I. Project Context

Country Context

The Former Yugoslav Republic (FYR) Macedonia is a small, landlocked, middle income nation in the Balkan Peninsula. FYR Macedonia has an open economy and has been very successful in maintaining macroeconomic stability throughout the recent economic crisis. The Government has followed prudent policies to stabilize the macroeconomic environment, resulting in adequate balances and comparably moderate debt levels. The Government has also continued its efforts to further structural reforms, which have helped the country increase its competitiveness as reflected in improvements in its Doing Business indicators and the country’s continued success to attract Foreign Direct Investment (FDI). Nonetheless, as a European Union (EU) candidate country and a potential future member of the EU, FYR Macedonia will need to strengthen its competitiveness, especially through skills development and technological innovation. Economic growth accelerated prior to the crisis and average real GDP growth for the period 2004-2008 reached five percent. Even though growth was somewhat lower than the regional growth average, the fact that the country followed a prudent fiscal management and had a relatively conservative financial sector acted as a buffer during the crisis that hit at the end of 2008. The country suffered a mild recession in 2009 (of -0.9 percent) but rebounded quickly in 2010 and 2011, when real GDP growth averaged...
2.9 percent. FYR Macedonia’s solid growth and fiscal performance over the past decade has resulted in a decrease in unemployment, yet its overall level remains high at 30.6 percent. Most of the new created jobs were low-earning and there has not been structural change towards higher productivity jobs. Related to this challenge is the need to increase the country’s competitiveness which potential has been held back by factor markets inefficiencies. According to The World Bank Competitiveness Study (2012), Macedonia’s shortage of skilled labor has been recognized as a key constraint for the export industry and the country’s overall competitiveness. Macedonia’s economy has been ranked 80 out of 144 countries, according to the Global Competitiveness Report (2012) and access to finance, an inadequately educated work force and low capacity to innovate are the most significant constraints for doing business in the country. Improving the country’s labor market performance and economic competitiveness will require a more skilled and better educated labor force, together with increased technology absorption, diffusion of knowledge and innovation. While access to education has improved, there is a challenging disconnect between the products of the education system and the private sector needs, as companies complain about the quality and availability of skills despite high unemployment. At the same time, the regulatory, institutional and financial environment can be strengthened to further promote innovation at the firm level.

The economic development model promoted by the Government in its Work Program for the period 2011-2015 envisions a growing, competitive economy that attracts new investment, creates new jobs, equal opportunities for all and better lives for its citizens. This model, having in mind Macedonia’s priorities for EU integration, is based on the EU Economic Development Strategy, also known as Europe 2020. Hence, the Government of the FYR Macedonia is committed to investing in quality education, innovation and information technology, identified as top strategic priority areas in its Program. To accomplish these objectives, the Government has sought support from the World Bank to advance its reforms to achieve better quality higher and vocational education and innovation systems.

Sectoral and institutional Context

Higher education in the Macedonian context today

The higher education sector in Macedonia consists of 5 public and 9 private universities and 5 non-university private institutions, enrolling about 58,000 students, 85% of whom are attending public universities. Enrollment in the tertiary education sector has been increasing rapidly in recent years – partially through private providers and partially as a result of targeted government interventions to increase the number of free places and decrease the level of payment for fee-paying students.

Despite the recent interventions of the government to increase enrolment at the tertiary level still the gross enrollment rate is far behind even from the enrollment rate of the new EU countries. Beyond the question of numbers of student the country also face significant problems with the quality of higher education. System efficiency remains low, with high drop-out rates and long average times to completion. While critical data on student learning and graduate employment outcomes do not exist, a recent World Bank employer survey of the demand for skills (2010) showed that employers continue to find it difficult to hire workers with the skills they require, particularly workers who possess the higher order skills needed in the newly created jobs. The lack of outcome data and the lack of an existing culture for internal and external quality assurance constrain the enhancement of quality and relevance of higher education. Procedures for internal and external quality assurance are, to a large extent, insufficient and need to be better aligned with the recent European developments. The newly established Board for Higher Education Accreditation and Quality Assurance has been focused only on the accreditation of institutions and study programs thus far. The next step must include external evaluation of higher education institutions.
and the linking of evaluation outcomes with institutional accreditation. The higher education system also faces funding and strategic management constraints, and reforms are needed to align with good EU practices. The targeted government interventions to increase the number of students at tertiary level have not been matched by an adequate increase of resources in the public HE sector. Thus, as recent reports note, several public universities lack basic infrastructure and quality personnel to address efficiently the gap between educational outcomes in tertiary education and labor market needs, as well as the gap between the current state of higher education in Macedonia and its European comparator countries. The current input-oriented model budgets staff, material and investment expenditures in an isolated, line-item way. The current model, in fact, only consists of one component, a basic funding. The lack of reliability regarding the allocation of the budget leads to a situation where the important stability function of basic funding is insufficient. There is also no multi-year financial perspective. The second pillar of performance-oriented funding and the third pillar of pre-financing innovative projects do not exist at all. This leads to a lack of performance incentives and to limited financial opportunities for universities to pursue new initiatives and projects. In particular, much work is needed to align Macedonia’s competitiveness agenda in the framework of the EU2020 Strategy, the Bologna Process and other important developments.

Further investments in the sector will be needed to make Macedonian HEIs competitive in the regional and wider European context and provide the labor force for a prosperous economic development of the country. Finally, the higher education sector in FYR Macedonia has not developed a centralized mechanism for supporting innovative implementation of research output or technology transfer to and/or from external agencies such as foreign researcher and enterprises. Such a mechanism is imperative for linking the higher education sector to the innovation elements of the FYR Macedonian economy and to promote implementation of innovative engagements between research and firms.

State of the Secondary Vocational Education and Training System
Vocational Education and Training (VET) in FYR Macedonia is largely focused on formal secondary school vocational education and training under the auspices of the Ministry of Education and Science. The Secondary VET system offers four-year vocational education in 14 occupations with 42 educational profiles, as well as visual art, music and sports education, and three-year programs with 60 educational profiles. Over half of secondary education students aged 15-19 attend VET schools. Secondary VET provision has seen profound changes between 1999 and 2006, but there are still significant weaknesses in planning, policy development, and quality management at all levels. The reformed secondary technical and vocational education and training (TVET) system failed to incorporate mechanisms for a quick response to labor market demands. A 2010 evaluation carried out to inform the development of a new strategy found that existing secondary TVET system was not producing graduates with professional competencies needed in the labor market. Similarly, a recent World Bank employer survey of the demand for skills (2010) showed that broad vocational training and many specific higher-level cognitive and behavioral skills sought by employers, such as problem solving, initiative, and ability to organize one’s work independently, are not yet being provided by the VET sector.

VET system has remained predominantly supply-driven, rather than market-oriented. It is aimed at filling existing programs and using existing teachers and facilities, rather than adapting to changes in the market and in the demographic situation. It is characterized by early diversification at the age of 14, excessive specialization, obsolete program content, and lack of collaboration among schools and employers. Finally, the lack of investment in secondary TVET in the last several years has left schools with obsolete and worn-out facilities and equipment. Teachers and instructors lack opportunities for in-service training and are consequently unaware of new good practices and more
effective teaching methods. The secondary TVET system in FYR Macedonia faces daunting challenges in terms of its relevance, management, quality, and internal efficiency. These issues are well understood by the Government and are reflected in the new Strategy for Vocation Education and Training (2013). The proposed project would finance activities targeted at improving the quality and labor market relevance of VET through structured support for the new Strategy.

Research and Innovation in the public and private sector
FYR Macedonia’s National Innovation System (NIS), dominated by the public sector and detached from industry, needs significant strengthening in order to be able to support the country’s long term vision to become a knowledge based economy. A knowledge economy should be based on a (i) strong institutional regime to provide incentives for efficient use of existing and new knowledge and the flourishing of entrepreneurship; (ii) an educated and skilled population to create, share, and use knowledge well; (iii) an efficient system of firms, research centers, universities, consultants and other organizations to tap into the growing stock of global knowledge, assimilate and adapt it to local needs, and create new technology, and (iv) Information and communication technology to facilitate the effective creation, dissemination, and processing of information. In general, the innovative capacity of Macedonian firms is low both in terms of human capital and financial resources for R&D and innovation. Brain drain particularly in the technical and engineering occupations remains a major concern, not only for the private sector, but also for the scientific community and policy makers. The Intellectual Property Regime (IPR), while adequate in legal terms, lacks adequate institutional support system and most patents registered are of foreign origin. In most cases, the Macedonian research sector and industry do not produce patentable research. The collaboration between public sector, R&D/academia and industry is weak and to a large extent insufficiently documented or promoted even where it exists. Low levels of public and business spending in research and innovation have been exacerbated by the current difficulties and expensive access to finance for firms, declining liquidity and profitability in the private sector, the situation in the Eurozone and the uncertainties in the markets more broadly. There are a few examples of excellence in applied R&D, university spin-offs and centers of excellence, but many R&D institutions lack modern infrastructure and are not attuned to the needs of the economy. Their R&D outputs are low in quantity and lacking in quality, and there is no culture of protection and commercialization of research outputs. The Government of FYR Macedonia has taken the first steps towards strengthening the legal framework of innovation by adopting Innovation Strategy in October 2012 and the Law on Innovation Activity in May 2013.

II. Proposed Development Objectives
The Project Development Objective (PDO) is to improve transparency of resource allocation and promote accountability in higher education, enhance the relevance of secondary technical vocational education, and support innovation capacity in Macedonia.

III. Project Description
Component Name
Improving Transparency of Higher Education
Comments (optional)

Component Name
Modernization of Secondary Technical Vocational Education and Training
Comments (optional)

Component Name
Improving the innovative capacity of enterprises and collaboration with research organizations
Comments (optional)

Component Name
Project Management and Monitoring and Evaluation
Comments (optional)

IV. Financing (in USD Million)

<table>
<thead>
<tr>
<th>For Loans/Credits/Others</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Borrower</td>
<td>0.00</td>
</tr>
<tr>
<td>International Bank for Reconstruction and Development</td>
<td>24.00</td>
</tr>
<tr>
<td>Total</td>
<td>24.00</td>
</tr>
</tbody>
</table>

Financing Gap: 0.00

V. Implementation

VI. Safeguard Policies (including public consultation)

<table>
<thead>
<tr>
<th>Safeguard Policies Triggered by the Project</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Assessment OP/BP 4.01</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Natural Habitats OP/BP 4.04</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Forests OP/BP 4.36</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Pest Management OP 4.09</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Physical Cultural Resources OP/BP 4.11</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Indigenous Peoples OP/BP 4.10</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Involuntary Resettlement OP/BP 4.12</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Safety of Dams OP/BP 4.37</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Projects on International Waterways OP/BP 7.50</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Projects in Disputed Areas OP/BP 7.60</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Comments (optional)

VII. Contact point

World Bank
Contact: Bojana Naceva
Title: Senior Education Specialist

Page 5 of 6
Tel: 5250+254  
Email: bnaceva@worldbank.org

**Borrower/Client/Recipient**
Name: Ministry of Finance  
Contact:  
Title:  
Tel:  
Email:  

**Implementing Agencies**
Name: Ministry of education and Science  
Contact: Biljana Trajkovska  
Title: advisor  
Tel: 38923140106  
Email: biljana.trajkovska@mon.gov.mk

**VIII. For more information contact:**
The InfoShop  
The World Bank  
1818 H Street, NW  
Washington, D.C. 20433  
Telephone: (202) 458-4500  
Fax: (202) 522-1500  
Web: http://www.worldbank.org/infoshop