

**Висновки.** Концепція динамічних здібностей може розглядатися як підхід, що розвивається та потенційно інтегрує новітні джерела конкурентних переваг. Дослідження показало, що концепція динамічних здібностей тяжіє до створення цілісної аналітичної схеми, на основі якої можливо як інтегрувати наявні концептуальні та емпіричні знання, так і розроблювати практичні рекомендації. Наукова новизна одержаних результатів полягає у тому, що вперше запропоновано виокремлювати динамічні організаційні здібності в області інвестиційного забезпечення діяльності підприємств. Перспективи подальших досліджень пов'язано з вивченням прикладних аспектів управління динамічними організаційними здібностями, вимірюванням їх впливу на ефективність і результативність діяльності підприємств, а також інтеграцією у сучасні системи менеджменту.

### Література

1. Тис Д. Дж., Пизано Г., Шуен Э. Динамические способности фирмы и стратегическое управление // Вестник С.-Петербургского ун-та. — 2003. — № 4. — С. 133—183.
2. Андреева Т.Е., Чайка В.А. К дискуссии о сущности динамических способностей // Вестник С.-Петербургского ун-та. — 2006. — Сер. 8. — Вып. 4. — С. 163—174.
3. РБК-Україна. Fitch: В 2010—2012 рр. інвестиції в АПК України складуть близько 1,9 млрд. дол. // Аграрний тиждень. Україна. — 29.10.2010.
4. Ларін М. ІРОдром для українських компаній // Правовий тиждень. — № 29 (207).
5. Жученко З.О. Залучення інвестиційних ресурсів на зовнішніх ринках капіталу публічними акціонерними товариствами України // Стратегія економічного зростання. — 2010. — № 26—27. — С. 60—69.
6. Исакова Д. Миллиардер из яйца. Бизнес вкрутую // Forbs. — 2011. — № 5. — С. 78—84.
7. ТОП-100 самых богатых украинцев. Специальный выпуск // Корреспондент. — 2011. — № 22.
8. Исакова Д. Нам нужно играть самостоятельно // Forbs. — 2011. — № 6. — С. 64—66.
9. Хэмел Г. Стратегическая гибкость / Г. Хэмел, К. Прахалад, Г. Томас, Д. О'Нил: Пер. с англ. — СПб.: Питер, 2005. — 384 с.
10. Минцберг Г., Альстрэнд Б., Лэмпел Дж. Школы стратегий / Пер. с англ. под. ред. Ю.Н. Каптуревского. — СПб.: Издательство «Питер», 2000. — 336 с.

Стаття надійшла до редакції 07.11.2011 р.

УДК 001.83:339.15

**G. Rumpf**, Phd., Key expert policy and capacity building EU Project: «Enhance Innovation Strategies, Policies and Regulation in Ukraine»

#### **INNOVATION IN UKRAINE — POLICY OPTIONS FOR ACTION CHALLENGES AND POTENTIAL OF INNOVATION DEVELOPMENT IN UKRAINE; POLICY OPTIONS TO MAKE INNOVATION A MAJOR DRIVER FOR ECONOMIC DEVELOPMENT AND COMPETITIVENESS AND A CONTRIBUTOR TO PROFITABLE BUSINESS**

**Abstract.** An analysis in innovation policy with relevance to raising the economy's competitiveness, to enhancing entrepreneurship, to untapping the huge technical potential of Ukraine, and to stimulating investment and innovations in Ukraine is given. The presentation is intended to contributing to an interactive

discussion on those policy options for action both from innovation policy and legal framework sides likely to contribute to leading Ukraine to a knowledge-based economy.

The trilogy «Innovation Policy: European Benchmarking for Ukraine» is outlined. It presents three consecutive steps how to lead Ukraine to a knowledge-based competitive economy. Considerations on important mechanisms which proved useful in EU Member States in the area of innovation were taken into account.

In Innovation Policy: European Benchmarking for Ukraine Volume 1 «Key features of innovation policy as a basis for designing innovation enhancing measures leading Ukraine to a knowledge based competitive economy — Comparison EU and Ukraine»<sup>1</sup> thirteen topics in research and development, technological and innovation policy in the EU and in Ukraine likely to have a major impact on the competitiveness of Ukrainian economy were analysed. Main comparisons between Ukraine and EU countries were drawn. Strategic policy issues and challenges for action were drawn.

- In Innovation Policy: European Benchmarking for Ukraine Volume 2 «The analysis of the legislation of Ukraine in the sphere of research, development and innovation activity and suggestions for amendment of legislation»<sup>2</sup> the legal frameworks regulating the issues as of Volume 1 in Ukraine, in the EU and in its Member States is analysed. Based on the comparative analysis proposals on improving legislation in the field of innovation, research and development in Ukraine were elaborated.

- The analysis carried out in Volumes 1 and 2 were the basis to draw policy options for action laid down in Innovation Policy: European Benchmarking for Ukraine Volume 3\_ «Innovation in Ukraine- Policy Options for Action»<sup>3</sup>. The effort was concentrated in identifying some main barriers and drivers to innovation in order to propose 87 sets of actions that could be useful for the policy makers to consider. The proposed sets of actions/measures have been grouped under main six policy action lines: «Better governance in favor of innovation»; «Enhancing innovation in enterprises»; «Bridging R&D potential with Industry»; «More Innovation in Regions»; «Developing an innovative culture»; and «Globally competitive on Eco-innovation». Each proposed action therein is characterized as framework modification, new programme or mode of financing and, changes or additions in the legislation/regulation conditions, and each policy action contributes to leading Ukraine to a knowledge-based competitive economy. Among those 25 policy actions were ranked with high priority. It is estimated that the proposed measures could lead to a substantial improvement of the Ukrainian positions in innovation relevant indicators to move Ukraine from the group of «catching-up» countries to the group of «moderate innovators».

The materials are promoted at [http://innopolicy.com.ua/?page\\_id=934&lang=en](http://innopolicy.com.ua/?page_id=934&lang=en) They can be used by policy makers for the analysis, discussion and adoption of specific decisions on the development of major areas of science, technology and innovation policy.

<sup>1</sup> Rumpf G., Stroylopoulos G., Yegorov I. — Kyiv 2011. Innovation Policy: European Benchmarking for Ukraine Volume 1 «Key features of innovation policy as a basis for designing innovation enhancing measures leading Ukraine to a knowledge based competitive economy — Comparison EU and Ukraine» [http://innopolicy.com.ua/wp-content/uploads/GR\\_Monograph\\_Volume\\_1\\_EN.pdf](http://innopolicy.com.ua/wp-content/uploads/GR_Monograph_Volume_1_EN.pdf)

<sup>2</sup> Kapitsa, Y, Kyiv 2011. Innovation Policy: European Benchmarking for Ukraine Volume 2 «The analysis of the legislation of Ukraine in the sphere of research, development and innovation activity and suggestions for amendment of legislation» [http://innopolicy.com.ua/wp-content/uploads/Monograph\\_Volume\\_2\\_EN.pdf](http://innopolicy.com.ua/wp-content/uploads/Monograph_Volume_2_EN.pdf)

<sup>3</sup> Rumpf G., Stroylopoulos G., Kyiv 2011. Innovation Policy: European Benchmarking for Ukraine Volume 3. «Innovation in Ukraine-Policy Options for Action» [http://innopolicy.com.ua/wp-content/uploads/GR\\_Monograph\\_volume\\_3\\_EN.pdf](http://innopolicy.com.ua/wp-content/uploads/GR_Monograph_volume_3_EN.pdf)

**Introduction.** Congratulations to Ukraine for its 20<sup>th</sup> anniversary on 24.8.2011. The country has come a long way in the difficult and still ongoing transition process from state to market economy.

The basis of the article was the observation that upon suddenly and unexpectedly acquiring its independence in 1991, Ukraine's technological, scientific and educational communities found themselves in a curious position. They had been a major and formidable player in the technological-scientific enterprises of the former Soviet Union. As such, they had at their command a wealth of developed scientific knowledge, a powerful scientific community, an extensive high technology industry, an advanced educational system, and a highly educated literate population thoroughly grounded in the sciences and technology.

With such substantial attributes, one might expect that after a certain period of adaptation, Ukraine would be ready to forge ahead and be able to compete effectively in the global marketplace of applicable ideas and technology, as well as in the areas of research and innovation. However, that is not what happened. Although in its study of global sustainability, «Geoinformatics and sustainable development» (<http://www.wdc.org.ua>), the World Data Center assessed that Ukraine at the end of the 1980's had one of the best starting conditions among the countries of the former Soviet Union and its sphere of influence, it also noted that Ukraine had not managed to benefit from its advantage. During the last four years, the rating table of the index of global competitiveness shows a decline from 72nd place to 82nd out of 139 countries ranked (<http://www.weforum.org>). And so, now after 20 years of independence, Ukraine is still struggling and unable to fully capitalize on its significant educational, scientific, and industrial strengths.

Considering the various positive developments that could arise from having a strong Ukraine, the major question at this stage is: «Can Ukraine's economic decline be turned around and, if so, how?» An understanding of why such a technologically advanced country did not thrive would begin to give us insight both into what was lacking and what is needed now.

The obstacles to economic and commercial success for Ukraine were numerous ranging from the shock of the breakup of the Soviet Union to the realization that Ukraine was not fully prepared for independence and was not prepared to fit into a market driven consumer economy, let alone to reap any benefits from it. A market economy requires a lot of initiative and capital. Initiative, while often available, was not always promoted. There were no precedents for business development on a large scale. There were no ready ways to know who owned what especially when it came to intellectual property. There were no laws to protect inventors, investors, businessmen, and their businesses. Both among potential innovators and among lawmakers, there was a lack of knowledge and experience in how Western style market economies work. As for capital, Ukraine was hard pressed to maintain itself and had no capital for innovation and commercialization investment. Foreign capital, given the legal uncertainties and the risks, shied away from investing in Ukraine.

Evidence shows it is difficult for Ukraine and other countries of the former Soviet Union to change. The world is witnessing the struggles that arise when a country and its populace must consciously choose another approach to living and conducting their affairs. In the former Soviet system scientific research and innovation were basically state property and as such had to be strictly guarded and controlled. Since independence, Ukraine and the other CIS countries have tried to develop legal systems to help manage their scientific activities. The Western models for business creation and operations were, and are still regarded with suspicion by some. Changing a country's old habits and beliefs takes education, re-training, re-interpretation and time.

The old centrally planned economy had failed. The old system had determined the value and worth of the various scientific and technological endeavors according to how they furthered the priorities of the state. Foremost among these priorities was the military complex. Generally, rewards were not linked with economics or the consumer; consumer innovation and commercialization were being a central priority of the state run economy.

Changing to a consumer market driven system meant that the state's priorities had to change — a difficult process under any circumstances with Ukraine being no exception. In turn, a change in priorities would also mean changes in the established systems of rewards, honors and privileges. Such changes cause major disruptions that test and fray the existing social fabric of a country. Today, Ukraine is still struggling with these disruptions. Some segments of society have been willing to cast aside many of its former values; other segments have not. The formation of a viable, unifying and dynamic Ukrainian identity is ongoing, and the struggle to bring about useful and workable changes goes on. In such a climate Ukraine's economy help is especially critical in the areas of science, innovation, technology, commercialization, and international collaboration through knowledge management and exchange.

In terms of growth, the economies of the West are knowledge-based. Technology is the major driving force, and through patenting and licensing and the formation of new start-up companies high technology jobs are created. Success leads to profits and more jobs which then lead to national well-being, national stability and further investment and success. These are all sorely lacking in Ukraine at present; the world of commerce is still relatively new and the world of consumer product commercialization still holds many mysteries. And yet, each year approximately 100,000 students graduate from Ukrainian universities only to discover that Ukraine's economy still has to create enough suitable jobs in order to absorb this annual flow of newly educated professionals. The development of high-tech ideas and products that can compete in the marketplace is a necessity, but so far it has not gained momentum.

There are many obstacles to the commercialization of scientific research in Ukraine: scientists lack adequate knowledge, experience, and preparedness for commercialization; management lacks effective managerial skills as regards research activities; financing for innovation is markedly insufficient; commercialization of research activity is hampered by the shortcomings of the legal structure; and overall there is the absence of an effective infrastructure for innovation. In contrast, market economies are empowered by their utilization of trained business and commercialization experts ranging from MBAs to patent and corporate lawyers, from knowledge and innovation managers to business development experts. Such experts are scarce in Ukraine. Formerly there had been no perceived need for them or their services. Now, however, it is becoming clear they are needed.

Statistics in Ukraine show that only 14,2 % of enterprises are involved in innovative activity and only 6,7 % by sales volume is realized through innovative production. All of these factors highlight the need for training, experience, and exposure to effective practices. In order to compete globally, various Ukrainian professional and social institutions need to understand how technology makes money and affects the economy, and then to coordinate their efforts toward rewarding goals.

Certainly there are obstacles that Ukraine has to overcome, however, the foundation and potential for innovation do exist. Ukraine, today, has more than 100,000 industrial enterprises, about 300 scientific institutes and universities, and an active scientific

community of approximately 100,000 scientists. In terms of the total volume of natural resources, Ukraine occupies one of the leading positions in the world for coal, metals, uranium ores, and minerals. Although Ukraine's exports consist largely of metallurgy products (up to 35 %), every year the share of machine-building, high precision equipment construction, and information technologies is growing. Even more indicative of technological potential is the fact that today's Ukrainian university graduates and scientists are welcomed in all parts of the world, and Ukraine remains a world leader in the areas, among others, of space and aviation technology, cardiovascular surgery, high-tech specialized metal welding, and in the preparation of certified computer programmers.

Furthermore it is important to recognize that, even at such a time of economic difficulties, collaboration between investors and scientist-innovators can be mutually rewarding, and that the commercial potential from scientific discoveries and technology developments can be great if one takes the time to uncover them and to work collaboratively with them. Ukrainians scientists are eager to see their developments and inventions in use by consumers in the global arena, and they are seeking collaborative opportunities with Western investors and the formation of joint ventures. The more training, experience, and exposure to the West that they can get, and the more trained business and managerial professionals that they can work with, the more smoothly will it be possible for them to participate in the global market economy. It is clear that training business/managerial professionals is central to Ukraine's transitioning to a market economy.

This introduction has shed some light on Ukraine's major difficulties in transitioning to a global market economy. An analysis on Western and Ukrainian experiences in detail in thirteen areas in innovation policy likely to having either a beneficial or a hampering effect on leading Ukraine to a knowledge-based competitive economy was carried out. The analysis brings us back to the major question posed earlier above: Can Ukraine's economic decline be turned around and, if so, how? In this publication we discuss the major concerns. The aim is to turn to the issue of reversing Ukraine's economic decline: «Can it be done?» By the analysis the author wants to contribute to the answer «Yes.» Ukraine has much to offer and all effort must be made to untap its enormous potential.

Information and analytical materials that characterize the current state of policy in science and innovation in the EU and Ukraine is provided (see literature reference 1). Thirteen topics of importance in research and development, technological and innovation policy were reviewed:

- Innovation driven, sustainable growth models
- Financing innovation
- Promoting R&D and innovation: Tax incentives and support services
- Innovation Culture
- Setting priorities for innovation and technological development
- Networking innovation and business support infrastructure
- Coordination, roles, and responsibilities within National Innovation System (NIS)
- State programmes in research and innovation
- State and regional policy for SMEs on research and innovation
- Innovation indicator tools
- Regional innovation programmes
- Decentralisation factors
- Peculiarities of innovation development of steel and coal regions

These topics were analysed in the EU and in Ukraine with the help of international and Ukrainian specialists. Main comparisons between Ukraine and EU countries were drawn. Strategic policy issues and challenges for action drawn. The legal framework of these issues was analysed (see literature reference 2). Moreover this analysis was the basis to draw policy options for action (see literature reference 3).

**Statement of the problem.** Ukraine's international position over the last two years has unfortunately worsened in most of the global competitiveness indicators. According to the 2011 World Bank Doing Business Report, Ukraine, a lower middle-income country, is 145th of 183 countries by the indicator of 'ease of doing business'. In chapters 1 to 5 in the above mentioned strategy paper «Innovation in Ukraine. Policy options for Action» (also called «Action Plan») (see literature reference 3) the competitive position of the country globally, the role of the enterprises in the Ukrainian economic system, the main infrastructures and their functionality, the main characteristics of the system governing innovation at national and regional level, as well as the most important framework conditions that support or inhibit innovation activity are described.

**Results.** The effort was concentrated in identifying some main barriers and drivers to innovation in order to propose (in Chapter 6) sets of actions that could be useful for the policy makers to consider. The proposed sets of actions/measures have been grouped under main six policy action lines (PAL) chapter 6. Policy Options for Innovation Support in Ukraine (see literature reference 3):

- Policy Action Line 1: Better governance in favour of innovation
- Policy Action Line 2: Enhancing innovation in enterprises
- Policy Action Line 3: Bridging R&D potential with Industry
- Policy Action Line 4: More Innovation in Regions
- Policy Action Line 5: Developing an innovative culture
- Policy Action Line 6: Globally competitive on Eco-innovation

Each proposed action therein is characterised as framework modification, new programme or mode of financing and, changes or additions in the legislation/regulation conditions. We estimate that the proposed measures could lead to a substantial improvement of the Ukrainian positions in innovation relevant indicators to move Ukraine from the group of «catching-up» countries to the group of «moderate innovators».

Among the proposed actions in Chapter 6 of the «Action Plan» the following topics/proposed actions of particular interest for the scope of the conference are highlighted:

1. Gap stated policy goals and actual implementation
2. Governance public institutions
3. Protecting property rights and investors
4. Co-ordination design and implementation innovation policy
5. Structured process for priority setting
6. Financial market development and venture financing
7. Tax incentives
8. Innovation and business support infrastructure leading to internationalisation of enterprises and research institutes.

### *1. GAP STATED POLICY GOALS AND ACTUAL IMPLEMENTATION*

**A key problem** in Ukraine is the gap between the stated policy goals and actual implementation of policy measures. The idea of knowledge-based economy, driven by innovation, has been discredited in the Ukrainian society, due to many ineffective and inconsistent actions by the public authorities and announced measures that were never

been put in practice. In addition, mechanisms for implementing innovation policy tended to suffer due to the fact that innovation policy has not been given a high priority by the state authorities. Legal acts on innovation support have, in many cases, a lower priority when compared to other state regulations (e.g. Law on the State Budget). This results in innovation initiatives being blocked. Such unfavourable developments have created a gap between science, education and the economy (businesses).

**It is recommended** to clearly define responsibilities and budget. Clear linkages between expected results of activities and their impact and performance need also to be established. Official declarations regarding the need for innovative development need to be supported by carefully tailored measures and, especially by appropriate and efficient mechanisms, programmes and framework conditions.

## *2. GOVERNANCE PUBLIC INSTITUTIONS*

Another **key problem** in Ukraine is the missing adherence to international standards of governance. This often puts impedes the adequate implementation of decided actions and measures geared at stimulating innovation.

**It is recommended** to introduce European governance standards to public institutions by applying to criteria for an effective legislative framework: 1. Identification and punishment of violations; 2. Definition of norms and procedures for the decision-making process and prevention of discretionary decision-making; 3. Safeguard the independence of controlling or supervisory bodies from those under supervision; 4. Mandatory regular controlling and monitoring of organizations, procedures and standards; 5. Provision of constant oversight over the effectiveness of legislated norms and rules; and 6. Universal application of deontological rules, that is, a code of conduct for public servants.

## *3. PROTECTING PROPERTY RIGHTS AND INVESTORS*

Another **key problem** in Ukraine is the unsatisfying protection of property rights and investors representing a major barrier to economic development impeding decisions towards much needed FDI into Ukraine. According to the International rating of Ukraine by Global Competitiveness Indices (GCI) 2011/12 Ukraine ranks 137 (!) out of 142 countries in protecting property and investors. This position has been worsening over the last years.

It is acknowledged that international trade rules and practices and intellectual property agreements strongly influence countries' abilities to attract partner and foreign investments, benefit from technology transfer through increased trade opportunities, and stimulate local innovation. Governments endeavour to create an adequate framework to build an enabling environment that is both attractive to foreign investment and locally supportive to innovation, adaptation of technology, and dissemination of knowledge. Government policies to support innovation should embark on reforms that update the regulatory and institutional framework for innovation and remove bureaucratic, legislative and regulatory obstacles to innovation. These obstacles affect competition laws, licenses to operate, government authorizations, technical norms and standards, customs procedures, and many other regulations and processes.

**It is recommended** to guarantee property right protection according to international standards. This embraces the evolvement of the legal system to cover transaction and disputes that arise over the possession, use, transfer, and disposal of property, most particularly involving contracts. Accompany the law defining such rights with judiciary adjudicating and enforcing property rights. This legal certainly will positively contribute

to the investment climate that determines also the degree to which transnational corporations are encouraged to raise local capabilities. More Foreign Direct Investments (FDIs) will result and will be important channels for technology and knowledge transfer to Ukraine.

#### 4. CO-ORDINATION DESIGN AND IMPLEMENTATION INNOVATION POLICY

Another **key problem** in Ukraine is the weak definition of responsibilities of key actors in design and implementation of innovation policy. There were several state ministries and agencies in Ukraine responsible for support of innovation activities, but their competences were and still are overlapping and not clearly defined. Most of them had historically no sufficient resources to conduct innovation policy effectively.

To focus on the still strong scientific and technological structures is an economic challenge for the country. New innovative enterprises could be developed and used as a model for the rest of the economy. More efficient public coordination and infrastructures is needed in order to succeed in this. Reforms should not be related towards single changes in the system but should represent a coordinated effort. Also, changes and activities on many «fronts» require a well-developed communication and coordination mechanism supported by policy makers, the administration, the science and innovation community and the wider public. This approach cannot be supported with the creation of ad-hoc Committees, without putting adequate political weight on both decision-making and budgets. Building an innovation driven development strategy constitutes a radical shift in the development paradigm of the country and conforms to a swing into the European development path. A necessary precondition for this is the elaboration of a strategy that is supported by the major stakeholders in the society. Such a strategy would allow the creation of efficient decision-making and coordination structures. Coming up with a shared and operational vision for Ukraine may be the biggest challenge of all.

**It is recommended** to specify in detail the responsibilities of the bodies that should design and/or implement innovation policy in the country, in addition to the recent approval of the MEDT, MESYS and SASII regulations by the President. The distinct role of SASII (the innovation agency) with fixed political value, scope, functions, long-term existence and budget is very important in order to perform the policy directions and to implement the measures decided. Additionally, the policy shaping mechanism should also be elaborated further. It is proposed to create an effective advisory body by the President solely for policy development, like the case of Finland. The Finnish Research and Innovation Council consists of the Prime Minister, the Ministry of Education, the Ministry of Economy, the Ministry of Finance, up to four other ministries, leading funding organisations, business and industry employee organisations, universities, and other qualified members. It is managed by a Council Secretariat with three staff that initiates and elaborates proposals. The Council convenes four to six times per year do discuss key problems of S&T and innovation development and to generate recommendations to the government.

#### 5. STRUCTURED PROCESS FOR PRIORITY SETTING

Another **key problem** in Ukraine is the implementation mechanism of agreed priorities. A lot of effort had been put to legislation and steering of activities but the set priorities were not properly implemented, monitored or evaluated.

In industrial countries technology (and later innovation policy) has always had a strong focus on promoting specific themes, technologies and industries that are expected to contribute to the societal and economic policy objectives. Setting of priorities for technology development has therefore been a key issue for innovation policy from the beginning.

Based on the developments in the priority setting process different kinds of priorities exist today in innovation policy:

- Mission-oriented priorities
- Functional priorities
- Thematic priorities

The first relates to various targets for innovation policy. A typical example has been the 3 % target for R&D expenditure as a share of GDP in the EU RTDI policy priorities or internationalisation of research. The second type of priorities refers to the development of specific functions in the national innovation system such as financing or researcher mobility. Examples of these can be e.g. the recent priorities in the Finnish National Innovation Strategy that emphasize e.g. promoting business R&D investments is to develop more market incentives for firms and other organizations to innovate. The thematic priorities are often related to specific technology or business areas such as nanotechnology, services or eco-innovation.

**It is recommended** to set up a structured process for setting priorities for R&D and innovation policies in Ukraine. A key factor of success is the co-ordination of the involved actors. Research and innovation priorities should be shaped taking into consideration forecast-analytical studies and global technological trends based on the results of the National Foresight-type programme with broad involvement of the representatives of national business circles and foreign experts. The Ukrainian authorities should mandate the relevant bodies (Academies, agencies, funds etc.) to prepare the methodology for this priority setting process. The process should involve identification of themes, experts/stakeholders/users consultation, budget estimates, etc. It is important to increase the share of competitive financing of R&D and implementation of co-financing principles for industry-oriented research.

#### *6. FINANCIAL MARKET DEVELOPMENT AND VENTURE FINANCING*

Another **key problem** in Ukraine is the overall low level of R&D financing in Ukraine. The proportion of GDP has declined over the last years and has reached its lowest ever record since the country gained its independence. According to the International rating of Ukraine by Global Competitiveness Indices (GCI) 2011/12 Ukraine ranks 116 out of 142 countries in financial market development. This position has been worsening over the last years. The recent years and in addition to the banking crisis, corporate and consumer lending to innovative enterprises by the banks has been very limited. In addition, the amount of investments for private equity is also limited and it is less than 0,1 % of any given year. There are more than 500 so-called «venture funds». However, these fund are mainly focused on real estate projects and do not invest in high-tech and start-up companies. As far as international venture funds are concerned, they do not show strong interest in Ukrainian technology projects also because there is a strong focus on the technology itself and not on the business aspect.

Ukraine faces several challenges related to innovation financing, namely

- Increasing the overall volume of investment into innovation, both from the public and private sources

- Improving the governance of the innovation system, with consequences to innovation financing
- Filling in the gaps in the innovation financing, such as development of effective innovation support instruments for the business sector, particularly for SMEs and encouragement of seed and venture capital
- Driving the overall balance of R&D and innovation financing from state institutional financing more towards competitive and transparent, project-based funding with clear innovation objectives.

**It is recommended to**

- Create an Ukrainian Fund for Innovation-Based Start-up Enterprises, a state-owned financing company to provide start-up capital in the form of loans on a competitive basis. The loans can be used for investments in machinery and equipment, as working capital, for other start-up or expansion innovation projects. The programme is suggested to be implemented by SASII — to execute the overall management of the Fund; to form an Expert Council; to organise business plans competition for innovation-based start-ups on an annual basis; to monitor the activity of the Fund; to assess the performance, and by MEDT and the Ministry of Finance — to foresee funding for the initiative in the yearly approved state budget.
- Ensure allocation of fixed percentage of State Budget R&D expenditures (UAH 3,398.6 m in 2009) for credit support of SMEs. Establish within SASII a finance and credit institution and its further transformation into the National Venture Company.

#### 7. TAX INCENTIVES

Another **key problem** in Ukraine is a lack of effective economic incentives for enterprises to carry out technological modernisation based on new knowledge. There are no tax incentives for investments in R&D in Ukraine.

There are significant differences in the EU member states concerning the utilization of this tool. Some countries have no tax incentives at all, while in most of the countries different types of tax incentives exist: tax allowances, tax relief, etc.

**It is recommended** to investigate if and how R&D tax incentives can be embedded within the overall taxation policy. It is hard to quantify the exact correlation between R&D tax incentives and the global deployment of R&D. In any event tax preferences should be given only to enterprises that can prove their innovation and R&D activities. Policy makers may wish to decide to more directly steer innovation policy interventions towards specific technologies and sectors. Care must be taken to balance the policy mix rather than to focus on choices between R&D subsidies versus tax incentives.

#### 8. INNOVATION AND BUSINESS SUPPORT INFRASTRUCTURE SUPPORTING INTERNATIONALISATION OF ENTERPRISES AND RESEARCH INSTITUTES

Another **key problem** in Ukraine is the low level of international business and research activities of companies and research institutes. Evidence shows that research institutes, universities, and SMEs need services to support technology transfer, research internationalisation, and business incubation services as otherwise they miss out on business and technology cooperation opportunities. Researchers seldom engage in international FP7 consortia and projects. Companies seldom close international technology deals. Start ups often die prematurely as they are not properly supported. Likewise the Ukrainian economy misses out on international business opportunities leading to growth and jobs. In addition, Ukrainian innovation and business support

infrastructure is «under-networked» when compared to their Western counterparts both bilaterally and within networks. Being cut out from accumulated international learning experiences, best practices, methodologies and tools ignites a virtuous circle. The downward spiral of professionalism of provided innovation and business support services makes it increasingly losing their *raison d'être* for assisting Ukrainian business in becoming more competitive. Likewise the gap to state of the art business support infrastructure widens and its actors are less and less able to provide state of the art business support services designed to help client organisations become more competitive in the globalised economy.

**It is recommended** to equip Ukrainian innovation and business support infrastructure with appropriate resources and with international state of the art business support services methodology and tools to help minimize and close this gap by setting up:

- Enterprise Europe Network Ukraine (EEN) to provide state of the art technology transfer and brokerage services to Ukrainian SMEs and research institutes;
- A comprehensive Ukrainian NCP support system with thematic NCPs to be systematically trained by the coordinating NCP; and
- Pilot Science and Technology Parks according to international standards. Such parks would host large and small companies and would foster collaboration between them. It would promote foreign direct investment. Said pilot Science and Technology Parks should host a business incubator.

**Conclusions.** Ukraine has a well known reputation in the various fields of Fundamental and Applied Research. It is fully understand that Ukraine is a big country with excellent education potential, strong traditions in Science and Technology. There are a number of persons and specialists who are doing the best of their efforts for the transformation of Ukraine from an innovative economy perspective.

The EU countries went through a long and not so simple way of innovation development. As a result some EU countries became world-wide innovation leaders; some countries significantly improved their positions in terms of innovations. There is a useful experience including positive and negative aspects. The author's purpose was to review it carefully, adapt to the Ukrainian conditions and to study together with Ukrainian partners the opportunities of its implementation in Ukraine.

The presented suggestions do not represent something to teach anybody about, on the contrary the author is are grateful for the long lasting and continuous cooperation, interaction and validation process she has benefited from you and major stakeholders. Some specific mechanisms applied in the innovation sphere in EU countries, specifically those from the Balkans and the Central Eastern Europe which joined the EU over the last years, proved their effectiveness.

Innovation really can be seen as major driver for economic development and competitiveness and a source for profitable business. For instance, eco-innovation has opened new markets leading to profitable business over the last years. Also innovation in products and processes can add to more growth and jobs in both traditional and organic agriculture in Ukraine.

The author hopes that the analysis and conclusions are useful for the design and implementation of innovation policy and strategies in Ukraine.

### **Literature**

1. *Rumpf G., Strogilopoulos G., Yegorov I.* — Kyiv 2011. Innovation Policy: European Benchmarking for Ukraine Volume 1 «Key features of innovation policy as a basis for designing

innovation enhancing measures leading Ukraine to a knowledge based competitive economy — Comparison EU and Ukraine»

[http://innopolicy.com.ua/wp-content/uploads/GR\\_Monograph\\_Volume\\_1\\_EN.pdf](http://innopolicy.com.ua/wp-content/uploads/GR_Monograph_Volume_1_EN.pdf)

2. *Kapitsa, Y.*, Kyiv 2011. Innovation Policy: European Benchmarking for Ukraine Volume 2 «The analysis of the legislation of Ukraine in the sphere of research, development and innovation activity and suggestions for amendment of legislation» [http://innopolicy.com.ua/wp-content/uploads/Monograph\\_Volume\\_2\\_EN.pdf](http://innopolicy.com.ua/wp-content/uploads/Monograph_Volume_2_EN.pdf)

3. *Rumpf G., Strogilopoulos G.*, Kyiv 2011. Innovation Policy: European Benchmarking for Ukraine Volume 3. «Innovation in Ukraine- Policy Options for Action» [http://innopolicy.com.ua/wp-content/uploads/GR\\_Monograph\\_volume\\_3\\_EN.pdf](http://innopolicy.com.ua/wp-content/uploads/GR_Monograph_volume_3_EN.pdf)

Стаття надійшла до редакції 23.11.2011 р.

УДК 330.322.1

**Л. П. Овчарова**, науковий співробітник  
ДУ «Інститут економіки та прогнозування  
НАН України»

## ЕКОНОМІЧНА ОЦІНКА ІНВЕСТИЦІЙНИХ ПРОЦЕСІВ У КРАЇНАХ СНД У ПОСТКРИЗОВИЙ ПЕРІОД

**Анотація.** У статті проаналізовано тенденції в інвестиційній сфері в Україні та країнах СНД у посткризовий період, визначено особливості залучення інвестицій в основний капітал, виявлено диспропорції в розподілі інвестицій за видами економічної діяльності і в регіональному розрізі та розроблено пропозиції щодо стратегічних пріоритетів державної політики в інвестиційній сфері.

**Ключові слова:** інвестиції, основний капітал, види економічної діяльності, прями іноземні інвестиції, інвестиційна привабливість

**Вступ.** Сьогодні інвестиції відіграють істотну роль у функціонуванні й розвитку економіки. Зміни в кількісних співвідношеннях інвестицій впливають на обсяг суспільного виробництва й зайнятості, структурні зрушення в економіці, розвиток галузей і сфер господарства. Забезпечуючи нагромадження фондів підприємств, виробничого потенціалу, інвестиції безпосередньо впливають на поточні й перспективні результати господарської діяльності та економічний розвиток країни.

В посткризовий період у країнах СНД дуже гостро стоїть проблема забезпечення якісного оновлення та розширення основних засобів, оскільки понад 40 % балансової вартості основних засобів становлять об'єкти віком понад 30 років. Середній ступінь зносу основних засобів перевищує 60 %. Інвестиції в основний капітал (ОК) в останні 2 роки знаходяться, наприклад в Україні, на рівні 13—16 % ВВП. У той же час, у країнах ЄС норма інвестицій в ОК по відношенню до ВВП не нижче 30 %. У Китаї ж в останні роки цей показник складає 40—46 % [1].

Збільшення капіталовкладень в економіку багатьох країн СНД у передкризовий період не спонукало до перерозподілу інвестиційних ресурсів для масової заміни основних засобів, які відпрацювали нормативний термін. Навіть ті обсяги коштів, що для цього виділялися, не створили матеріально-технічне підґрунтя для ефективної роботи виробничого потенціалу.