage their finances more prudently than men.

4.1.2 Discussions on the levels and necessity of improving financial literacy

The empirical observations presented above and comments from the literature suggest that despite very impressive FL results in international achievement tests conducted by the OECD, Estonia needs to address the following challenges to improve the FL:

1. Inequality of FL knowledge: (i) gap between Russian language and Estonian language school students, including immigrant knowledge gap in FL; (ii) limited gap based on education and income among adults.
2. Limited (i) curriculum development and its ambiguity (related to the fact that the national curriculum on principles of economics and entrepreneurship is not supported by the provision of teaching materials and enforced by the state examinations for students); (ii) formal education of teachers in the subjects and state support of life-long education in economics in general and FL in particular; and (iii) student access to education (that relates to the elective nature of these classes at secondary school).
3. Mismatch between high FL achievement test results and behaviour of the population when it comes to long-term financial planning and saving.

4.1.3 Overview of past policy attention

The development of the National Strategy for Financial Literacy started in 2010 and an eight-year national programme was launched in 2013. This program for 2013–2020 is the first national programme regarding FL. This will be followed by a second programme in 2021. The strategy targets the whole population, including youth. According to the Estonian Ministry of Finance,³ the strategy has three aims: (i) increasing awareness of the need of financial planning and attitudes that support smart financial decisions; (ii)

³ The ministry of Finance has been the coordinating body for strategy implementation and therefore arranging biannually the meetings of its steering committee. For details, see Rahandusministeerium (2013).

improving the common understanding of financial services and life-long and life-cycle financial planning; and (iii) promoting socially responsible and transparent financial service provision.

The Estonian Financial Supervision Authority (FSA), in partnership with other government departments and various private and non-profit stakeholders, was initially made responsible for leading the implementation of the programme. But due to changes in the Management Board and priorities of the FSA in 2014, the FSA is no longer leading the implementation. There have been discussions around creating a separate body in the form of a public-private partnership, but so far, no such institution has been set up. Therefore, according to the social partners' insights, the implementation of the program is practically on hold at the moment. However, the Estonian Ministry of Finance has initiated and supported the participation in several international financial literacy surveys, coordinated teacher training and held regular stakeholder meetings for the exchange of information and best practices.

Three cross-national FL surveys, using the OECD methodology, have been used in designing and evaluating the strategy. More specifically, the 2010 survey served as an argument for starting the strategy process, the 2012 survey was used for setting the baseline, and the 2015 survey was the first opportunity to evaluate the outcomes. The next evaluation of the program is scheduled to take place in 2019.

The first objective of the strategy is related to curriculum design, teachers' life-long education and development of teaching materials, including digital tools. When it comes to measurable policy goals, the action plan is precise and ambiguous at the same time. On the one hand, most of the indicators, as shown in Table 5, are actually measuring the rates of long-term savings or time deposits. On the other hand, the plan does not even acknowledge the above presented issues of inequality; therefore, it would be incorrect to expect it have set clear targets or indicators for addressing the need to decrease these. Nevertheless, one could have expected that policy makers clarified the specific target for the PISA's achievement test. As shown in the previous sections, the FL score among the Estonian students (with the exception of students who study in Russian language schools) has in the past tests given one of the highest results among OECD countries. It would be desirable to know how ambitious and/or confident policy makers are that the action plan they have set up is able to reach the target – especially as the plan identifies no indicators to measure progress in curriculum design, improvement and/or teachers' competencies in FL.

The second objective is intended to be reached with the help of the information campaigns, web pages (such as www.minuraha.ee), trainings and increased advisory services in local municipalities. Table 6 presents the indicators and the intended targets for various interventions that use the tools of informal education and public awareness raising. Evidently, measures and indicators are targeted for increasing adult FL and thus address one of the listed problem areas. While most of the interventions supporting the second objective were planned to be financed from the national budget or EU funds, to the best of our knowledge the goal has actually received very little attention – reflected in the fact that no financial resources have been directly allocated to cover the costs related to these activities.

Table 5. Indicators of reaching the first objective of the 2013 Estonian National Strategy for Financial Literacy

Indicator	Baseline	Target	Source of information
Percent of people who plan their long run actions and keep financial budget	47 %	57 %	Financial literacy survey
Percent of people who invest to less liquid assets, more than 2 years yield	24 %	34 %	Financial literacy survey
Average percent of III pillar pension deposits from monthly salary	4.40 %	4.50 %	Ministry of Finance
Number of people who have III pillar pension account	120,000	135,000	Ministry of Finance
Number of personal term deposits and saving accounts and total average amount	456,000 contracts; 4,999 euros	Increase	Financial Supervision Authority
Households outstanding financial loans ratio from total loans	9.16 %	Decrease	Bank of Estonia (official statistics)
15–16 years financial literacy PISA score	To be specified in 2013		PISA financial literacy score

Source: Rahandusministeerium (2013)

Table 6. Life-long learning and public awareness indicators

Indicator	Baseline	Target	Source of information
Percent of people who searches for the information and various offers before choice of financial service	44 %	55 %	Financial literacy survey
Percent of people who don't know where to appeal for customer protection	36 %	26 %	Financial literacy survey
Regularity of info days and campaigns	It will be indicated in 2014	Regular	Statistics of participants and number of events

Source: Rahandusministeerium (2013)

The third objective targets transparency in the provision of financial services, which almost inevitably embeds the need for improvement in financial regulation (i.e. amendments to the legal documents). It is stressed that measures are targeted to support certain age groups, such as retired or youth, by decreasing their behavioural and knowledge gaps compared to the rest of the population. To achieve the goal of the plan, the actions have addressed more specifically the informational scarcity and asymmetric information problems either through regulating private financial services and improving the legal acts related to these such as the Consumer Protection Act.

4.2 Provision of financial education: schools, universities and the financial sector

4.2.1 Implementation in the education curriculum?

In Estonia the implementation of the curricula that addresses FL started in 1996 when the related topics were incorporated into the first National Curriculum (after regaining independence in 1992). According to the new curricula adopted by the government in January 2011 (with the last amendment from August 29, 2014), introduction of the FL related topics are part of civics and of an optional subject that is divided (and delivered) in two separate courses: (i) the principles of economics and (ii) entrepreneurship.⁴ The government decree states that these courses should be “closely integrated with other subjects, relying on the knowledge gained in mathematics, geography and history and supporting civics and human studies” (The Government the Republic of Estonia, 2011: 2).

Although the above presented government guidelines for the teaching of economics and entrepreneurship are still valid as part of the national curriculum for upper secondary schools, in 2016 the Ministry of Education and Research of Estonia started to develop fully-fledged curricula for the entrepreneurship education. It is being implemented within the EU funded programme “Edu ja tegu” [Entrepreneurship education programme “Edu ja tegu”] by the government agency Innove.

While the programme document makes it clear that the intention is to promote interdisciplinarity at all types of educational institutions, from higher secondary schools to universities (Haridus- ja teadusministeerium, 2017: 7.4), researchers contracted within the programme to guide the drafting of the principles for redesign of the entrepreneurship education seem to have persuaded the programme directors not to follow a narrow disciplinary approach but a broad teaching approach that integrates its components and related competencies (instead of knowledge) throughout the curriculum (see Venesaar et al. 2018). Indeed, after few years of implementation the programme website⁵ leaves no

4 In the official government documents “majandus- ja ettevõtlusõpe” are actually translated as “economic and business studies”. For details, compare the documents by Eesti Vabariigi Valitsus (2011) and The Government of the Republic of Estonia (2011).

5 For further informatin see, the official website of the programme – <https://ettevotlusope.ee>.

doubt that it is targeting all educational levels, has preselected topics to be introduced and related competencies to be developed, has been setting the intended learning outcomes, and has been developing (online) study materials, sample programmes as well as guidelines for their implementation and teacher training courses.

In the context of the existence of national curricula from 2011 for the civics and the elective course, on the one hand, and the more recent state initiative to develop entrepreneurship education within the EU funded programme that has already drafted the course description (see Innove, 2018), on the other, schools actually have substantial autonomy over the content of the elective courses. This includes the specific topics to be introduced, the level of detail/difficulty, the intended learning outcomes and the teaching methods to be used to achieve these. It is enforced by the state policy whereby, unlike in mandatory courses – for some of which students must take national exams that also serve as entrance exams to universities – the optional courses, like the principles of economics and entrepreneurship, have no standardized state examination.

All this means that FL topics are introduced to Estonian students in lower and upper secondary schools in the mandatory civics classes and in elective courses on the principles of economics and entrepreneurship. More specifically, topics and concepts such as budget, planning personal finances, comparing financial services and consulting with financial institutions are integrated into the curricula of civics in grade six and, in greater depth, in grade nine of general secondary education. For instance, in the ninth grade (which is the last grade of the so-called middle school before pupils start the three year higher secondary school, go to vocational school or get a job on the labour market) the topic of consumption and investment is introduced among others to the students in the part of the Civics and Citizenship Education course titled “Managing the economy of society”.⁶ Teachers who are able to follow the ambitious curriculum are supposed cover, among other sub-topics, the following: loans and borrowing, risks associated with loans, investing, stocks and shares, pension funds, saving and investing. It has to be noted that little or no indication is given about the depth or detail in which these sub-topics need to be taught.

The existing national curricula on the principles of economics from 2011 includes five major topics. Out of these topics, FL is developed most directly in the context of “Money and the Financial Economy”. It has the following intended learning outcomes attached to it: “1) know the nature of the Estonian monetary system and discuss Estonian financial policy; 2) analyse the role of commercial banks as payment performers and intermediaries in money circulation and the importance of deposits and loans in the bank balance sheet; 3) know the tasks of the central bank as the organiser of money circulation, the currency reserve keeper and the supervisor of commercial banks; 4) understand the nature of insurance and range of insurance services; 5) know the causes of inflation and deflation and discuss their consequences; 6) analyse consumer price index development and its fluctuations due to changing prices and wages; and 7) understand the nature of,

⁶ In Estonian the course is titled “Majandus ja maailmapoliitika”, which in direct translation would be “Economics and World Politics”. The above mentioned translation comes from the official course registry which can be found here: <http://oppekava.innove.ee/subject-field-syllabuses-2/>.

and differences between, the most important securities (bonds and shares) and ascertain how the securities market functions and its importance for the national economy.” More specifically, the programme suggests as “learning content” that the following sub-topics be covered: (i) functions of money, (ii) financial intermediation; (iii) the banking system, central bank and commercial banks, their tasks and roles in money circulation and offered services; (iv) deposits, loans and risks; (v) the Estonian monetary system, currency board and financial policy; (vi) the Euro and its use in Europe; (vii) insurance and insurance services; (viii) securities: bonds and shares, their nature and differences; (ix) securities market and its effect on economy; (x) inflation and deflation; and (xi) consumer price index.

As for the study materials to support the teaching of FL, a relatively recent review composed by Ustaal (2017) found that there are only two Estonian language textbooks that are widely used at the level of higher secondary education. The first of these, titled “Majandusõpik Gümnaasiumile” [Economics Textbook for Secondary Schools] (Junior Achievement Eesti, 2018), is composed by a consortium of authors who address a variety of topics related to entrepreneurship, from marketing to macroeconomics. The second one, titled “Finantsaabits” [ABC of Finances] is initiated by FSA (Zirnask 2016) and financed by the Nasdaq OMX Tallinn Stock Exchange with support from the Ministry of Education and Research, is more directly related to issues of personal finances. Although the first edition of Finantsaabits was published and made available free of charge in 2011, the most recent version comes from 2016. It is written by a well-known business journalist with the support and content provided by the experts of the FSA, stock exchange and banks, was delivered free of charge to schools and libraries, and is freely downloadable. Therefore, it has been widely adopted.⁷ In 2020 the first personal finance textbook for institutions of higher learning will be published in Estonian as a commercial initiative by the authors: Liivamägi, Talpsep and Vaarmets. There are several other books for various age groups and difficulty levels, from the ABC of money to kids up to wealth management and achieving financial freedom. In the end of 2018, some of them were distributed free of charge to schools and libraries, with the financial support of the private sector.

4.2.2 Is there attention to financial literacy in teacher training?

The first and probably most important fact to be realized about the current situation in Estonia is that vast majority – if not almost all – teachers who teach principles of economics and entrepreneurship and civics, where FL topics are introduced to students, do not have a university degree in economics, business, entrepreneurship or finances. As economics and entrepreneurship studies are electives at Estonian schools, they do not provide full-time teaching hours for teachers who would specialize only in these topics;

⁷ In recent years, one more book, titled “Rikkaks saamise õpik” [Textbook How to Get Rich], written by Jaak Roosaare and published by a less well-known commercial publisher, Müügiguru Ltd, has appeared. There have been three prints (or improved versions) that have appeared so far and the author claims on his personal website that it is the best-selling book on economic issues in Estonia (Roosaare 2019).

and it would probably be quite difficult to attract teachers with the specific educational background to school.

Another major issue is the socio-economic background of teachers. According to the OECD database, more than half of teachers in Estonia are in age 50+, meaning they started their career in the Soviet times when investing was not supported and have seen several economic reforms that made them sceptical about the advantages of long-term investing. Therefore, their attitudes are not in favour of teaching long term prudent financial behaviours. Furthermore, due to relatively low income levels, very few of them are investing themselves. Therefore, they lack both experience and confidence to teach such issues.

The way Estonian secondary school system has been able to cope with the responsibility to teach courses on civics, principles of economics and entrepreneurship by attracting existing teachers as discussed earlier. So currently the main actors at the school, whose background could be from history to mathematics, have to take up the teaching of these classes. Teachers with appropriate motivation have several possibilities to get informal and continuous education on these subjects.

More specifically, continuous education of higher secondary school teachers in financial education, economics and entrepreneurship subjects has mostly been taken up by the private and non-governmental sector. The most important actors with this mission are FSA, Junior Achievement Estonia, the Economics Teachers' Association, SEB Bank, the Museum of the Bank of Estonia, the Banking Association, and the Economics Teachers' Association in cooperation with the US organizations Global Economic Education Alliance and National Centre on Education and the Economy.⁸

More recently, the Ministry of Finance, in cooperation with the NGOs Rahatarkus and Investeerimiskubi, has also supported the continuous education of higher secondary school teachers in the topics related to FL. Furthermore, the Consumer Protection Board together with the University of Tartu has offered consumer protection courses for teachers and the above mentioned state programme "Edu ja tegu", that is coordinated by the government agency Innove, has offered some teacher trainings in the field of entrepreneurship education.⁹ In addition to this, the consultations with stakeholders on the framework document lead to the negotiations over the teacher training at universities more generally and there is a hope that FL topics will be included in their curricula in the future. Nevertheless, the open university that allows people who have already started their career

8 For instance, Junior Achievement has been active in offering teacher training programs. (For details see – <http://www.ja.ee/programmid/koolitused.html>). SEB Bank and Bank of Estonia provide financial education or hold seminars to teachers twice a year. Banking Association has been organising the festival called "My Money Month" every spring for seven years across the whole country. All schools have the opportunity to invite guest teachers, recently also international competitions have been launched. Last but not least, Economics Teachers' Association in cooperation with the US organizations The Global Economic Education Alliance and National Center on Education and the Economy has been offering two-day summer courses for teachers for years.

9 For details, see – <https://koolitus.hitsa.ee/training/2330>.

to take classes at the institutions of higher learning seems to be an underutilized option in this context.¹⁰

As a result, it has been estimated that approximately 50% of teachers have attended professional development in financial education and almost 90% of classes are taught by teachers of the school (not NGO, public or private experts).

4.2.3 How do various initiatives reach students and the general population?

State efforts to develop FL among Estonian students are concentrated to the curriculum developments of formal education and teachers' non-formal (continuous) education discussed above – especially in the field entrepreneurship. The general population in this context has been targeted by various initiatives, not so much by the government but by the banking sector as well as enthusiasts and NGOs.

It is important to understand that the financial sector in Estonia is heavily concentrated in the hands of two large Swedish universal banks, which control over 80% of the commercial banking sector, and the other parts and types of financial intermediation like investment banking, stock and bond market, have started to grow only recently. The mandatory and voluntary pension system, which – as pointed out above – has become a matter of severe political debate, has also played a part in this change.

In this context, one should not be surprised to learn that commercial banks and the pension funds they manage have played an important role in FL development among the general public in Estonia, starting often already at school age, to tie young people to a specific financial service provider – first simply as the client opening a checking account and debit card, but later also purchasing more complicated products, from loans to pension funds.

More specifically, individuals born in 1983 or later are required to freely choose one of the licensed pension funds, out of more than 20 operated by private fund managers in Estonia (Pensionikeskus, 2018). To help individuals compare and choose pension funds, several educational websites (minuraha.ee, pensionikeskus.ee) have been developed.¹¹ The rest of this section provides an overview of the financial sector's initiatives in relation to FL development.

Financial sector initiatives

There are efforts that commercial banks undertake collectively through their umbrella organization as well as individually. To start the overview with the former, for the last

¹⁰ However, Tartu University Tallinn subsidiary offers some open University courses available to teachers.

¹¹ However, Riitsalu (2018) revealed that merely 9% of individuals had compared the conditions of several funds before making the decision. More than half had accepted the offer from the home bank, while 14% had enrolled in a fund offered to them by another bank. She also shows that gender, age, dwelling, education and income level are insignificant factors for the choices, and same applies to risk attitudes. In short, her research demonstrates that prudent choice cannot be explained by a better financial knowledge score or socio-economic status.

seven years the **Banking Association** has been organizing Financial Literacy Month whereby guest lectures are conducted in secondary schools and, in the last two years, an international FL quiz has been organized.¹² Most recently, they also collaborated with the SEB Bank and Investeerimisklubi to organize a class dedicated to the development of FL for primary school students that was streamed on Facebook Live. (It has been reported that some 12,000 viewings have been registered to date).

As the largest commercial bank in Estonia, **Swedbank** set up the Institute of Finances (IF) as an independent educational entity of the bank. Its mission is to facilitate general FL among the Estonian population through encouraging sustainable financial habits in all groups of society. IF provides informational support in various finance-related matters, conducts research, offers practical tools for financial planning and organizes educational events, social media initiatives, etc.

In addition, Swedbank supports the “Back to School” initiative, which aims to strengthen the cooperation between Estonian schools and the rest of society. They invite guest teachers to schools, to carry out lessons and share their experience. In 2018 Swedbank employees gave 140 such lessons in different schools all over Estonia.

The bank is also actively trying to engage with youth on social media and has recently initiated the following initiatives: (i) Facebook group Kogumispäevik [Savings Diary] – a community which unites over 27,600 people (approx. 10% of Estonian households) who are interested in saving money and improving their financial behaviour. 90% of the members are actively engaging (asking and sharing advice, commenting, sharing). (ii) Class excursion contest MeieReis [#OurTrip], organized in 2017 and in 2019. The aim was to promote financial literacy among youngsters. Students had to compile a class excursion project within certain budget, discuss and write down saving tips and ideas on how to earn extra money and make a short video about their class; (iii) Money School – investment seminars for beginners. In 2019, seminars were organized in different towns and over 150 people participated.

SEB Bank, the second largest commercial bank in Estonian market, is less visible compared to the above presented Swedbank. Nevertheless, they have been an important promotor and supporter of FL in Estonia. For instance, it organizes seminars for teachers twice a year as well as FL classes for primary and elementary school students. The course consisting of 10 video-classes is freely available.

LHV bank as the only Estonian capital-based commercial bank has taken the lead in investor education ever since its founding. It has provided investor education at schools and free seminars for the general public. In addition, it has a blog (with various resources for learning more about investing)¹³. Furthermore, LHV have launched an interactive platform Börsihai [shark of stock exchange] that uses gamification and edutainment for investor education and offers favourable terms and conditions to young customers. Youth

12 For details, see – <https://pangaliit.ee/uudised-ja-teated/pressiteade-2500-abiturienti-naitasid-katte-rahataarkuse-kitsaskohad> as well as <https://www.pangaliit.ee/uudised-ja-teated/selgus-estli-parimate-rahateadmistega-klass>.

13 For the details, see – <https://fp.lhv.ee/academy>.

Bank was launched specifically for young customers and – among other specificities – offers Growth Account and Microinvestment services that make it easy and attractive to start investing.

In addition to commercial bank initiatives, FSA runs a financial education webpage minuraha.ee [my money] that can be considered an impartial and objective source of information for the general public, with no commercial interests, in both Estonian and Russian. The web page collects and provides information about various financial services, including issues related to investment and pension. It also has digital tools for calculating interest payments for loans and savings, as well as a comparative description of all financial service providers on such basic costs as transfer and contract fees, credit cards etc.¹⁴

FSA also organized several contests for students, for instance a video contest in co-operation with the Estonian Ministry of Education and Research for students (from grade one to twelve) in 2009. For the contest, the students produced short films about themselves and money. A financial education website¹⁵ hosts six sections: everyday money matters and life events (chapters composed by FSA experts); young people on their own money matters (videos); celebrities on their money matters (interviews); useful tools (comparison tables, calculators); games (two are interactive games and six tests) and materials for teachers (various resources).

Some educational games have also been developed for the benefit of students. More specifically, Danske Bank has developed a game for elementary school students,¹⁶ LHV Bank has developed a completion for secondary school students,¹⁷ and finally FSA has come up with one for all age groups.¹⁸

Other initiatives

There is also a website that functions as the **e-learning repository** as it collects and makes available for reuse the digital teaching materials for the benefit of teachers and students. One of those e-courses or modules usually contains visualisations, text, and exercises together with the correct solutions. For the higher secondary level, the following e-modules are publicly available: (i) Changes in the global economy and globalization; (ii) The economy and global politics; (iii) Macroeconomic indicators; (iv) The state and economy – the role of state in the economy; (v) Legal forms of enterprises; (vi) Functional forms in economics; (vii) Consumption and saving; (viii) Taxes in Estonia; (ix) Consumption and investment; (x) Consumer protection; (xi) Labor market and employment; (xii) Consumer protection (loans and lending); (xiii) Contracts (4 parts); (xiv) Family finances; (xv) International trade; (xvi) Economic systems (study texts); (xvii) and Social science: economy and ethics.¹⁹

14 The website can be found at www.minuraha.ee.

15 For more information see the website – <http://kool.minuraha.ee/>.

16 For more information see website <http://www.rahamaa.ee/>.

17 For more information see <https://www.lhv.ee/et/hai>.

18 For more information see <https://minuraha.ee/pane-oma-teadmised-proovile/>.

19 The website can be found at <https://e-koolikott.ee/>.

Two major daily newspapers have created a fictional character who describes his or her experiences as an investor. Äripäev, a business daily, has an intermediate level character called Investor Toomas. Postimees, a general interest daily has Investor Mari, a woman beginner in investing. These regular reflections on how these imaginary investors are doing on the stock market promote interest in investing and indirectly encourage readers to take their first steps in this field. Äripäev has also launched **radio broadcasting** of financial news, which can be flexibly accessed from their web page.²⁰ Investment Radio and Investment Club provide regular radio podcasts.

There are also a number of internet **blogs and forums** that have been launched by institutions, individuals and interest groups. These have started to teach the basics of planning and investing as well as improving the attitudes regarding personal finances. For example, Swedbank, as the biggest commercial bank in Estonia, keeps a blog about personal finances, setting goals, savings, budgeting, loans and behavioural economics.²¹ Tuleva, an association of pension savers, looks for ways to keep the costs of pension fund management low. For instance, they were the first to bring to the market a pension fund that invests into index funds for that purpose. They keep a blog that reflects on the importance of saving for the pension age and explains different options for that purpose.²²

As for blogs kept by individuals, one can point out Kristi Saare, Jaak Roosare and Taavi Pertman. Kristi writes about her personal experience about investing into stock markets and real estate as well as about savings and taxes more generally.²³ Jaak, who is also the author of a popular book titled “Rikkaks saamise õpik” [Textbook of Getting Rich], shares his thoughts about economics, investments, crowd-funding and financial freedom in general and about his experience in investing in loans for private persons (peer-to-peer lending) and investing in stock markets in particular.²⁴ Finally Taavi, whose background is actually psychology reflects about his experiences and provides training for beginners on how to start with investing.²⁵

There are also several **investment clubs** that have been launched. They utilize peer effects, opinion leaders and experts for developing an investment culture. Some of them work for profit, but not all. For example, The Estonian Minority Shareholders’ Association, which “is an independent, non-for-profit organization formed to provide minority shareholders of Estonia with strong collective voice, influence and an opportunity to realize their rights in accordance with best standards and practices of the European Union” keeps a blog to keep its members and the public informed about their activities aimed at equal treatment and protection of all investors.²⁶ There is also a *Naisinvestorite klubi*, an investment club encouraging women to start investing.²⁷ Another one that could be

20 The website can be found at <https://www.aripaev.ee/raadio>.

21 The blog can be found at kukkur.swedbank.ee/tag/rahatarkus.

22 The blog can be found at <https://tuleva.ee/blogi/>.

23 The blog can be found at kristiinvesteerib.ee/blogi.

24 The blog can be found at roosaare.com/blog.

25 The blog can be found at <https://rahafoorum.ee/>.

26 The blog can be found at <http://vaikeaktsonarid.ee/blogi>.

27 For more information, see <https://naisinvestoriteklubi.ee/>.

pointed out is *Ärikatel* which actively promotes investing and entrepreneurship. It also cooperated with Nasdaq OMX in organising the annual investment fair *Rahakompass* in Tallinn between 2010 and 2012.²⁸ There is also the *Investeerimisklubi*, which organises – among other things – an investment festival and another investment club for Russian speakers.²⁹ Last but not least, NGO *Rahatarkus* specialises in financial education and consultation. Their aim is to help individuals to make wise choices in planning their personal finances and career in all life stages. To achieve this goal, they provide training, consultation, teaching resources, surveys, career advice and other services in cooperation with various stakeholders from both the public and private sector.³⁰

4.2.4 Is there a lot of attention from the government?

There was a lot of attention from the government to FL at the height of the financial crisis. As a result, the above-mentioned National Strategy for Financial Education was initiated in 2010 and the first seven-year program was launched in 2013. This policy was described in detail above in the section titled “Overview of past policy attention”. As indicated there, the policy’s implementation has nearly come to a standstill in Estonia – an issue that we shall return to below. However, the MoF is starting develop the NS for the next period and has started consultation with experts.

It is probably fair to say there has been rather little attention from the part of government since the economic recovery. It is also noticeable that in the run-up to the last general elections in Estonia in the spring of 2019, and in light of the new government that came to power as a result, there is a real possibility that the existing pension system will be fundamentally reorganized. In this highly politicized context, personal finance topics gained much attention in the first half of 2019.³¹ The looming pension reform will put even more responsibility on individuals to save themselves, to ensure future financial security.

In anticipation of the need to reorganise the governance and implementation of the National Strategy for Financial Education, Estonian decision makers could lend more weight to the general recommendations by the OECD (2015) that emphasise the following four core elements as the principles for effective national strategies: (i) developing a diagnosis to inform the national strategy; (ii) establishing institutional and governing arrangements; (iii) setting and achieving objectives, evaluating and funding the national strategy; and (iv) ensuring effective and innovative provision of financial education.

28 For more information, see <https://arikatel.ee/meist/>.

29 For more information, see <https://investeerimisklubi.ee/>.

30 In their recent projects they have been contracted by or have cooperated with the Estonian Ministry of Finance, Foresight Centre and OECD.

31 In addition to this, the Foresight Centre, as the futures studies policy analysis institution working at the arms-length of the parliament and government, has, for instance, an ongoing project that has engaged various experts to develop scenarios for financial well-being for those who retire after 2050. Several analyses are in the process of being finalized in the second half of 2019.

Within this context, a critic could argue that the three last above mentioned suggestions made by the OECD have received limited attention in Estonia. In addition, there is no regular or sufficient funding to increase FL. Instead, much of its implementation at grassroots level relies on responsible school teachers and management, depending on individual initiatives that are often only one-time events realized with project-based funding. These limitations place substantial constraints on the sustainability and effectiveness of such interventions in particular, and on the long-term prospects of the Estonian national strategy in general.

4.2.5 Overview of evidence on tools that exist to promote financial literacy

Estonia provides an interesting set of policy lessons which are probably very difficult to replicate in other contexts. The highly impressive result of Estonian students and adult populations in the OECD achievement tests is better explained by the past dependency of its educational practices rather than well-designed policy efforts on FL. Improving FL is a long-term issue; it takes many years of constant effort to deliver results. It could be argued that, so far, a vast majority of financial education initiatives have been designed, funded and carried out by financial sector institutions, with moderate support from the Ministry of Education and Research. In this context, some outstanding efforts can be highlighted:

- First, the launch and development of the impartial financial education portal *minuraha.ee* in 2008.
- Second, becoming a member of the OECD International Network on Financial Education in 2010.
- Third, participating in three international financial literacy surveys for adult population and in two PISA financial literacy tests.
- Fourth, developing a national strategy of financial literacy.
- Fifth, launching a public-private partnership for improving financial literacy in Estonia. For example:

- In 2011, the handbook of personal finances mentioned above, titled “*Finantsaabit*” [ABC of Finances] was authored by Zirnask (2016), a well-known commentator who also teaches at the University of Tartu. Since it was financed by the Nasdaq OMX Tallinn Stock Exchange with support from the Ministry of Education and Research, it was published and distributed free of charge to schools and libraries across Estonia.
- In 2011–2012 regional financial education full day events “*My Money Days*” were organized by the FSA in partnership with the Banking Association and Stock exchange. In all major regions of Estonia full day extra-curricular events were delivered during which one group of teachers and three groups of students were provided financial education in an interactive and engaging manner. Participants from several schools of the same region attended these full-day events, and experts from all partner institutions drove to these regions to provide training and guidance. To increase the

- relevance and use of peer effects, volunteers from youth organizations taught the students of grades 6–10.³²
- In 2013, additional teaching resources were developed in a partnership between the FSA, stock exchange, Banking Association, Estonian Economics Teachers' Association and Ministry of Education and Research. The teachers developed 36 resources that can be integrated into the curricula of 14 subjects at all school levels, a total of 250 pages of materials with teaching notes, all supervised by the experts of the financial sector. All of these use coherent methodology and formatting, in accordance with the intended competencies set by the national curriculum. These financial education resources went through rigorous testing and are available online free of charge.³³
 - Sixth, the active engagement of private sector, NGOs and influencers in providing financial education, and more specifically investor education, in several innovative as well as traditional ways.

4.3 The future of financial literacy in Estonia

4.3.1 Remaining difficulties and issues

Despite the high achievement test results both for Estonian teenage students and for the adult population, presented in the first section of this chapter, the country still faces several challenges. There are important differences in the attainment results among students who attend Estonian and Russian language schools. Financial education is taught by teachers whose formal educational background is in other fields and who, at best, are self-taught or benefited from some of the non-formal educational programmes of various kinds. Most of the financial education programmes do not receive regular funding and are therefore not sustainable. Furthermore, there could be better coordination across stakeholders to reduce overlaps and fill the gaps (e.g. design programmes for specific target groups) for the provision of 'just in time' financial education initiatives. Last but not least, there is a mismatch between high FL achievement test results and the behaviour of the population when it comes to long-term financial planning and saving.

4.3.2 Necessary steps to be taken

FL is a complex topic that borders several disciplines from economics and finance to psychology and sociology. As it also relies on the skills and competencies developed in mathematics and relates to the issues discussed in the civics and entrepreneurship education, it seems reasonable that Estonian teachers are introducing FL related topics

³² For further information, including teaching manuals, see the website of the festival: <http://kool.minuraha.ee/minu-raha-paev/>.

³³ For the details, see: <https://koolielu.ee/waramu/view/1-2ee78509-cea0-45c9-acc4-34e0ee3981f1>.

in various courses of the integrated national curriculum. Although there are noticeable differences between students studying in Estonian and Russian schools, the empirical overview of results provided by the OECD and PISA confirms that this approach has been very successful, at least in transferring the knowledge. While it is not strongly supported by the data collected for the comparative study in the beginning of the book, various OECD studies show that Estonia stands out as a country with some of the highest financial knowledge scores both among the teenagers as well as the adult population.

The Estonian case faces a number of challenges: the principles of economics and entrepreneurship are not mandatory courses during secondary education; secondary school teachers lack almost completely formal education in these disciplines; the national curriculum leaves much to be desired; and the most widely used textbooks at secondary schools have been developed as a result of private initiatives or public-private partnerships. Therefore, better coordinated and more sustainable teacher training programmes could be developed. Although the cooperation with stakeholder society is positive in principle, the Estonian example shows that without coordination, these efforts remain fragmented with questionable results. Hence Estonia would benefit from better coordination of national curricula, textbooks and specialized teacher training programmes for the preparation of teachers in economics and FL.

The result of the lack of attention to economics and FL in national curricula, teacher training and textbook development at the state level is that a large number of fragmented and uncoordinated efforts initiated by nongovernmental actors have emerged. These actors, some for-profit and some others not-for-profit, have been actively promoting various blogs, competitions, forums and other platforms. On the one hand, one can question the commercial interests behind some of these initiatives prompted by for-profit actors. On the other hand, one can question the possible impact of the short projects implemented by not-for-profit actors with limited and unstable findings.

To improve policy making and implementation, the steering and strategic coordination could be reorganised. More specifically, given that FSA's leadership and priorities have changed, on the one hand, and given the role of private and non-governmental organizations in support of the development of FL among the general population, on the other, the Estonian National Strategy for Financial Education needs a new coordination mechanism and responsible body, with appropriate powers and funding.

More specifically, decision-makers in Estonia should channel their efforts to setting up a coordinating and implementing body for the improvement of FL, aiming to: (i) give it not only the mandate but also necessary resources; (ii) develop action plans for the next years; (iii) agree on the main target groups and priorities; (iv) agree on the division of work, responsibilities and allocation of resources; (v) get a government buy-in for these plans; (vi) evaluate and assess each of the initiatives on regular basis; rigorous testing of various tools and programmes for finding the most effective solutions; apply behavioural insights in policy, design of financial services and financial education for improving financial behaviours (instead of increasing only knowledge); (vii) coordinate the support and training for teachers more effectively.

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