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**The Former Yugoslav Republic of Macedonia  
Toward An Education Strategy for the Twenty-First Century**

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## BACKGROUND AND EXECUTIVE SUMMARY

This note identifies major challenges now facing the Macedonian education system and suggests policies and programs for addressing them. Its primary function is to inform the representatives of the Government as well as other political leaders and stakeholders—in a continual dialogue with the World Bank—about the Bank team’s position on the main challenges and policy options, which Macedonian education policy makers may consider.

In 2001, the Government completed the implementation of the first World Bank financed project, the Education Rehabilitation Project, with several pilot activities. Some of the policy objectives of the project have remained open for further assistance, scaling-up, and strategic consideration. These include the objectives of integrating educational assessments into daily management and policy making, reforming teacher training, or improving the textbook production system. Meanwhile, the government produced an education strategy<sup>1</sup> with the support of the Dutch government, which includes the following objectives:

- (a) Developing education materials and equipment to support reforms in primary, secondary, and adult education;
- (b) Promoting competition in publishing;
- (c) Completing reform of general and vocational secondary education;
- (d) Development of policy making and management capacities;
- (e) Renewing pedagogical support institutions and improving teacher training;
- (f) Infrastructure development including buildings and equipment for selected primary, secondary and post secondary institutions.

Given the past ethnic conflict and current political situation, Macedonia likely will require a significant increase in donor support in upcoming years to remedy some underlying social and economic problems and to simplify rehabilitating the school infrastructure. It is important that donor activities fit into a strategy and a follow-up policy framework to be agreed upon with the Government. Based on the Country Assistance Strategy signed by the Government and the Bank, the next education project’s preparation is underway and is planned to be effective by early 2004. This education policy note therefore intends to offer a coherent policy basis for the government’s evolving strategy and to establish a basis for the project preparation, for other donor activities in education and for subsequent discussions on the opportunities and options of future Bank support in education.

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<sup>1</sup> Strategy for Education Development 2001-2010

The note focuses on (i) the main strength and potential of education in assisting the country's overall social and economic development, (ii) the main challenges education faces in terms of the system's management, structure and performance, (iii) the opportunities and policy options for reforming the education system, (iv) the main political risks that reformers need to take into account (v) and general reform options the government strategy could take into account.

The improvement of economic competitiveness in Macedonia requires a flexible education system that helps graduates gain a broad range of basic skills and capabilities to contend with fast-changing external conditions and a dependence on the global economy. Meanwhile, there are lingering ethnic and social tensions calling for changes in education administration and for more equitable provisions at equal (and accountable) quality. Macedonia's education and training systems must address these demands with very limited economic resources under potentially difficult social, political, and economic conditions.

Meanwhile, there are important strength to rely on, including relatively high enrollment rate, continued commitment by families and other stakeholders to preserve quality and reform initiatives both from grass-root levels and from the center.

The educational system faces a number of institutional challenges, including limited policy capacities, inadequate division of administrative and management tasks and distorted financing and budgeting procedures. Education policy needs to overcome inertia in terms of traditionalism in curriculum, in lacking quality assurance and in over-centralized school management. There is a lack of consensus policy and inadequate civil and political support for reform.

Education administration is distorted. Central agencies predominantly focus on legislative and control functions and have less capacity to engage in assessment, policy or advisory activities. Meanwhile, local actors, including municipalities and schools, have limited roles and narrow range of options in managing education service delivery.

The public finance system and fiscal pressures make it difficult to analyze, budget planning and execution. There are no easy mechanisms that would help adjust state funding of education to match education policy priorities. Meanwhile, the budget process removes all financial incentives to pursue reductions in cost through the correction of inefficiencies in the design or previous operation of a school.

While overall investment to education is somewhat low, in absence of consensus on policy goals, it is difficult to argue for additional public support. Within the education sector, Macedonia invest relatively more in higher education while it under-finances primary education. Meanwhile, the per capita funding for higher and preschool education are also high compared to other countries. Among budget categories, Macedonian education appears to be labor intensive and expenditures on non-recurrent categories are minimal.

The economic, social and educational relevance of education is difficult to assess given the lack of outcome standards and assessment technologies. The labor market relevance is highly questioned by the extremely high unemployment rate. Social relevance is improved via reforms but their impact is hindered by the lack of flexibility in the curriculum. Educational relevance is hindered by the outdated pedagogical models (passive learning, factology) and enduring elitism in the structure. The new international assessment activities show that Macedonia has severe quality challenges to overcome.

Overall attainment in Macedonia is low given the high proportion of short vocational programs. Preschool and secondary education rates are low albeit for different reasons. Enrollment to higher education is also lower than the international average. Among different social groups, the enrollment of children to preschools and to quality secondary programs from poor rural communities is especially at risk. In addition, some ethnic groups, especially Albanian girls and the Roma have low enrollment and attainment rates. These trends have serious impact on the incidence of poverty.

The note covers higher education issues separately. Here, the main problems are institutional fragmentation by faculties, lack of transparent finances, uneven approaches to innovation and limited choices for students. In general, there is a lack of institutional competition, therefore, the existing faculties have little incentives to engage in innovation and make their activities more transparent and accountable.

The note identifies opportunities for an education reform program in the areas of governance and management, finances, curriculum and teacher training, and reforming tertiary education. It focuses on challenges and opportunities in institutional reforms and, to a minor extent in structural adjustment.

- The recommendations for changing management focus on recent efforts to decentralize public administration and set up an optimal framework for decentralizing education. Greater management autonomy of schools can improve learning and teaching efficiency by introducing multiyear strategic plans and professional and financial incentives. The delegation of responsibilities to municipal governments could ensure more effective adjustment to local need. An efficient regional system would also ensure the economies of scale required for professional advisory and training services. This system should be linked to an independent national assessment program, which provides objective information on education progress.
- A more transparent system of finances will be achieved through adequate formulas, the development of adequate budget frameworks, and proper incentives for efficient and accountable financial management. It will also require a new curriculum framework, which would be less detailed in terms of content and delivery.
- Curriculum development needs to place emphasis on issues like communication skills, critical analysis, and the formulation and testing of formal hypotheses.

Similarly, modernization of vocational training needs to focus on these 'foundational skills' rather than on vocation-specific knowledge. Reform of teaching practices needs to scale up innovations in interactive learning and introduce teaching materials that permit student-led activities.

- The key issues in tertiary education are affordability, access to quality training, and accountability for public funds. Access should be provided via a system of loans, grants, and scholarships. Joining the Bologna Agreement should help enhance the quality of higher education by stimulating curriculum innovation and the credit-transfer system. More competition among institutions could help improve transparency and accountability.

Finally, a successful reform requires broad participation by stakeholders and by civil society in both planning and implementation.

This note intends to reflect on general education policy issues, that a government strategy needs to address. Consequently, the discussion does not provide a full sector assessment neither will go into great technical detail and empirical analysis of specific issues. An annex, however, provides a basic list of statistical information -- as a background to the note -- about the demographic, economic, and educational trend indicators.

## 1. THE POLICY ENVIRONMENT

*Macedonia has challenging and complex geographic, social, and economic conditions. It requires a flexible education system that helps graduates gain a broad range of basic skills and capabilities to contend with fast-changing external conditions and a dependence on the global economy.*

1.1 Macedonia is a landlocked, geographically isolated, lower-middle-income country. It is bordered by Albania to the west, Serbia and Kosovo to the north, Bulgaria to the east, and Greece to the south. The average per capita income is about US\$1,900 (in 2000) measured at official exchange rates). The gross national product (GNP) of Macedonia is about US\$3.3 billion. Macedonia's population is small and ethnically diverse. In 1999, its total population was about 2 million people. Estimates vary as to the population's ethnic diversity. Approximately three-fifths of the population is Macedonian-Slav, about one-fifth is Albanian, and the remaining one-fifth is scattered principally among Turks, Roma, Vlachs, and Serbs. The Roma community in Skopje, the capital, is the largest concentration in the world. Macedonia's national government, meanwhile, is 10 years old. It was formed in 1991 after the country gained independence from the Republic of Yugoslavia. (See Sections A and B in the Appendix.)

1.2 The implementation of a market economy has been slower and more difficult than initially expected. Since gaining its independence, the country has had difficulties adjusting both its private and public sectors to the requirements of a market economy. Many economic sectors have collapsed and unemployment is around 32 percent. The majority of Macedonia's economic production is dependent on foreign trade, and the country has not found ways to integrate its economy in the international markets, nor (e.g., in the case of agriculture) has it fully implemented an economic development strategy using its advantage to the country's benefit.

1.3 The economic slowdown has deprived the public sector of tax revenues and, as a result, has forced the education system to operate with greatly reduced funding. The maintenance of school buildings and equipment has been deferred and the continuing education of teachers and school administrators has been under-funded. Efforts to innovate and to improve programs have also suffered in short resources.

1.4 The geographic, ethnic and economic characteristics of Macedonia produce social and economic problems significantly more complex than those facing most countries in the region forced politicians to reassess how to achieve economic competitiveness.. The country's small domestic market, following independence, and its uncertain access to



international markets severely limit opportunities to exploit economies of scale and threaten to interrupt efforts to meet local needs via international trade. In addition, the creation of a politically independent Macedonia has reopened traditional rivalries and focused attention on issues of interethnic equity. The ethnic conflicts that have afflicted other Balkan countries repeatedly have spilled over into Macedonia, disrupting efforts to develop the country and its economy, and undermining trust among ethnic groups. Thus, the geographic and ethnic conditions

1.5 Macedonia has yet to fully establish many of the institutions of a democratic government, including the administrative agencies required to implement public policy and provide public services. In addition, the need to deal actively with ethnic problems has distracted the government from its primary missions: establishing an independent nation and addressing requirements for public services. These challenges are compounded by the need to complete the national economy's restructuring to adapt to the Yugoslavian Federation's disintegration—and to address the issues that stem from the economy's isolation and size.

1.6 Coping effectively with these social and economic problems will require sustained effort and a broad range of skills, many of which were not produced or sufficiently nurtured in the past. Macedonia's formal education system will be called upon to respond to many of these needs. Moreover, because it has a small economy with uncertain access to international markets, Macedonia must be poised to respond quickly to both international competition and emerging market opportunities if it is to deal successfully with international competition and regional uncertainties. It must develop a capacity for continuously monitoring market conditions, quickly retooling its industries, and rapidly retraining its workers.

1.7 Under the tight fiscal and economic conditions, the position of the education sector within government policy and its share of public support will strongly depend on its capacity to demonstrate its contribution to economic development and social peace in the country. The education institutions must equip students with foundational skills and general competencies related to employability, trainability learning skills and successful adjustment to labor market demand. Moreover, the training system, following general education, must provide workers with the more specific abilities to respond to emerging economic and political opportunities.

**Box 1: Education and Training for the Twenty-First Century**

In recent decades, advances in the range and quality of goods and services have played a critical role in determining economic growth. The development of high technology in such areas as chemicals and electronics has led to new goods and allowed the creation of new services. Improvements in the quality of both old and new goods have taken many forms: greater reliability, more consistent quality, more prompt delivery, lower maintenance requirements, and greater responsiveness to specific consumer preferences. For example, the value of electronic computers exploded after the personal computer was developed and applications software became available for carrying out an enormous range of tasks, including word processing, database management, business accounting, video editing, production scheduling, and graphic

design. The innovation process has been as much about identifying ways in which a new technology can be applied and communicating these possibilities to consumers as it has been about basic scientific discovery or engineering design.

High incomes will continue to be paid to workers able to devise and market goods and services that better serve consumers. On the other hand, markets for standardized products produced with conventional technologies will continue to be invaded by "pirate" producers in countries with lower wage labor. The key, therefore, to sustained income growth will be to develop a workforce proficient in carrying out established tasks and skilled in identifying market opportunities, creating new and better products, devising creative production methods, and implementing effective marketing strategies. In order to realize this vision, countries need to build a system of education that lays the foundations for lifelong learning and that develops curiosity and capacity for innovative thinking. New basic job skills will include traditional proficiencies in carrying out specific tasks, but these skills increasingly may lose saliency due to market competition, technological progress, and changing performance. Many skills thus will have to be replaced frequently through job-related training or lifelong education.

1.8 These challenges must be addressed under extraordinarily difficult economic and social conditions. The dissolution of the Yugoslav Federation, the intensification of ethnic conflict, and the incomplete transition from a planned to a market economy have contributed to social strife, high unemployment, and severe social problems. In addition, Macedonia's limited ability to mobilize tax revenues has forced restricted education spending and to deferred investments on the renovation of buildings, training of staff, and implementation of improvements. Macedonia's education and training systems also must address these demands with very limited economic resources under potentially difficult social, political, and economic conditions.

1.9 The government will need to set education priorities consistent with the above challenges, strengthen its management and implementation capacities, and commit its resources to the needs and aspirations of individuals and society at large. In addition, the government has to work diligently to reduce ethnic tensions and income inequality through more equitable and targeted allocation of resources. It thus needs to improve education outcomes among disadvantaged groups. It will have to meet poor and disaffected people's needs for good jobs and for full participation in the country's political and social life. Meeting these needs will mean that minorities receive educational opportunities that enable them to succeed in both school and later life.

1.10 Politicians and stakeholders generally agree that the present education system must be changed. Changes must now include the reallocation and better use of existing resources, mobilization of additional inputs, improvement of the content and quality of teaching and learning, and better monitoring of the educational system and its graduates' performances.

## 2. STRENGTHS IN THE EDUCATION SYSTEM

*Macedonia approaches its economic challenges with a number of important strengths in education. Macedonia inherited an impressive education system, with strong social and political commitments that generate opportunities.*

2.1 Participation in formal education is high for a lower-middle income country. The number of children enrolled in the primary education system (grades 1-8) represents 89 percent of the number of children between the ages of 7 and 15. About 70 percent of primary school graduates complete some form of secondary education. Two-thirds of secondary school students attend vocational training programs and the remaining third attend general academic secondary schools (*gymnasia*). More than 80 percent of those entering secondary school complete four years of study, and those who complete fewer years are enrolled in vocational curricula that require only two or three years of study. About 22 percent of the students who graduate from a four-year program of secondary education continue their studies at a tertiary education institution (constituting about 12 percent of the total age cohort).<sup>2</sup>

2.2 Second, the commitment to quality of education bodes well for the future. Education has a high value in Macedonian society. Expectations of standards to be achieved by graduates are impressive. Content standards for all levels of education exceed those in most economically advanced countries. Those students who meet the standard provide a well-trained education core of professionals and intellectuals for the country. Meanwhile, anecdotal evidence indicates that many parents have remained fully committed to provide for the education of their children; and to spend time and other sources to support their studies even beyond formal education.

2.3 Third, some major reform programs and several innovations have been initiated in the country. Since 1997, the MES has been working on the modernization of secondary vocational education<sup>3</sup>. The aims of the program were to: reduce the number of occupational clusters and educational profiles (i.e. the number of distinct vocational education programs); create a stronger orientation to labor market needs; place more

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<sup>2</sup> So far the data made available did not allow an appropriate tracing of students through their school career. Demographic, enrolment, admission and completion data came from different sources and official statistics are limited and inconsistent. Therefore, the numbers summarized are only estimates.

<sup>3</sup> with EU - PHARE program and German Government support

emphasis on broad skills and core academic subjects (and less on memorization of facts and narrow occupational training).

2.4 The Government has also initiated the reform of the gymnasium curriculum and the Matura examinations. This reform is intended to make learning more interactive, reduce the emphasis on memorization of facts and place more on development of skills and abilities; increase flexibility and choice in the curriculum; and develop reliable standards for assessment and certification. It is hoped that the achievement of the final aim might remove the need for the university entrance examination. The Matura will be introduced in 2005, when the first cohort of students following the new general education curriculum completes their four-year program.

2.5 Other donor initiatives have been successful in upgrading teaching methods (UNICEF's *Interactive Learning* and the Open Society Institute's (OSI) *Step by Step* programs), strengthening capacity for evaluation and assessment of students (based on support from the Dutch Government and the first World Bank project), strengthening parental participation in school management (Dutch support and World Bank assistance and creating textbook publishing and dissemination systems (OSI and World Bank supported program).

2.6 These reforms have resulted in some significant progress in the country, especially the creation of a more change-oriented professional culture, the development of a sound curriculum and assessment development programs, enhanced expertise at national and school levels, more interactive and practical teaching and learning methods, and some better-resourced schools.

2.7 Fourth, Macedonia is committed to improving education. The Macedonian political leadership is keen to capitalize on the education system's existing strengths. The government has established a Pedagogical Institute at the university in the capital, and has set up an assessment unit within the Bureau for the Development of Education (BDE). The institute and the BDE have been active in assessing preprimary, primary, and secondary education, and have been at the forefront of the above reforms in these sectors. Parliament, meanwhile, has enacted a comprehensive law on higher education. These initiatives demonstrate the government's commitment to improving the system.

2.8 Teachers and students universally support the principles of the new reforms. There has already been some success in making learning more interactive, with both students and teachers reporting a higher level of interest and in some cases achievement. In addition, steps have been taken to further involve parents in school management and to create local school councils at both the primary and secondary level. These efforts reveal an awareness of the need to pursue improvements in education and a willingness to innovate.

2.9 Macedonia's commitment to improve education is also demonstrated by the Government's recognition of some lingering problems to be addressed. These include the poor quality of many school buildings, the lack of computers and specialized equipment, the need to provide learning materials for the new curricula, inadequate provision of in-

service training to support the educational reforms, the unreliability of internal assessment of student attainment and the lack of criteria or procedures for evaluating the effectiveness of schools and the education system. The recognition of these problems – combined with renewed calls for improving equity, quality, transparency and accountability – lends hope that a broad reform program is not only necessary but also feasible.

### 3. THE CHALLENGES

*The educational system faces a number of institutional challenges, including limited policy capacities, inadequate division of administrative and management tasks and distorted financing and budgeting procedures. These institutional arrangements are the main causes of some sub-optimal or negative outcomes in terms of the education system's relevance, performance, attainment, access, and efficiency. Higher education appears to have separate but no less significant institutional shortcomings; it too faces subsequent efficiency and relevance challenges.*

3.1 The government of Macedonia must now deal with a long list of new, external challenges to its education system. These stem primarily from the economic and political transition that followed the breakup of the Yugoslav Federation.

3.2 The institutions of government that make and implement public policy have not been fully successful in responding to these challenges. Macedonia has not been able to agree on a medium-term vision for the education system or provide the bureaucratic apparatus needed for substantial reforms. Since the mid 1990s, the government has remained committed to develop an education strategy. However, the outcome has been somewhat limited to short-term actions and legalistic approaches. In absence of broad participation in education reform discussions, frequent political changes have often interrupted the government's pursuit of a strategy. Political turnarounds resulted in changing investment priorities and directed the focus away from necessary institutional reforms and structural adjustments.

3.3 The latest Government strategy was issued in March, 2001. It made a commitment to target poverty through education and defines an extensive list of investment priorities. However, it falls short of committing the government to a comprehensive and systemic reform, which would also define new principles of public finance, planning and management. There are several possible reasons for this lack of commitment, including a lack of social consensus on the scope of reform, the low level of stakeholder involvement, for example in the definition of curricula and standards, a reluctance to change the existing management and financing structure, and inadequate implementation capacities.

3.4 The government's inability to mobilize broad support for a reform program has resulted in the pursuit of incremental changes with only limited support from the local education agencies. Consequently – and despite of the repeated efforts -- Macedonia has

not managed to develop a comprehensive education policy, which would guide the activities of the state and to shape the elaboration of budget priorities. Such a policy framework would define the role of the state and other major players in the sector and establish criteria for assessing the performance of each group. A well conceived policy document would help to focus resources and analyses on the most crucial issues and priorities.

### **Over-centralized Educational Administration and Management.**

*Presently, central and regional administrative agencies dominate education administration and management. These agencies predominantly focus on legislative and control functions and have less capacity to engage in assessment, policy or advisory activities. Meanwhile, local actors, including municipalities and schools, have limited roles and narrow range of options in managing education service delivery.*

3.5 Prior to the breakup of the Yugoslav Federation, responsibility for education in Macedonia was assigned to 34 largely autonomous regional authorities. Management of education was then re-centralized in 1991, when authority over education shifted to a newly created national Ministry of Education, (later Ministry of Education and Science, or MES). A new law on territorial responsibilities was enacted in 1996, increasing the number of municipalities to 124 and effectively restraining their capabilities to manage education or most other public-sectors activities. To achieve de-concentration, regional centers representing the central government were created.

3.6 The existing laws mandate that the MES should manage directly the country's approximately 1,100<sup>4</sup> basic and secondary schools via its own staff and its subordinate bodies such as the Pedagogical Institute (presently known as the Bureau for Development of Education, or BDE), and the School Inspectorate. The MES is also responsible for allocating budgets to schools, authorizing payments, appointing school directors, supervising compliance with national standards, and regulating the pedagogical processes, curricula, teacher qualifications, and school management.

3.7 The Macedonian educational system imposes detailed national directives on schools. This has led central, regional and local authorities to focus on compliance with rules and standards; schools often are unable to meet expectations within existing constraints. This arrangement has overburdened the MES with management tasks that cannot be performed well without detailed knowledge of each school's needs and opportunities. The daily administration load has distracted the MES from strategic functions such as policy formulation, long-term planning, standards setting, and inter-ministerial cooperation.

3.8 The MES has a staff of about 170 in the capital. Prior to a recent restructuring, it was organized partly by sub-sectors (primary, secondary, tertiary) and partly by general

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<sup>4</sup> Out of these, 90 are secondary schools and 350 central primary schools have their own legal identity and administration, whereas the rest are satellites attached to the central schools.

functions (finance, legal, investments, etc.) The recent restructuring established departments for programs, development and legislation, finance, information and logistics and communication. The previous sub-sectoral division remained by and large intact under the programs department. The restructuring stopped short of revising the Ministry's responsibilities and adjusting the staff capacities accordingly.

3.9 In addition to the core Ministry staff, the Ministry also has 15 regional representatives (RRs) with 30-35 professional staff, who act on behalf of the ministry. These units have pedagogical, financial and administrative functions, but have no decision-making powers. For instance, they represent MES in the school boards. RRs are subordinated to the under-secretary of primary education and they also have responsibility for other levels of educational institutions. Their work stresses compliance with directives and supervision of mandated standards of service. The representatives do not provide advisory services or lead efforts to improve the performance of schools.

3.10 The State Inspectorate comprises 25 Inspectors.<sup>5</sup> The Inspector's role is to check compliance with Ministry regulations, through yearly visits to schools, on such matters as conditions of work, qualifications of teachers, curriculum, and textbooks. The main function of inspection reports is to keep the Minister informed about what is happening in schools, especially in relation to parental complaints. There is no evidence that these reports impacted on the quality of provision or resources in schools.

3.11 The work of the BDE is organized in three sectors or departments: Planning (curriculum development, assessment, teacher training), School Monitoring, and Logistics (finance, IT and other support services). While there is about 80 professional staff working at the Bureau, 50 is employed in Logistics. The Planning sector comprises the Subject Advisors and the Assessment Unit<sup>6</sup>. The BDE also has additional 30 logistics staff at its 12 regional units. The Bureau main task is to monitor schools and teachers, advise on staffing and equipment, provide subject based advises and training. However, there is a mismatch between the Bureau's responsibilities and its staffing, brought about through a substantial number of early retirements combined with a sharply increased development load. The current curriculum development agenda leaves subject advisors with inadequate time for other responsibilities.

3.12 On the other hand, the Bureau retains over 30 staff who undertake school monitoring visits but are said not to have the skills for development of curricula and assessment or teacher training. Their activity is focused on controlling compliance with regulations rather than pedagogical assistance. Schools are not invited to do self-evaluation. Although the separation of the State Inspectorate from the BDE advisory work implies a clear distinction between legal and professional control, the two areas can not be, in fact, separated. Inspectors continue to control pedagogical processes and advisers continue to exercise formal, official type of control.

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<sup>5</sup> Their number was recently reduced from 35.

<sup>6</sup> The Assessment Unit has 10 staff and is currently responsible for a number of major new developments related to student assessments and international tests.



3.13 Presently, Macedonia's 124 municipalities do not have an important role in education. They have the right to appoint some members to school boards and some of them may initiate investments into repairing buildings improving school infrastructure or even construction of new schools. (All schools are owned by the MES.) Municipalities have little authority to raise tax revenues; municipal revenues thus represent no more than 2 percent of total public revenues. Nearly two-thirds of the municipalities have a population of fewer than 10,000 people; 37 percent have fewer than 5,000 inhabitants. Opportunities for stakeholder participation in making decisions about educational matters are also very limited. Local partners (parents, business organizations, civic groups, etc.) often help schools raise money for supplementary materials and for the support of extracurricular activities.<sup>7</sup>

3.14 School directors are appointed by the education minister, but school boards and educational advisors play an active role in the process. The dossier of the candidates is evaluated by the school board, then sent to the MES which asks for the opinion of the BDE (on the basis of the personal records BDE has on the individual teachers through the advisor's reports). Prior to appointment school leaders do not receive any preparatory training. School management is not seen as a profession that requires special competencies or qualifications. This may be a major obstacle if schools are to have more autonomy and, consequently, if the quality of education depends more on the quality of school level management.

3.15 Directors have a strong influence on school level human resource management (they select teachers from among candidates) Teachers have a contract signed by the MES as the employer setting out the duties and obligations. Meanwhile, directors have little control over resources, with spending tightly controlled by the MES. School directors and teachers have very little room to maneuver in managing school-level instructional processes. Schools produce annual programs of work, that include some developmental objectives, but there is no culture of school planning linked to self-evaluation.

3.16 Schools have very little room for manoeuvre in managing school level pedagogical processes. About half of the schools have pedagogues and/or psychologists or social workers. The pedagogues' role is ill-defined, they de-facto serve as deputy directors and have limited capacity or mandate to influence school effectiveness. The centralized external control of the internal pedagogical processes discourages adaptation of teaching methods and curricula to local needs and constraints; it also stymies innovation.

3.17 Schools are managed by School Boards<sup>8</sup> of 9 members, two by the founder (government); 3 representatives of the parents of pupils and 4 representatives of the teachers employed at the school. They are elected for 4 years and may serve one further

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<sup>7</sup> By some estimates, such funds could average as much as 10 percent and can reach as much as 20 percent of the total school budget.

<sup>8</sup> Article 88 of Law on Secondary Schools; Article XX of Law on Primary Schools

term. Each group is elected by their respective stakeholders (eg: teachers by teachers). The Boards are too large, their activities are quite formal and are dominated by the teachers and principals.

3.18 School principals define each year an educational program<sup>9</sup> The program includes the teacher need with a schedule of the teachers employed, number and details of the classes, general timetable, number of instructional hours, all planned school activities; lists of equipment and teaching aides. The program is signed off by the School Board, circulated to all parents and teachers as well as to the BDE, MES and Inspectorate. For now, schools are not established or organized to become more self-monitoring.

3.19 The most fundamental challenge for education administration is external: Article 22 of the new Law on Local Government assigns competencies related to “establishing, financing and administering of primary and secondary schools, in cooperation with the central government, in accordance with law” to the level of local governments. The 124 municipalities have diverse size, student population, financial and management capacities, making it difficult to assign new responsibilities to them without creating inequalities in accessing education services. Meanwhile, a rational territorial redistricting and an adequate law on local government finance is politically contested, though effectively unavoidable.

3.20 The demands on education, driven by political and ethnic considerations, range from calling to establishing the rights of local governments to select school directors, to local governments be able to choose curriculum, hiring and firing teachers and to essentially financing education (based on adequate level of central transfers. Meanwhile, politicians are legitimately concerned that an improperly designed decentralization could have negative impacts on the quality of education and that decentralization could weaken the Ministry’s power to implement recently established curriculum reforms. Finally, on the long-term, the decentralization of education management will challenge the relationship between schools management, local communities (school boards) and municipalities. Given the dormant or ineffective nature of these authorities, a tension between them has not manifested for now. However, such a tension could emerge if the devolution of responsibilities and the transfer of competencies are based on well conceived and consensual strategic objectives.

### **The Current Budget Process.**

*Education is financed primarily from the state budget, but most educational institutions also obtain some funding from activities under their direct control. In the meantime, the public finance system and fiscal pressures make it difficult to analyze, budget planning and execution. Also, there are no easy mechanisms that would help adjust state funding of education to match education policy priorities.*

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<sup>9</sup> Annual Programme of Work for Each School for the Year.

3.21 Government spending on education is concentrated at the level of the central budget, while spending on other important items, such as health, welfare, communication, are de-concentrated into distinct funds. Therefore, education's share within the central government's budget appears to be uniquely high in comparison with other countries. However, information on overall and program by program based spending is highly problematic for several reasons. Since each school is a separate budget unit, the regular reports on the central budget incorporates education expenditures into the large gross expenditure categories of wages, goods, utilities, etc, therefore they only appear as expenditures of the education sector in the executed budget. Further, public funding on education also includes significant special revenues (fees, extra-curricular revenues, donor funding) and accounting for these is difficult, when the executed budget is reported.

3.22 Some estimates put overall spending on education relative to gross national or gross domestic product in par with other countries at comparable level of economic development. Meanwhile, fiscal control and fiscal pressure on education has increased over the last few years, and the government budget has decreased<sup>10</sup>. In 2000, the declared education budget was 8.2 billion Denars or USD 121 million. With calculating of a USD 3.57 Billion, the share of public expenditures in the GDP was about 3.4 %. This trend is also somewhat overshadowed by increasing extra budgetary expenditures, especially increased donor funding of investment related activities<sup>11</sup>. While the proportion of education in the budget does not reflect the relative importance of education, it is difficult to argue for added public support in absence of clear education policy priorities.

3.23 Macedonian schools are separate legal entities and as such manage their own budgets. The annual program (described above) determines the funding need. The amounts made available to a school are determined by the application of a funding formula that included 12 variables. The list includes not only the number of students being taught, but also such variables as the floor area of the school, the area of the school grounds and the distance of the school from an all weather road. Thus, the funding formula ensures that the greater costs associated with excess capacity, inefficient engineering designs, poor location and other error in the design of the school are met.

3.24 The primary flaw in the budget process is that it removes all financial incentives to pursue reductions in cost through the correction of inefficiencies in the design or previous operation of a school. School principals have no reason to seek to use resources more efficiently if the reallocation of resources would be penalized by a reduction in the allocation of funds. If improvements in the design and infrastructure cause reduced costs, they may lead to reduced budgets.

3.25 Secondly, the current budget process assigns priority to staffing needs. The centrally defined curriculum calls for relatively large number of mandatory class hours

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<sup>10</sup> from 8.2 billion Denars (\$121 million) i 2000 to a projected 7.8 billion Denars (\$115 million) in 2002.

<sup>11</sup> The total amount for education is estimated to be 10.8 billion Denars (\$159 million).

and subject areas<sup>12</sup>. These, plus the regulation of full time equivalency for teachers together produce the teaching need in terms of teaching hours, staff need and necessary qualifications. Teachers are typically certified to teach only one subject, which may cause problems of access to quality, inefficiency or inequality. The full time employment of teachers requires 20 hours per week contact time<sup>13</sup>, significantly lower than the international average of 25 hours per week.

3.26 Smaller and poorer schools may have limited access to better qualified teachers, especially in subjects like foreign language or computer literacy as they may not be able to employ such teachers on a full-time basis. If, however, schools “decide” to afford the employment of teachers with specialized certification, they may have a number of part-time teachers whom the schools use with less than optimal efficiency. Part time teachers are entitled to the same transportation and meal allowance as full time teachers. The cost of these benefits would represent a third of the total compensation for a half time primary school teacher, but only about 10 percent of the total compensation for the principal of a secondary school. To deal with this problem, schools are organized into groupings of several campuses serving several communities. However, the satellite schools often have limited access to the “quality” teachers and quality programs. Some of these satellite schools teach 1 to 8<sup>th</sup> grades without adequate teaching staff and resources.

3.27 Thirdly, the budgeting process limits the capacity of the government to implement new policy priorities as the overwhelming portion of expenditures are based on need to maintain the status quo in terms of staff and infrastructure. The formula validates past errors by providing funding to sustain inefficient and outmoded designs and programs—including antiquated heating equipment and oversized school grounds. The budgeting and budget execution is oriented, through inertia, towards the preservation of status quo, trying to retain high standards, where those are available but also funding schools, with outdated curricula and low attainment (especially in the vocational sector), thus retaining staff and facilities there, as well.

### **Efficiency Implications of the Budgeting Process.**

3.28 *Allocative efficiency* indicates the extent to which resources are assigned and spent according to policy priorities. As seen earlier the government of Macedonia invests into education at a level that is roughly similar or marginally lower than other countries in comparable economic status. However, with this level of investment, the government does not achieve the adequate results either in terms of the relevance or in terms of educational attainment. From a public investment perspective, this under-achievement indicates inefficiencies. Unless the system shows that it can use the existing resources better to achieve better outcomes, arguing for additional investments remains difficult.

3.29 The efficiency of allocations can also be assessed within the education sector. Macedonia allocates the largest share of its education budget to the primary subsector

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<sup>12</sup> Even though there have been some reforms in this, especially in lower grades.

<sup>13</sup> Some schools now have students in a double shift (8 hrs) with two teachers.

(more than 50 percent, see Figure C2 in Appendix C.). However, when considering per student allocations across the subsectors, expenditure shares are far greater for tertiary education. Relative to enrollment, tertiary education receives more resources than the other sub-sectors: more than 23 percent of the education budget is allocated to 8.1 percent enrolled in universities. Secondary education receives slightly more but enrolls almost three times as many students (Table C18). International comparisons show a similar inefficiency in resource allocation. In Macedonia, per student public education expenditure by level of education (as percentage of per capita GNP) is the highest for tertiary education (approximately 70 percent), and almost twice as much as the OECD average (37 percent, see Table C19 in Appendix C.).

3.30 *Technical efficiency* means the extent to which resources are allocated adequately between budget categories to maximize outputs. It can be assessed by looking at how labor, infrastructure, and resources are used.

3.31 The proportion of the educational budget spent on **wages and salaries** is large—more than 80 percent; comparable countries spend between 60 percent and 70 percent of their total education budgets on wages and salaries. The high proportion is partly explained by the small school sizes (given the ethnic structure of the country<sup>14</sup> and the large number of rural schools.

3.32 In addition, it is also clear that education in Macedonia is also becoming more staff intensive. Student-teacher ratios declined across the decade at both the primary and secondary levels, although they are still above the OECD average (18 and 16, respectively, against 16 and 14.6 for OECD, see Table C15). At the basic level, the number of enrolled decreased across the decade by approximately 14,000 children, while the number of teachers in fact increased by 500 (Tables C1 and C16); Macedonia's ratio of teachers to non-teaching staff is the same as for OECD countries (2.8 in 1995).

3.33 Meanwhile, teacher salaries are low and their value is decreasing. They provide no motivation for teachers to improve their performance. The level of teacher salaries—compared to the economic development level of the country—is lower than the level of most other public-employee categories. Primary school teachers from grades 1 to 4 earn about 70 percent of the average earning in the country, from grades 5 to 8, 80 percent, with a university degree they earn 90 percent. Secondary school teachers are by and large at the level of average national earning. After taxation (about 40 percent of the salary a lower primary school teacher takes home about US\$100. Salary structures are flat and differentiated only by length of experience and status. There is no recognition of excellence or incentives for performance or for training. Wages have been frozen since 1992 during which time inflation has eroded the purchasing power by at least 1,700%. The low salaries force teachers to seek other income, often they provide private tuition to students.

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<sup>14</sup> As about one third of the population needs to be taught in other than Macedonian language.

3.34 Most spending on **staff training** is being financed by donors. School directors, administrators, and teachers are not receiving regular services to update their skills. More importantly, training does not play a role in appointing, recognizing, rewarding, or promoting administrative or teaching staff. In the absence of a framework stimulating performance improvement, provision and allocation of the meager training services are mostly ad hoc.

3.35 There is emerging recognition that public funds should be reallocated to support school improvements—training, investments into new equipment, etc.—and that these additional requirements will have to be met primarily through a reduction in the total education wage bill. However, given these reasons, but also given the distorted incentives described above, the system has so far resisted the repeated pressures to reduce the wage bill by cutting the number employees. Such efforts may not bring about sustainable results without adjusting pre-service training system, curriculum and teaching standards and staffing regulations.

3.36 Meanwhile, a minimal amount remains for **non salary expenditures**, instructional materials, training, capital investments, repairs, or even maintenance. Moreover, given the detailed regulations, there is very limited space for local managers to adjust financial input to local conditions and expenditure needs, economize on some (e.g., staff), and spend more on others (e.g., instructional materials and capital repairs).

3.37 Most reports recognize that **textbooks and instructional materials** are scarce, outdated and of low quality. The scarcity of supplementary materials, which could enrich curriculum, is especially serious. Such materials are essential in the context of lifelong learning, as they might be also helpful in allowing students to pursue their interests independently. The reliance on centrally selected teaching materials deprives schools of diverse content. It also undercuts efforts to build critical thinking skills by presenting students only with approved ideas and perspectives.

3.38 Although the government piloted a competitive and transparent textbook-publishing scheme, it has not committed itself to scale up the pilot. government's commitment to textbook allocation. What is more, use has been inconsistent and highly dependent on short-term political considerations. Some textbooks have been distributed freely to the entire population and others are paid for by parents. Incentives to re-use textbooks have not been established. There are indications that supply and access to both textbooks and other materials are highly unequal, favoring wealthier communities, where private contributions, extra-budgetary funds are more accessible.

3.39 While more efficient use of funds would give additional resources for investment, additional spending is needed for restructuring and development of schools. The MES recognizes the need to **repair and renovate schools**. Decades of under-funding of these functions (even under the Federal Republic) have resulted in the deterioration of many schools and the obsolescence of equipment. The lack of adequate instructional equipment, including new technology, is commonly acknowledged by parents and communities as well. However, these shortcomings are as much the result of structural problems in the allocation and management of public resources as they are the result of

shortfalls in the amount of those resources. These shortcomings originate in the management structure that provides no incentives to gain efficiency and to reinvest as discussed above. The economic problems of the 1990s have also resulted in limited overall capacity to maintain and equip the existing network of schools.

3.40 The government has responded to this problem by relying on donor funding to address needs for **capital improvement**. Capital improvement requires clear standards for regular financing of repairs, monitoring of enrollment trends and the conditions of infrastructure. Also, improvements need to be measured against projected efficiency gains. The irregular, donor-based or other extra budgetary revenues have not stimulated adequate responses in terms of efficiency improvements, or allocating funds where demand is increasing. The government does not have a regularly updated management information system, which would facilitate re-allocation of funds or special targeting practices.

3.41 Student-class unit ratios show that Macedonia uses its schools intensively (25 and 31 students per class unit in basic and upper secondary, respectively, see Table C15). Data on urban versus rural ratios do not exist, but since the average number of students in a class unit is quite high, urban classes are usually crowded, especially secondary schools. Similarly, data on the number of basic education institutions being used as double- or triple-shift schools support a picture of intensively used facilities. Some 40 percent of primary and lower secondary schools are double or triple shift (Table C13). Such an intense use of the infrastructure may be at the expense of educational quality (triple-shift in primary schools is pedagogically bad practice).

### **Challenges to Improve the Relevance of Education.**

3.42 The relevance of education may be assessed along three dimensions:

- (1) Do education programs provide adequate skills to meet changing economic and labor market needs?;
- (2) Do programs provide skills to meet civic challenges in an emerging democracy and an ethnically diverse society?; and
- (3) Does a particular level of education program give students adequate skills to pursue more advanced education and training? Provide them with the ability to make informed choices among study, training options and career options?

3.43 Macedonia appears to have challenges in all: education, especially at upper secondary level -- doesn't appear to be flexible enough; curricular standards are overwhelming, leaving too narrow space for the schools and teachers to engage in pedagogical innovation, adjust the teaching program to changing local need or, in the case of vocational programs, to the volatile labor markets. Curriculum, syllabi and teaching materials are fact based, theoretical. The traditionally selective system of grading and examination brings about early streaming and favors privileged (affluent and urban) groups.

3.44 Economic relevance is tested, at least in part, by the labor market. Employment, earning, and career patterns of graduates demonstrate the success of education and training. In Macedonia at present, however, there is little capacity for or commitment to monitoring graduates as they progress through their working careers. However, since unemployment is persistently high at over 35 percent and within the unemployed between 1/3<sup>rd</sup> to 40 percent is between age 15 to 24, labor market relevance appears to be an acute problem. In absence of labor market survey, one cannot precisely determine the type and level of education that is rewarded via employment and higher earnings. However, there are indications that, like elsewhere in the region, demand exists for workers with higher levels of competence, a broader skill base, and better problem-solving and knowledge acquisition skills.<sup>15</sup>

3.45 Civic relevance requires all citizens to exercise the rights and obligations of citizenship and to create a shared commitment to social and national norms regardless of ethnic, social, and political divisions. Pedagogical methods and curricula are adjusted to what is needed locally, including (i) language and culture relevant to social groups; (ii) understanding and tolerance of one other to minimize instability and strife; (iii) skills to develop and improve local communities; and (iv) increased social capital and trust. Although the government has made significant commitment to improve civic education in Macedonia, flexibility in curriculum is largely lacking.

3.46 The structure of education programs is competitive, and weekly tests, year-end grading, and examinations following grades 8 and 12 establish a track record for students facilitating (or limiting) their admission to the next level. Grade 8 exams and basic education records contribute to early streaming of students (at age 15). Weaker performing students are tracked into vocational programs. Typically, children from lower-income families, from rural areas, and from minority ethnic groups have lower proportional participation in general secondary education. The relevance, therefore, of education in terms of advancing one's individual school career is compromised by an education structure closely linked to social and economic hierarchies.

3.47 Most local and international experts consider the curricula overloaded and highly demanding in terms of the factual knowledge that must be absorbed by students. As a result, curricula coverage is selectively met in the best located and supplied schools. Meeting the curricula requirements is not only difficult but also creates a wasteful use of resources in less populated and poor areas. At present, the most decisive factor determining management and financing activities at central and local levels is the curricula describing for each year and each subject what should be taught, qualifications required, and approved textbooks and materials.

3.48 In parallel to an overloaded curriculum and its focus on factual knowledge, the teaching, acquisition, and assessment of this knowledge takes place by **extensive, passive learning** by students, including lecturing and oral examinations conducted by teachers.

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<sup>15</sup> International test data – including for example PISA -- show that countries of the region (though not yet measured in Macedonia) are behind OECD countries in many of these skills . Macedonia is participating in the upcoming PISA+ assessment.



Assessment and examination are, by and large, the same and based on non-standardized questioning and grading of students. At the end of the 8<sup>th</sup> grade, students take a BDE-set test that defines their secondary-education career options. Both the school-based and the BDE-set tests focus on reproduction of facts rather than on critical thinking and interpretation.

3.49 Macedonia lacks a nationally standardized and comprehensive system of examinations and assessment of students' performance. A law from 1995 prescribes the grading system (5-1 with 5 being the highest). Grades are given on a subjective basis. The MES receives only summarized exam results from schools, which are not comparable across schools, districts, or over time. However, the system is under revision and a new and broader model is being shaped; also, new grade 8 and Matura exams will be introduced by 2003. The new exams are expected to cover two compulsory and three elective subjects, plus one "theme" or extended essay on a topic chosen by the student.

3.50 In 1999, Macedonia participated in the Third International Mathematics and Science Study (TIMSS), which measured progress in eighth-grade (13- to 14-year-olds) mathematics and science achievement in 38 countries around the world. TIMSS also collected information about the teaching and learning of mathematics and science (curricula, instructional practices, policies, and student background and attitudes). Besides Macedonia, 10 other countries from Central and Eastern Europe took part in the study: Bulgaria, the Czech Republic, Hungary, Latvia, Lithuania, Moldova, Romania, Russia, Slovakia, and Slovenia. TIMSS is the only international student-assessment test in which Macedonia has participated and therefore the only reliable comparative source of students' performance.

3.51 As the published results show, Macedonia's performance is disappointing: not only is its country average significantly lower than the international average (approximately 6% below the international average), but also it is the lowest of all ECA countries included in the study, in both mathematics and sciences, and among the lowest that participated in TIMSS (only Turkey, Jordan, Iran, Indonesia, Chile, Philippines, Morocco, and South Africa did worse than Macedonia).

3.52 Additional information about the teaching and learning of mathematics and science was obtained through questionnaires given to students and teachers. The TIMSS analysis on students' backgrounds shows that Macedonia scored low in terms of home educational resources (books and educational aides at home, parents' education) but scored fairly high on time dedicated to studying outside of school and students' attitude toward the study of science and mathematics. The TIMSS analysis of curricula indicates that Macedonia has placed only moderate emphasis on approaches and processes, especially in sciences. However, Macedonia stands out in terms of teachers' self-confidence in teaching both science and mathematics.

## **Participation and Attainment.**

3.53 Rates of enrollment and attainment are among the best indicators of a country's human capital status monitoring system. In the absence of direct information from national exams, they provide a good indirect indication of students' performance.<sup>16</sup> They show the extent to which students remain committed to education and pass the minimum requirements. The reported wastage rate (dropout and repetition) is rather moderate at primary and secondary levels in Macedonia. However, with some 15 percent of the students enrolled in three-year vocational programs, the average attainment level is well below international averages (approximately 10.7 years against 16.4 in OECD countries). Of the age group graduating from grade 8 in 1991, for example, only 62 percent graduated from secondary school 4 years later, and only 12.8 percent obtained a first degree at the tertiary level in 1999.<sup>17</sup> Survival rates of Roma students, and of Albanian and Turkish ones, are unsatisfactory beyond the 8<sup>th</sup> grade.

3.54 Participation in preprimary education varies greatly by ethnic group (90 percent among Macedonians, 54 percent among Albanians, 37 percent among Turkish)<sup>18</sup>, by region, by urban versus rural area, and by income level. Because of the variations and the fact that many children entering grade 1 have had limited or no preschool experience, student achievement during the first years of basic education is very uneven. Consequently, a few children gain an advantage at the start of the otherwise competitive and selective system; an advantage that the dominant pedagogical approaches further reinforce rather than balance out.

3.55 Primary school coverage went down to 85 percent between 1990 and 1993; since then it has come up slowly to 89 percent. Because both dropouts and repetitions are minimal (less than 1 percent each), the causes of less-than-adequate coverage are likely to be limited access by some ethnic groups and especially poor backgrounds for some children.

3.56 Overall secondary school enrollment rates (around 65 percent) in Macedonia are low by both regional (Southern and Eastern Europe) and international standards. Low enrollments result from both demand and supply factors. The decline in enrollments reflects a decline in real household income, an increase in indirect income (in terms of foregone income for higher ages), and an increase in direct costs of obtaining an education (as a result of the increased fees and reduced subsidies on textbooks). Supply has also diminished and the programs offered appear increasingly inadequate to meet the needs of a market economy.

3.57 Low enrollment rates at the overall secondary level (general and technical/vocational) signal emerging and important inequalities. Differences emerge

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<sup>16</sup> Unfortunately, up to date, we haven't received reliable data on attainment nor one that would help trace student cohorts through their school career (see Tables C7 and C8 in the appendix).

<sup>17</sup> Ibid.

<sup>18</sup> See Table C4 in the appendix.

across ethnic groups, gender, location, and income groups. While, for instance, Albanians represent a higher proportion among pupils participating in basic education relative to their proportion in the overall population (indicating higher live-birth rates), their participation in secondary education, though growing, is significantly lower than their proportion within the groups and even lower than their proportion within the overall population. One critical issue is Albanian and other ethnic minority girls' education. While girls take equal part in secondary education among Macedonians, they barely reach one-third of the total number in their respective ethnic groups.

3.58 Although Macedonia followed the regional trend of increasing general-education enrollment at the expense of the vocational track—a consequence of economic transition—participation rates are still very low: in 1999 general secondary-enrollment rates accounted only for some 34 percent of the age group, well below the international averages (see Table C5 and Figure C1 in Appendix C.)

3.59 Survival rates of Roma students—and indeed of Albanians and Turks—are very low beyond grade 8. By the time students reach the end of grade 12, the vast majority of those continuing into higher education are Macedonian (see Table C2 in Appendix C). The highest numbers of young unemployed persons are those with only basic or secondary education. Consequently, those coming from ethnic minority groups and having a low education attainment have the highest risk of becoming unemployed. Gender differences exist especially in Skopje and other urban areas where the Albanian and Roma minorities are concentrated.

3.60 There are substantial differences in secondary enrollments by income levels as well, from 28 percent in the poorest quintile to 65 percent in the wealthiest one. Only 18 percent of the poorest adults completed secondary education while almost half of those in the highest-income quintile completed secondary education (see Table C23 in Appendix C.).

3.61 Only 27 percent of secondary school graduates continue into higher education (12 percent of the original grade 1 cohort, Table C7 in Appendix C. versus around 22 percent in other European countries. Students graduating from four-year vocational schools can only continue their studies in relevant professional fields that are vocationally, not academically oriented.

3.62 Inadequate education is a powerful determinant of poverty. Children born into poor households often are trapped in a vicious circle in which the low income of their families translates into unsatisfactory educational attainment and achievement. In Macedonia, the private costs of education absorb some 3 percent of the total household expenditure. The expenditure increases to 3.3 percent in urban areas and decreases to 2.6 percent in rural areas. Students are expected to pay for school supplies and textbooks at all levels of the education system. In addition, a dearth of affordable transportation and an increase in the cost of textbooks, school supplies, and clothing exacerbate the problem, especially for more vulnerable groups such as the poor and ethnic minorities (notably Roma). The financial burden results in reduced participation and lower student attainment. As a percentage of per capita consumption, poor households spend a third

more than non-poor households—relative to their income—for basic education and twice the percentage for upper secondary and tertiary education. Available information indicates that private spending on education is regressive.

3.63 The Macedonian government has undertaken initiatives to improve the targeting of education resources towards the poor. While secondary students pay nearly 70 percent of boarding costs (lodging and food), poor students from remote areas receive them for free. But despite such measures, the poor remain disadvantaged. The reasons for this may be found in the distribution of government subsidies to education. Benefit incidence analysis shows how groups with different social economic status gain from public support. Since all levels of education are heavily subsidized by the state, those groups that have higher enrollment also benefit more from the state subsidies. Richer households receive a much higher average per capita subsidy as their participation rate is higher both in 4-year secondary and tertiary education. (See for instance, Table C23 in Annex) In addition, the level of the per capita subsidy is much lower in rural areas than in urban one.

3.64 Although information on informal costs is not available, recent literature indicates that such practices are pervasive in the region. Parents often have to pay to get their children into school, either in a lump sum or in the form of high hourly rates.

3.65 Higher education in Macedonia has severe problems at the system, institutional, and program levels. The system lacks relevant structure and competitiveness, whereas institutions and programs lack incentives for capacity building and innovation. Macedonia's system of higher education needs to overcome traditional problems of relevance, efficiency, access, equity, quality, governance, and financing. It also has to deal with new challenges stemming from globalization and a knowledge-driven market economy.

3.66 Higher education in Macedonia tends to be rather elitist and monopolistic, providing limited access to students and limited competition and incentives. The overall numbers and structure of enrollments indicate that higher education in Macedonia maintains an elitist orientation with slow growth, little adjustment in terms of the program structure, strict entry selection, and a traditional examination process.

3.67 Two public universities, St. Cyril and Methodius University and University St. Klement Ohridski, are located in Skopje and Bitola, respectively (with some faculties in Prilep and Ohrid), and enrolled 350,000 students in 2000/2001. This is a ratio of approximately 185 students per 10,000 citizens. Although this figure could be compared with other transitional Eastern European countries in the mid-1990s, it is much smaller than in OECD countries.<sup>19</sup>

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<sup>19</sup> Data about number of students are not available in University of Tetovo and (newly forming) South Eastern European University in Tetovo, both private and non-recognized (in the case of the latter: not yet recognized) institutions.

3.68 The number of students enrolled has been growing in recent years. Student retention and graduation figures in Macedonian higher-education institutions are unsatisfactory. On average only 34 percent to 39 percent of entrants matriculate from undergraduate programs in four years. In some programs the graduation rate is only 16 percent to 24 percent (Table C9).

3.69 Macedonia's higher-education system has two major problems. First, governance is weak. The system lacks coherent strategic policy making and coordination among independent faculties. Second, a lack of competition among providers reduces pressures to strive for excellence in teaching, management, and research. The system is based on the legal and financial autonomy of some 33 faculties under the umbrella of two universities. These faculties have little incentive to innovate: those who teach the most popular subjects (economy and law) benefit from having the best students. Student quality is a function of high demand, whereas less popular subjects (engineering, teacher training) have no incentives to innovate given the incremental public-finance system.

3.70 The main institutional decision-making bodies—the Senate and the administration, led by the rector—are often unable to solve conflicting interests of independent faculties. Having no incentives to optimize the system, there is a danger that conservative forces, which resist change, become the winners and people with new ideas and relevant competence are marginalized. Although a new law has enabled new forms of financing and quality assurance, it falls short of establishing a competitive and transparent organizational and management structure. Additionally, implementation of the new regulations on finance and quality assurance has been delayed.

3.71 There are a growing number of students who fail to meet minimal achievement levels, resulting in unacceptably high dropout and repetition rates. The proportion of students completing their studies varies between 15 percent and 30 percent (Table C9). In addition to the fact that these students cannot enter the professional labor market and contribute to the economy, their status creates further expenses for the public.

3.72 There are many limitations on students' "choice" and "voice" in Macedonian higher education. Choice of emphases within a particular program is symbolic at best. Students cannot design or influence their studies according to their preferences and orientations. Students are not given a chance to choose a professor, to schedule their classes, or to choose resource materials. Because recourses are scarce, students have limited access to modern textbooks, information sources, and information technologies. This limits their abilities to modify course content to meet the skill requirements of changing market economics.

3.73 The rigidity of studies is embedded in professor-driven teaching methods and style. Traditionally, excellence in higher education was based on rigid structures, teaching methods and professor-centered approaches. Teaching methods are oriented toward knowledge reproduction (with the exception of arts and architecture, and economics programs) rather than individual, research-based studies, teamwork, or experimentation.

## 4. OPPORTUNITIES AND OPTIONS

*4.1 Opportunities lay in importance of education in the society and the skills and capabilities of graduates. Policy options need to encompass changes in the governance, management, and finance of education; the development of planning; management capabilities; and targeted measures to gauge and improve quality and relevance, content, and structure of education. Higher education also needs critical institutional restructuring and adequate incentives to improve quality, efficiency, relevance, and transparency.*

4.2 The importance of education and training will increase dramatically in the future. The high levels of participation and high standards of Macedonian schools, colleges, and universities will be advantages in meeting the challenges presented by globalization. However, to exploit its strengths fully Macedonia will need to implement further reforms in the content of curricula and teaching methods, and will need to ensure that as many of its citizens as possible are equipped to enter the workforce and to keep pace with advances in technology and changes in the organization of work. In the future, the growth of productivity, incomes, and employment will depend on the introduction of new products of value to consumers, adoption of better management and production processes, and employment of more skilled and better-disciplined workers.

### ***Box 3: New Skills in Demand***

In the new global economy, the ability to adapt quickly to change will profoundly affect a country's productivity and economic welfare. Formal education and training must lay the foundation for citizens to acquire rapidly new skills throughout their lives. The application of knowledge to complex problems demands the use of not only fact and formula but also more elaborate conceptual frameworks that enable people to manage and apply knowledge. In the new economic environment, creativity and imagination are also important traits. The assessment of education thus should include an examination of the extent to which students can analyze, think independently and creatively, and assess with logic and intuition.

Many of the skills needed to meet the above requirements are grounded in the behavioral and social sciences—disciplines in which Macedonia has not been strong in the past. For example, Macedonia will need to place greater emphasis on developing high-level skills in the marketing of goods in competitive markets. This will entail increasing its capacity to assess potential demand for new goods and services, to evaluate the strengths and weakness of potential competitors, and to design, advertise and distribute products. Macedonia will also need to strengthen its management of production processes. This will require the further development of general skills

for such fields as industrial engineering, production scheduling, inventory management, quality assurance, and personnel administration. Moreover, Macedonia will need to impart these skills widely—not only to managers and engineers, but also to production workers and sales staff—in order to compete successfully with the most advanced economies.

Macedonia will also need to strengthen basic physical and biological sciences and mathematics in order to be able to apply technological knowledge. Advances in material sciences and biotechnology are likely to be particularly important to the development of new products and services. Nurturing a team approach to the development of research-based products will be especially important. Marketing experts, production engineers, and research and development staff will increasingly have to work together to develop products that will meet the demands of discriminating buyers and can be produced at a cost buyers are prepared to meet. The education system will need to provide high-quality training in these fields of study.

### **Improving the Governance and Management of Education**

4.3 In an ideal administrative-governance structure, each level of administration, including the central ministry, regional authority, local administration, and school would have a clearly defined role in improving performance. The national interest in achieving core standards of student performance and in ensuring equitable access to educational opportunities would be assured while local need and aim variations are accommodated.

4.4 These principles suggest that the central government should retain responsibility for governance functions: developing an overall strategy, establishing an enabling legal and regulatory framework, ensuring the equitable distribution of resources to schools, and apprising stakeholders about system performance. Sub-national (regional) administrative units should be delegated authority and provided sufficient flexibility to amend the distribution of public resources to schools, monitor the performance of administrators, and provide specialized, professional support (advisory services and in-service training) to local schools. Local agencies and schools should be granted the authority to use budget resources to hire staff and purchase material inputs, define curriculum, select and implement teaching strategies, and monitor and report the educational progress of students.

4.5 A major reform of the entire public-administration system is being developed, and the reform is expected to have a significant impact on the education system. The most important proposals include (1) changing the central governmental structure to improve strategic capabilities, (2) creating an intermediate (municipal) level of government, (3) distinguishing civil servants and public employees, (4) introducing a treasury system, (5) revising the law on local government, and (6) increasing the financial autonomy of municipal governments. According to the public administration reform concept, some public functions, including school maintenance, are to be transferred to the municipal level. A subsequent law on fiscal decentralization is planned to provide adequate funding for the additional task, though neither the feasibility nor the capacity building needs have been assessed.

4.6 An important implication of the reform is likely to be changes in the legal status of teachers and non-teaching school employees. Teachers would become public

employees rather than civil servants and would be granted the protections of employment law. Other school employees would be hired locally and would have no special status. Education officials do not appear to have played a significant role in shaping the reform agenda or in elaborating alternative education sector scenarios.

4.7 The public administration reform has helped to restructure the MES and to create new units whose responsibilities cut across sectors, including program financing, legal affairs and development, statistics and information and international cooperation. However, this initiative must be supplemented by reduced responsibility for routine management of schools, which now distract the MES from its governance function, and a shift of these responsibilities to locally based authorities.

4.8 Macedonia will need to seize opportunities for improving the governance and management of schools created by the ongoing decentralization of public administration. It will be challenged to elaborate more fully plans to transfer responsibility for schools to local communities. It may explore the possibility of creating administrative districts large enough to provide primary and secondary education efficiently and effectively.

4.9 Local administration needs optimally encompass the potential to reallocate funds if necessary to improve efficiency and meet local socioeconomic demands with a variety of educational choices and options. Local administration should have adequate strategic capacities, autonomy and authority to use funds efficiently, provide educational and professional advisory and training services to schools, and to raise or use non-state revenues to improve education. In terms of their size, regional units need to cover a large enough territory in which enough students are enrolled to run a school network with appropriate economies of scale.

4.10 While from a management perspective, the old administrative structure of 34 local administrative units appears to be more adequate with about 10 thousand students on average, such structure may not be politically feasible. However, approaching this level is advisable. The more municipal administration units are maintained the less feasible it is to expect that they can run education efficiently. Local administrative units need to contain adequate schools and programs (at least one secondary school and a number of primary schools) and be able to recruit and employ well-trained, professional managers and specialist staff (remedial reading experts, subject specialists, and administrators).

4.11 With the imminent decentralization of education administration, the government should also consider creation of lay oversight boards for the local or regional education authorities. The main purpose would be to assure that there is a lay/civic control over the quality of education services, school effectiveness and the use of public resources. These boards might recruit the district's senior management team, review strategic plans for school improvement, ratify annual and medium term budgets, and receive periodic reports on the performance and finances of school districts.

4.12 Macedonia needs to develop a professional cadre of school administrators. The current practice of appointing teachers as school directors and head teachers will need to be replaced with a system that relies on people trained and certified in education



management and leadership. This would ensure greater professionalism and reduce the scope for political interference in the appointment process. Directors could be appointed under multiyear contracts that would enable them time to implement serious reforms in teaching and administration. Their reappointment should be at the discretion of local school boards.

4.13 Education reform should assist the transformation of the nature and content of external pedagogical control over schools and the gradual shift from external to internal evaluation mechanisms. The role of internal (self) evaluation as opposed to external is a universal European tendency with also some agreed standards<sup>20</sup>. Evaluation standards should be defined locally by school boards and influenced by users of educational services. The task of making self-evaluation a general practice and a reliable management tool requires new regulations, time, capacity building and persistent organization development efforts. This may come partly from outside the existing agencies which are now doing external evaluation, including the BDE and the State Inspectorate.

4.14 All schools should be required to adopt multiyear strategic plans for the improvement of education. Expertise in the training of teachers, the preparation of plans for the improvement of instruction, and the development and use of examinations and assessments should be offered to schools by the regional offices of the MES.

4.15 Education may also benefit from further encouraging the involvement of local partners (parents, business organizations, minority groups etc.) in school activities. This involvement is based on traditions inherited from the former Yugoslavia and includes local community participation in the school boards, parent associations and support schemes that schools sign with external donors. School boards may be best positioned to select school directors, oversee school level planning and self-evaluation, organize voluntary work, raise funds, help in resource management and bring in innovations.

### **Improving Education Finance**

4.16 Macedonia will need reform the financing of primary and secondary education to ensure greater management autonomy by the school district and to provide incentives to districts to manage resources efficiently. A funding formula needs to be adopted that is transparent and equitable. Local administrative units need to be provided with budgets based on the numbers of students attending and the cost of meeting exceptional needs such as (i) transporting children living in sparsely populated or mountainous areas; (ii) addressing the special needs of children who are from linguistic minorities, very poor, or mentally or physically handicapped; and (iii) funding special “magnet” programs for children with special skills. Schools will have to be held accountable for meeting agreed performance targets with the funds budgeted. Schools that fail to achieve their targets for could forfeit their management autonomy and be placed under probationary supervision of the national education ministry.

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<sup>20</sup> See the 1998 Vienna Declarations in: European Commission, Evaluating Quality in Schools Education, Brussels, June 1999, pp. 92-94.

4.17 Changes in the resource-allocation system should be planned, tested and introduced gradually by measuring and indicating the implications to local providers of educational services. In the medium term, however, changes in curricula, in training, and in governance could result in savings on staff-related expenditures. Such savings could be used to provide necessary additional investments in training, equipment, and staff salaries for those with increased workloads. Increased workloads (a full-time workload is set at 20 hours per week) will also limit the use of part-time teachers who must be paid the same benefits as full-time teachers.

4.18 The supply of textbooks and educational materials but also of training services ideally would be competitive; the approval of titles would be transparent and participatory and would allow for some local choice. Competition would likely result in better-quality textbooks and materials at lower prices. An entirely market-based allocation process is not possible in a country with a small population and multiple languages. Given Macedonia's economic situation, incentives are needed to ensure that allocation and use of textbooks is cost-effective (i.e., revolving textbook funds or other schemes facilitating the reuse of textbooks). Public funding should be targeted at those who truly cannot afford purchasing learning materials; those who can should pay for the books.

4.19 Ideally, skill upgrading should be competitive with the quality being assured by a professional accreditation system—and the use of training provisions should be based on school-level initiatives. Schools should be able choose training providers and pay for such services in exchange for the providers' commitment to improve performance (based on measurable performance plans and a local choice of service providers).

### **Improving the Relevance of Curriculum, Instruction, Standards, and Assessment**

4.20 The content of the primary-education curricula and school-teaching methods could be reviewed and revised. The content of the curricula is widely recognized to include more factual information than many students are able to absorb. These excessive demands lead to widespread manipulation of the examination system and erosion of standards of assessment. In addition, they often contribute to the premature exclusion of students who are able to successfully complete an academic secondary, or even higher, education. The revised curricula should place much greater emphasis on the development of skills as opposed to the mastery of fact. Specifically, greater attention ought to be paid to communications skills (listening, speaking, reading, and writing), applied mathematics, critical analysis, and formulation and testing of formal hypotheses. Memorization of fact should be restricted to areas in which facts are either employed very frequently or are difficult to access quickly when needed.

4.21 Pedagogical reforms should also be pursued. The initiatives undertaken with support from the *Step-by-Step* and *Interactive Learning* programs should be spread to all schools and extended to upper secondary and higher education. The role of the teacher should be redefined to stress management of the learning process. Teaching materials and classroom support should be offered to facilitate student-led and student-centered

activities. Particular emphasis should be placed on the development of teaching-learning strategies for children not succeeding in school.

4.22 An Assessment Unit has been set up within BDE to plan national assessments of pupils' achievements at the end of grade four, the final year of the first cycle of schooling. These assessments will be sample-based, and conducted in four-year cycles, the first (in May 2001) in language (Macedonian and Albanian) and in mathematics. The first results are expected by early 2002.<sup>21</sup>

4.23 The national assessment should be expanded and institutionalized to provide reliable information on education. A management-information system should be put in place to support decision-making and program monitoring at the school level. It should also be aggregated at the district, regional, and national levels to support oversight and management intervention. The assessment data could then be merged with data from the management-information system to analyze what determines success or failure—and what can be done in the future to improve quality. Each level of the education system should be equipped to interpret the information it receives and to act decisively on that information.

4.24 Macedonia should continue participating in international data-collection initiatives and assessment programs. It will be challenged to adopt international conventions on variables in order to compare of its achievements and efforts with those of other countries.

4.25 The enrollment of two-thirds of secondary schools students in vocational training programs is inconsistent with the long-term interests of both students and society. The rapid pace of technological change and frequent shifts in the factors determining global supply and demand imply that the goods a country can produce are unpredictable. This suggests the importance of ensuring that workers can acquire new or additional skills as needed, quickly and at minimum cost. In order to facilitate lifelong learning and to accelerate the acquisition of skills, secondary-school students need to be enrolled in general academic curricula that build foundational skills that permit them to acquire capacities as needed. These “foundational” skills include the ability to communicate effectively and precisely (written and oral) in both the mother tongue and an international foreign language; the capacity to formulate problems in quantitative terms and to perform basic mathematical operations on these problems; skills in the formulation and testing of formal hypotheses; sensitivity to the values and habits of people from different cultures; and the ability to work smoothly in teams with people who have different skills and attitudes. Because vocational training costs much more to provide than high-quality academic education, shifting students will also reduce the average cost of secondary education per student.

4.26 Macedonia should consider developing a postsecondary vocational education system. This ought to provide “just-in-time” training to young adults and non-traditional

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<sup>21</sup> OECD (2001).

students. Students could be admitted to these schools regardless of prior academic performance if they can demonstrate the foundational skills necessary to benefit from further study. Emphasis will need to be placed on the “topping up” of skills rather than the provision of formal credentials. Courses could provide skills valued by employers. A flexible, modular curriculum could be devised that allows students to construct their own specialization. The prerequisite skills necessary to complete a course should be clearly identified. Providers of such courses—together with employers, employees, and the state—would need to establish an adequate and transparent certification and accreditation system. Courses could be scheduled during evenings and weekends to allow people currently working to improve their qualifications or pursue career changes. Instructors should be sought from throughout the economy. Courses could be offered at convenient locations including existing secondary schools where facilities are adequate. Part-time students should be expected to finance part of the cost of their education. Postsecondary vocational training institutions should also train workers for specific employment. Consistent with international benchmarks, hands-on training aimed at achieving proficiency should take place in the actual workplace.

### **Reforming Tertiary Education**

4.27 In order to ensure sustainable economic growth and to enter European and global economic markets, the Macedonian economy needs highly competent, skilled, adaptable professionals capable of adapting quickly to the new demands of a knowledge-driven, information society. The higher education system should meet those new demands; the system, therefore, should be optimized.

4.28 Higher education institutions are to be given a framework in which their professional autonomy is assured while becoming accountable to the state for use of public resources and for providing quality education and training services. The state needs to establish a competitive organizational framework, professional organizations for quality assurance and accreditation, incentives, and an efficient system of public funding based on a transparent formula. In addition, public funding should facilitate improving access to tertiary programs by the poor. The affordability and retention issues should prompt introduction of flexible plans for student-financial support, including loans, grants, and scholarships.

4.29 Once within a more transparent and competitive system, institutions need to be rewarded for innovations such as revised curricula, introduction of a credit transfer and study system in line with global trends and European standards (i.e. the Bologna agreement), and for capacity building and strengthening institutional management.

4.30 Capacity building and program-curricula innovation should be linked with flexible study modules and the provision of optional teaching resources. Innovations should focus on students’ choices and on more active participation of students in the study process.

4.31 Two alternative policies could be proposed to highly fragmented and unevenly governed, managed, and monitored system of higher education in Macedonia: decentralized or centralized and coordinated system.

4.32 Alternative I. Instead of maintaining the practical monopoly of one big university based in Skopje and a smaller institution in Bitola, it would be reasonable to restructure higher education into a more competitive system of six to eight institutions. These would be located in Skopje (possibly even with three or four institutions), Bitola, Prilep, and Ohrid, or other bigger cities of the country. This change could encourage more competitiveness, innovation, and flexibility, which are needed to modernize academic institutions.

***Box 4: Latvian example***

Latvia could be comparable in size with Macedonia. This country has a population of more than two million. It has developed a diverse system of higher education, incorporating 20 public institutions, 11 private accredited), and 13 licensed private institutions (applying or undergoing institutional accreditation). More than 78,000 students are enrolled in public institutions and more than 11,300 students are studying at accredited private institutions. (Sources: Ministry of Education and Science, January 2001 data on institutions; and Central Statistical Bureau of Latvia, 1999/2000 data on students). The Latvian higher-education system has developed 2.5 times the capacity Macedonia has. It features diversity, competition, and fair rules of accreditation.

4.33 Alternative II. In order to avoid fragmentation and lack of coordination, more centralized policy making could be implemented in existing universities to persuade all faculties to: pursue reforms, achieve internal and external competitiveness, creatively use incentives for innovation and modernization, and meet both traditional and new demands of the economy and society. More systematic and centralized policy making at the rector, Senate, and council level is necessary if the institution is to redefine its mission and vision. In most cases, centralization of policy making within a big institution, composed of faculties with different and often conflicting interests, is difficult to achieve. Consequently, the university's central leadership would gain the right and responsibility to define the institution's strategy, issue degrees and diplomas (based on external accreditation), receive and allocate public funds, regulate the reception and use of non-public funds (tuition fees, contract work, etc.), establish human resource and personnel management and personnel contracts, and set up strategy and management of intellectual property rights for the entire institution. Faculties would remain in control of curriculum, examination system, performance assessment, quality assurance, and research.

## 5. POLITICAL RISKS

5.1 *The main political risks are related to the lack of political stability and consensus. While frequent governmental shifts limit the scope of changes, these same governments rely overwhelmingly on the power of central political forces. As such, they tend to ignore primary stakeholders and civil society in strategic processes.*

5.2 The government of Macedonia has committed itself to developing a long-term education strategy that will define the role education should play in social and economic development. The specific education policy objectives, the necessary framework for institutional and structural changes, and the directions for further developments and investment options are under consideration. In this effort, the government faces several internal and external risks and threats. A number of external challenges could stimulate the government to limit its focus on short-term and remedial steps instead of medium- or long-term ones:

5.3 First, social strife and ethnic tensions make it difficult to establish a political consensus on the necessity and directions of educational change. This risk is clearly visible as various political coalitions bring different priorities and commitments to education reform. The ethnic violence in early 2001 has intensified and complicated efforts to reform education, particularly to decentralize education management. The existing 124 municipalities vary wildly in size, education infrastructure, fiscal capacity, and managerial capacities. These variations make it very difficult to assign significant new responsibilities to municipalities without exacerbating the inequalities. Meanwhile, jurisdictional consolidation will be very difficult because of the ethnic pressures that helped produce the current number of municipalities in the first place. The fundamental tension over Macedonia's transferring of new responsibilities to local governments could risk increasing the very inequities minorities hoped could be resolved by the shift.

5.4 Municipal governments want ownership of schools to be transferred to municipalities they also contend that elected local officials should be given a substantial role in the hiring and firing of school directors. Meanwhile, the MES is concerned that poorly planned decentralization could have negative impacts on the quality of education. These concerns, however, skirt the more legitimate concerns that the MES needs to improve its capacities to attend strategy, develop overall policy, and reduce its bureaucratic mandate.

5.5 The economic and financial shortfalls could force short-term restrictions, temporary and unsustainable as they may be, without adequate structural adjustments and incentives for those delivering education services. A good example is the number of teachers cut back as part of the public sector wage-reduction effort without changing the existing regulations and standards defining qualification requirements, curricula, workload, or class-size. Consequently, such measures repeatedly have proven to be unsustainable.

5.6 There is also a risk that governments (with either political orientation) avoid adequate reform or ignore complete implementation of a development strategy. The dominant role the government played in a centralized public sector in general and the MES in education in particular could provide an attractive but false alternative for these authorities to avoid real institutional or structural changes.

5.7 Fourth, a political risk of the reform is if there is a lack of participation by stakeholders, non-governmental organizations, and other (more distant) members of the civil society in creating the new policy framework. The government can introduce different strategies and even have them endorsed by parliaments. Full political consensus, however, requires the involvement of stakeholders in defining a strategy and implementing it. Otherwise education reforms become dependent by short (generally 4-year) political cycles.

***Box 5: Achieving “Goal Stability” through the Development of Civil Society***

Macedonia has had several governments since it achieved independence in 1991. Frequent changes in political leadership have led to frequent changes in education policy and a stop-and-go approach to implementing education reforms. International experience clearly reveals that progress is possible only if a course of action is pursued consistently for a minimum of several years. Experience also suggests that the most successful reform programs have resulted from commitment to a broad policy agenda and from implementing it through a process of strategic experimentation and continuous improvement.

Civil society can play a major role in ensuring that goals are consistently pursued. Teachers' unions, professional associations of teachers of specific subjects, parent associations, schools boards, university faculties, and chambers of commerce and industry have a common interest in the performance of schools, colleges, and universities. If these groups endorse both a vision for the development of education and a process for implementing that vision, they can help to stabilize the policy environment and thereby ensure clear direction and consistent implementation of measures to improve education.

The government needs to consult frequently and widely on issues of education policy. Its policy pronouncements should be thoroughly vetted by a range of constituents. Advisory and oversight boards should be nurtured in order to broaden and deepen support for education initiatives.

## 6. HOW TO ENGAGE IN EDUCATION REFORM

6.1 **Define Long-Term Objectives:** Although it is difficult to separate education reform and government strategy from current political pressures, the government and the stakeholders have some options to minimize political risks. Education reform needs to touch upon several aspects, including curricula, human resources, structure of educational provisions, and institutional arrangements. This reform should start with the identification of fundamental objectives to be achieved in the long-term. In the present political context, for instance, decentralization is only a *process*, whereas a legitimate objective is to improve quality of learning (both in terms of overall quality as well as access to it by different social and ethnic groups).

6.2 **Open Educational Structure and Curriculum:** The development of new achievement and curriculum standards has started at several levels, including lower primary grades, vocational, and general secondary education. The new standards should be set up in terms of educational outcomes rather than detailed contents or educational processes. They should allow for the inclusion of local content and innovation. Testing and examination (especially the matura) is being standardized and gradually separated from the schools. The continued improvement of educational content should aim at providing better opportunities for students to update or modify their education careers within and beyond the school system. Groups at risk (including those with lower socioeconomic status or from ethnic minorities) should be given more opportunities to catch up and improve educational attainment.

6.3 **Measure Progress:** Education reform, targeting improvement of quality, or other measures of system performance require measurable outcomes and capacities for purposes of monitoring and policy adjustment. In Macedonia, the institutional capacities of educational assessment have been established and strengthened during the last five years. Assessment now needs to be scaled up to provide information regularly to both central policymaking and local agencies, and to school managers. Further, informed policy making requires reliable data on inputs, enrollments, resources, and expenditures. The new treasury system allows the monitoring of financial information but an education information system should be developed to provide data on students, staff, and physical and other resources. Further, the information system needs to connect these data with finances and, eventually, indicators of performance. The impact of policies can only be understood if it is measured.

6.4 **Strengthen Institutional Capacities:** Regardless of the political pressures to decentralize, education administrators need to develop and strengthen capacities for planning, policy-making, management and monitoring. The central-level education administration should strengthen planning and policymaking capacities and develop institutional capacities to set standards, set accreditation procedures, and connect finances with policy priorities *to enable the central agencies to work in a decentralized system*. Local levels should have adequate capacities to manage efficiently, monitor performance, and adjust service delivery to local need. A reform of education administration should



establish a system in which central policy priorities are realized through incentives and guidance rather than through the concentration of power and authority to appoint local staff.

**6.5 *Equitable and Policy Focused Financing:*** Financing—both the overall budget framework and the allocation formula—should assure that families have equal access to quality education regardless of social and economic status, geographical location, or ethnic background. Once the government and the stakeholders agree on priority objectives, financing should assure that policy objectives are being attended. Funds for the maintenance of school facilities should be allocated among municipalities based on objective formula. But given the fiscal weakness of many municipalities, resource allocation should also ensure that all jurisdictions could support the facility-maintenance responsibilities they will be assuming. The overall funding of education should ensure that spending on in-service professional development, on instructional materials and equipment, and on capital maintenance and improvements becomes sustained at a higher than present level.

**6.6 *Institutional Incentives to Improve Performance and Effectiveness:*** Regulation, management, administration, and finance should ensure that primary educators become motivated to improve performance and effectiveness. Schools (management and boards) should be given a mandate to develop improvement plans and should be able to access resources to implement them. The teacher compensation system should ensure that teachers have incentives to upgrade their skills and improve their performances. Municipalities should be given guidelines and incentives to develop and implement capital improvement plans. School service providers, including trainers and providers of textbooks and other supplies, should have standards and (if necessary) accreditation to ensure competitiveness and quality.

**6.7 *Involve Stakeholders and Civil Society:*** The government needs to improve its dialogue with the stakeholders regarding the main directions and planning implementation of reforms. Scaled-up assessment activities and strengthened information systems also allow the provision of more adequate and quantitative information about system performance to citizens. Regular provision of information should be a key mandate to the central government. Local communities should be better involved in the municipal-level education administration. At the school level, boards should be strengthened to make them able to participate in school-level planning and performance monitoring. Non-governmental and private organizations should be given equal opportunity to provide services (once they meet quality standards), monitoring, and evaluation activities.

### ***Box 6: Education Reforms in Transition Countries***

Education reform has been a gradual process in most “reform oriented” countries in the Central and Eastern European region. In some countries, such as Poland, Hungary, or Lithuania, the process has covered 10-to-15 years. In others, such as Slovenia or Romania, the process started later and covered a more intensive period of 5 to 7 years. In these countries, reform covered

several aspects, including administration, finance, curriculum, personnel, and infrastructure. In others, reform has been more recent and focused on a limited set of issues, including teacher policy, textbook policy, or education finance. In all cases, however, reform has typically lasted several government cycles—and even more in the ministries of education. There is not one typical cycle of changes, only some typical steps and cornerstones of education policy.

In Hungary, reform started in the mid-1980s by giving more autonomy to schools and teachers and by changing the system of inspectorate into a regional advisory organization. School innovation was supported via innovation grants. At that time, Hungary developed a professional-assessment system and was one of the first in the region to participate in international-assessment activities. From 1990 on, Hungary underwent a radical decentralization in which local governments and operators of non-government schools receive grants based on the number of students they have. Both have full authority in electing directors and hiring/firing teachers. Salary range, however, has been determined centrally. In addition, a mandatory 7 percent of all public education expenditures goes for development programs, i.e. training, curriculum, and technology development. Parallel to decentralization, Hungary developed a core curriculum system in which curricula and standards were defined in broad concepts of skills and knowledge groups rather than subject areas. The country also has introduced an in-service training program in which teachers' seniority and salary are connected to training. Teachers or their schools choose training programs and receive matching grants from the government. Hungary has also recently introduced a competitive quality-assurance program based on multiple providers and school choice.

Similarly complex reform agendas have been introduced in Slovenia, Romania, and Lithuania, among others. In all countries with complex reforms, the fundamental challenges have been continuity and institutional memory. In most cases, the success of reform has depended on the effectiveness of governments to mobilize a broad set of experts in strategizing and civil society in discussing challenges. In all countries there have been setbacks and contradictory policy movements. However, in countries where reform has been based on participation, overall progress has been solid.

## 7. APPENDICES

### APPENDIX A - DEMOGRAPHICS

**Table A1. Demographic indicators**

	<b>1991</b>	<b>1995</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>
Total fertility rate	2.30	1.97	1.82	1.80	1.88	1.73
Crude birth rate	17.09	16.35	14.55	13.50	14.50	13.30
Male life expectancy at birth	70.09	70.10	70.23	70.48	70.68	70.73
Child dependency ratio	..	39.88	38.15	37.54		
Total population	2,055,729	1,974,800	2,005,500	2,017,000	2,026,000	2,035,000

*Source:* State Statistical Office (2002).

**Table A2. Population by Ethnic Group, 1994 Census**

	<b>Percent</b>
Macedonian	66.5
Albanian	22.9
Vlach	0.4
Roma	2.3
Turkish	4.0
Serbian	2.0
Other	1.8

*Source:* State Statistical Office (2000).

The 1994 Census is the most recent available source for information on the ethnic composition of the Macedonian population. A new census was performed last year (2002) in April, but there are no available data yet from it. There is expected to have first results somewhere in the beginning of 2004.

## APPENDIX B - ECONOMY

**Table B1. Gross Domestic Product**

	1991	1995	1998	1999	2000	2001
GDP (in 1.000.000 US\$)	2.830	3.351	3.575	3.730	3.899	3.723
GDPpercapita(constant 1995 US\$)	1,477	1.705	1.781	1.848	1.924	1.830
GDP growth (annual %)	-3.24	-1.11	3.4	4.3	4.5	-4.5

Source: Ministry of Finance (2002).

As it is common in transition economies, the Macedonian GDP decreased following the transition and is now on the way to recovery.

**Table B2. Basic Macroeconomic Indicators**

	1993	1998	1999	2000	2001
Inflation (average)	-7.5	-0.1	-0.7	5.8	5.5
Budget balance (general government, % of GDP)	-13.4	-1.7	0.0	2.5	-6.1
Average exchange rate (Denars/1 USD)	23.6	54.5	56.9	65.9	68.1
Export (F.O.B.), bn. USD	1.06	1.31	1.19	1.32	1.15
Import (F.O.B.), bn. USD	1.01	1.91	1.78	2.08	1.68
Trade balance, bn. USD	0.05	-0.60	-0.59	-0.76	-0.53
Current account balance (incl. grants), bn. USD	0.02	-0.31	-0.11	-0.11	-0.26
Current account balance (incl. grants), % GDP	0.8	-8.7	-3.0	-3.1	-8.6
Foreign exchange reserves, bn. USD	0.12	0.33	0.48	0.71	0.79
Import coverage (reserves/imports), months	1.4	2.1	3.2	4.1	4.9
External debt, bn. USD	1.14	1.44	1.49	1.49	1.44
External debt, % GDP	45.5	40.1	40.6	41.5	3.70

Source: World Bank (various years), Ministry of Finance (2002).

Imports account for more than 70% of Macedonia's GDP.

**Table B3. Structure of the Economy**  
(value added by economic sector as a percentage of GDP)

	1990	1995	2000	2001
Agriculture	8.48	13.21	12.0	10.9
Industry	46.65	32.46	33.7	31.1
Services	44.87	54.33	54.3	58.0
Total	100.00	100.00	100.00	100.0

Source: World Bank (various years).

**Table B4. Labor Force by Ethnic Group (population over 15), 2000**

	<b>Employed</b>	<b>Unemployed</b>
Macedonian	71.8	28.2
Albanian	50.9	49.1
Vlach	67.9	32.1
Roma	26.9	73.1
Turkish	61.4	38.6
Serbian	63.4	36.6
Other	63.1	36.9

*Source:* State Statistical Office (2000).

Unemployment is very high among minorities, especially the Roma and Albanians.

**Table B5. Labor Force by Level of Education, 2000**

	<b>Unemployed</b>	<b>Employed</b>
Without education	1.8	1.3
Incomplete education	4.7	7.1
Primary education	36.4	23.7
3 years of secondary	14.3	12.8
4 years of secondary	35.2	36.6
Higher education	2.3	5.4
University level education	4.5	12.6
Master degree	0.2	0.4
Doctorate	0.1	0.1
Total	100.0	100.0

*Source:* State Statistical Office (Oct 2002).

The majority of the labor force has 4 years of secondary education. People in such a category are more likely to be employed.

**Table B6. Equity**

	<b>1990</b>	<b>1997</b>
Gini coefficient of household per capita income	..	0.29
Gini coefficient of monthly earnings	0.22	0.26
Distribution of earnings-10th percentile	60.54	55.65
Distribution of earnings-90th percentile	167.14	180.14

*Source:* World Bank (various years).

## APPENDIX C - EDUCATION

**Table C1. Total Number of Students**

	1990	1995	1998	1999	2000	2001	2002
Basic education	272,843	261,033	259,386	258,111	252,212	246,490	244,740
% Females	48.02	48.17	48.12	48.11	48.09	48.13	48.17
Upper secondary	71,878	75,349	84,744	88,087	89,775	93,161	92,554
% Females	48.17	47.70	48.30	48.36	48.15	48.08	48.20
Tertiary (faculties)	29,349	27,340	32,048	35,141	36,992	39,406	44,710
% Females							

Source: State Statistical Office (2002).

In the past decade, the number of students enrolled in basic education has decreased while enrollments in upper secondary and tertiary have increased. The gender distribution reflects the population trend.

**Table C2. Students' Distribution by Ethnicity and Gender**

	Basic education*			Secondary education			Tertiary education		
	1992	2000	2000%	1992	2000	2000%	1992	2000	2000%
<i>Macedonians</i>	63.64	146558	58.1	87.71	69884	77.8	89.20	39765	89.21
Females	49.27	77164	52.65	51.45	35588	50.92		22149	55.70
<i>Albanians</i>	27.02	77442	30.7	6.68	14823	16.5	5.50	2192	4.92
Females	47.13	37244	48.1	31.03	6092	41.10		1094	49.91
<i>Turks</i>	3.78	10760	4.3	1.04	1545	1.7	1.10	546	1.22
Females	46.58	5113	47.5	30.23	568	36.76		269	49.27
<i>Roma</i>	1.90	7757	3.1	0.43	447	0.5	0.10	126	0.28
Females	43.74	3588	46.3	21.90	178	39.82		68	53.97
<i>Vlachs</i>	0.10	456	0.2	0.14	194	0.2	0.26	417	0.94
Females	52.75	231	50.7	42.16	90	46.39		257	61.63
<i>Serbs</i>	1.48	2902	1.2	2.17	1298	1.4	1.90	822	1.84
Females	46.05	1395	48.1	42.86	538	41.45		425	51.70
<i>Other</i>	2.06	6293	2.5	1.90	1608	1.8	1.20	707	1.59
Females	45.45	3015	47.9	28.35	596	37.06		361	51.06

\*Regular schools only.

Source: State Statistical Office (2002).

Since 1992, the share of Macedonians in basic education decreased to the benefit of ethnic minorities, notably Albanians. This reflects the trend in population demographics. A similar trend is observable in upper secondary. However, Albanians remain under-represented. Macedonians account for some 90 percent of tertiary education; Albanians,

meanwhile, are seriously underrepresented with a mere 5 percent. Gender distribution shows a bias against women in upper-secondary education among minorities, especially Albanians.

**Table C3. Share of Students Attending Preprimary by Ethnic Group**

	1996	1997	1998	1999	2000	2001	2002
TOTAL(excl. other minorities)	260659	260241	259314	257240	254838	248901	244114
Macedonian (%)	79.79	77.80	76.68	74.71	66.87	65.85	65.84
Albanian (%)	18.45	20.53	21.47	23.51	30.41	31.41	31.62
Turkish (%)	1.43	1.38	1.48	1.40	2.47	2.50	2.42
Serb (%)	0.32	0.29	0.37	0.37	0.25	0.24	0.23

Source: Ministry of Education (2003).

The young population of Albanians is rapidly increasing.

**Table C4. Share of Primary-School Students (first-graders) That Have Attended Preprimary by Ethnic Group (percent)**

	1995	1999	2000	2001	2002
Macedonian language	84.80	90.87	67.47	64.91	62.31
Albanian language	39.01	54.76	55.13	57.13	58.24
Turkish language	35.88	36.91	38.36	39.12	39.25
Serbian language	51.13	83.78	63.24	62.12	63.69

Source: State Statistical Office (2002).

Macedonians first graders are more likely to have had some preprimary education than are any other pupils from different ethnic groups. However, demographic trends show an increase in the share of Albanian and Serbs.

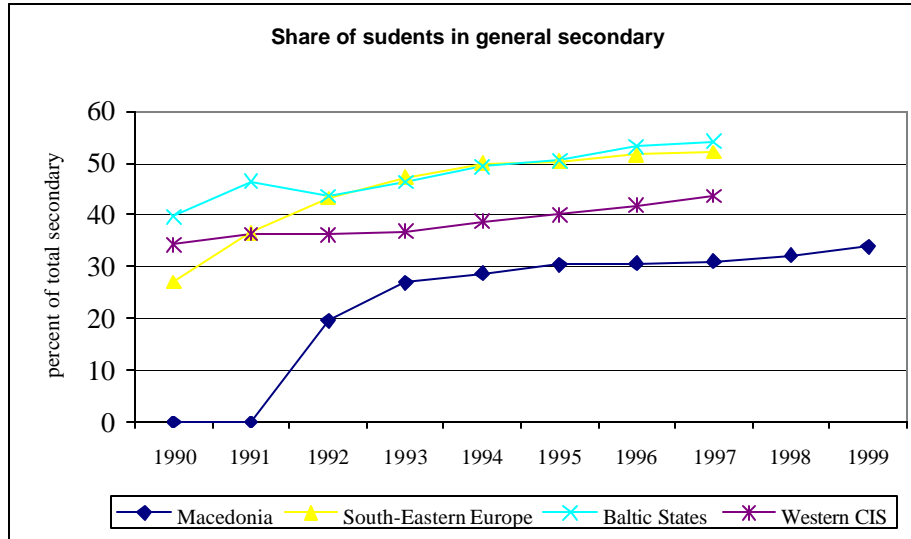
**Table C5. Share of Students in Secondary Education (percentage of total)**

	General	Vocational
1990	0.00	100.00
1991	0.00	100.00
1992	19.55	80.45
1993	26.92	73.08
1994	28.72	71.28
1995	30.44	69.56
1996	30.57	69.43
1997	30.99	69.01
1998	32.22	67.78
1999	33.92	66.08
2000	34.75	65.25
2001	36.09	63.91

Source: World Bank 2002.

Vocational education is still the most common choice amongst Macedonian secondary school students. The share of students enrolled in general secondary education is very low by regional standards (see Figure C1).

**Figure C1. Share of Students in General Secondary (% of total secondary)**



Source: State Statistical Office (2000). (Figure to come?)

**Table C6. Trends in Enrollment in Tertiary Education**

	1991	1995	2000	2001
University (all)	24,846	26,959	35,995	44,710
University (full-time)	20,174	22,637	29,568	36,549
Nonuniversity (all)	1,567	2,098	927	1,221
Nonuniversity (full-time)	1,148	1,534	588	723
Total (all)	26,413	29,057	36,922	45,931
Total (full-time)	21,322	24,171	30,156	37,272
Agecohort 19-23		157,033	164,768	165,103
Enrolled/age cohort (%)		18.50	22.41	27.82

Source: Macedonian National Observatory (2002).

Enrollment in tertiary education is increasing. However, by international standards, non-university programs are still underdeveloped.



**Table C7. Tracking Students through the System**

<b>Born in</b>	<b>7-year-olds</b>	<b>Completing Basic</b>	<b>Entering Upper-Secondary</b>	<b>Completing Upper-Secondary</b>	<b>Entering Tertiary</b>	<b>Completing Tertiary</b>
1974	1981	1989 29,732	1990 22,530	1994 16,788	1995 9,495	1999 3,735
1975	1982	1990 30,235	1991 22,687	1995 18,446	1996	2000 3,180
1976	1983	1991 26,697	1992 20,505	1996 18,552	1997 9,469	2001 3,294
1977	1984	1992 28,679	1993 20,302	1997 19,000	1998 10,240	
1978	1985	1993 28,782	1994 21,361	1998 19,987	1999 11,323	
1979	1986	1994 29,071	1995 22,840	1999 20,712	2000 12,673	
1980 39,900	1987 37,700	1995 29,749	1996 23,083	2000 21,780	2001 13,711	
1981 39,500	1988 37,500	1996 29,871	1997 23,687	2001 22,350		
1982 39,500	1989 37,600	1997 30,522	1998 24,692			
1983 38,600	1990 36,800	1998 30,741	1999 25,537			
1984 38,100	1991 36,400	1999 30,389	2000 25,811			
1985 37,800	1992 36,200	2000 30,564	2001 25,318			
1986 37,100	1993 35,600	2001 31,257				
1987 37,300	1994 36,100					
1988 36,300	1995 35,200					
1989 34,600	1996 33,400					
1990 35,800	1997 34,900					
1991 35,300	1998 34,400					
1992 33,700	1999 33,100					
1993 32,700	2000 32,100					
1994 34,100	2001 33,500					
1995 32,600	2002 32,100					
1996 31,900	2003 31,400					
1997 30,000	2004 29,500					
1998 29,700	2005 29,300					

Source: various sources. various years.

**Table C8. Internal Efficiency**

	1990	1995	1999	2000	2001	2002
<i>Graduation rates</i>						
Basic education	98.3	98.0	99.1	99.3	98.8	99.0
Upper-secondary	---	---	---			
<i>Drop-out rates</i>						
Basic education	---	0.0	0.2	0.1	0.0	---
Upper-secondary	---	1.0	1.1	0.9	0.9	---
<i>Repetition rates</i>						
Basic education	3.0	2.0	1.0	2.0	1.0	---
Upper-secondary	8.6	4.0	3.7	3.2	3.0	---

Source: State Statistical Office (2002).

Based on the official statistics, the Macedonian education system appears internally efficient.

**Table C9. Tertiary Education Enrollment and Graduation: 1994-1998 & 1995-1999**

Fields of studies	Number of new entrants in 1996	Number of graduates in 2000	Graduation rate after 4 years <sup>1</sup> of studies %
Agricultural	580	142	24.48
Social	2,798	1,754	62.69
Physical/Natural	569	248	43.59
Engineering <sup>2</sup>	2,491	678	27.22
Medicine	501	323	64.47
Other	586	193	32.94
Postsecondary	338	117	34.62
Teachers training	576	285	49.48
Total	8,439	3,740	44.32

<sup>1</sup> Six years for medicine, five for engineering <sup>2</sup> Enrollment in engineering as of 1995

<sup>3</sup> Enrollment in medicine as of 1994 Source: State Statistical Office (2002).

Fields of studies	Number of new entrants in 1998	Number of graduates in 2001	Graduation rate after 4 years <sup>1</sup> of studies %
Agricultural	738	132	17.89
Social	2734	1664	60.86
Physical/Natural	569	236	41.48
Engineering <sup>2</sup>	2573	573	22.27
Medicine <sup>3</sup>	550	295	53.64
Other	909	290	31.90
Postsecondary	288	109	37.85
Teachers training	428	181	42.29
Total	8,789	3480	39.59

<sup>1</sup> Six years for medicine, five for engineering Source: State Statistical Office (2002).

On average, only one-third of university students finish in time. For some fields, such a share can be as low as 16 percent.

**Table C10. Number of Institutions by Level of Education and Type of School**

<b>Primary schools</b>	<b>1991</b>	<b>2001</b>
Schools with legal status	345	435
Satellite schools		
I-IV grade	576	417
I-V grade	2	2
I-VI grade	1	1
I-VIII grade	143	155
Total satellite schools	722	575
Total primary schools	1,067	1,010
<b>Upper-secondary education</b>	<b>1991</b>	<b>2001</b>
Regular schools	93	95
Schools for gifted	4	16
Schools for disabled	3	4
Total	96	115

*Source:* State Statistical Office (2002).

The unusually high number of primary schools results from the high number of satellite schools, mostly in rural and mountainous areas.

**Table C11. Primary Schools and Number of Pupils**

	<b>Total primary schools</b>	<b>Up to 20 pupils</b>	<b>21-50</b>	<b>51-100</b>	<b>101 -300</b>	<b>301 - 800</b>	<b>801-1200</b>	<b>Over 1200</b>
1991	1,067	286	194	154	174	142	73	44
1992	1,053	278	193	152	174	137	79	40
1993	1,050	271	205	140	177	145	74	32
1994	1,048	272	201	143	177	141	72	43
1995	1,045	267	201	143	178	141	72	43
1996	1,046	275	195	138	182	139	78	39
1997	1,045	283	192	131	183	141	77	38
1998	1,033	284	195	123	181	150	70	40
1999	1,041	283	193	125	178	152	72	37
2000	1,036	278	198	123	175	158	66	38

*Source:* Statistical Office (2002)

Most of the primary schools are very small: more than one-fourth of the total primary schools has fewer than 21 pupils.

**Table C12. Number of Schools with Classes in the Language of Minorities (regular schools) by Level of Education**

	1990	2001
Basic education	352	343
Upper-secondary	12	33

*Source:* State Statistical Office (2002).

Approximately one-third of basic-education schools offer classes in the language of minorities. In upper-secondary education, such numbers account only for one-fifth, despite having tripled in the past 11 years.

**Table C13. Number of Schools with Double/Triple Shifts by Level of Education, Regular Schools**

	1990	1991	1999	2000	2001
Basic education	452	439	451	440	417
Upper-secondary	---	---	---	---	---

*Source:* State Statistical Office (2002).

Infrastructures are intensively used. Almost half of the primary schools in Macedonia have at least two shifts.

**Table C14. Percentage of Full-Time Teachers by Level of Education and Type of School (percent)**

	1990	2001
Basic education	97.01	98.37
Upper-secondary	86.15	87.23

*Source:* State Statistical Office (2002).

More than 10 percent of upper secondary school teachers are part-time teachers.

**Table C15. Student/Teacher and Student/Class Unit Ratios by Level of Education**

	Student/teacher ratios		Student/class unit ratios	
	1990	2001	1990	2001
Basic education	20	19	26	25
Upper-secondary education	17	17	31	31

*Source:* State Statistical Office (2002).

**Table C16. Distribution of Teachers by Qualification  
(percent of total teachers in regular school by level)**

	1992	2001
Basic education		
Total number of teachers	13,044	13,954
-of which:		
With tertiary education	13.90%	27.16%
Higher (2-year tertiary)	74.27%	66.50%
Secondary	11.81%	6.26%
Other education	0.02%	0.07%
Upper-secondary		
Total number of teachers	4,293	5,482
-Of which:		
With tertiary education	91.89%	94.76%
Higher	6.31%	3.91%
Secondary	1.09%	1.33%
Other education	0.70%	0.0%

Source: State Statistical Office (2000).

The largest majority of teachers in basic education have only a 2-year college education.

**Table C17a : Central Government Expenditures by Function in Central Europe, 1998  
(% of total spending)**

	FYRM	Albania	Bulgaria	Croatia	Czech R	Hungary	Poland	Romania	Average	
Defense	16.1	3.5	8.0	10.8	4.8	2.3	4.0	7.3	7.1	
Education	35.0	1.9	4.4	6.5	9.7	8.6	6.4	9.4	10.2	
Health	0.6	3.8	4.7	14.1	17.9	6.0	10.0	6.8	8.0	
Social security and welfare	4.8	20.1	32.4	36.0	36.4	29.9	49.9	31.0	30.1	
Recreation and culture	5.0	0.9	1.4	0.9	0.9	1.8	1.1	1.1	1.6	
Agriculture	2.1	3.9	2.0	1.7	2.2	3.5	1.9	4.6	2.7	
Transportation and comm.	0.8	4.4	4.6	6.4	4.2	4.2	2.1	4.5	3.9	
Other	35.6	61.5	42.4	23.5	24.0	43.8	24.7	35.3	36.4	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

Source: IMF, Government Finance Statistics, 1999.

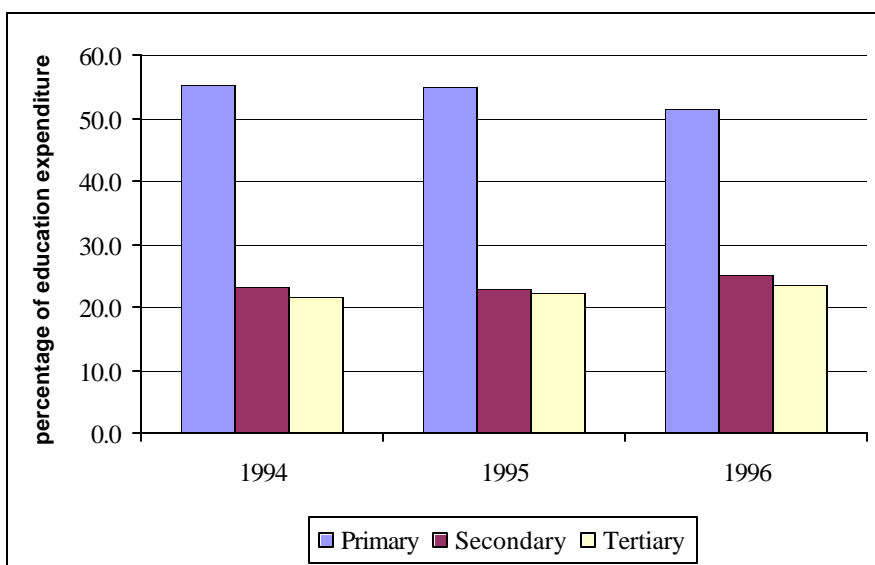
**Table C17b. Public Education Expenditure as Percentage of GNP and of Total Public Expenditure by Year**

	Macedonia	OECD	Central Europe	Southeastern Europe	Western CIS
1990		5.7	5.6	4.8	4.7
1991		5.6	5.8	4.8	5.2
1992	5.3	5.7	5.8	4.8	6.0
1993	5.1	5.5	5.8	4.4	6.0
1994	5.2	5.4	5.5	3.6	7.7
1995	5.0	5.4	5.2	3.9	6.4
1996	5.1	5.6	5.6	3.4	8.3
1997		5.5			

Source: EdStats.

Relative to the average OECD country and others in the region, Macedonia is roughly in par in terms of the share of its public budget for education. Its expenditure on education is close to but lower than the OECD average and lower than all but one of the sub-regions considered.

**Figure C2. Distribution of Public Education Expenditure among Levels of Education**



Source: EdStats.

Macedonia is allocating the largest share to primary education—more than 50 percent of the total public expenditure on education—while secondary and tertiary education have similar shares of slightly more than 20 percent each. However, looking at the trend, 1994-1996 highlights how public financing of education decreased for primary education (from 55 percent to 51 percent) while it increased for both secondary and tertiary education (from 23 percent to 25 percent and from 21 percent to 23 percent respectively).

**Table C18. Distribution of Public Total Education Expenditure among Levels of Education**

Level of Education	1994		1995		1996	
	Expenditure share	Enrollment share	Expenditure share	Enrollment share	Expenditure share	Enrollment share
Primary	55.1	70.6	54.9	70.1	51.5	69.1
Secondary	23.2	21.0	22.9	21.5	25.1	22.2
Tertiary	21.7	7.9	22.2	7.9	23.4	8.1

Source: EdStats, WDI.

Relative to enrollment shares, expenditure shares are greater for secondary and tertiary education. Expenditure on secondary education appears to be in line with a variation in the size of enrollment: from 1995 to 1996, enrollment increased by 8 percent. In the same period, the expenditure share increased almost proportionately (by 7.7 percent).

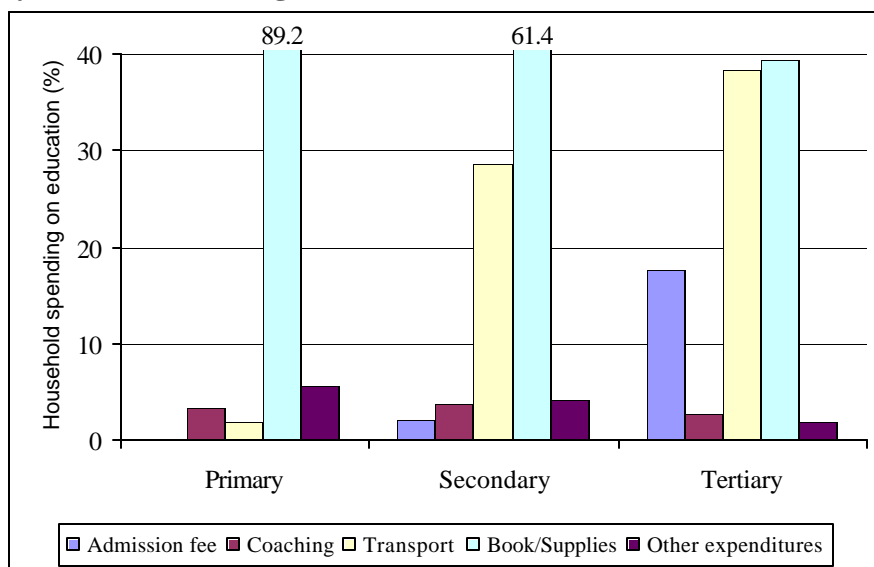
**Table C19. Public Secondary Education Expenditure per Student (as percentage of per capita GNP)**

	1998	1999	2000
Macedonia, FYR	29.68	26.71	27.31
Central Europe	18.17	21.10	
Baltic States	37.60	48.27	37.13
EU	24.84	25.01	25.82
OECD	23.66	24.71	

Source: EdStats.

Public secondary education expenditure per student in Macedonia is in line with both EU and OECD averages and higher than those for countries in Central Europe. Only the Baltics have values significantly higher. However, looking at the time series shows that public secondary education expenditure per student in Macedonia has decreased during the period of 1994-1996, as opposed to the general trend of all but one of the regional averages considered (notably transition economies in Central Europe and countries in the EU and OECD).

**Figure C3. Distribution of Household Spending on Education by Level of Schooling, 1996**



Source: World Bank 1999.

The main cost faced by households in educating children is best represented by books and school supplies. Transportation costs are the second most important item of expense in household expenditure for education. Books and school supplies are relatively more important as a share of private spending for primary school students, while the share of transportation costs dominates as a share of private spending, particularly at the secondary and post-secondary levels. Moreover, admission fees become a significant share of household education costs only at the tertiary level.

**Table C20. Public versus Private Spending on Education, 1996**

	Household (Per capita spending)		Government (Per capita spending)		Total	
	Denars	Percent	Denars	Percent	Denars	Percent
Poor	396	10	3,664	90	4,061	100
Nonpoor	1,202	21	4,512	79	5,713	100
Total	748	16	3,964	84	4,712	100
Urban	902	17	4,427	83	5,329	100
Rural	520	13	3,411	87	3,931	100

Source: World Bank 1999.

An important objective of public spending on education is to improve the education status of the poor, especially as private expenditure on education increases. In Macedonia, the government undertook initiatives to improve the targeting of education resources toward the poor. While secondary students pay nearly 70 percent of boarding costs (lodging and



food), school boarding is free for poor students from remote areas. Although the amount of per capita education subsidy does not vary significantly across income groups, public spending on education comprises a greater share of total education spending compared with private spending on education. This is the case particularly for poorer households.

**Table C21. Private Expenditures on Education for the Poor and Non-Poor, by Level of Education, 1996 (percentages, unless otherwise indicated)**

Expenditure Categories	Primary education		Secondary education		Tertiary education	
	Poor	Nonpoor	Poor	Nonpoor	Poor	Nonpoor
Admission fee	0.0	0.0	0.0	1.1	0.0	26.2
Coaching	0.0	13.3	0.0	8.6	0.0	5.6
Transport	1.1	3.1	36.3	36.2	64.4	33.7
Books/supplies	95.8	75.8	61.9	50.6	31.1	33.4
Other expenditures	3.1	7.7	1.9	3.5	4.5	1.0
Total expenditures on education (dinars)	1,953	5,274	3,683	7,968	6,371	13,782
Total as % of per capita consumption	6.62	4.22	12.49	6.38	21.60	11.04

Source: Vandycke 2000.

As a percentage of per capita consumption, the poor pay a third more than the nonpoor for basic education and twice as much for upper-secondary and tertiary education.

**Table C22. Distribution of Public Subsidies to Education (per capita denars and as a percentage of education expenditure) by Level of Education, 1996**

	Primary		Secondary		Tertiary		All levels	
	Per capita denars	% Of exp.	Per capita denars	% Of exp.	Per capita denars	% Of exp.	Per capita denars	% Of exp.
Poor	2,464	13.0	625	3.3	284	1.5	3,664	19.3
Nonpoor	1,363	1.5	1,105	1.2	1,838	2.0	4,512	5.0
Total	1,941	3.9	990	2.0	799	1.6	3,964	7.9
Urban	1,781	3.2	1,099	2.0	1,229	2.2	4,427	8.0
Rural	2,131	5.0	858	2.0	287	0.7	3,411	8.0
Capital	1,614	2.6	1,002	1.6	1,414	2.2	4,389	6.9
Other	2,048	4.5	985	2.1	598	1.3	3,825	8.3

Source: World Bank 1999.

Although the subsidy to education decreases with income as a percentage of education expenditure amongst almost all of the levels, things look differently when considering the amount of per capita education subsidy received by poor and nonpoor households. The per capita education subsidy increases with income for all but one of the education levels. As a result, richer households receive a much higher per capita subsidy for education in both

secondary and tertiary education. There is a rural/urban bias as well. The level of per capita subsidy is much lower in rural than in urban areas. The only exception is primary education, where rural areas receive a higher per capita subsidy than urban centers.

**Table C 23. Secondary Enrollment Rates by Income Quintile and Gender, percent (1996)**

Quintile	Male	Female	Total
1	27	29	28
2	39	37	38
3	57	65	60
4	66	65	66
5	69	60	65

**Table C 24. Average gross and net payments in all levels of education**

	Average <b>gross</b> monthly pay per employee in dinars	Average <b>net</b> monthly pay per employee in dinars	Average <b>net</b> monthly pay per employee in USD
Average PAY all workers	16292.00	9416.96	136.48
<b>Primary education</b>			
Primary school teacher 1-4th grade (with higher vocational degree)	11701.00	7107.00	103.00
Primary school teacher 5-8th grade (with higher vocational degree)	12778.00	7725.00	111.96
Professor (with university degree)	14394.00	8652.00	125.39
<b>Secondary education</b>			
Secondary school teachers	15690.00	9069.00	131.43
<b>Higher education</b>			
Assistant	26495.00	15472.00	224.23
Professor	38887.00	22708.00	329.10

Source: MoES 2002

Peter Darvas  
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