

COUNTRY REPORT OF VIETNAM  
**TECHNOLOGY TRANSFER:**  
**Challenges, Opportunities and**  
**Successful Cases**

**Phan Quoc Nguyen**

VNU University of Engineering and Technology,  
Email: [pqnguyen@vnu.edu.vn](mailto:pqnguyen@vnu.edu.vn)

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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.
- New technologies are necessary for national development, in particular after Vietnam's accession to WTO.

## **INTRODUCTION**

- However, Vietnam lacks technology.
- University technology transfer (UTT) is the process promoting and encouraging the creation of new technologies.
- Basic research from universities is the main source of new inventions to be patented and commercialized.

## **INTRODUCTION**

- The role of intellectual property (IP) is clear when successfully commercialized.
- Based on the analysis of opportunities and challenges to UTT, two main groups of solutions will be given to promote UTT in Vietnam:
  - + Mechanism and policies need to be launched at a national scale;
  - + Concrete solutions.

## **TECHNOLOGY TRANSFER IN VIETNAM**

What is Technology transfer?  
No concrete definition in Vietnam's laws.

## Classification

- In Vietnam, technology transfer (TT) is now composed of the following activities:

1. Foreign technologies are transferred into Vietnam
2. Vietnamese technologies are exported
3. Domestic TT (mainly UTT)

## The 1<sup>st</sup> Flux

- The success of Vietnam's economic development resulted mainly from the investment and innovation of technology for enhancing productivity and product quality, which creates new, highly competitive products, satisfying domestic needs and export.

- The biggest flux of transferred technologies is TT between Holding Co. and their subsidiaries in Vietnam via FDI projects ( $\geq 90\%$ ). Till Dec. 15<sup>th</sup>, 2009, 10,960 projects have been in effect with the total registered capital of 177 billion USD  
(sources: Ministry of Planning and Investment).

### **The 2<sup>nd</sup> Flux**

-The second flux, Vietnamese exported technologies, are developing with 268 investment projects in 37 countries with the total capital of 2 billion USD  
*(sources: Ministry of Planning and Investment, 2007).*

### **The 3<sup>rd</sup> Flux**

-The TT from Universities and other institutes of research to enterprises is fruitful.

-Only technical – agricultural universities, 10,250 TT contracts are signed with the total amount of more than 1,000 billion VND (1 USD = 11,000 VND) during the last 5 years.  
*(sources: Ministry of Science and Technology).*

## **UNIVERSITY –INDUSTRY COLLABORATION TO PROMOTE TECHNOLOGY TRANSFER**

### **University – Industry: Organic Relationship**

- In developed countries, the relationship between scientific research and TT at universities and the economic development is of the special importance because there is more and more less foreign investment in the technology area.

→ The use, protection, commercialization of intellectual assets and the propaganda of knowledge on IP is not only the concern of Government agencies, universities but also that of businesses.

## **UNIVERSITY –INDUSTRY COLLABORATION TO PROMOTE TECHNOLOGY TRANSFER**

-The most importance is to establish a mechanism and policy to boost IP activities at universities in order to encourage them to transfer technologies, support and give consultations on IP to enterprises.

-On its part, enterprises will positively promote the process of scientific research and creation.

-The Government needs to encourage the cooperation between universities and enterprises through technology transfer as well as consultations, training on IP and providing information about results of patented scientific researches in order to give enterprises various options.

-On their side, universities will receive more financial support from enterprises.

## UNIVERSITY TECHNOLOGY TRANSFER IN VIETNAM - OPPORTUNITIES

- Law on Science and Technology (2000)
  - Decree No. 81/2002/ND-CP providing detailed guidelines on the implementation of Law on S&T
  - Law on Technology Transfer (2006)
  - Decree No. 133/2008/ND-CP providing detailed guidelines on the implementation of Law on TT
  - Law on High Technologies (2008)
  - Law on Intellectual Property (2005)
  - Decision No. 78/2008/QD-BGDDT on intellectual property at university and training institutions, etc.
- **promoting the UTT in Vietnam**

## UNIVERSITY TECHNOLOGY TRANSFER IN VIETNAM - OPPORTUNITIES

- 10% of industries have used technologies in the 1970's, 30% in the 1980's and 50% in the 1990's (*recent statistics on technological development level of Vietnamese industries*). Due to low-level technologies, Vietnam's products do not satisfy quality and design requirements, which affects price and weakens competitiveness.
- UTT is very necessary and Vietnamese technical universities play a very important role.

### UNIVERSITY TECHNOLOGY TRANSFER IN VIETNAM - CHALLENGES

- Technologies of universities are embryonic and not mature, therefore highly risky to develop and invest.
- Practical utility is not proven: Technology is not developed in response to market need (only at Lab.-level, lack of collaboration with businesses).
- Most of centers and offices promoting TT at universities are not legal entities, so have difficulty in lending money from banks.

### UNIVERSITY TECHNOLOGY TRANSFER IN VIETNAM - CHALLENGES

- The size of Vietnamese enterprises is still small, around 90% of enterprises have capital below VND 5 billion. More than 90% of Vietnamese enterprises are SME (*survey of SMEs Development Department under the Ministry of Planning and Investment*)



## **Challenges (Cont'd)**

In brief, the TT from universities to industries in Vietnam is still limited, desynchronized, and weak due to several reasons:

- Lacking IP policy and lack of encouragements for innovation promotion and technology commercialization for technology makers and transfer;
- Lack of offices or bodies which specialize in the commercialization of research results or patents like models of TLO;

## **Challenges (Cont'd)**

- Poor utilization of patent information for research;
- Very weak protection of IPRs at universities, which affected UTT and creativity within universities;
- Lack of encouragements and incentives such as financial policies, funds for innovation, remuneration and bonuses for parties successfully executing UTT contracts, etc.

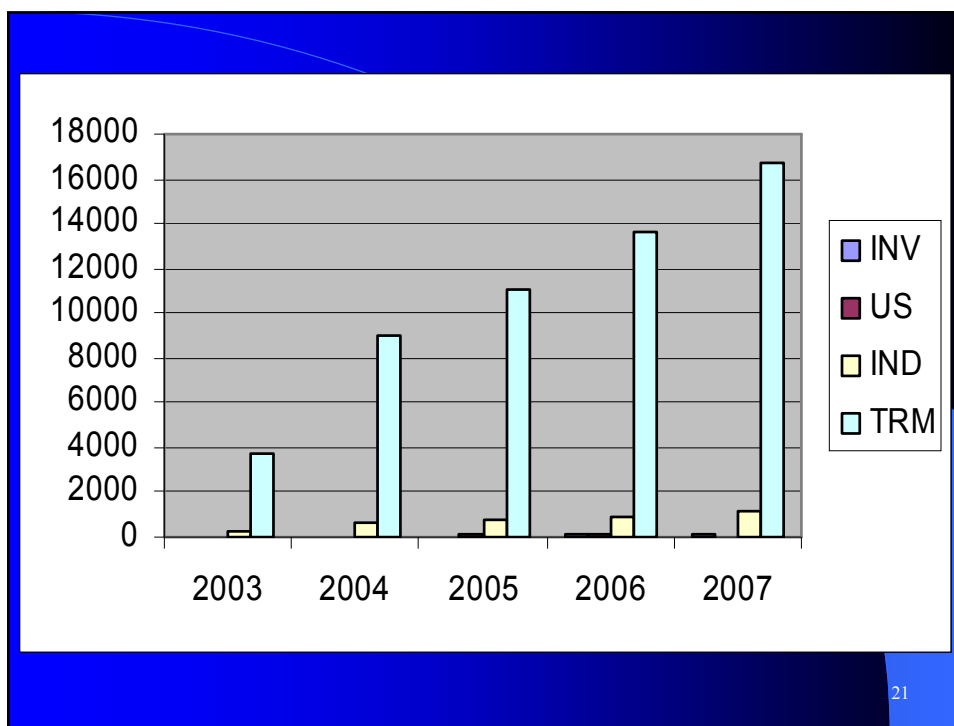
## CURRENT STATUS OF FILING IN VIETNAM

- Awareness and knowledge about IP raised drastically.
- Number of applications raised: 20% on average annually.

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Year	INV	U S	IND	TRM
2003	17	24	197	3697
2004	36	42	585	9024
2005	56	98	716	11045
2006	79	88	900	13609
2007	95	49	1131	16678

Source: NOIP



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## CURRENT STATUS (cont'd)

- Awareness raised about IPRs protection but not commensurate with factual social development.
- TRM and IND big rate, INV small.

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## **SOLUTIONS PROMOTING UNIVERSITY TECHNOLOGY TRANSFER**

- Mechanism and policies need to be launched at a national scale to promote UTT.
- Concrete solutions to promote and manage TT at Vietnamese technical universities.

### **Mechanism and policies**

- Support the establishment of intermediary organizations for TT service.
- Provide equipment for technical universities to enhance their research and innovation.
- Organize tech-marts (technology fairs) and promote the marketing of technologies.
- Raise funds for the researcher and have programs to support innovation and application of new technologies.

## **Mechanism and policies (cont'd)**

- Hold regularly the meetings between Government-University-Enterprise or Bank-University-Enterprise.
- Promote the establishment of science-technology enterprises and incubators.
- Have programs to support the commercialization of technologies.
- Launch tax policies to support the UTT.
- Launch policies to support universities in exploiting patent information, etc.

## **Some solutions**

### ***1. IP policies***

- Vietnam's technical universities need to have IP policies (which regulate in detail the organization and management of IP activities at universities and concretize UTT, the commercialization process, and the division of income between the inventor, university and the laboratories, faculty, etc.)
- Moreover, IP policies need to promote the relationships between University-Industry.

### **Some solutions (cont'd)**

- Procedures and process for filing patent and technology commercialization should be clear and detailed, especially matters relating to fees and financial support, to ownership, to sharing benefit, etc.
- The division of royalties is a driving force behind innovation and UTT as well as the management and organization of TT transactions.

### **Some solutions (cont'd)**

Vietnamese universities should concretize the rate of royalty division pursuant to the laws and according to the experience of some foreign universities mentioned above as follows:  
40-50% for inventor(s), 50-60% for university including faculty, department, research center or Laboratory where inventor works and TLO if any.

## **Some solutions (cont'd)**

### ***2. Offices specialized in UTT (TTO or TLO) at technical universities***

-At present, there is not an office of technology transfer (TTO) and IP at most Vietnamese universities.

## **Some solutions (cont'd)**

\* ASEAN countries (Indonesia and Singapore), offices managing IP and TT have been set up at the universities and research institutes, are responsible for managing IPRs, support in licensing industrial property rights and searching patent information, etc. with an aim at developing the national economy based on knowledge. For example, in Singapore, most technology universities set up TT/licensing office which are operating effectively. The offices have received much supports from IPOS to develop these offices as the technology information centers.

## Some solutions (cont'd)

\* In developed countries, the protection of intellectual property rights (IPRs) and commercialization of IP for research results are indispensable for the scientific and technological activities.

## Some solutions (cont'd)

Thanks to government, Japanese universities excelled in TT and IP activities. Some initial results are:

- 43 TLO at Japanese universities (in 2003),
- Number of patent filing: 6,314 (in 2003),
- Number of patented inventions: 4,088 (in 2003); (691 in 2000),
- Number of joint research between University and Industry: 6,767 (in 2002), 4,029 (in 2000);
- Number of spin-off from universities: 614 (in 2003), 128 (in 2000),
- Number of licensed patents: 1,236 (2003),
- Revenue from patent license: 14 million USD (in 2003) , etc.

(Hanoi University of Technology, *Experiences from TLO at the universities of Japan and the USA*, Proceedings of *Workshop on Science-Technology at technology universities: from Research to Market*, Ministry of Education and Training, Hanoi, 2004, p.26.)



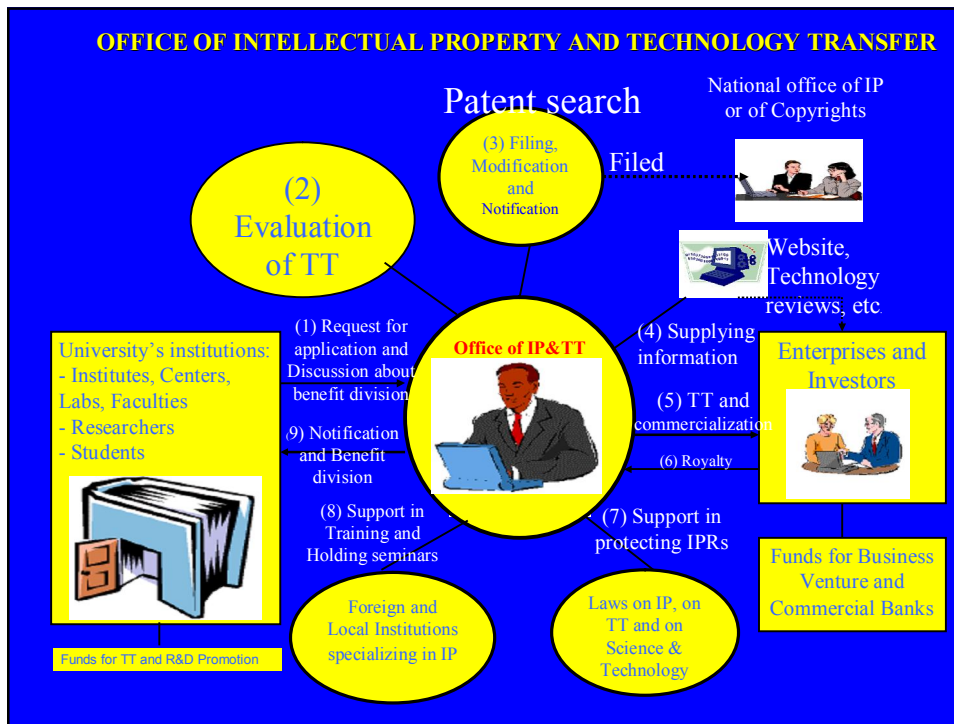
## Some solutions (cont'd)

The offices have the following functions:

- Set up councils to evaluate, select the technologies for the patent filing and to transfer and commercialize technologies.
- Search and exploit patent information.
- Support researchers in filing patent.
- Manage protected IPRs.
- Build up databases on patent information.
- Build programs, projects; hold seminars, develop curriculum, and teach IP subjects.
- Seek financial resources for R&D activities.

**TLO**





# CONCLUSION

- Adopt IP policies in which the ownership and division of royalties must be detailed.
- Set up the offices specialized in UTT and IP management (as the model of TTO or TLO), etc.

**THANKS FOR YOUR  
ATTENTION!**

PHAN QUOC NGUYEN  
pqnguyen@vnu.edu.vn