

FULBRIGHT CONFERENCE: SMALL PLACES CHANGE THE WORLD: ECONOMIC DEVELOPMENT AND INNOVATION IN SMALL COUNTRIES MARCH 2009-SKOPJE

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R&D AS A KEY FACTOR FOR PRIVATE SECTOR DEVELOPMENT

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introduction

- Modern economy is based on knowledge, new methods of work, skilled human capital, new technology
- Strong support of the relevant institutions, especially universities and centers/ agencies for R&D and transfer of technology is necessary
- SMEs-a core of competition and competitiveness,
- R&D are important tools for fast growing of SMEs which generate competition and competitiveness on the global market.

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1. Macedonian official documents support competitiveness and innovation

- According to the Lisbon Strategy/Agenda of EC for Competitiveness and Innovation for 2007-2013, Acquis Communautaire and other relevant documents, Macedonian Government starts with acceptance of:
- In 2007-Second Program for Entrepreneurship Development, Competitiveness and Innovation of SMEs for 2007-2010, that is realized by annual ones, consists 4 components: institutional infrastructure, business environment, finance and taxation, innovation and competitiveness.,
- From 2003- Chapter for Small Enterprise, which includes results in 10 important fields for SMEs development ,
- In 2008 -New industrial policy

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1.2. Macedonian Industrial Policy Measures

- Industrial policy covers measures in all areas of intervention:
- 1. Applicable research and development and innovation,
- 2. Sustainable development,
- 3. Competitiveness enhancement by collaboration
- 4.SME development and entrepreneurship,
- 5. Internationalization for business and knowledge creation.

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1.3. Main macroeconomic indicators

- Real growth of GDP: in 2001 is -4,5, in 2007 is 5,1 (in%)
- Industrial production: in 2001 is -3,1, in 2007 is 3,7 (in %)
- Inflation: in 2001 is 5,5, in 2007 is 2,3 (in%)
- Employment growth: in 2001 is 9,0, in 2007 is 4,0 (in%)
- Unemployment rate: in 2001 is 30,5 in 2007 is 34,5 (in%)
- Trade balance (% of GDP) in 2007 is -15,3, in 2007 is -21,4
- Gross Domestic Product per capita: in 2007 is 1 689, in 2007 is 3 706, (current prices in USD)
- Trade Balance (million) in 2001 is: -526, in 2007 is: -1 627
- Disciplined fiscal policies, consistent monetary policy and the tax reform -10% tax

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1.4. Entrepreneurship and SMEs development (1)

- 2007-Active Enterprises
- 1. Small-98,9%
- 2. Medium-80,83%
- 3. Total SMEs-99,8%
- 4. Large-10,19%
- 5. Total-100,00%

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1.4. Entrepreneurship and SMEs development (2)

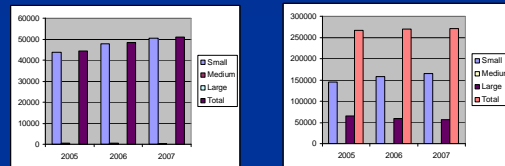
- 2007 -Number of Employees -%

 1. Small-61,16%
 2. Medium- 17,93%
 3. Total SMEs- 79,08%
 4. Large-20,92%
 5. Total-100,00%

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1.4. Entrepreneurship and SMEs development (3)



Enterprises

Employment

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1.4. Entrepreneurship and SMEs development (4)

- Number of Active Enterprises by Sectors is:

 - -Wholesale and retail trade -47% of total number,
 - -Manufacturing-13%,
 - -Real estate, renting and business activities-7%
 - -Construction -6,3%
 - Health and social work-5,2%
 - Hotels and restaurants-5%

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1.4. Entrepreneurship and SMEs development (5)

- Gross Value of Production by Type of Enterprises shows following tendencies:

 - Small 44,29% (2002) growth to 48,67% (2006)
 - Medium 9,27% (2002) 9,27% (2006)
 - Large-46,44% (2002) and 38,78% (2006)

- Gross value of production is progressively made in SMEs,

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1.5. Institutional structure for SMEs Support

- Agency for entrepreneurship development
- 11 regional centers, 8 new settled in rural regions, 3 centres for transfer of technology at the universities,
- Center for New Businesses-University Sent Cirilys and Methodius-Skopje- Faculty of Mechanical Engineers
- 9 business incubators, two business incubators for yang people with IT companies,
- Center for permanent education and transfer of technology,
- Center for carrier at FON University- Skopje
- Human Resource Development Fund,
- Enterprise Europe Network,
- 15 business association,17 centers for local d development,120 business consultants.

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2. Technological policy towards innovative private sector development(1)

- OECD give the recommendation for support of new technology and innovation in 6 fields:

 1. Stimulation of diffusion of technology and relation between universities and enterprises,
 2. Strengthening the innovation and technology policy,
 3. Strengthening and reforms of scientific research and scientific basis,
 4. Strengthening the efficiency of the stimulation for R&D in the economy,
 5. Relies the growth of SMEs, based on new technology, including risk capital and new enterprises,
 6. Strengthening the framework for design policy and active realization,

 - Macedonia is on the low level of technological & innovation policy

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2. Technological policy towards innovative private sector development(2)

- Related to the new technology and innovation, Program for Development of Entrepreneurship Competitiveness and Innovativeness of SMEs (2007-2010) emphasizes main topics:
- SME e-Readiness
- ICT Awareness Raising
- R&D Investment
- Technological Industrial Development Zones
- Promotion of R&D
- Innovation Scoreboard
- Science-Innovation Interface
- Technology Transfer Centres
- Innovation Relay Centre

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2. Technological policy towards innovative private sector development(3)

- % of GDP devoted to R&D in 2003 was only 0.22% of GDP (Croatia 1.1%, Slovenia 1.5%) in 2004 - 0.25% of GDP
- Lisbon agenda target-to increase R&D spending to 3% of GDP by 2010
- The R&D expenditure comes mainly from higher education (60.2%) and governmental resources (34.1%), only (5.7%) comes from the business sector,
- In the EU- the business sector participated with 65.3% (2000)- contribution in R&D. The revised Lisbon target is- 66% of the investment in R&D should be contributed by the private sector by 2010.
- Macedonian Government should adopt a target of 1% of GDP for R&D by 2010 and 40% participation by the private sector.
- Important task for the Government is to introduce tax incentives for the SME sector to invest in R&D.

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2. Technological policy towards innovative private sector development(4)

- In 2004 only 2 small, 21 medium and 31 large enterprises invested in R&D activities amounting to € 1.24 million in 2004 (1.7 mil. in 2003). It is extremely low and demonstrate the lack of R&D investment by national enterprises.
- For that reason, the Program suggests development an awareness raising campaign for demonstration the role of investment in R&D, highlight to SMEs "best practices" in commercialization of new technological performances and adequate rewards for innovative solutions to business problems

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3. Universities as an active factor in R&D

- Active cooperation of the private and public sector, between large enterprises and the Universities, national and local governments.
- The university of the "third generation" is open for cooperation with industry and other partners/stakeholders,
- Universities' R&D is inter disciplined and multicultural, characterized by cosmopolitanism and internationalization.
- There are small examples of Macedonian "best practice" in the field of cooperation between universities and industry
- An active R&D supported by Government would accelerated economic growth and prosperity of Macedonia

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Conclusions (1)

- Macedonia is obliged to follow the new trends on the global market, to use the new technology and knowledge, methods of effective business running, networking and cooperation in purpose to reach desirable economic growth
- SMEs very often are not prepared to establish the units for R&D. That role should have the universities, which have human capacities for that purpose.
- The universities should have one very important role in development of competitive economy, because of many available resources for develop new technology and R&D.

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Conclusions(2)

- Awareness raising activities for the promotion of applicable R&D and innovation in industry should be through the:
- Stimulation of interactions between university/research institutions and industry,
- Stimulation of development of new market driven products, services and technologies that will be commercially exploited.
- Support the industry to employ higher education researchers to strengthen their technological and innovation competences.
- Technology transfer stimulation with different tools,
- Intellectual Property Rights protection.
- Support of entrepreneurial ideas and projects, especially innovative ones.
- The long term National Policy for new technology and transfer of technology for Macedonia is necessity to be adopted very soon

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