Lithuania: Policy Note on Financing Education, with Particular Reference to Higher Education

This policy note analyses the system for financing education in Lithuania, with emphasis on its implications for efficiency and equity and with a particular focus on higher education. It is intended to contribute to the policy debate by raising questions for discussion. It begins by reviewing the general principles that underlie decisions about who should pay for education and how government money should be allocated to educational institutions. As background to the discussion of financing, it then compares educational attainment, access, resources, efficiency and outcomes in Lithuania with those in EU member states and other accession countries. The main statistics on education in the national budget are set out. The systems for financing the various types and levels of education are then described and discussed: pre-primary, basic and general secondary education; vocational education; lifelong learning; and higher education. Finally, the main policy recommendations of the note are summarized.

Introduction

This policy note addresses two of the most contentious questions in the field of educational finance. Who should pay for education? And how should government money be allocated to educational institutions? The detailed answers to these questions will depend on local political and social circumstances, but there are some general principles that have to be taken into account.

It is generally agreed that the state should pay for what are called 'public goods', which cannot be bought and sold in the market because they yield social benefits only if they are consumed by all: environmental protection and malaria eradication are the classic examples. Is education a public good? Only partly. Sen (1999:128) calls it a 'semi-public good', yielding benefits both to the individuals who receive it and to society as a whole. Education is important to the future material welfare of individuals – their ability to earn more in the labor market and to live longer lives that are enriched in other ways. But it is also important for social cohesion: the higher the average level and the wider the spread of education within a society, the more likely it is that groups of citizens will be willing to cooperate across boundaries that normally divide them. And there are other social benefits from widespread education – improved public health, lower crime rates, more active and informed democracy, reduced inequality in incomes, etc.. It follows that if individuals had to bear the full cost of their schooling they might tend to buy less of it than would be socially optimal.

Does this mean that all levels of education, from pre-school to postgraduate, should be 100 per cent subsidized by the state? The case for state subsidy gets weaker as the level rises. The provision of a high-quality basic education to all may be enough to ensure most of the social benefits arising from it. Beyond that, the ratio of individual to social benefit probably increases. As the higher levels of education expand throughout the industrialized world, governments, faced with budgetary constraints, are using this argument to increase the proportion of their cost that is financed by beneficiaries. In countries which have traditionally regarded education at all levels as a public good this causes great political stress.

The more narrowly vocational the skills that are imparted (and particularly in the case of enterprise-based training), the stronger is the case for asking the beneficiary to pay all or some of the costs of the training. The
definition of the beneficiary will depend on whether the skills in question are general or specific\(^3\). If the skills are general or transferable, i.e. of use to more than one employer (for instance, welding or general computer skills), employers will be reluctant to finance such training of workers because it will make them more attractive to other employers. If the skills are ‘specific’, i.e. useful to only one employer (for instance, assembly or repair of a specific brand of machine), employers will be willing to finance such training. Thus individuals are often willing to pay for the acquisition of general, transferable skills, but employers would only finance such training if an incentive is offered to them, such as the ability to pay a special low ‘training’ wage or a subsidy of some kind from government.

As for the principles on which government money should be allocated, many countries are exploring reforms that are intended to increase the efficiency of education systems and the quality of their output. For instance, several have introduced a ‘radically decentralized’ approach to educational administration, which amounts to the creation of a ‘quasi-market’ for the services of publicly funded schools\(^4\). The allocation of finance to a school is determined by a formula, based primarily on the number of pupils (the principle of ‘money follows the student’). Such formula funding gives schools a financial incentive to recruit students and gives parents choice of school. It is hoped that autonomous schools will be encouraged to improve quality, in order to recruit more students and hence increase their funding. However, the lesson of international experience so far is that competition between autonomous schools will not, on its own, result in an improvement in quality. It has to be supported by the building up of national systems for curriculum, testing and publicization of quality indicators and regular reports of inspectors for every school. And, if such competition is not to result in further deterioration in equity of access and outcomes, it has to be modified by allocation formulae which favor recruitment of and payment of special attention to students with physical, intellectual or socio-economic difficulties.

Comparative overview: attainment, access, resources, efficiency and outcomes

In many respects Lithuania compares quite favorably with EU member states and other accession countries as far as quantitative educational indicators are concerned. For instance:

\(\text{o}\) Lithuania is entering the EU with a much higher average level of education among its active adult population than many existing members – 84 per cent of 25-64-year-olds had at least upper secondary education in 2001, compared with an average of 64 per cent in EU member states and 77 per cent in accession countries (see Figure A1 in Annex A);

\(\text{o}\) Lithuania’s enrolment rates (above pre-primary) are also higher than the AC and very close to the EU average (Figure A2);

\(\text{o}\) Lithuania has a considerably lower proportion of upper secondary students in vocational schools than most other accession countries and than the EU average (Figure A3);

\(\text{o}\) early school leaving is less of a problem than in many EU member countries – among 18-24 year olds, those with only lower secondary education and not in education or training represented 14 per cent of the age group in 2002, higher than the 8 per cent average for ACs but lower than the 19 per cent average in the EU (Figure A4);

\(\text{o}\) completion rates are also higher than in many EU member countries – 84 per cent of 22-year-olds in 2002 had successfully completed at least upper secondary education, again lower than the AC average (90 per cent) but higher than in the EU (75 per cent ) (Figure A5).

The educational comparison with Ireland, often quoted as a model to be emulated, is interesting: many of the above indicators are remarkably similar for the two countries.

As far as lifelong learning is concerned, the comparison is less favorable to Lithuania. For instance:

\(\text{o}\) adults seem to be less involved in education and training than in the EU – only 3 per cent of 25-64-year-olds interviewed in the labor force survey in 2002 had participated in education or training in the four weeks prior to the survey – the lowest percentage among the ACs, for which the average was 5 per cent, and well below the EU average of 9 per cent (Figure A6);

\(^3\) The originator of this distinction is Becker (1975): it is explained, clearly and briefly, in Middleton et al. 1993:Box 4-1).

\(^4\) See Ross and Leva (1999) for a discussion of formula funding systems in Australia, England and Wales, the US, Canada, and New Zealand. Among transition countries, Russia and Armenia have introduced ‘per capita’ formula funding of general education on a pilot basis (World Bank 2001; 2003), and the Czech Republic has a national system (Krátký et al. 2002).
enterprise training is much less developed than in the EU – only 43 per cent of Lithuanian companies organized some training of their employees in 1999, higher than the AC average of 40 per cent, but well below the EU average of 72 per cent (Figure A7).

The Lithuanian government is more generous than most to education and training but resources available are limited by the relatively low level of GDP:
- public expenditure on education amounted to 6 per cent of GDP in 2001, above the 5 per cent average of both the ACs and the EU (Figure A8)
- but expenditure per pupil in PPP euros is considerably lower than in the EU and in most other accession countries
- and the ratio of expenditure per pupil in higher education to that in secondary education is lower in Lithuania than in most other accession and EU countries (Figure A9).
- public expenditure on labor market training programs is a tiny proportion of GDP (as is also the case in most other ACs) and well below EU levels (Figure A10).

Indicators of efficiency in schools show a mixed picture:
- Lithuania’s pupil/teacher ratio in primary schools is close to both the AC and the EU average (Figure A11);
- but the range of secondary school teacher salaries (as a percentage of GDP per head), while similar to that in other Eastern European accession countries, is well below that in Southern European member and accession countries (Figure A12);
- nevertheless, the proportion of teachers above the age of fifty is below that in many other accession countries and (partly because of differences in retirement norms) the EU average (Figure A13);
- as in most other Eastern European accession countries, women represent a higher proportion of teachers in secondary schools than in the EU, partly because of differences in history but also reflecting the lower salaries on offer (Figure A14);
- as a result of relatively high pupil/teacher ratios and relatively low salaries, non-personnel expenditure accounts for a higher proportion of total expenditure in Lithuania’s public educational institutions than in most other accession countries and the EU average (Figure A15).

Learning outcomes seem to deteriorate as pupils get older and move higher up the education system:
- Lithuania’s fourth grade primary school students did relatively well in the 2001 PIRLS tests of reading achievement – a higher proportion of them reached the median international benchmark than in many EU member countries (Figure A16);
- performance of grade-8 students in both mathematics and science in the 1999 TIMSS tests was better than four years earlier, but in both subjects only just over half reached the median international benchmark (less than in most accession countries) (Figures A17 and A18);

Finally, the pay-off to education in the labor market does not seem to be as high as in some other accession and EU-member countries. For instance,
- Lithuanian upper secondary and tertiary graduates below the age of forty have some of the highest unemployment rates experienced in these countries (Figure A19);
- The earnings premium for tertiary over upper secondary graduates is lower than in Hungary and the Czech Republic (which have expanded tertiary enrolment more slowly) – but higher than in Ireland, which has benefited from its relatively cheap graduate labor (Figure A20).

In short, Lithuania enters the EU with indicators of educational attainment, enrolment, progression and completion that are comparable to those of existing members. But there are some worrying aspects of the comparison. Lifelong learning and enterprise training are less developed than in the EU and, although government funding for education represents a respectable proportion of GDP, expenditure per pupil is much lower than in the EU and most accession countries – and particularly low, relative to other levels, in higher education. Teachers’ salaries (and presumably status) are much lower, in relation to GDP per head, than in Southern European member and accession countries. And the apparent deterioration in students’ performance in international tests as they move up the education system is a matter for concern.

5 Purchasing power parity euros, i.e. converted at an exchange rate that is adjusted for differences in prices between countries.
Education in the national budget

Education competes with other sectors for government finance and, as already indicated, does quite well – obtaining more than 27 per cent of the national budget and 6 per cent of GDP in 2002 (Table 1). In addition, vocational training of unemployed and laid-off workers is funded from the Employment Fund: around 18 mn litas was spent on this in 2002, equivalent to only 0.04 per cent of GDP.

Table 1: National budget expenditure on education by level, 1995-2002

<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education as % of national budget expenditure</td>
<td>21.8%</td>
<td>30.6%</td>
<td>28.6%</td>
<td>29.4%</td>
<td>27.1%</td>
</tr>
<tr>
<td>Education as % of GDP</td>
<td>5.6%</td>
<td>6.5%</td>
<td>6.0%</td>
<td>6.1%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Total expenditure on education (mn. litas)</td>
<td>1350</td>
<td>2788</td>
<td>2704</td>
<td>2949</td>
<td>3169</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-primary schools</td>
<td>180</td>
<td>403</td>
<td>388</td>
<td>395</td>
<td>401</td>
</tr>
<tr>
<td>General schools</td>
<td>625</td>
<td>1326</td>
<td>1300</td>
<td>1413</td>
<td>1488</td>
</tr>
<tr>
<td>Boarding schools</td>
<td>76</td>
<td>143</td>
<td>135</td>
<td>131</td>
<td>134</td>
</tr>
<tr>
<td>Total</td>
<td>187</td>
<td>1592</td>
<td>1524</td>
<td>1655</td>
<td>1723</td>
</tr>
</tbody>
</table>

Vocational schools

<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>High schools &amp; colleges</td>
<td>60</td>
<td>123</td>
<td>120</td>
<td>120</td>
<td>135</td>
</tr>
<tr>
<td>Universities</td>
<td>176</td>
<td>352</td>
<td>322</td>
<td>442</td>
<td>523</td>
</tr>
<tr>
<td>Other</td>
<td>134</td>
<td>263</td>
<td>264</td>
<td>275</td>
<td>310</td>
</tr>
</tbody>
</table>


As can be seen from Table 2, which analyses government expenditure on education in 2002 in more detail, about a third of the education budget comes directly from the central government, two thirds is channeled through municipal governments. Capital expenditure is equivalent to only 4.4 per cent of current expenditure, of which 59 per cent goes on wages and salaries.

Table 2: Government expenditure on education, by level of budget, type of expenditure and level of education, 2002 (million litas)

<table>
<thead>
<tr>
<th></th>
<th>State budget</th>
<th>Municipal budget</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Current of which: wages</td>
<td>Capital</td>
</tr>
<tr>
<td>Pre-primary</td>
<td>1</td>
<td>0.3</td>
<td>0.5</td>
</tr>
<tr>
<td>General</td>
<td>82</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Boarding schools</td>
<td>126</td>
<td>2</td>
<td>70</td>
</tr>
<tr>
<td>Voc schools</td>
<td>177</td>
<td>1</td>
<td>87</td>
</tr>
<tr>
<td>High schools</td>
<td>39</td>
<td>0.3</td>
<td>0</td>
</tr>
<tr>
<td>Colleges</td>
<td>96</td>
<td>47</td>
<td>2</td>
</tr>
<tr>
<td>Universities</td>
<td>523</td>
<td>47</td>
<td>229</td>
</tr>
<tr>
<td>Total</td>
<td>1158</td>
<td>497</td>
<td>92</td>
</tr>
</tbody>
</table>

* In addition to wages, there are also contributions to social security. In the case of vocational schools, for instance, 49 per cent of the budget goes on wages and a further 15 per cent on these contributions.

Source: Ministry of Finance.

A question for the future is whether the Ministry of Education and Science will be able to hold on to its target allocation of 6 per cent of GDP over the next few years. The costs of joining the European Union are already eating into the resources available: the percentage fell to 5.4 per cent in 2003 and rose only to 5.7 per cent in 2004. Meanwhile, the number of children of school age is falling. Rough population projections suggest that:
- while the number of 19-24 year-olds will be 9 per cent higher in 2010 than in 2003;
- the number of 16-18 year-olds will be 11 per cent lower;
- the number of 7-15 year-olds will be down by 28 per cent.

In view of these demographic trends, the Ministry of Finance is unwilling to commit itself to maintaining education's share at 6 per cent. The teachers' union reports worries among teaching staff that financial gains from
efficiency improvements in education may accrue to other sectors. A potentially positive factor for education funding is a new law which allows taxpayers to designate 2 per cent of their income tax payments to schools.

Other sources of potential funding for education are non-budget finance (from parents, students, employers, donors, foundations etc.) which is expected to rise from almost zero to 0.5 per cent of GDP by 2006 (encouraged by a new tax allowance for parents’ payments for children’s education), and project funding from the EU. The EU Structural Fund is offering €158 mn in 2004-6 for projects in the fields of: development of infrastructure of labor market, education, vocational training, research and study institutions and social services; development of conditions for lifelong learning; and improvement of human resources quality in scientific research and innovations (Table 3). EU funds will be supplemented by €50 mn in national public financing over the three-year period.

Table 3: Financing Plan for EU Structural Fund projects, 2004 – 2006 (€mn)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Total</th>
<th>EU</th>
<th>National public financing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure 1.5. Development of Infrastructure of Labor Market, Education, Vocational Training, Research &amp; Study Institutions and Social Services</td>
<td>111.4</td>
<td>85.8</td>
<td>25.6</td>
</tr>
<tr>
<td>Measure 2.4. Development of Conditions for Lifelong Learning</td>
<td>61.2</td>
<td>45.9</td>
<td>15.3</td>
</tr>
<tr>
<td>Measure 2.5. Improvement of Human Resources Quality in Scientific Research and Institutions</td>
<td>34.9</td>
<td>26.2</td>
<td>8.7</td>
</tr>
</tbody>
</table>

Source: Ministry of Education and Science.

Although there is no shortage of project ideas, there are worries both about the local capacity to prepare applications for such funding that meet EU requirements, and about the possibility of absorbing such large amounts, subject to exacting EU implementation procedures, over a three-year period.

Financing system: (1) pre-primary, basic and general secondary education

An apparent deterioration in the relative quality of learning outcomes as pupils move up the education system has already been noted (Figures A16, A17 and A18). This may partly reflect the survival of the memorization-based 'factology' approach to teaching and learning, which builds strength in awareness of facts or solving a known class of problem, but not in applying a given technique to a new problem or in choosing which techniques to use to solve a new problem. Lithuania did not participate in the full PISA 2000 study, which tested the ability to use knowledge acquired in school in real-life situations, but a small sample of students took part in the field tests – and did not perform well. Also, analysis of items in the 1999 and (so far unpublished) 2003 TIMSS tests showed that eighth-grade students had difficulties with indirect questions that asked them to do more than reproduce textbooks or class notes. And results in the National Student Achievement Study, so far implemented for 4th, 6th and 8th grade students, point in a similar direction.

There may be other explanations for relatively poor performance in problem-solving tests (unfamiliarity with the format of such questions, international differences in motivation etc.) but the persistence of old-fashioned teaching methods is probably partly to blame. Although the percentage of teachers above the age of fifty is below the average for accession countries and EU members, many of those now teaching were prepared in the old way. The retirement age for public servants of 62½ is not enforced in the case of teachers.

Reforms on this and many other fronts are needed to improve quality of education, but the hypothesis underlying the new approach to financing schools is that it should help to reinforce their impact on quality. Under the old financing system, based on input-based norms, historical precedent and negotiation, big differences in per-student allocations had emerged between municipalities, salaries were often paid late, and there was little money for textbooks and teaching materials.

The new 'student's basket' system for general education, implemented over the past three years, applies to primary, basic, youth and secondary schools, gymnasiums (except those specializing in art), general education schools for adults, adult education centers, vocational schools that include general education, and special boarding

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Information in this paragraph is from interviews with the Center for School Improvement and the National Examinations Center.
schools, centers and classes\textsuperscript{7}. It will be introduced for pre-primary schools also from 2006. The principle underlying it is ‘money follows the student’: details are shown in Annex B\textsuperscript{8}.

The general verdict on the operation of the new scheme is favorable. Inequities between schools have been reduced, and the transparency of the allocation rules is appreciated. Rules for the use of non-budget funds (from foundations, international donors and partners, parents, enterprises etc.), which are consolidated into a school’s budget and can be carried over from year to year, are helpfully flexible, though such funds are subject to tax. Although cause and effect are not fully established, some increase in pupil/teacher ratios in secondary schools has been detected since the scheme was introduced in 2000. However, the full benefits of the formula funding model are not yet being reaped, for the following reasons.

1. Schools are not yet fully autonomous. School directors can decide how many teachers they need, and prepare their budgets with the approval of the school Boards (on which teachers, parents and students are represented). But, unlike higher education institutions and the five experimental vocational schools (with public-institution rather than budget-institution status), discussed below, a school does not receive a lump sum for flexible allocation by its management. The student’s basket and the funding from the municipality have separate purposes and are tied to particular line items. The inflexible basis for planning expenditure in a school is still the number of classes rather than the number of students.

2. Teachers’ salaries have been increased recently but they are still low in relation to GDP per head (Figure A12) and to the national average wage. In towns and cities, the high cost of living and competition from other employers make it difficult for schools to recruit and retain good teachers. The salary scale (Table 4) is hierarchical, compressed and unrelated to the labor market, tying the hands of school directors who can only offer extra payments for extra work.

<table>
<thead>
<tr>
<th>Table 4: Annual teachers’ salaries in public institutions, 2001-2002 (litas)</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td></td>
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<tr>
<td>Starting teacher with minimum level of training</td>
</tr>
<tr>
<td>Maximum additional bonuses</td>
</tr>
<tr>
<td>Teacher with minimum level of training &amp; 15 years of experience</td>
</tr>
<tr>
<td>Maximum additional bonuses</td>
</tr>
<tr>
<td>Teacher with typical qualifications &amp; 15 years of experience</td>
</tr>
<tr>
<td>Maximum additional bonuses</td>
</tr>
<tr>
<td>Teacher with maximum qualifications &amp; 15 years of experience</td>
</tr>
<tr>
<td>Maximum additional bonuses</td>
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<tr>
<td></td>
</tr>
</tbody>
</table>

Source: National Observatory in Lithuania 2003, Table 5.

3. The extent of competition for students between schools is limited. The 2003 Law on Education gives students the ‘possibility’ of choosing schools and programs, but in practice choice is limited. In rural areas and smaller towns there may be only one practical possibility available to a student, and even in larger urban areas choice is constrained by the number of places available in particular schools.

4. Statistically, one of the most important influences on student performance is home background. This suggests that schools need to spend more on socially disadvantaged students. The methodology for calculating the student’s basket gives extra funds for pupils from ethnic minorities, migrants and those with special needs, but not for those from low-income or otherwise disadvantaged households. In the absence of such a premium, schools (conscious of the need to get good results) will have an incentive to avoid such students – to the detriment of average learning outcomes.

5. The role of the municipalities is problematic. Many of them are short of money, and some have diverted funds

\textsuperscript{7} The student’s basket is available to private as well as public educational institutions.

\textsuperscript{8} For further details see Ministry of Education and Science (2004).
from the student’s basket to other purposes\textsuperscript{9}: in one case, teachers’ salaries were delayed by over a month. The rules have been tightened up to prevent this: money can now only be diverted from the basket if genuine savings can be demonstrated. Plans have been approved for part of income tax to be earmarked for education; if this goes directly to municipalities they could eventually become entirely responsible for school funding, with freedom to decide on the system of allocation. This could pose a threat to the development of the student’s basket/autonomous-school model, since many municipalities would prefer to remain in charge. There are problems of capacity also: many municipalities have difficulty in processing the data needed for the operation of the system. As authority was decentralized to municipalities, governance and accountability issues would arise, which would need to be carefully watched.

6. The system demands a lot of data, not all of which are available. In particular, a full database on teachers, including qualifications, hours worked etc., is lacking. There is no comprehensive education management information unit – the Center for Information Technology in Education collects data on inputs but not on finance. The centers dealing with vocational and higher education are separate.

A fully functioning student’s basket system, which allocated lump sums (with extra weight for the socially disadvantaged) to autonomous schools, competing with each other for students, could be expected to have a positive effect on quality. A ‘Good School Guide’ could be prepared for parents, with comparative information on every aspect of each school, including examination results (and value added in relation to its intake), security, social atmosphere, etc.. The role of the Ministry of Education and Science would be to provide a strong framework of quality control, accreditation, core curriculum content, etc.. Autonomous schools competing with each other would have an incentive to become more efficient, moving towards optimal pupil/teacher ratios and, as the number of pupils falls, able to increase both teachers’ salaries and non-salary expenditure in the interests of improved quality.

Financing system: (2) vocational education

A similar student’s basket system is being introduced in 2004 for vocational education, which is almost entirely funded from the central budget, though with a higher proportion of revenue from non-budget sources than in the case of general schools. Table 5 shows that this proportion rose to 7 per cent in 2000 but fell again to 5 per cent in 2002. Students in vocational schools are also eligible for government grants (received by 65 per cent of such students in 2001), social grants (20 per cent) and orphan grants (3 per cent). Very few vocational school students get grants from enterprises – only 129 in 2001, 0.3 per cent of those enrolled.

| Table 5: Sources of funding for vocational schools, 1998-2002 (million litas) |
|---------------------------------|------|------|------|------|------|
|                                 | 1998 | 1999 | 2000 | 2001 | 2002 |
| Revenue from national budget    |      |      |      |      |      |
| Total                           | 176  | 178  | 174  | 173  | 172  |
| of which from:                  |      |      |      |      |      |
| state budget                    | 176  | 178  | 174  | 173  | 172  |
| municipal budgets               | -    | -    | 0.08 | 0.3  | -    |
| Income from provision of services | -   | 5    | 11   | 10   | 8.4  |
| Foreign & national donors       | 1.3  | 0.8  | 1.2  | 2    | 0.7  |
| Charity & sponsorship          | 0.2  | 0.02 | ...  | 0.1  | ...  |
| Total                           | 177  | 184  | 187  | 185  | 181  |

Source: National Observatory in Lithuania (2003:Table 8).

Half of vocational schools’ budget-financed expenditure of 172 million litas in 2002 went to staff salaries, and a further 15 per cent to social security contributions. With grants for students accounting for 18 per cent and spending on utilities for 10 per cent, little was left for renovation of buildings, teaching materials and in-service training of staff.

As in the case of general education, the introduction of the student’s basket system for vocational education is a response to the drawbacks of the previous system, whereby each school sent a draft estimate of its funding needs to the MoES, which aggregated and adjusted the estimates and then sent them to the Ministry of Finance for further

\textsuperscript{9} As one informant put it, ‘money follows the student’ to the municipality but not to the school.
adjustment to the constraints of the budget. This procedure was:
- inequitable – providing different funds per student to schools implementing the same programs;
- unconcerned with quality – providing no separate funds for modernization, procurement of information technology, visual aids, technical literature, textbooks, training materials, or in-service teacher training;
- inefficient – not promoting optimization of the network of vocational schools.

The objectives of the new system, accordingly, are improvements in efficiency, transparency, equity between urban and rural students, and accountability.

The principles of the system, described in Annex C, are similar to those already described for basic and general education. As a step towards its implementation, five vocational schools have been given a change in status from budget institutions to public (non-government, non-profit) institutions. This enables them to involve social partners in their ownership as well as management and to achieve true autonomy. The results of the experiment will be watched with interest as it could help to define a model for general as well as vocational schools.

The introduction of the new financing system raises a question about the future of vocational schools. It has to be recognized that competition between schools and greater parental choice may result in their choosing general rather than vocational schools. Between 1998 and 2002 the number of students in vocational schools fell by 21 per cent to 44,000. There are four stages of vocational schooling: stage I takes students who have not yet completed basic education and offers them two-year vocational courses at ISCED 2 level; stage II offers two-year courses at ISCED 3 level to those who have completed basic education; stage III offers three-year courses at ISCED 3 level plus general education to those who have completed basic education; and stage IV offers vocational courses at ISCED 4 level to those who have completed secondary education. As Figure 1 shows, only stages I and IV have managed to maintain and increase their intakes over the past few years.

**Figure 1: Intake into vocational schools by stage, 1997-2001**

![Intake Chart](image)

Source: National Observatory in Lithuania (2003:Figure 1).

The expectation is that stage II will die out in the next few years, intakes into stages I and III will be stable and intake into stage IV will continue to increase. These expectations are probably correct for stage I, unless an alternative to low-level training is found for dropouts from basic education, and for stage II (which is an anachronistic form of purely vocational training with no possibility of upward progression). But the size of the intakes into stages III and IV will depend on private rates of return and the relative attractions of the alternatives that are available.

As Table 6 shows, 25-34 year-old graduates of upper secondary general schools, of both sexes, earn
considerably more than their counterparts from stage-III vocational schools, though in the case of females they have a higher unemployment rate. The return to upper secondary general education (over lower secondary or basic education) for this age group, adjusted for the probability of having a job, is around 3,070 litas for males and 1,930 litas for females, compared with 1,710 and 880 litas respectively for stage-III vocational education.

Table 6: Average annual pay in main job and unemployment rate, by sex and highest level of education completed, 25-34 year-olds, first quarter 2004

<table>
<thead>
<tr>
<th>Education:</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average pay (litas p.a.)</td>
<td>Unemployment rate (%)</td>
</tr>
<tr>
<td>University or college (ISCED 5A, 5B)</td>
<td>15438</td>
<td>5.2</td>
</tr>
<tr>
<td>Professional college (ISCED 5B)</td>
<td>10432</td>
<td>10.4</td>
</tr>
<tr>
<td>Specialized secondary school (technicum) (ISCED 4)</td>
<td>9079</td>
<td>10.8</td>
</tr>
<tr>
<td>Upper secondary general education (ISCED 3A)</td>
<td>8965</td>
<td>12.1</td>
</tr>
<tr>
<td>Post-secondary stage-IV vocational education (ISCED 4)</td>
<td>7911</td>
<td>14.0</td>
</tr>
<tr>
<td>Upper secondary stage-III vocational education (ISCED 3A)</td>
<td>7411</td>
<td>12.0</td>
</tr>
<tr>
<td>Upper secondary stage-II vocational education (ISCED 3C)</td>
<td>7276</td>
<td>22.6</td>
</tr>
<tr>
<td>Lower secondary general education (ISCED 2A)</td>
<td>6248</td>
<td>23.0</td>
</tr>
<tr>
<td>Primary education (ISCED 1)</td>
<td>5518</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Source: Labor Force Survey database.

If basic-school leavers can really choose (and are equipped to do so by improvements in the quality of basic education), many of them may thus prefer a general secondary to a stage-III vocational course; and, if baskets are bigger for the socially disadvantaged (who are disproportionately represented in vocational schools at present), schools of different types will be competing to attract them. Stage-IV vocational courses will in turn be competing with other forms of post-secondary education (than which it delivers much worse labor-market results, as Table 6 shows) – so much will depend on what happens to subsidies to higher education institutions (discussed below).

The relative attraction to students and parents of vocational education will depend on the extent to which the schools can improve quality by rebuilding the links with employers that were broken by the change in the economic system. The involvement of social partners in the ownership and management of schools is a welcome step in that direction, but further incentives to employers are probably needed. For example, employers are allowed to deduct the costs of training or retraining their employees from their taxable income, but this does not include training that takes place in a vocational school or other educational institution. This anomaly should be corrected, and tax deductions should also apply to expenditure on supporting training in schools of students who are not yet employed by the enterprise. An inflow of funding, work experience opportunities and market-related management and advice would help to break the vicious circle of low quality of vocational education leading to lack of interest on the part of employers – and lack of attraction to students and parents. The improvements in vocational education infrastructure financed under measure 1.5 of the EU Structural Fund Program (see Table 3 above) will also be useful, but will only have a lasting effect if links with employers are rebuilt.

It is also important to ensure that those vocational students who have the desire and capacity to progress further in the educational system are able to do so. This means that they should be equipped with the general-education qualifications needed for this purpose. At present, stage-I and stage-II students do not acquire such qualifications at all and many stage-III students, while formally able to do so, do not get high enough grades to progress further. It is probably true that vocational students are on average less able but the system should ensure that they all fulfill their potential. If it did, it would become more attractive to students and parents.

Financing system: (3) lifelong learning

Opening up the possibility of upward progression in this way would help to ensure that involvement of employers in financing vocational education (recommended in the previous paragraph) did not perpetuate the dead-end, low-level model.
Lifelong learning takes many forms: as defined in the recent draft strategy paper (Ministry of Education 2003a), it includes ‘all the learning activities undertaken throughout life, with the aim of improving knowledge, skills and competences, within a personal, civic, social and/or employment-related perspective’. Many of these forms escape the statisticians’ net entirely. Those which are counted include adult education and training, funded by individuals, employers or the state, and retraining and training of unemployed and laid-off workers, funded by the state.

As already noted, Lithuanians seem to be less involved in adult education and training than inhabitants of most EU member and accession countries (Figure A). In 2002, some 86,000 people are estimated to have participated in adult education courses, 7 per cent more than a year earlier, but not much more than half the number of participants in 1998. The most important fields of study in 2002 were health (22 per cent of all students), security services (15 per cent), computing (13 per cent), engineering (12 per cent) and transport services (11 per cent). Just over half of adult education students took their courses in formal institutions – vocational schools, colleges and universities.

Statistics on funding of adult education and training are poor. According to the household survey, average expenditure per household on all types of education was only 2.6 litas in 2002. Expenditure on training by enterprises in 2000 amounted to only 0.8 per cent of labor costs and only 43 per cent of enterprises (mainly in the electricity, gas, water supply and financial intermediation sectors) organized any training for their employees (European Commission 2002). Only a minority of enterprises have a training plan (16 per cent of those surveyed) or a budget for training (15 per cent).

Fuller information is available on public-sector spending on training of its own employees (Table 7). Training and upgrading of health workers, teachers and finance specialists get the largest share of the budget, which was halved between 2000 and 2001.

<table>
<thead>
<tr>
<th>Table 7: Government expenditure on training for public-sector employees, 1999-2001 ('000 litas)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year</strong></td>
</tr>
<tr>
<td>Social work, labor market counseling etc.</td>
</tr>
<tr>
<td>Nursing specialists – upgrading</td>
</tr>
<tr>
<td>Medical specialists – upgrading</td>
</tr>
<tr>
<td>Physical education – upgrading</td>
</tr>
<tr>
<td>Teachers – professional development</td>
</tr>
<tr>
<td>Ministry of Agriculture – farmer training</td>
</tr>
<tr>
<td>Ministry of Finance training centre</td>
</tr>
<tr>
<td>Public &amp; municipal in-service training centre</td>
</tr>
<tr>
<td>Lithuanian Public Administration Institute:</td>
</tr>
<tr>
<td>upgrading civil servants</td>
</tr>
<tr>
<td>preparation of introductory training programs for civil servants</td>
</tr>
<tr>
<td>preparation of upgrading programs</td>
</tr>
<tr>
<td>preparation of training programs for top-level civil servants</td>
</tr>
<tr>
<td>preparation of training programs related to EU integration</td>
</tr>
<tr>
<td>management of training programs</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

Source: National Observatory in Lithuania (2003:Table 14).

In addition, the government supports training for owners and employees of small and medium enterprises, through the Lithuanian Development Agency for Small and Medium Enterprises, with a budget of 599,000 litas for three projects in 2002, and most municipalities have Small and Medium Business Promotion Funds, which are available for training and counseling businessmen.

Training for the unemployed is provided under the auspices of the Labor Exchange and the Labor Market Training Authority. The proportion of the registered unemployed who receive training is small – less than 10 per cent in 2002, of whom 70 per cent in technical skills, 16 per cent in entrepreneurship and 14 per cent in job searching. Since 2001 training providers have been invited to tender for provision of this type of training and 187 providers participated in the bid in 2002. This has lowered the cost of training but to the possible detriment of quality.
Training for the unemployed is financed from the Employment Fund, which in turn receives most of its funding from the State Social Security Fund. In 2002, the Employment Fund spent almost 30 million litas on training; the proportion of its budget that is spent on training fell sharply between 1999 and 2000 and has recovered since then, but only to 16 per cent in 2002 (Table 8). The funds available for such training are doubly squeezed, because the allocation from the Social Fund to the Employment Fund is what is left over after entitlements such as pensions have been paid, and because within the Employment Fund payment of unemployment benefits is given priority.

Table 8: Employment Fund expenditure on training the unemployed, 1998-2002

<table>
<thead>
<tr>
<th>Year</th>
<th>Employment Fund expenditure on training (million litas)</th>
<th>% of total Employment Fund expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>27.5</td>
<td>18%</td>
</tr>
<tr>
<td>1999</td>
<td>28.6</td>
<td>19%</td>
</tr>
<tr>
<td>2000</td>
<td>17.1</td>
<td>11%</td>
</tr>
<tr>
<td>2001</td>
<td>25.1</td>
<td>14%</td>
</tr>
<tr>
<td>2002</td>
<td>29.9</td>
<td>16%</td>
</tr>
</tbody>
</table>


Adult education, enterprise training and training of the unemployed stand to benefit from allocations from the EU Structural Fund, under measures 2.4 (development of conditions for lifelong learning) and 1.5 (development of infrastructure of labor market, education, vocational training, research and study institutions and social services – see Table above. Measure 2.4 covers development of a national system of qualifications, the assessment system, a quality assurance system, second-chance opportunities, publication of training materials, and the vocational guidance and counseling system, implementation of innovative training methods and forms and improvement of the teacher training system. Measure 1.5 includes creation, renovation and modernization of institutions to improve the quality of lifelong learning provision and labor market services, to develop the capacity of labor exchanges to provide quality employment services, to improve the quality of and access to occupational rehabilitation infrastructure for the disabled, and to increase the diversity and quality of social services in relation to the labor market. To maximize the benefit from these funds, all the institutions involved need training in how to gain access to them, to ensure national co-financing and to use them effectively.

The draft Strategy Paper on Lifelong Learning (Ministry of Education 2003) provides a useful framework within which to plan for this sector. One of its key recommendations is the establishment of a Council of Adult Vocational Education, which would coordinate activities in this field. The mission of this Council could usefully be defined as the development of a 'culture of adult education and training' among individuals and enterprises. To judge from statistics reviewed above, Lithuania (like France and Italy but unlike Scandinavia and the UK) does not have a culture of adult education, whereby individuals are used to paying fees for evening classes in subjects that interest them. As for culture of training, this is mainly confined to the larger foreign and modern national companies. Many local companies seem to expect the education system to produce ready-to-work skilled recruits for them – which would be an inefficient as well as an inequitable model.

Some subsidies from the state are justified to raise individuals' consciousness of the availability and benefits of adult education: for instance, Adult Learning Week should be substantially financed by government. It is also the state's responsibility to help people deal with shocks to the economy that affect them, and to help the unemployed and the disadvantaged improve their position in the labor market. The current system whereby expenditure on re-training the unemployed is merely a residual after pensions and unemployment benefit have been paid is neither efficient nor equitable. The budget for such retraining should be determined by its cost-effectiveness (which should be carefully monitored).

Current incentives to companies to train and retrain their employees do not seem to be adequate. Companies can deduct such costs from their taxable income for the purposes of profits tax assessment, but not all companies know about this incentive and few respond to it – probably because of their fear of losing employees to whom they have imparted general, transferable skills (see page 1 above). Further incentives, such as a levy/grant system (whereby employers pay a training levy and are reimbursed for the costs of any training that they provide or finance) or lower minimum wages for apprentices, should be considered.

Statistics on the incidence and funding of adult education and training are poor. They may understate the extent of such activity in Lithuania compared with some other countries. A new Council of Adult Vocational Education, as recommended by the Strategy Paper on Lifelong Learning, would not be able to work effectively
unless the data available to it were considerably increased.

Financing system: (4) higher education

Higher education in Lithuania seems to be in crisis. At 70 per cent in 2002, the progression rate from upper secondary general school to higher education is one of the highest but expenditure per student is one of the lowest in the expanded European Union (Table A9). Moreover, universities take around 79 per cent of the intake at this level, threatening the viability of the non-university colleges.

About seventy post-secondary institutions were amalgamated in 2000, after ten years of heated discussion, to form such colleges (16 state and 12 private), intended to provide a more practical tertiary alternative to universities. They are still in transition, awaiting the results of assessment of all the units involved, which will determine whether they become part of a college, revert to the level of vocational school or are closed down.

Colleges are directly funded by central government, and get less money per student: in 2002 their allocation from the national budget per full-time equivalent student was 68 per cent of the universities’ allocation (Table 9). The proportion of students paying a fee (or ‘partial contribution’) of 1,000 litas per year, around 20 per cent, is also lower than in universities. One financial issue that still rankles with colleges is the fact that, when fees were reduced two years ago, universities were compensated for the resulting loss of income but colleges were not.

Table 9: National budget expenditure per full-time equivalent student, colleges compared with universities, 2002

<table>
<thead>
<tr>
<th></th>
<th>National budget expenditure ('000 litas)</th>
<th>Number of daily students</th>
<th>Number of evening students</th>
<th>Number of extra-mural students</th>
<th>Full-time equivalent students</th>
<th>Expenditure per FTE student (litas)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colleges</td>
<td>134,849</td>
<td>27,427</td>
<td>825</td>
<td>20,351</td>
<td>38,263</td>
<td>3,524</td>
</tr>
<tr>
<td>Universities</td>
<td>524,320</td>
<td>77,792</td>
<td>9,198</td>
<td>32,558</td>
<td>101,429</td>
<td>5,169</td>
</tr>
</tbody>
</table>

Note: One evening student = 0.8 daily student; one extra-mural student = 0.5 daily student for costing purposes.

In 2004 an experimental student’s basket method was used to allocate funds to colleges, along the following lines:
- funds needed for state-funded students are calculated by study area, on the basis of the standard number of teachers and teaching-administration employees required per student, average personnel costs per staff member, funds for study-related goods and services (15 per cent of salaries per student in the case of humanities, rising to 30 per cent for veterinary medicine), funds for organization of cultural, sports and social activities (no less than 20 per cent of the minimum standard of living), with adjustments made for extra-mural and evening students (treated as 50 and 80 per cent of full-time students respectively);
- colleges have to work within the salary-fund limit set by their approved budget, so calculations may have to be adjusted;
- funds for research, publishing, conferences, seminars, in-service training etc. are based on the previous year’s pattern of allocation between colleges, with 3 per cent of the total reserved for research;
- funds for administration, housekeeping and maintenance are proportionate to the funds allocated for studies, with a minimum set for maintenance of 70 per cent of non-personnel expenditure;
- funds for student grants, investment funds and funds for the development of international exchange are allocated separately in line with normal procedures.

In addition to the above, colleges also get some money from national programs (such as the national program for information technology, and the library modernization program), from international programs (particularly from the EU), and from fees for special courses, leasing premises and equipment, commissioned research and consultancy etc.. Of these non-budget funds raised by faculties, 20 per cent goes to the college Director.

Colleges enjoy less autonomy than do universities. They plan their budgets but the allocation to them, as in the case of schools, is by line item and subject to central control. Limits on student numbers are set by the MoES, and the Directors stick to them. Directors are not elected by colleagues but appointed by college boards, of which two thirds of members are external (including social partners and university representatives). The decisions on
amalgamation were taken by the MoES.

The nature and extent of the problems faced by universities is illustrated by Figure 2, from Vilnius University. Between 1999 and 2002, the number of students admitted into the first cycle of studies at the university rose by 35 per cent, its student/staff ratio increased by 33 per cent, income per student fell by 17 per cent, and floor area per student decreased by 33 per cent.

Figure 2: Trends in admission, student/staff ratios, university income per student and premises per student, Vilnius University, 1999-2002

In these circumstances (which apply throughout the university system not just in Vilnius), quality of education deteriorates because:

- of pressure of numbers on staff and equipment;
- students in the lower reaches of the ability range are admitted;
- lower expenditure per student is reflected in reduced availability of books, teaching materials etc.

At the same time, the low expenditure per faculty member increases the need for supplementation of income by outside work, at the expense of time available for teaching: an international quality assessment found that teachers in the prestigious law faculty in Vilnius University were highly qualified but were not spending enough time with their students. It also makes it difficult to renew the cadre of university teachers: a high proportion is over the age of fifty, to the detriment of propensity to reform.
international test results for basic-education students already discussed above) is teacher training\textsuperscript{11} – the 'least changed' part of the education system. It is widely criticized by researchers as too academic, insufficiently practical and out of date in its content, technology and methodology. It is also too big. While the number of school age children is falling, enrolment in teacher training courses continues to expand. In 2002-2003 there were nearly 18,000 students in faculties of teacher training and education – of whom, it is expected, only about 20 per cent will end up working in schools.

The MoES introduced an experimental student's basket system for universities in 2004, similar to that used for colleges. The yearly cost of study per state-supported student, which varies according to type and level of program is calculated by aggregating:

- salaries and social security costs for teaching and support staff per student;
- the cost of goods and services needed for study purposes per student (30 per cent or more, depending on the type and level of program, of salary and social security costs per student);
- funds for the organization of student, cultural, athletic and civic activities (7 per cent or more, depending on the type and level of program, of the sum of the first two categories).

In addition to the student's basket, funds for research and art (apart from 18.5 million Litas for the special research-funding programs of the Lithuanian State Science and Studies Foundation) are allocated 24 per cent to humanities, social studies and art, and 76 per cent to physics, biomedicine and technology. Allocations to particular institutions depend on:

- in the case of humanities, social studies, physics, biomedicine and technology, scholarly output (publications), for which a points system is used, adjusted by a coefficient to reflect the qualification levels of members of academic staff;
- in the case of art, assessment results.

Funds for administration are partly allocated to specific items, and partly in proportion to other parts of the budget. Funds for the care of cultural assets are allocated per area of floor space of buildings listed in the registry of cultural assets, and there is a separate fund for increases in salaries of teaching and research staff, proportionate partly to the number of teaching staff and partly to the allocation for research and art.

This provisional attempt at a student's basket approach to funding universities was a welcome step towards transparency. Unfortunately, however, the logic of the formulae was not allowed to prevail – the process became politicized. The budget of each university is still subject to parliamentary approval, and Rectors at risk of losing resources from the application of the new methodology lobbied effectively to change the results. For the basket system to work properly, the role of parliamentarians should be limited to approving the total amount of public expenditure and the methodology for allocating it: they should not get into discussions about particular institutions.

Since the student's basket gives an incentive to universities that are short of resources to recruit more state-financed students, the MoES tried to limit student numbers by penalizing enrolment over an agreed limit and rewarding enrolment below that limit. A university that was 5 per cent above or below the agreed figure would get the same total amount as if it had stuck to the limit. This did not have the desired effect: no university admitted fewer students than its target. One third of universities also ignored an agreed limit on the number of full-fee students. The MoES is considering a new way of limiting admissions (whereby a university which is 20 per cent below its admissions limit would get the same money as if it had exceeded it by 20 per cent) but, even if it is successful, the problem of inadequate resources would remain.

The only way out of this crisis is to make changes in three areas – fees, scholarships and loans. The current situation in each case is as follows.

1. Since 2002, fees for higher education have been set at a nominal level (1,000 litas per year regardless of specialization) for half of the full-time students in universities, 20 per cent in colleges, while the rest are totally funded from the state budget. Thus, fee income is equivalent to less than 10 per cent of national budget expenditure per full-time university student, and less than 6 per cent in the case of colleges (see Table 9 above). Exemption from fees is awarded to students based on their academic performance. Commercial fees are paid

\textsuperscript{11} Information in this paragraph from MoES (2004a) and interviews.
only by extra-mural, evening and postgraduate students.

2. Full-time state-funded students are eligible for small scholarships: some, chosen on academic merit, get 250 litas per month, some, classified as disadvantaged, get 125 litas per month. The Lithuanian National Union of Students estimates that only about 35 per cent of students get scholarships. Each university is responsible for administering its own scholarships scheme.

3. The Lithuanian State Science and Studies Foundation runs a student loan scheme, with a state-funded budget for this purpose of 18 million litas in 2004 (compared with 13 million litas two years earlier). This budget can cover a very small proportion of full-time higher education undergraduates – probably less than 5 per cent. Colleges and universities select students for loans on the basis of academic performance and family situation: socially disadvantaged students qualify for loans if they are paying fees and their family's annual income is less than a quarter of the Lithuanian average. The standard amount of a loan is 4,500 litas per year for living expenses + 1,000 litas to meet fees (which goes straight to the institution); those studying abroad can borrow an extra 4,500 litas per year. Interest is payable at 5 per cent per year. Payment of interest and repayment of the loan begin two years after completion and are spread over 15 years, but with incentives for early repayment: postponement is possible in the case of unemployment, illness, maternity leave, etc.. Repayments do not revert to the MoF but go into a revolving fund usable for future loans.

A solution to the financial and other problems of higher education institutions could be sought along the following lines.

- Tuition fees would be increased from the present level of 1,000 litas per year to an average of, say, 2,000 litas (but varying by type and level of course, and by type of institution – with lower fees in colleges to reflect their lower costs), and would be payable by all state-financed students.
- Grants, to cover fees and living expenses fully or partially, would be available only to students from disadvantaged backgrounds, and would be administered by the MoSSL, not by higher education institutions. Higher education institutions would be at liberty to use part of their student's basket to offer scholarships to students of high academic quality but would not be reimbursed for these.
- Student loans would be expanded, using banks as well as the existing Foundation.

As Table 6 above showed, university graduates in the 25-34 age group enjoy much higher pay than do secondary general school leavers (72 per cent higher for men and 41 per cent higher for women) and much lower unemployment rates: given the big state subsidies at this level, this implies high private rates of return to higher education. A package of this kind would reduce the private rate of return on higher education in general and on university relative to college education and on higher-fee relative to lower-fee specializations. It could thus be expected to reduce the number of applications for places in higher education institutions, particularly in universities, and in some faculties relative to others. Without any increase in the share of higher education in GDP, the student's baskets could be increased as the same amount of money would be spread over a smaller number of students, to the benefit of the institutions' income and the quality of their teaching; colleges would benefit differentially from this, because their share of higher education students would be likely to increase. Students from disadvantaged backgrounds would not be deterred from proceeding to higher education by the increase in fees, since they would qualify for grants – indeed (because the previous recipients of fee exemptions are likely to have been mainly from privileged backgrounds) the equity of the system would be improved by this combination of fees for all + means-tested grants for some. Students who have borrowed money to pay fees and living expenses would be a pressure group for maintenance of and improvement in the quality of teaching. Faculty salaries could be increased to a level that would enable academics to live entirely from their university salaries and those who did paid outside work could be expected to go off-salary for the time involved, releasing funds for hiring extra teachers – again to the benefit of the quality of teaching.

How this might work can be illustrated by a hypothetical example, roughly based on the actual 2003 budget, enrolment and staffing statistics of a leading Lithuanian university. Figure 3 shows the composition of university income in the current situation, with tuition fees of 1,000 litas paid by half of around 17,600 state-

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12 This is an arbitrary, and relatively modest, figure for illustrative purposes. It would imply that less than 20 per cent of university income would come from fees paid by state-financed students (see Figure 3 below).
financed students. The impact of doubling the fee and applying it to all state-financed students (while leaving other sources of income unchanged) is explored on three different assumptions. In the first case, the number of students remains unchanged, and university income – total, per staff member and per student – rises by 21 per cent. In the second case, the number of students is assumed to fall by 10 per cent, in response to the increase in average private cost, with the result that total income and income per staff member rise by 19 per cent, while income per student increases by 32 per cent. In the third (and perhaps the most plausible) case student numbers fall by 20 per cent, to the benefit of total income and income per staff member, up by 16 per cent, and of income per student, up by as much as 45 per cent. As for grants, if the budget for grants remained the same as it had been for stipends, and if grants were confined to the lowest quintile of students by family income, in this third scenario each such student would get a grant of around 4,000 litas.

Several objections are likely to be raised to such a package – for instance, the following.

- 'The average fee level suggested is too high and discrimination between different subjects is unfair'. If it is accepted that higher education is only partly a public good (as discussed at the beginning of this report), the extent to which it is subsidized is a political decision (though influenced by powerful public-finance considerations). The average fee level suggested above is much lower in relation to unit costs than in the US, Korea, Japan and Australia (Biffl and Isaac 2002). It is also low compared with what Lithuanian students are willing to pay for a first degree in management and business administration at the country’s only private university-level institution, the International School of Management: even with an annual fee of 7,200 litas, 1½ qualified applications are received for every place. If fee levels (like student’s baskets) reflect the differing unit costs of different subjects, this enables students to decide whether a particular investment is more worthwhile than another. If society (as reflected in parliament) considers that some subjects generate a higher ratio of social to private benefit than others this could be reflected in adjustments to relative fee levels.

- 'It is impossible to identify the students from disadvantaged social backgrounds who would qualify for grants'. Within two years, reasonable data on assets and income will become available from the tax authorities. Meanwhile, the kind of system that has been used successfully to establish eligibility for small scholarships based on disadvantage (involving the collection of documents from district officials and family members, with the help of the students’ union) could be used for grants also.

- 'It will be difficult to increase student loans from their present low extent'. This is true but it is not impossible. The present system, heroically managed by the LSSSF with a small staff, is unnecessarily complex. Students can apply for a new loan every year, for which a new agreement has to be
drawn up: a postgraduate student may have accumulated eight such agreements by the end of her studies. LSSSF also has to send the part of any loan that covers fees direct to the institution – a procedure which is unpopular with students and which generates extra work. A streamlined system whereby students signed loan agreements for the whole of their prospective study period and were responsible for paying their own fees would be easier to administer. The cost to government of building up the student loan fund will eventually be offset by a reduction in government subsidies to higher education, and the fund will eventually become a revolving fund. It may be possible also to involve the commercial banking system in loans to students. The International School of Management is exploring this with some success: in general, banks are not immediately interested, but they are open to persuasion.

- 'Colleges will still be at a disadvantage'.
  If colleges' tuition fees were higher than at present, but lower than would be charged by universities, they would be likely, as already indicated, to attract a larger share of a smaller number of higher education students – possibly increasing their enrolment in absolute terms. To reinforce this relative advantage, it is very important that colleges maintain and improve the quality of their teaching – in specializations that bring their graduates success in the labor market. There will undoubtedly be a tendency, as in other countries, for these non-university institutions to try to turn themselves into universities: some municipalities and politicians are already supporting such a move. Some way of stopping this must be found. While college staff interested in research and writing should be allowed to pursue their interest, there should be no financial incentive and certainly no obligation to carry out research. The fact that their teachers are not obliged to be researchers is the reason why their unit costs are lower and why they could charge lower fees than universities. Colleges will flourish if they accept their role as high-quality, labor-market-oriented teaching institutions – to the benefit of Lithuania's higher education system as a whole.

- 'The combination of tuition fees, grants and loans will not ensure that universities take teaching seriously'.
  It has already been suggested that students who have borrowed money to pay fees and living expenses will be more likely to insist on getting what they are paying for. But further reforms in financial incentives to faculty members are also needed. As in other countries, promotion within faculties depends primarily on research and publication. This is reinforced by the financial allocation system already discussed, where funds for research depend partly on the publication record of the university. Moreover, this is linked by the MoES to the teaching loads of individuals: an academic who acquires 50 publication points or more (10 points for each publication in an international journal, 1 point in a Lithuanian journal) is awarded a reduction in teaching hours, at the expense of colleagues with fewer than 50 points. This link should certainly be broken, but the scope for positive incentives for good teaching should also be explored.

Quality of teaching is, admittedly, much more difficult to measure in a mechanical way than quality of research. Measurement by learning outcomes (examination results or value added) is in principle possible at an institutional level, but it would be dangerous to link individuals' rewards to such measures. It is probably necessary to fall back on judgments about the process. Student assessment of teachers would thus be part of a measurement system: in some universities this is already done in an informal way, but the instruments for such assessments need to be professionally designed and administered. Some monitoring of the process of teaching by management is also needed. In this respect, the systematic way in which Lithuania's only private university-level institution handles measurement of teaching quality is worth noting. Management reviews the quality of preparation done by teachers (handouts, teaching materials) and sits in on lectures by new staff members. An evaluation of teachers by students is organized by specialists. If any of these assessments identifies problems, these are discussed with the teacher; if more problems arise, the contract is not renewed. The excellent Center for Quality Assessment in Higher Education would be capable of organizing independent assessments (national or international) of teaching processes but these may be too expensive to be mounted on a regular basis.

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13 An inequitable measure for specialisations with a limited international audience, such as Lithuanian language, literature and history.
14 As one university informant put it, it is an incentive to 'publish garbage and neglect students'.
These reforms of financing also need to be reinforced by reforms in university governance. As Table 10 shows, Lithuania’s universities are among the most autonomous in the world. They can borrow money (subject to conditions), spend their budgets flexibly, set their academic structure and course content, recruit and dismiss academic staff, use non-budget funds to pay above-scale salaries, decide the size of student enrolment (although they are penalized financially for exceeding agreed limits). They can, however, only set fee levels for a limited category of full-fee-paying students. And, in contrast to their counterparts in many comparable countries, they own their equipment but not their buildings – an important constraint on their flexibility.

Table 10: Extent of autonomy experienced by universities, Lithuania in a comparative context

<table>
<thead>
<tr>
<th>Institutions are free to:</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Own their buildings &amp; equipment</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Borrow funds</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Spend budgets to achieve their objectives</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Set academic structure/course content</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Employ &amp; dismiss academic staff</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Set salaries</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Decide size of student enrolment</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
<tr>
<td>Decide level of tuition fees</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
</tr>
</tbody>
</table>

- o Institutions have autonomy.
- o Institutions have some autonomy, but limited.

a 'Employ and dismiss academic staff' (column 5) and 'Set salaries' (column 6) include cases where any legal requirements for minimum qualifications and minimum salaries have to be met.

b 'Decide size of student enrolment' (column 7) includes cases where some departments or study fields have limits on the number of students able to enroll.

Source: Interviews for Lithuania; OECD (2003:Table 3.1) for other countries.

c Public universities.

University autonomy in Lithuania is given a special flavor by the fact that rectors are elected by senates (consisting of members of academic staff), rather than appointed by university councils. Moreover, as Table 11 shows, it is one of the few countries in which a rector elected by academic staff does not need government approval and can be renewed for another round. While it is true that there is no mechanical connection between the method of selecting a university leader and propensity to reform, there is no denying the logic of the widespread critique that:

- o senates tend to elect rectors who will look after them;
- o Boards vary in their composition (extent and nature of external representation), quality, function and energy but in general leave management to the deans;
- o there is little involvement of social partners in university management; and
- o academics are accountable only to themselves.
Table 11: Appointment of leaders of higher education institutions, Lithuania in a comparative context

<table>
<thead>
<tr>
<th>Process for election or appointment</th>
<th>Government has to approve?</th>
<th>Typically appointed for how many years?</th>
<th>Renewable position?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Countries where leaders are usually ELECTED by:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>No</td>
<td>4-5</td>
<td>Yes, for one more round</td>
</tr>
<tr>
<td>Senate (academic staff)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>No</td>
<td>5</td>
<td>Yes</td>
</tr>
<tr>
<td>Academic staff &amp; heads of separate institutes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>No</td>
<td>5</td>
<td>No</td>
</tr>
<tr>
<td>Board or Council</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic staff</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>Yes</td>
<td>4</td>
<td>Varies</td>
</tr>
<tr>
<td>Senate or ad hoc committee</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korea</td>
<td>Yes</td>
<td>4</td>
<td>Varies</td>
</tr>
<tr>
<td>All full-time faculty members</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>Yes, mostly</td>
<td>5</td>
<td>Yes</td>
</tr>
<tr>
<td>Turkey</td>
<td>Yes</td>
<td>4</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Countries where leaders are usually APPOINTED by:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>No</td>
<td>5-7</td>
<td>Yes</td>
</tr>
<tr>
<td>University Council (majority usually external)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governing Body (approximately 50% external)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>No</td>
<td>10</td>
<td>No</td>
</tr>
<tr>
<td>Supervisor Board: 5 external members appointed by Minister</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>No</td>
<td>4</td>
<td>Yes</td>
</tr>
<tr>
<td>Government, on recommendation of mainly external Governing Board, which first consults students &amp; employers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governing Body, of which majority are external members</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>Yes</td>
<td>6</td>
<td>Yes, for 2 periods of 3 years</td>
</tr>
<tr>
<td>UK</td>
<td>No</td>
<td>7</td>
<td>Yes</td>
</tr>
<tr>
<td>State government-appointed Regents or Coordinating Boards on recommendation of Search Committee</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>No</td>
<td>Varies</td>
<td>Varies</td>
</tr>
<tr>
<td><strong>Countries where reforms have been implemented in 2003:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Austria</td>
<td>No</td>
<td>4</td>
<td>Yes</td>
</tr>
<tr>
<td>Formerly elected by University Assembly (75% staff, 25% students)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From 2003 appointed by University Council, made up of external members, from a shortlist of 3 candidates nominated by Senate.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formerly elected by academic staff (50%), other staff (25%) &amp; students (25%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td>No</td>
<td>4</td>
<td>Yes</td>
</tr>
<tr>
<td>From July 2003, appointed by Board with majority of external members</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formerly elected by academic &amp; other staff, with some role for students.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>No</td>
<td>4</td>
<td>Yes</td>
</tr>
<tr>
<td>From 2003, and Executive Board with strengthened external representation may propose to the Minister that it appoints the Rector</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: for Lithuania, interviews; for other countries, OECD (2003:Table 3.4).

The trend in Europe is clearly towards a redefinition of the functions and composition of university Boards or Councils, with a greater role in management and more representation from outside the world of academe. Such Boards then take over the function of appointing university leaders from shortlists that emerge from a wide-ranging search. A move in this direction would help Lithuanian universities to implement the financial reforms that are needed to overcome their current crisis. As a *quid pro quo* it would be reasonable to allow them to take over ownership of their property, to the benefit of its efficient use.

At the same time, within the MoES full integration of the colleges into the higher education department and of the higher education department into the Ministry is still work in progress. It would be useful also to clarify the functions of the Ministry in relation to higher education. Universities are right to be worried about threats to their autonomy and colleges to aspire towards the same status as universities in this respect. But there is a national interest here, which the Ministry should represent, in such issues as:
the proportion of secondary school leavers who should proceed to higher education,
- the quality of education that is being provided at this level, and
- the composition of graduates by specialization (at least to the extent of ensuring that there are adequate numbers in specializations that are considered of national importance).

Rather than detailed interference in academic processes, this can be done by a combination of standard setting and financing systems designed to ensure high-quality outcomes. Higher education would work within an assessment and quality control framework provided by the MoES, and including international peer reviews. And the methodology for allocating funds would include formulae to encourage quality in teaching as well as research. The private rate of return on higher education as a whole and on different types and specializations could be influenced by fee levels, for which the MoES would retain responsibility. The rest could be left to universities and colleges, autonomous but accountable in their governance arrangements.
Summary of recommendations

Recommendations (or suggestions for policy options) have been made or implied at various points in this note but it may be useful, finally, to pull them all together, as follows.

1. The retirement age of 62½, which applies to public servants, should be enforced in the case of teachers also.

2. Basic and general secondary schools should be moved towards full autonomy, receiving a lump sum for flexible allocation by school management. For this purpose, consideration should be given to changing their status from budget to public institutions.

3. The salary scale for teachers should be reviewed, with a view to increasing the ability of schools to recruit and retain the best and brightest.

4. In view, also, of the need to improve quality by increasing non-salary expenditure per pupil, the fall in the number of school-age children should not be used as an easy excuse to reduce the proportion of GDP allocated to education from its current level of 6 per cent: any such proposal would need to be thoroughly debated.

5. The extent to which parents and students can choose between schools should be reviewed, with a view to increasing it if possible. A 'Good School Guide' should be prepared, with comparative information on every school, to inform their choice.

6. The methodology for calculating the student's basket for schools of all kinds should give extra funds for pupils from low-income families.

7. Steps should be taken to ensure that devolution of authority to municipalities does not pose a threat to the autonomous-school/student's basket system.

8. A comprehensive education management information and policy advice system, covering all levels of education, should be located in a single centre.

9. Subject to a satisfactory outcome from the five-school experiment, all vocational schools should change status from budget to public institutions, involving social partners in ownership and management.

10. Employers should be allowed to deduct the costs of training their present and future employees in vocational schools or other educational institutions from their taxable income.

11. All vocational schools should include enough general education to enable those with the desire and the capacity to progress further in the education system to do so.

12. Adult and other relevant education institutions should be given training in how to gain access to EU Structural Funds, to ensure national co-financing and to use them effectively.

13. The Council of Adult Vocational Education, recommended by the draft Strategy Paper on Lifelong Learning, should be set up, with the mission of developing a 'culture of adult education and training' among individuals and enterprises.

14. Adult Learning Week should be substantially financed by government, for this purpose.

15. The budget for training and retraining the unemployed should not be a residual after pensions and unemployment benefit have been paid – it should be determined by its cost-effectiveness (which should be carefully monitored).

16. Further incentives to employers to train and re-train their employees should be devised and implemented.
17. Statistics on the incidence and funding of adult education and training need to be increased and improved: this would be one of the tasks of the educational management information system recommended above.

18. The student’s basket approach should be fully implemented for higher education, with the role of parliamentarians limited to approving the total amount of public expenditure at this level and the methodology for allocating it.

19. A solution to the financial and other problems of higher education institutions should be sought along the following lines:
   - an increase in tuition fees to a level that would cover about 20 per cent of unit cost per student (but varying by type and level of course and type of institution) and payable by all state-financed students;
   - the provision of grants, to cover fees and living expenses fully or partially, only to students from disadvantaged backgrounds, administered by the MoSSL;
   - the expansion of the student loan system.

20. The role of colleges should be defined as high-quality, labor-market-oriented teaching institutions: they should be neither expected nor encouraged to do any research.

21. In formula funding of universities, the link between research points and individual teaching loads should be broken, and the scope for positive incentives for good teaching should be explored.

22. University Boards or Councils, with their functions redefined to give them a greater role in management and with more non-academic representation, should be made responsible for appointing university leaders (rectors) from shortlists that emerge from a wide-ranging search.

23. Higher education institutions should take over ownership of their property.

24. The functions of the MoES in relation to autonomous but accountable higher education institutions should be clarified, with emphasis on standard setting and financing systems designed to ensure high-quality outcomes rather than on detailed intervention in academic processes.
Annex A: Figures

Figure A1: Educational attainment: % of 25-64 population having completed at least upper secondary level, 2001

Source: European Training Foundation, 2003, Thirteen Years of Cooperation and Reforms in VET in the Acceding and Candidate Countries, Ch. 7, Figure 1.

Figure A2: Enrolment rates by level of education, 2000/2001

Source: UNESCO website. pre-primary, primary, secondary = net. tertiary = gross.
Figure A3: Vocational/technical as % of total students in upper secondary education, 2000/2001

Czech Republic
Slovakia
Slovenia
Hungary
Romania
Poland
Bulgaria
Latvia
Lithuania
Estonia
Malta
Cyprus
EU average
Spain
Greece
Portugal

Source: Eurostat

Figure A4: % of 18-24 population with only lower 2ndary education & not in education or training, 2002

Cyprus
Czech Republic
Estonia
Hungary
Lithuania
Latvia
Poland
Slovakia
Slovenia
Austria
EU average
Greece
Spain
Portugal
Ireland

Females
Males

Source: Commission of the European Communities, 2003, Education & Training 2010, Communication, Figure on page 19.
Figure A5: % of those aged 22 who have successfully completed at least upper secondary education, 2002

Source: Commission of the European Communities 2003, Figure on page 22

Figure A6: % of 25-64 population participating in education or training in 4 weeks prior to survey, 2002

Source: Commission of the European Communities 2003, Figure on page 24
Figure A7: Training enterprises as % of all enterprises, 1999

Source: ETF 2003, Ch. 7 Figure 19

Figure A8: Public expenditure on education as % of GDP, 1999

Source: ETF 2003, Ch. 6 Figure 1
Figure A9: Public expenditure per student by level of education, 1999

Source: ETF 2003, Ch. 6 Table 2 and Eurostat Statistics in Focus, Theme 3, 22/2003

Figure A10: Public expenditure on labor market training as % GDP, 2001

Source: ETF 2003
Figure A11: Ratio of pupils to teachers in primary schools, 2000/2001


Figure A12: Range of salaries of teachers in upper secondary general schools as % of GDP per head, 2000/2001

Source: ETF 2003, Ch. 6, Table 6.
Figure A13: Teachers aged more than 50 as % of all secondary school teachers, 2000/2001

Figure A14: Women as % of total teachers in upper secondary schools, 2000/2001
Figure A15: Non-personnel expenditure as % of current expenditure in public educational institutions, 1999


Figure A16: % of grade-4 students reaching PIRLS median international benchmark in reading achievement, 2001

Source: PIRLS
Figure A17: % of grade-8 students reaching TIMSS median international benchmark of mathematics achievement, 1999

Source: TIMSS

Figure A18: % of grade-8 students reaching TIMSS median international benchmark of science achievement, 1999

Source: TIMSS
Figure A19: Unemployment rate by education attainment of people aged 15-39, 2001

Source: ETF 2003

Figure A20: Average earnings premium for 25-64-year-old tertiary over upper secondary graduates (%), late 1990s/ early 2000s

Source: Lithuanian Labor Force Survey; OECD Education at a Glance for others.
Annex B: The Student’s Basket System for General Education

1. The allocation per student to any school from the central budget depends on teachers’ salaries and on norms for student/teacher ratios and class sizes, for in-service training expenditures, for replacement of teachers, for social insurance, for textbooks and for visual aids and teaching materials. It also varies with the grade in which the pupil is studying and with the location and type of school.

2. The basic equation is

\[ MK = q \left( k_1 + k_2 + k_6 + k_8 \right) \times 12 \]

where
MK is the student’s basket per year for this particular type of student (defined by grade and school location);
q is the base monthly teachers’ salary cost per student;
k\(_1\) is the salary-cost coefficient to be applied to q for this type of student (reflecting class size, number of lessons in the curriculum, norms for teaching input per class);
k\(_2\) is the coefficient to be applied to q for this type of student for in-service training of teachers;
k\(_6\) is the coefficient to be applied to q for this type of student for replacement and social insurance costs;
k\(_8\) is the coefficient to be applied to q for this type of student for textbooks and teaching materials.

3. A base basket \(K_b\) is calculated in the methodology paper for a student in grades 5-8 in an urban school. With base monthly salary costs per student set at 105 litas for all students, and with (for this type of student) 25 students per class, 50 lessons in the curriculum, and a teaching input per class of 2.8,

\[ K_b = 105 \times (0.8444 + 0.0106 + 0.349 + 0.03) \times 12 = 105 \times 1.234 \times 12 = 1,555 \]

4. This base basket of 1,555 litas per year can be compared with baskets ranging from 1,302 litas for a student in grades 5-8 in an urban school with larger class sizes to 3,831 litas for a student in a gymnasium with an average class size of 10 and 50 lessons in the curriculum.

5. Further adjustments are made for special categories, such as smaller schools in rural areas, youth schools, schools attached to hospitals, general education in vocational schools, special classes or schools, home-schooled students and classes for ethnic minorities and migrants. For instance, in comparison with the coefficient of 1.234 used above for a student in grades 5-8 in an urban school, the coefficient for a migrant or integrated special-needs student or one from an ethnic minority in grades 9-12 in a rural school with small class sizes is 2.71; for a home-schooled student it is 2.981; and for a student in a special secondary school with 400 pupils or less it is 1.8154.

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\(^{15}\) Covering only teaching salaries and personnel costs, textbooks, teaching materials, and in-service teacher training. The maintenance of the buildings, utilities, salaries and personnel costs of technical staff and other maintenance expenses are the responsibility of the municipality and are not included in the student’s basket.
Annex C: The Student’s Basket System for Vocational Education

In the case of initial vocational education, for instance, the methodology\(^\text{16}\) is as follows.

1. The student’s basket has two parts – a variable part, consisting of salaries and social insurance contributions of teachers, managers, teaching assistants, psychological, special and social pedagogical assistants and library staff; and a fixed part, with three sub-components (a) for technical literature, textbooks and visual aids, (b) for materials, tools and occupational safety accessories, and (c) for in-service training of teachers.

2. To calculate the variable part of the basket, the first step is to work out the salary costs per student group, starting from the hourly rate:

\[ HR = (q \times k_1) \div h \]

where

HR is the hourly rate of salary;
q is the base monthly teachers’ salary cost per student;
k_1 is the salary-cost coefficient to be applied to q for this type of student;
h is the standard number of education hours per month.

Then

\[ AR = HR \times L \times 1.2 \]

where

AR is the annual salary cost per group;
L is the number of lessons per year per group.

3. Total personnel costs per student are then calculated as follows:

\[ DSM = (AR + MP + V + SD) \div S \]

where

DSM is total personnel costs per student (the variable part of the student's basket);
MP is costs per group of substituting for teachers under training (determined by a formula);
V is costs per group of management and teaching assistance (10 per cent of AR);
SD is costs per group of social security contributions (31 per cent of AR).

4. The costs of the fixed part of the basket per student are then added, as follows: 25 litas for textbooks, 11.6 litas for visual aids and technical literature, 60 litas for materials etc., and 18 litas for in-service training of vocational teachers.

As an example, the basket for a student on the second stage of a two-year course in the least expensive category, in which the medium of instruction is Lithuanian, the average group size is 25 and the annual number of lessons per group is 2,105, works out at 1,651 litas, of which the variable component is 1,536 litas. The range for full-time students is from 1,426 to 1,720 litas, depending on the nature of the course (coefficients from 1, e.g. for accounting, to 1.15, e.g. for mechanics and metalwork, are applied), stage, medium of instruction, and number of students and lessons per group. The baskets for students with special needs, with smaller groups, are higher, ranging from 2,585 to 6,212 litas. In general, the basket tends to be bigger for a vocational than for a general education student.

\(^{16}\) For a full description of the methodology see Ministry of Education and Science (2003).
\(^{17}\) Multiplied by 1.2, to allow for two months’ non-teaching time out of twelve.
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