



BETTER POLICIES FOR BETTER LIVES

# The OECD - World Bank Review: Science, Technology and Innovation in Viet Nam

Presentation at the launch of OECD-World Bank Report:  
*Science, Technology and Innovation in Vietnam*

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# Outline

- Overview of the OECD Reviews of Innovation Policy
- The Review of STI in Viet Nam
- Main findings of the review
- Main Policy Recommendations of the review



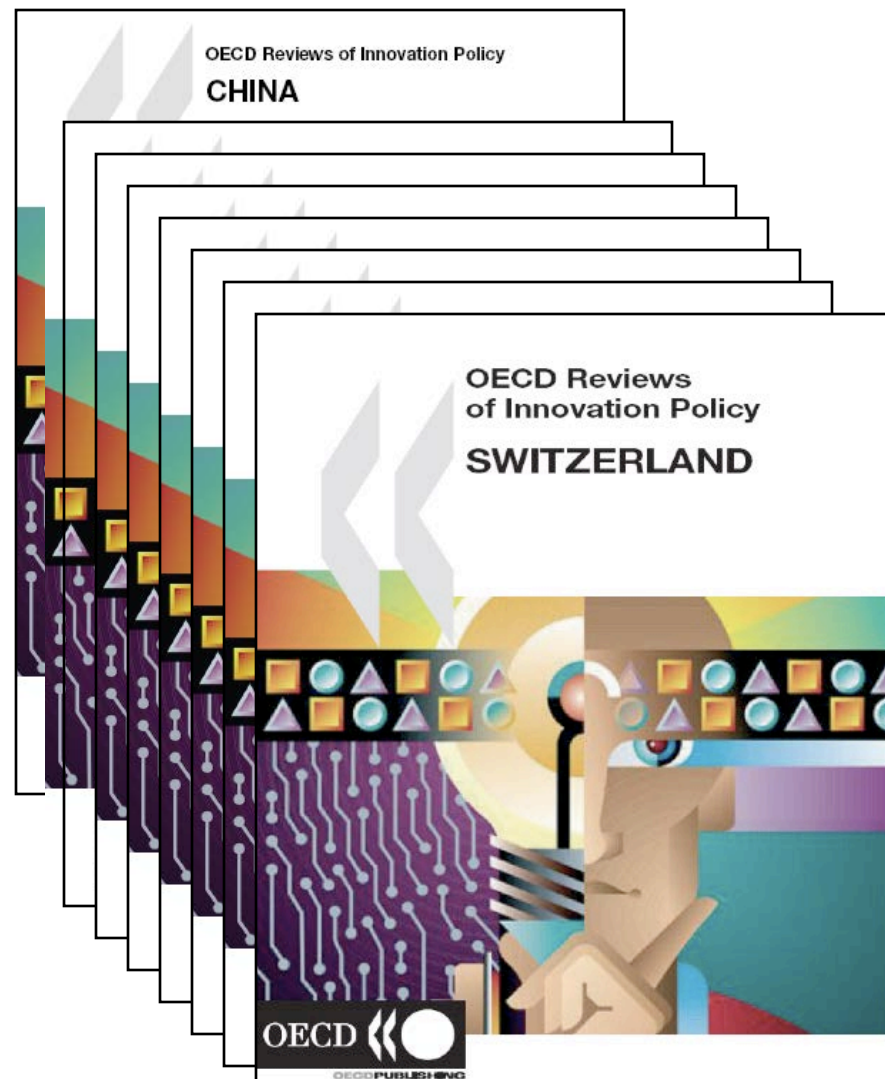


# What are OECD Reviews of Innovation Policy?

In 2005, the OECD re-launched Innovation Policy Reviews to serve as:

- “A customised service” to support individual countries’ endeavour to improve national STI policy and performance;
- “A learning tool” to reinforce and inform our thematic research on STI policy issues by analysing them in country specific contexts;
- “An integration tool”: to facilitate the participation of selected partners in OECD work on STI and to benefit from OECD expertise and country experiences.

*The Reviews provide a comprehensive analysis of the respective national innovation system - with a focus on the role of government policy.*

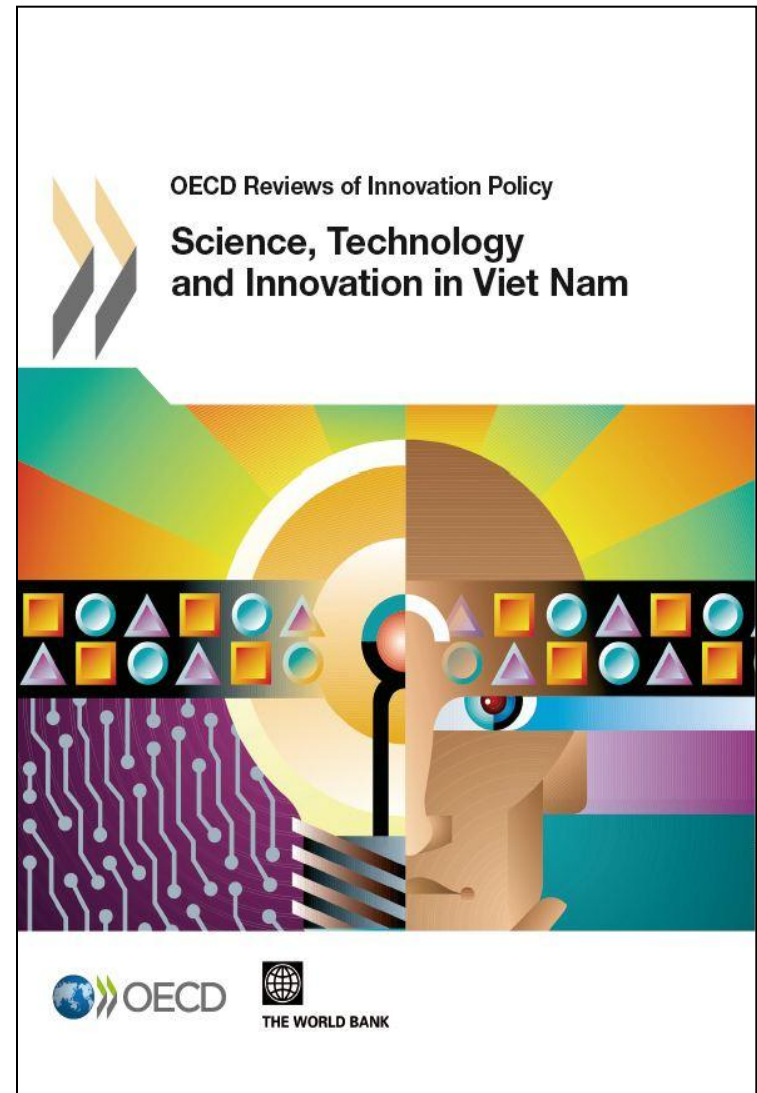


# A wide range of OECD and emerging economies reviewed

	OECD	Key Emerging	Other emerging
Completed	Luxembourg, Switzerland, New Zealand, Chile, Norway, Greece, Hungary, <b>Korea</b> , Mexico, Slovenia, Sweden, Netherlands, France	South Africa, <b>China</b> ; Russian Federation	<b>Viet Nam</b> Peru, Croatia, Colombia, and Southeast Asia (regional)
In the pipeline	Luxembourg (2 <sup>nd</sup> review)		<b>Malaysia</b>
Under preparation	Several under discussion	Several under discussion	Costa Rica, Lithuania, Kazakhstan

# OECD-World Bank Review of STI in Viet Nam

- The review was requested by the Ministry of Science and Technology of Viet Nam.
- It is a joint undertaking between the OECD and the World Bank, and is the first of its kind.
- The review was supported by Finland's Innovation Partnership Programme (IPP) with Viet Nam.
- Numerous Vietnamese policy makers, academics and experts, and business entrepreneurs gave input through sharing their views and insights with the Review team.



# Scope and Structure of the Review Report

- **Overall Assessment and Recommendation:** provides a comprehensive analysis of Viet Nam's STI system - with a focus on the role of government policy, and it makes recommendations for policy improvements in six broad areas.
- **Chapter 2: Economic Performance and Framework Conditions for Innovation:** it reviews past growth performance, considers global conditions, and discusses the role of innovation for Viet Nam's future growth.
- **Chapter 3: Innovation Performance and Actors in Viet Nam:** using available quantitative indicators as well as qualitative information, it assesses STI capacities and the performance of major actors, i.e. government research, universities and business sector, in Viet Nam's innovation system.
- **Chapter 4: Human Resources for Innovation in Viet Nam:** it addresses issues such as what kind of HR matter most for innovation, where does Vietnam stand with HR and the main skill gaps and constrains, and the key options for remedy.
- **Chapter 5: The Role of Government:** it provides a brief overview of the evolution of STI policy in the past three decades, followed by an assessment of the current government policy framework in place for STI development, and it identifies areas where policy improvements are recommended.



# Impressive achievements: economic growth, investment and export expansion

- High growth performance at over 7 % (1990-2007) translated into a rapid rise in per-capita income (< 100\$ to 1600\$ 1990-2012) and reduction of poverty;
- Increasing rate of capital accumulation (18%(95)-30%(2011)) with investment severing a main driver of growth...
- Exports expanded from below 1/3 to nearly 90% of GDP (1995-2011) , and diversified...

Growth of GDP per capita, 1990-2011

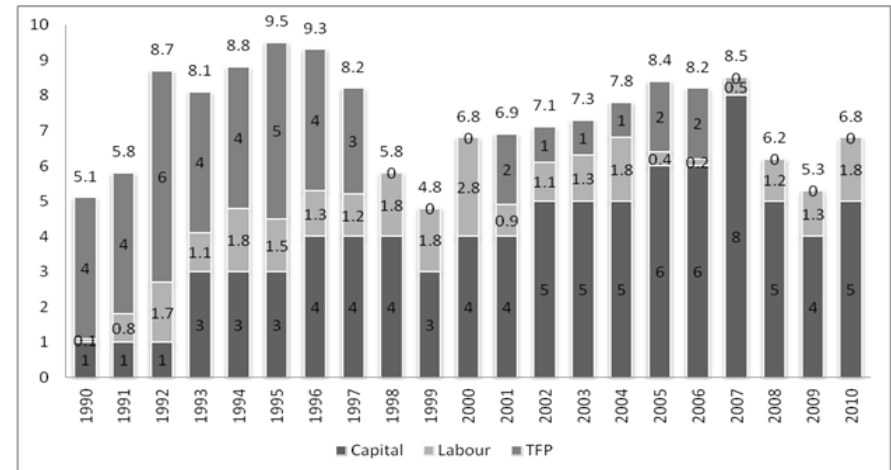
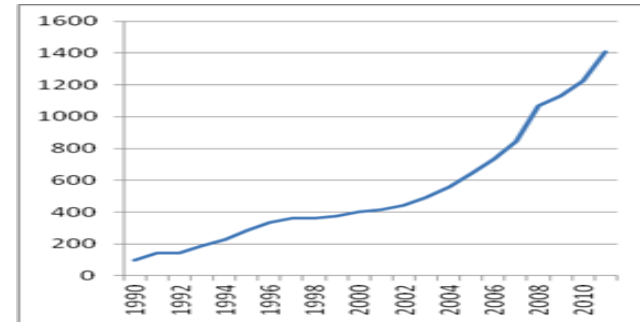
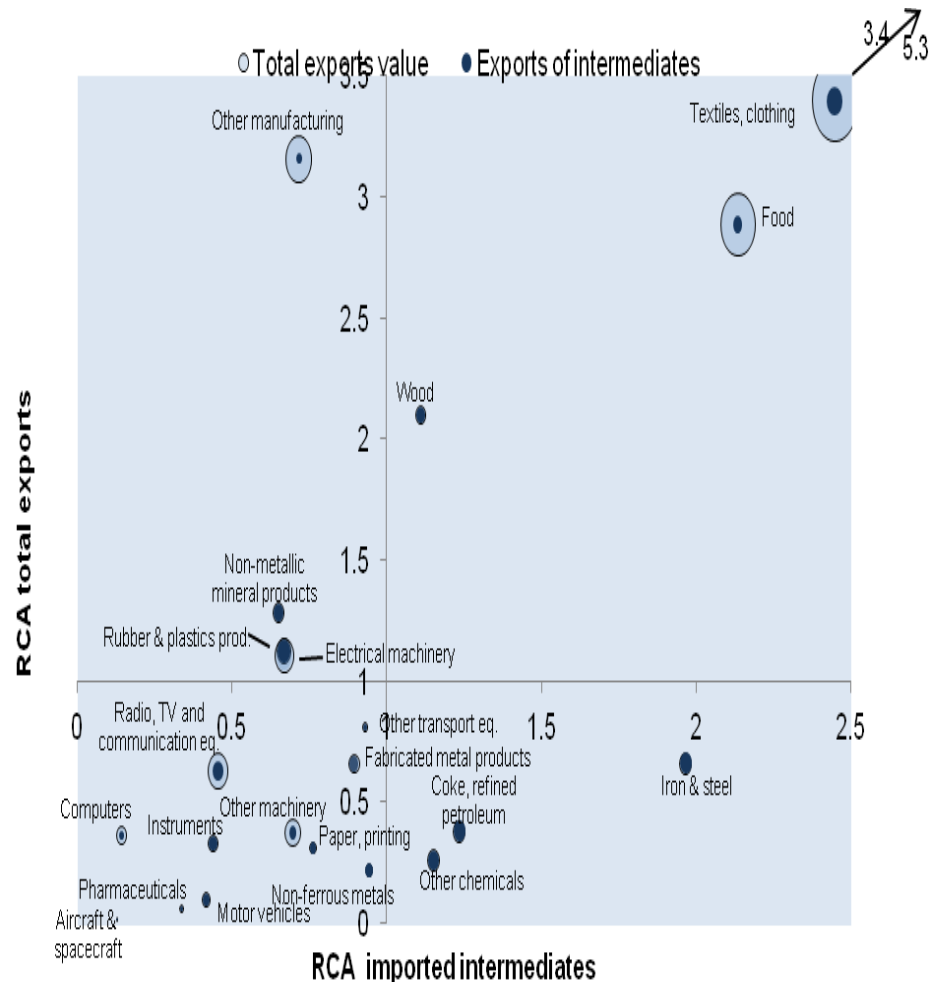
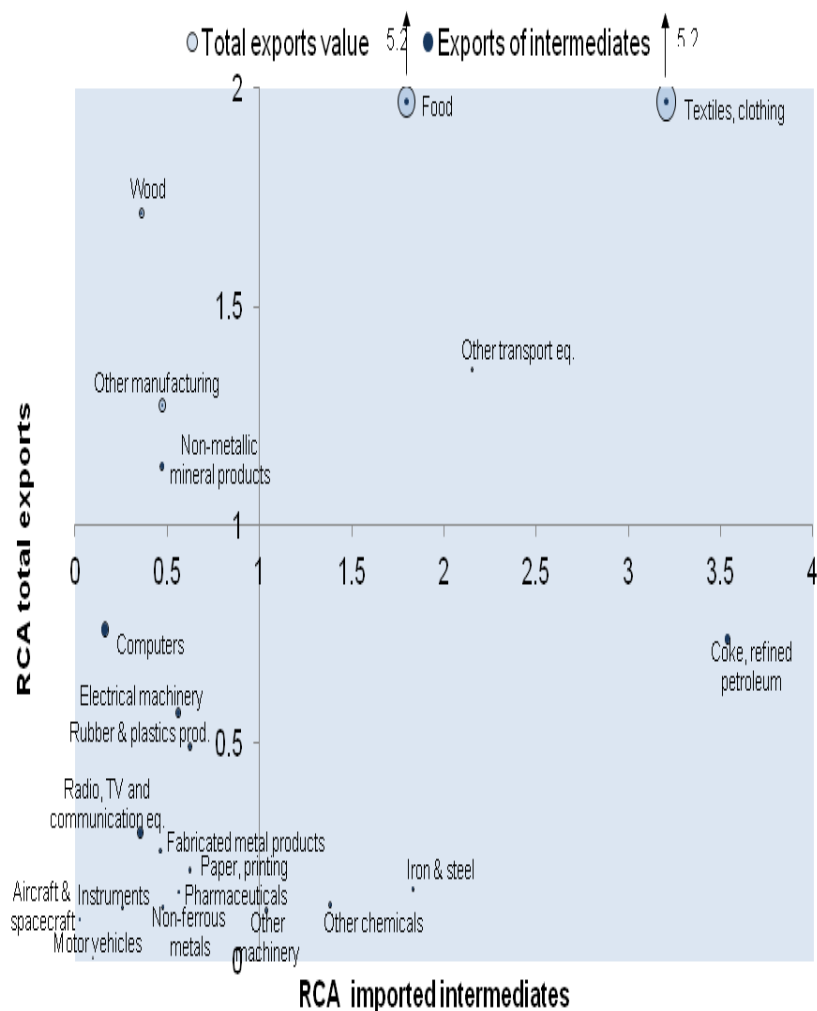


Table 1.2. Exports of goods and services as a percentage of GDP, 1995-2011

Country	1995	2011
China	20.23	31.36
Viet Nam	32.81	86.96

# Evolving revealed comparative advantages, Viet Nam 2000 v. s. 2011





# Approaching a crossroads – facing the challenge

- GDP growth slowed to around 5% on average since 2007, in a less buoyant global environment;
- Previous sources of growth are diminishing in power, negative total factor productivity growth, 2005-10;
- Slow structural change towards “high technology”, while lock-in in low value-added activities, raising the threat of a “middle-income trap”;
- *Viet Nam will have to rely more on productivity gains driven by innovation. This will in turn require considerable improvements in domestic innovation capabilities.*

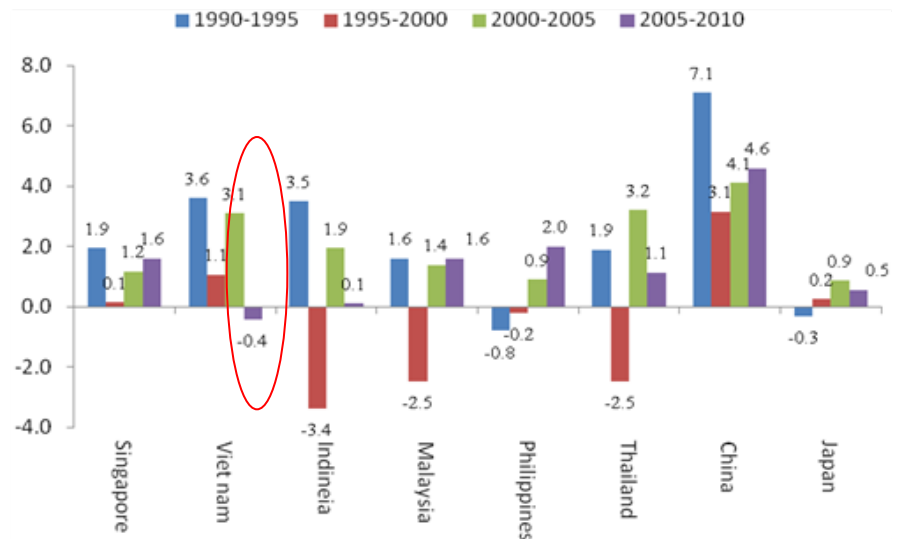


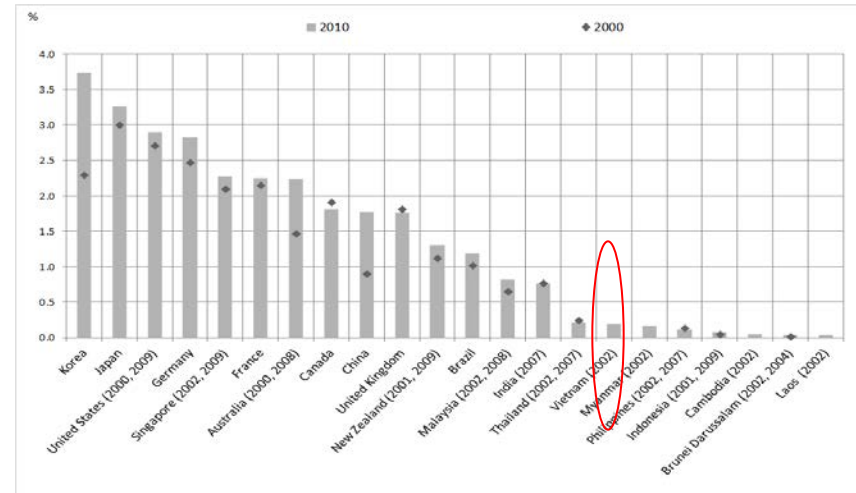
Table 1.4. Technological structure of manufactured exports for Viet Nam and comparator countries, 2000 and 2009

Country	2000				2009			
	HT	MT	LT	RB	HT	MT	LT	RB
Viet Nam	11%	10%	65%	14%	12%	13%	62%	12%
China	21%	24%	45%	9%	32%	28%	32%	8%

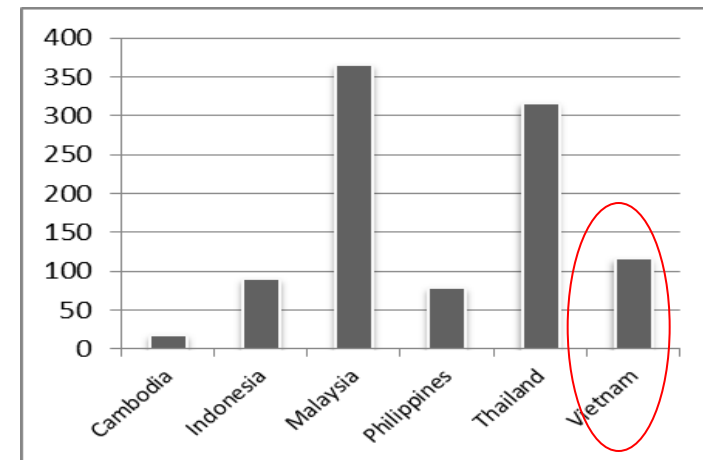
# Current state of play in STI in Viet Nam

- STI capabilities are weak and much needs to be done to improve them...
- Overall, current level of investment in R&D is very low
- ... as is the share of human resources in total population...
- *In sum, available indications are that research, which is a part of wider innovation activity, is still a peripheral activity in Viet Nam, both in the business and in the public sector.*

## GERD as % of GDP is low ...

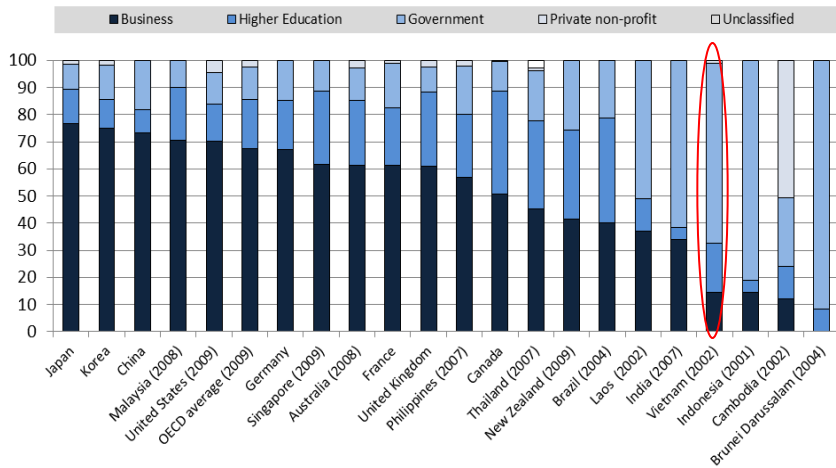


## As is the share of researchers per million population...

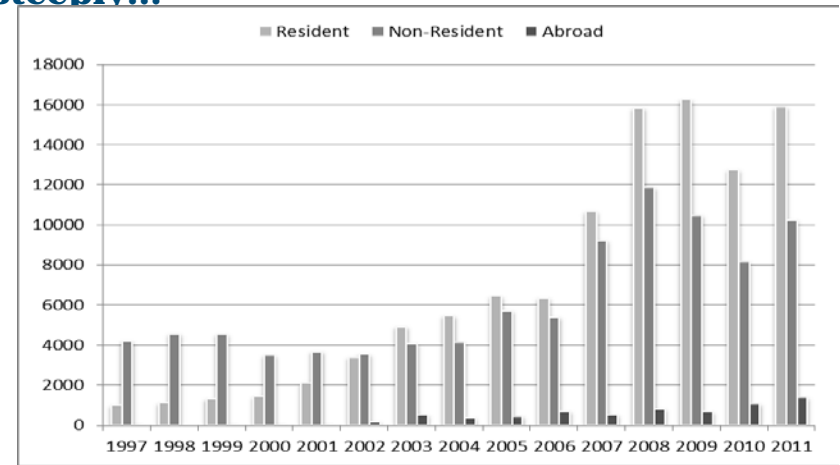


# Business innovation in Viet Nam: investment and performance

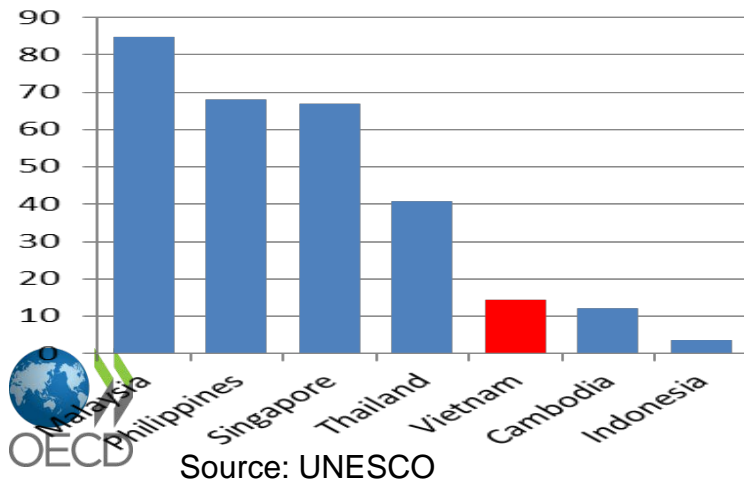
*The business sector accounts for a very small share of both the funding and performance of R&D.*



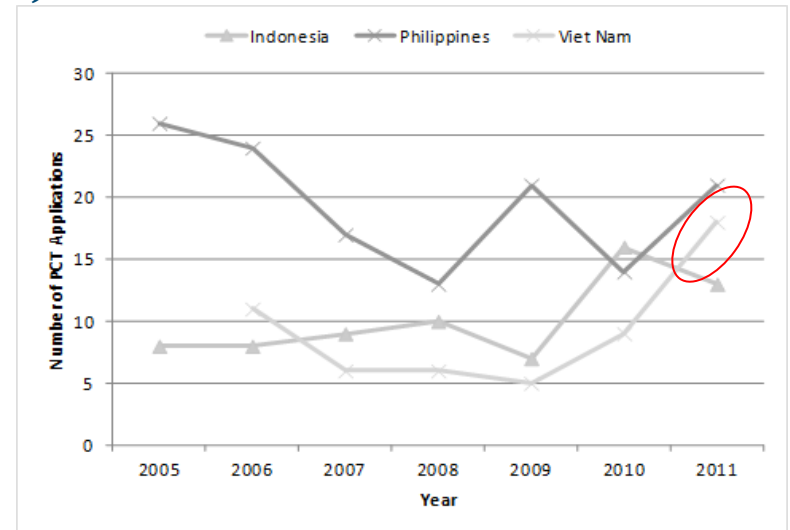
**While trademark registration increased steeply...**



**BERD/GERD, 2007 or latest year**

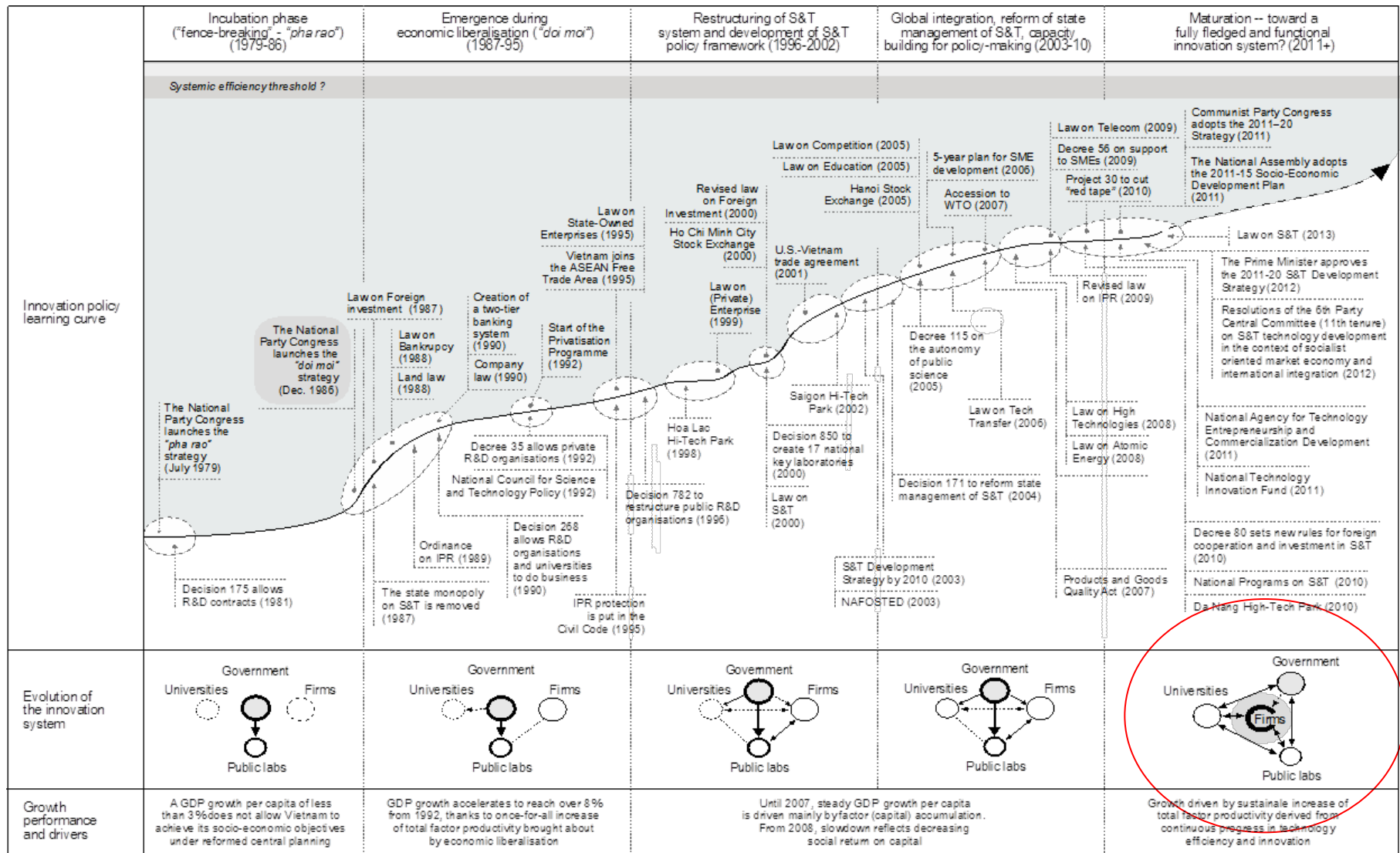


**international patenting remains very few (<10/y 05-11)**





# Evolution of STI Policy in Viet Nam, 1979-2011



# Summing up: SWOT Analysis

## Strengths

- Strong economic performance and diminishing poverty levels.
- Geographical location in one of the world's most dynamic regions.
- Sizeable labour force and favourable demographics.
- Substantial national education effort and good secondary education performance.
- Attractiveness for investment by multinational enterprises.
- Export strengths in a range of sectors.
- Reputation in S&T fields such as mathematics and specialisation in agricultural research and biology.
- Efforts to create and sustain a set of organisations and institutions to support innovation.
- Regional initiatives of national benefit.

## Weaknesses

- Low levels of productivity and income.
- Inadequate framework conditions and disincentives for innovation.
- Limited access to finance for enterprises.
- Inefficiencies in SOEs.
- Infrastructure deficiencies. And weaknesses in the S&T infrastructure
- Weak performance of the teaching and learning system.
- Low level of sophistication of production and exports.
- Little innovation and even less R&D capacity in the business sector.
- Weak performance of public-sector research.
- Seriously underdeveloped information base for evidence based policy making, and inadequate STI governance arrangements and policy implementation.

## Opportunities

- Further developing the human capital and skills base involving the sizeable Vietnamese diaspora.
- Nurturing a dynamic business sector and its innovation capabilities.
- Diversifying and upgrading the economy.
- Developing a healthy attitude to risk-taking.
- Improving effectiveness of the innovation system in terms of economic and social impact.
- Strengthening inclusive growth.

## Threats

- Unfavourable macroeconomic developments and a slowdown in growth.
- Failure to improve the institutional and business environment by tackling banking system reform and corruption.
- Increasing brain drain.
- Failure to prepare for increased international competition.
- A looming middle-income trap.

# Policy recommendation: Improve framework condition for innovation

- ❑ ***Successful nations' experiences show*** that good framework conditions and a healthy business environment are essential for strong innovation performance.
- ❑ ***Over some two decades, Viet Nam has made significant progress*** in a number of dimensions, moving from a centrally planned economy towards a socialist-oriented market economy.

## ***Further improvement should aim to:***

- ✓ ***Establish and maintain sound macroeconomic conditions and stability;***
- ✓ ***Improve the business environment*** as regards administrative burden, irregular payments and bribes, and lack of transparency;
- ✓ ***Reduce burdens on doing business*** by addressing bureaucratic hurdles for starting a business, and emphasising a user-centred, business-friendly approach to public service delivery;
- ✓ ***Address aspects of the financial system and related regulations*** that constrain the financing of innovative projects in the business sector, including SMEs;
- ✓ ***Further reduce the dominance of SOEs*** and the resulting distortion of incentives for innovative entrepreneurial activity;
- ✓ ***Strengthen market incentives*** that reward innovation by improving the protection and enforcement of IPR, with a stronger deterrent effect to infringement;
- ✓ ***Extend and improve the quality of key infrastructure for innovation.***



# Policy recommendation: Improve public governance of the innovation system

- ❑ ***The Role of Government*** should focus on providing long-term orientation on social and economic priorities; ensuring adequate resource allocation for STI; well performing public research and education; and facilitation of linkages of key components of the innovation system and its function as a coherent whole.
- ❑ ***Innovation system governance in Viet Nam*** has been beset by a number of shortcomings which can be related to a lack of effective commitment, poor coordination and ineffective implementation of government policies.

## ***Further improvement should aim to:***

- ***Improve the effectiveness of innovation policy*** by setting ambitious, but also realistic and operational policy objective/targets;
- ***Improve co-ordination*** between ministries and agencies;
- ***Improve the involvement of non-government stakeholders***, importantly the business sector, in the formulation of strategies and policies;
- ***Raise the government's implementation capacity***: Professionalised government agencies with a sufficient degree of operational autonomy and larger portfolios to help enhance policy implementation;
- ***Strengthen the evidence base for STI policymaking*** by strengthening the use of indicators, policy analysis and evaluation results in the policy making process;
- ***Establish an evaluation system*** that is pragmatic, timely, transparent and actionable. Results of evaluations should feed back to policymaking process.
- ***Raise the profile of STI policy*** within government through visionary leadership and political commitment to STI development.

# Policy recommendation: Strengthen the human resource base for innovation

- ❑ **Human resources are the key to innovation.** Viet Nam has made a substantial effort on education and skills. The results of the 2012 OECD PISA assessment of the performance of secondary students bode well.
- ❑ **However, Viet Nam needs to improve the quantity and the quality** of its human resources, particularly at the tertiary and secondary vocational levels, needed for its future innovation driven growth.

## **Further improvement should aim to:**

- **Increase the funding of tertiary education** to cope with the increase in technical and research studies;
- **Improve and modernize the curricular** of formal education and training that are out of date or overly theoretical;
- **Improve the alignment between school education and the skill needs** of the labor market, through better provision of information on future skill needs and incentives for alignment and school-industry partnership;
- **Broaden options for professional specialisation** in upper secondary education and enhance the quality of vocational training to help improve the innovation capabilities of the Vietnamese firms;
- **Upgrade the skills of existing workforce** through effective on-the-job, short-term training, and improved opportunity for part-time tertiary education and other lifelong learning to help address gaps in “soft” skills;
- **Use public-private partnerships (PPPs)** to encourage businesses to take greater part in the national effort on human resource development. Firms, especially SOEs and MNEs, should be encouraged to increase their training investments;
- **Improve the skills of the public sector** by meeting the Government’s ambitious targets to remove skills constraints in the public sector by 2020.

# Policy recommendation: Strengthen innovation in the business sector

- ❑ **Business enterprises that thrive on innovation** – and leverage R&D done in universities and PROs – are at the centre of all national innovation systems that drive growth and development.
- ❑ **Viet Nam's business sector still accounts for a very small share of R&D expenditure.** Few firms perform R&D, the level of innovation activity and output are overall low and links to public research weak.

## **Further improvement should aim to:**

- **Improve in-house innovation capabilities** of a broad range of Vietnamese firms, with significantly improved skills to engage in design, engineering, marketing, information technology and R&D;
- **Foster conducive and stable framework conditions for innovation** in Viet Nam, including through continuing regulatory and SOE reforms, stimulating competition, facilitating access to finance etc. Avoid frequent regulatory changes and proliferation of red tape;
- **Increase the funding of promising public support schemes** for business R&D and innovation, and ensure that their design and delivery is brought up to good (international) practice standards;
- **Streamline and re-orientate public support for business innovation** based on a comprehensive inventory (covering direct support instruments and tax incentives) and successive evaluations;
- **Take additional measures to attract knowledge-intensive FDI** and facilitate spillovers from foreign-invested to domestic firms;
- **Explore suitable forms of public-private partnership (PPP) programs** for R&D and innovation to help focus and leverage resources, and to improve co-operation between public research and business actors, including foreign firms.



# Policy recommendation: Strengthen the contribution of public research

- ❑ ***Viet Nam's public research sector*** has undergone profound changes since Doi Moi, but problems persist.
- ❑ ***These include*** a large number of often overlapping labs and R&D units, many of which are of sub-optimal scale, suffer from lack of resources (funding, qualified personnel, research infrastructure) and separation from potential end-users.

## ***Further improvement should aim at:***

- ❖ ***Tackling these issues effectively*** requires a clear, strategic view on the division of labour between universities and PROs, and the balance between the main functions of PROs
- ❖ ***A profound restructuring of the governance*** of PROs and research universities should be made a precondition for the necessary increase in their funding.
- ❖ ***Continue the process of corporatisation*** of PROs and towards institutional autonomy, while non-corporatised PROs should be restructured into fewer, better performing entities.
- ❖ ***Better align public research with socioeconomic priorities*** by establishing clear missions and funding criteria, including performance-based ones set at the appropriate level.
- ❖ ***Enhance the co-ordinating role of MoST*** at the strategic level, while, at the operational level, a limited number of agencies could play a constructive role in streamlining the portfolio of PROs.

# Policy recommendation: Foster innovation linkages

- ❑ Available information suggests that ***there is little collaboration on innovation*** either between firms (both among the Vietnamese and foreign-Vietnamese) or between firms and public research institutions and universities.

## ***Further improvement should aim to:***

- ***Establish organizational and individual performance*** incentives in universities and PROs with a view to encouraging collaboration with industry and integration with national and international S&T networks;
- ***Remove other institutional arrangements applying to universities*** and PROs that may hinder such collaboration;
- ***Encourage the establishment of training partnerships*** between vocational education providers, universities and business firms;
- ***Consider ways to improve the impact of industrial parks*** on the international linkages of Vietnamese firms and the generation of knowledge spillovers, including by way of formal collaboration on innovation between foreign and domestic firms.
- ***Improve the absorptive capacity*** of the Vietnamese industry.

**cảm ơn bạn**

Thank you for your attention!

For more information, please  
go to the website:

[www.oecd.org/sti/innovation/reviews](http://www.oecd.org/sti/innovation/reviews)

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