INNOVATION AND INVENTION COMMERCIALIZATION IN VIETNAM

Dr. Phan Quoc Nguyen
Vietnam National University, Hanoi
Email: pqnguyen77@yahoo.com

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PROFILE OF PRESENTER

1. IP Attorney and Senior consultant. Has strong expertise in intellectual property (IP), technology transfer (TT) and innovation management.
2. Founder of TLO of some leading technical universities.
3. Director of Public Relations of World Invention and Intellectual Property Associations (WIIPA).
4. Vietnamese representative (3 times) presenting the Country Report at the University-Industry Technology Transfer Forum held by World Intellectual Property Organization (WIPO).
5. The only Vietnamese scholar whose papers are accepted continuously for oral presentation at the Asia-Pacific Innovation Conference (APIC): National University of Singapore (2011), Seoul National University (2012), Taiwan National University (2013), University of Technology, Sydney (2014), and Kyushu University (2016).

PROFILE OF PRESENTER

6. Judge and Award Winner for invention contests: Kaohsiung International Invention and Design Exhibition (KIDE) by WIIPA in Taiwan; Envex Young Researcher Club (i-ENVEX) by University Malaysia of Perlis in Malaysia; EUROINVENT by Gheorghe Asachi Technical University of Iasi in Romania; World Invention and Creativity Contest (WICC) by Korea University Invention Association in South Korea; and Vietnam Innovation (Vietnam Television Channel No.3), Inventions-Solutions and Inventors (Vietnam Television Channel No. 2), IP and the Life (Vietnam and Province Televisions), Woman with Scientific Research and IP (Vietnam Television Channel No.2), Vietnam and the World (Vietnam Television Channel No.4), etc.

7. Member of Draft and Revision Group: **Decision No. 78/2008/QD-BGDDT** of Vietnam's Ministry of Education and Training on IP activities at university and training institutions; **IP Policy** of Hanoi University of Technology; **IP Policy** of Vietnam National University, Hanoi.

8. Chief author of textbook and book: *Intellectual Property, Technology Transfer and Patent Information Exploitation* (Bach Khoa Publishing House, 2008, 2010, 2016); *Technology and Innovation Management* (TOPICA, 2012) and co-author of books: *Innovation Essentials*, (Science and Technology Publishing House, 2012); *Technology Transfer* (Science and Technology Management Institution, 2010), *Intellectual Property Exploitation for Green Economy Growth in Vietnam* (National Economics University, 2016), etc.

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II. Current status of Innovation and Invention Commercialization in Vietnam
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INTRODUCTION

- Vietnam has had an underdeveloped economy.
- Since its renovation and shift to an open economy, it has seen more progress.
- The actual economy is in double transition:

+ moving from centrally planned state economy to market economy
+ moving from agricultural economy to industrial economy

INTRODUCTION

- Multiple challenges of globalization.
- Need for shortcut industrialization and modernization.
- New technologies are necessary for national development, in particular after Vietnam's accession to WTO in 2007, joining in the AEC in 12/2015 and participation in the TPP Negotiation in 2016.

INTRODUCTION

- However, Vietnam lacks technology.

- IPRs Commercialization & Innovation:

+ promote and encourage the creation of new technologies,

+ important step for the set-up of technology market,

+ important role in socio-economic development.

- Research at universities/research institutes is the main source of new inventions to be patented and commercialized, and applied into production.

CURRENT STATUS

- The National Party Congress: "*strengthening research and application of scientific and technological achievements to create a breakthrough in productivity, quality and efficiency in each sector of the economy, improving the quality and commerciality of the S&T products".*
- The Government: policy, mechanisms

+ to use and reward S&T staff and
+ to implement the *"rapid development of S&T market; encourage and support S&T activities for the development and exploitation of intellectual property".*

POLICY AND LAWS

- The legal system of S&T: basically completed in accordance with a modern management model successful in many developed countries (*Sources: MOST*)

→ Policy, specialized law and supporting legal documents:

+ S&T Strategy to 2020;
+ Reforms of S&T Management mechanisms;
+ Development of technology market;
+ International integration in S&T;
+ Law on Science and Technology (2000, amended in 2013);
+ Law on Intellectual Property (2005, amended in 2009);
+ Law on Standards and Technical Regulations (2006);
+ Law on Technology Transfer (2006);
+ Law on High Technology (2008) and

and 52 decisions, decrees to guide law implementation.

DEVELOPMENT CONDITION

- Science based development.
- Favorable development conditions: stable growth (6-7% GDP growth on average from 2000-2007).
- 3 year average from 2011 to 2013 has increased by 5.6%/year, but still lower than the 7.2% in the 2006-2010 period.
- 2015, GDP growth is 6.68% and expectedly increases by 6.7% in 2016.

PROGRAM AND PROJECT

- 14 programs in State-level (10 in S&T and 4 in social sciences and humanities).
- Cooperate with 70 countries, signed and implemented more than 80 Agreements, member of more than 100 organizations in S&T.
- Projects:

+ IPP (Innovation Partnership Programme, 2nd term);
+ FIRST (Fostering Innovation through Research, Science and Technology);
+ V-KIST;
+ BIPP (Support to the Innovation and Development of business incubators policy project)

INSTITUTION

- 505 R&D organizations (Source: MOST).
- 400,000 enterprises, 2,800 S&T enterprises, but only 204 enterprises have been granted S&T enterprise certificate (Source: MOST, in 11/2015).
- 75% of SMEs are using outdated equipment (1960-1970), used 15% normal equipment and 10% “modern” equipment (Source: MOIC)

HUMAN RESOURCE

- R&D manpower: 164,744 people in 2013,
- 2011-2012:

+ 134,780 people, accounting for 0.15% of the population (87.84 million),
+ number of researchers is 105,230 people, the rest are technicians, supporting staff,
+ Universities: 52,997 – 62,095 people, accounting for more than 50%,
+ 111 researchers in R&D/million people

(Korea: 981 in 2010, Malaysia: 158 in 2011)

INFORMATION SOURCE

- 5 million S&T books.
- 20,000 S&T magazines.
- Database: Science direct, Proquest Central, Web of Science, IEEE, APS, Primo Central Index, IOP Science, Springer eJournals.

INFORMATION SOURCE

- By the end of 2011, the NOIP has kept 29,090,778 descriptions of inventions and utility solutions.

→ an extremely rich source of information and a potential if exploited for commercialization.

≠ However, average of only 150 requests/year, this number is too low.

Source: NOIP

EXPENDITURE FOR S&T

- The annual investment for S&T activities was at 2% of the total State budget expenditures (equivalent to 0.5 to 0.6% GDP with the average growth rate of about 16% per year,

+ the state budget is still the main source of investment: 70%,

+ from the non-state-budget sources: 30%

of the total investment of the whole society to S&T activities).

EXPENDITURE FOR R&D

- Expenditure for R&D from State budget (Source: MOST):

Year	2007	2008	2009	2010	2011	2012	2015
Billion VND	**6,310**	**6,585**	**7,867**	**9,178**	**11,499**	**13,168**	**14,144**

- Expenditure of enterprises for S&T in 2011 (Source: NASATI):

	Total	R&D	Technology Innovation
Total Billion VND	**5,349.54**	**1,503.70**	**3,935.84**

VIETNAMESE PATENT APPLICATION NUMBER

Year	Patent number	Utility solution number
2010	306	215
2011	301	193
2012	382	198
2013	443	225
2014	583	310

Source: Annual report of NOIP 2015

RANK OF GLOBAL INNOVATION INDEX OF VIETNAM AND SOME COUNTRIES (Source: The GII)

Year	No of country	Highest score	Vietnam		Malaysia		Singapore		Thailand	
			Score	Rank	Score	Rank	Score	Rank	Score	Rank
2011	125	74.1	36.71	51	44.05	31	74.11	1	43.33	48
2012	141	68.2	33.9	76	45.9	32	64.80	3	36.90	57
2013	142	66.59	34.82	76	46.92	32	59.41	8	37.63	57
2014	143	64.78	34.89	71	45.60	33	59.24	7	39.28	48
2015	141	68.3	38.35	52	45.98	32	59.36	7	38.10	55

GERD/GDP

- GERD/GDP: 0.37% (2014).
- 2011:

Country	Vietnam	USA	China	Malaysia	Korea
GERD Billion USD	**0.25**	**450**	**250**	**2.65**	**33.7**

(Source: MOST)

PATENT NUMBER GAP

- According to NOIP, till end of 2010, the patent number granted by the Vietnamese is 371 while of utility solution number is 263.

- In comparison with the patent numbers granted by the foreigners in Vietnam, there are the big gap: 371/5383 = 0,06.

PATENT COMMERCIALIZATION

Year	Registered Patent licensing contracts number	Registered Patent assigned contracts number
2004	1	25
2005	1	23
2006	0	17
2007	0	22
2008	3	28
2009	2	20
2010	2	25
2011	4	18

Source: NOIP

RECOMMENDATIONS

1. Support the establishment of intermediary organizations for TT service.

2. Organize techmarts and promote the marketing of technologies.

3. Raise funds to support innovation.

RECOMMENDATIONS

4. Re-create the relationship between Government-University-Enterprise.

5. Promote the establishment of science-technology enterprises and incubators.

6. Have new programs to support the application and commercialization of new technologies.

THANKS FOR YOUR ATTENTION

Dr. PHAN QUOC NGUYEN

Mobile phone: +84-913078792

Email: pqnguyen77@yahoo.com