ARTNeT / WTO Research Workshop on Emerging Trade Issues in Asia and the Pacific: Meeting contemporary policy challenges

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The role of IP in economic development
The case of Thailand

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Outline of the Presentation

Part 1: Environment for Innovation in Developing Economies

- 1.1 Framework Condition
- 1.2 Innovation Capabilities
- 1.3 Network Development
- 1.4 Policy Dilemmas

Part 2: Innovation Indicators

1.1 Framework condition

1. Framework condition in developing countries are different from that of developed countries – i.e., excessive government intervention, burdensome legal procedures, market protection, credit constraints, uncertain government policies, corruption may discourage innovation.
2. Weak capabilities (lack of skills and education) hamper domestic innovation and growth.
3. Network connections may help unlock internal constraints for innovation

What are the implications ?

1.1 Framework condition (2)

- Excessive government intervention:
  - state owned enterprises that carry special privileges may undermine private sector's ability to compete and hence, incentive to innovate.
  - Price-based and corruption in government procurement discourage innovation to produce high-quality products and encourage "race-to-the-bottom".
- Burdensome legal procedures
  - Lengthy patent registration due to insufficient man power.
  - Overly generous intellectual property protection . For example, reverse engineering may be prohibited, "patentable subject matter" may be too broad covering, for example, plant and animal breeds, software and business methods that can be rather abstract.
- Credit constraint
  - Incentives for "venture capital" may not work well.

1.2 Weak capabilities

- Why foreign companies choose not to construct R&D or invest even when strong IPR protection is made available?
- Education, skilled workers, language barriers, infrastructure, supporting industries, etc. ?
- List of “short run measures” that offer “quick gains” to be made from altering or improving the status quo rules or regulation should be clearly declared and advocated -- i.e., overly restrictive immigration rules, distortionary tax incentives, etc.

1.3 Network connection can help promote innovation

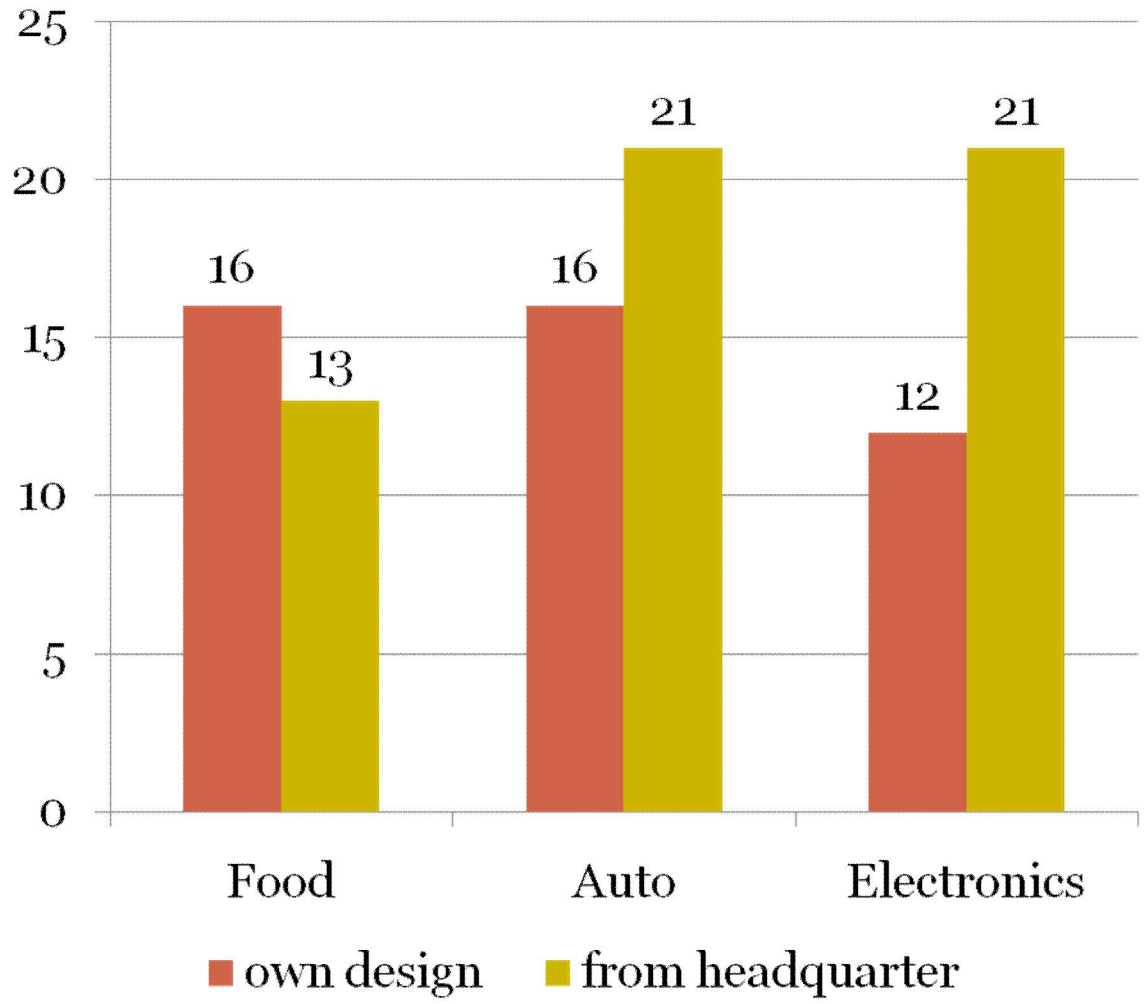
- How to create “industrial clusters” that can support innovation ? Does this require clear policy in promoting specific industry and creating industry-specific “industrial estates” such as “IT towns”?
- How to link industries with local academic institutions?
- How to promote innovation in export-oriented industries where technology is provided from overseas ?

Most firms do not benefit from locational proximity for innovation

Industry	No. of firms interviewed (Firms 1)	No. of firms involved with innovation	No. of firms involved with innovation that are within 30 km.
Food	27	6	1
%			3.7
Auto	30	8	2
%			6.7
Electronics	31	13	3
%			9.6

Source: Thailand Development Research Institute (2009), A Study on the Linkage between Industry and Service Clusters

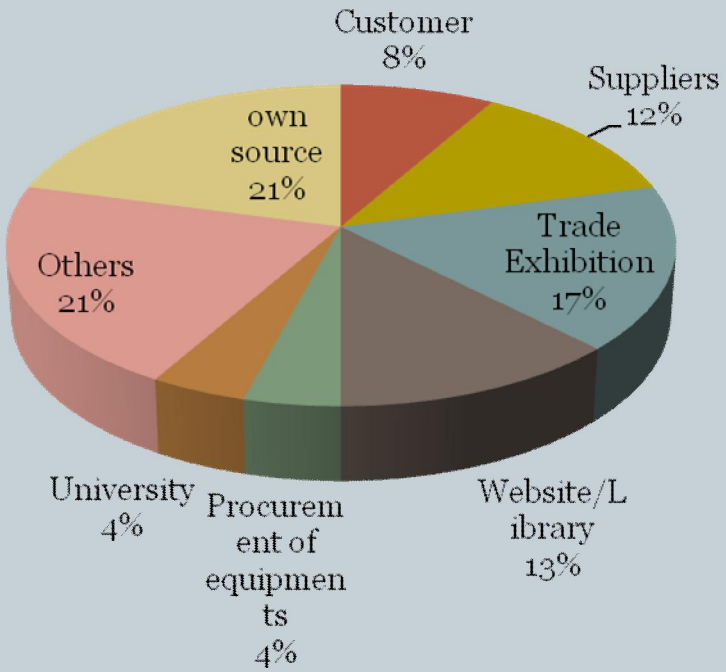
Local Industry tend to innovate more than export-oriented industries.



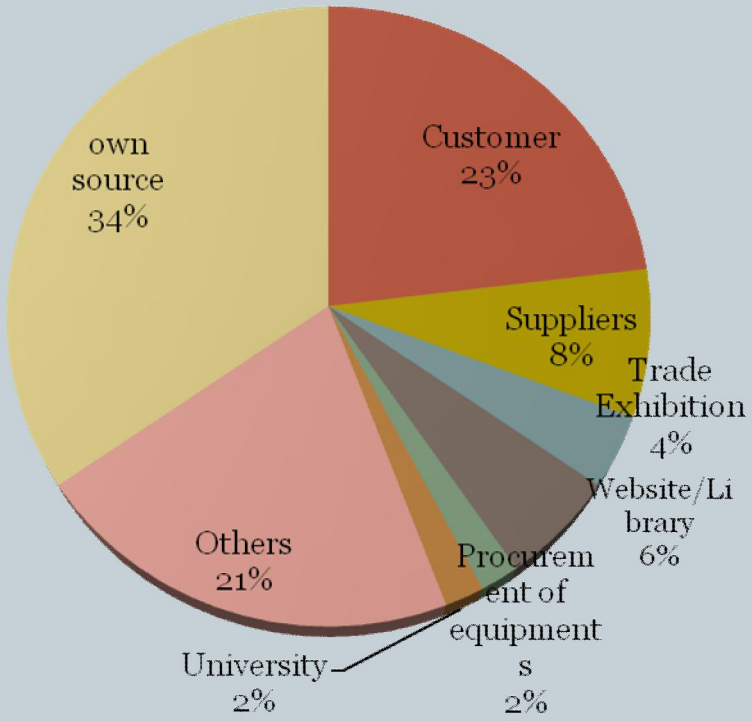
Source: Thailand Development Research Institute (2009), A Study on the Linkage between Industry and Service Clusters

Source of Information Concerning Technology

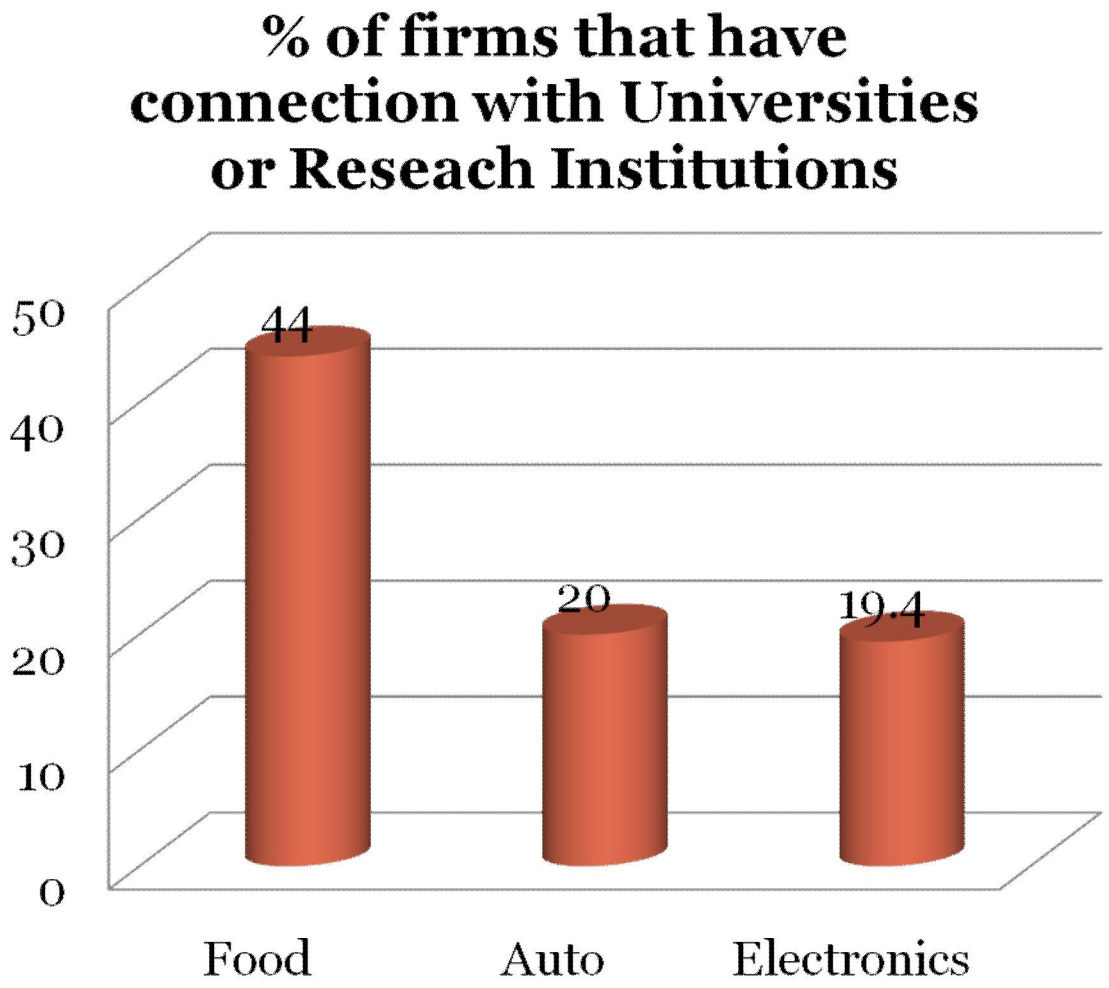
Food Industry



Automobile Industry



Local industries are also better linked with local academic institutions



Source: Thailand Development Research Institute (2009), A Study on the Linkage between Industry and Service Clusters

1.4 Enduring Policy Dilemmas

1. What kind of innovation ?

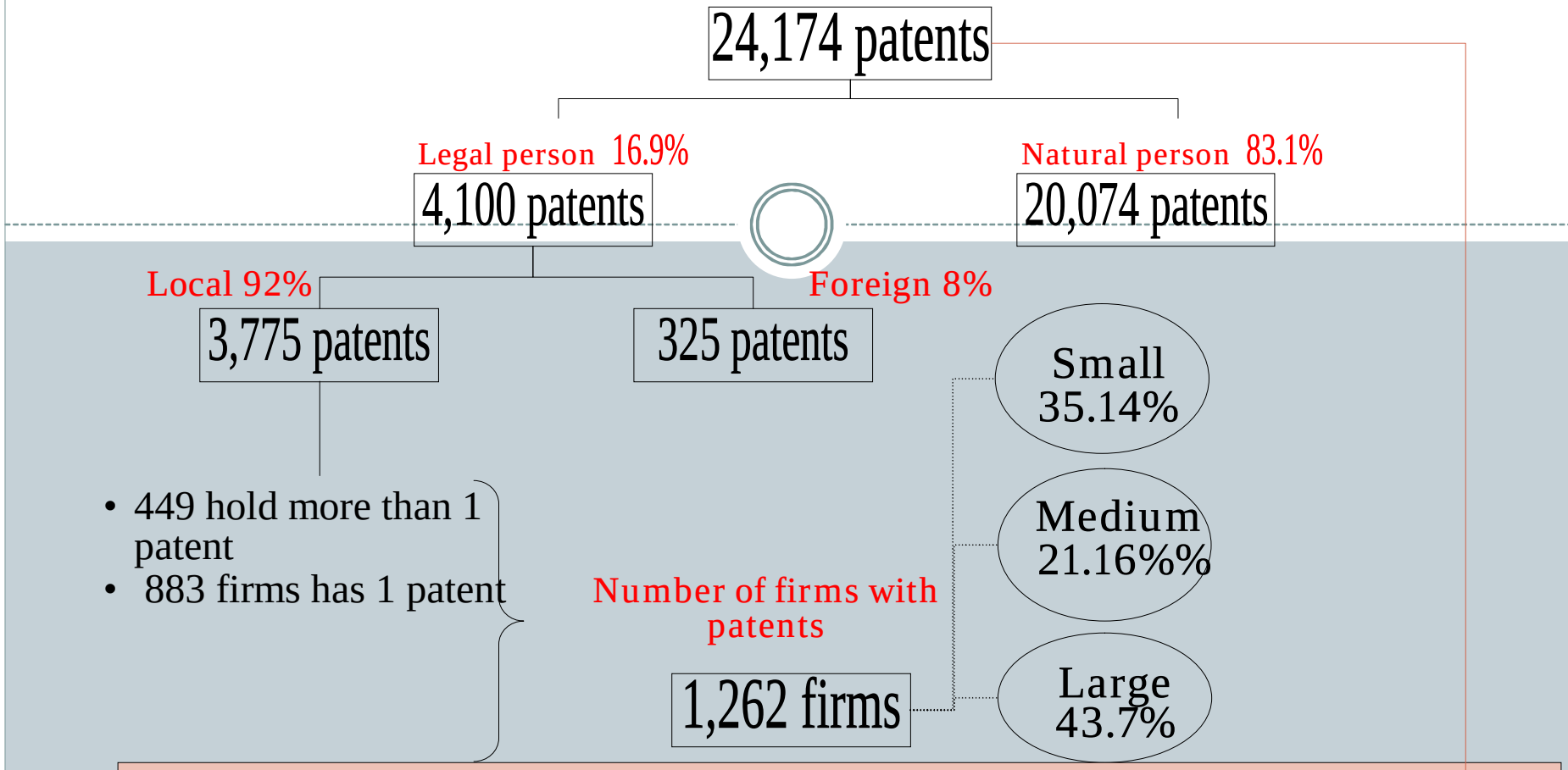
√ innovation from foreign technology

- Are terms and conditions of licensing overly restrictive ? Are they in violation of competition law (abuse of IPR?).
- Do foreign firms that received investment incentives implement effective technology transfer (noting local absorptive capacity) ?
- Is the patent/industrial design database user friendly ? How to facilitate the use of existing local and global patent database?

√ locally oriented innovation

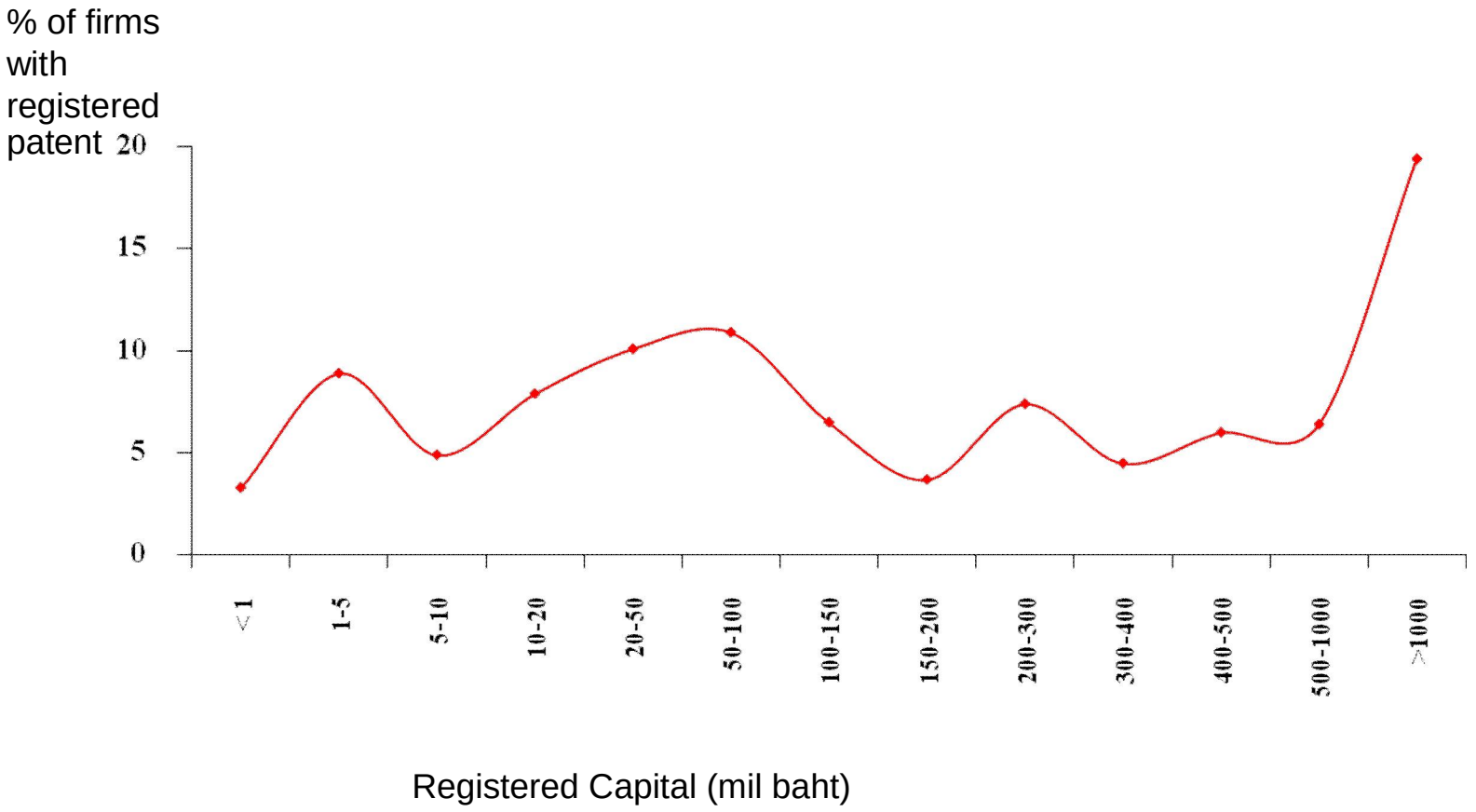
- Utility models are most effective
- How to promote not only registration, but commercialization of registered IPs ?

Composition of Registered Patents in Thailand in 2008



Source: Thailand Development Research Institute (2008), An Assessment of State Rules and Regulations Affecting Competitiveness of SMEs

Innovation and Firm Size



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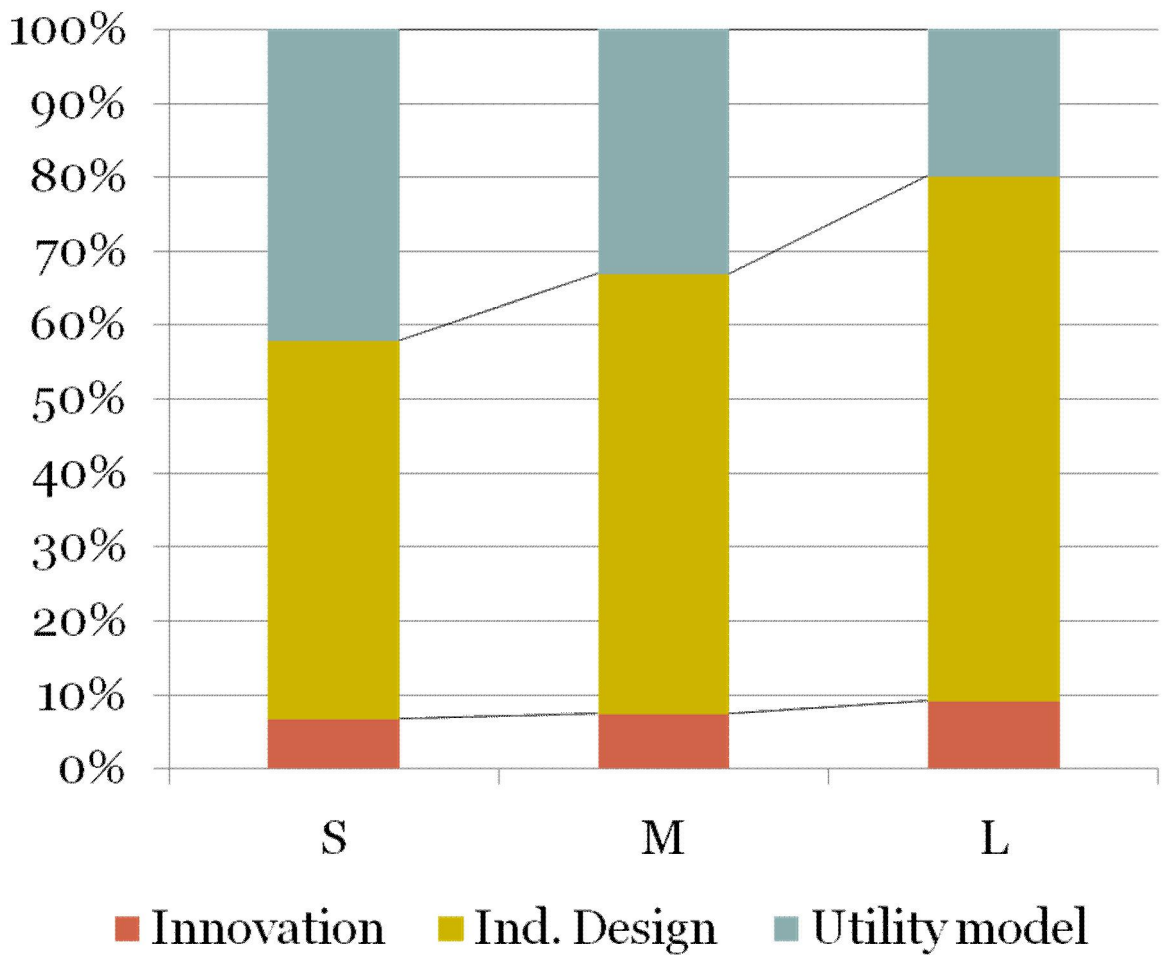
Small firms make use of utility model



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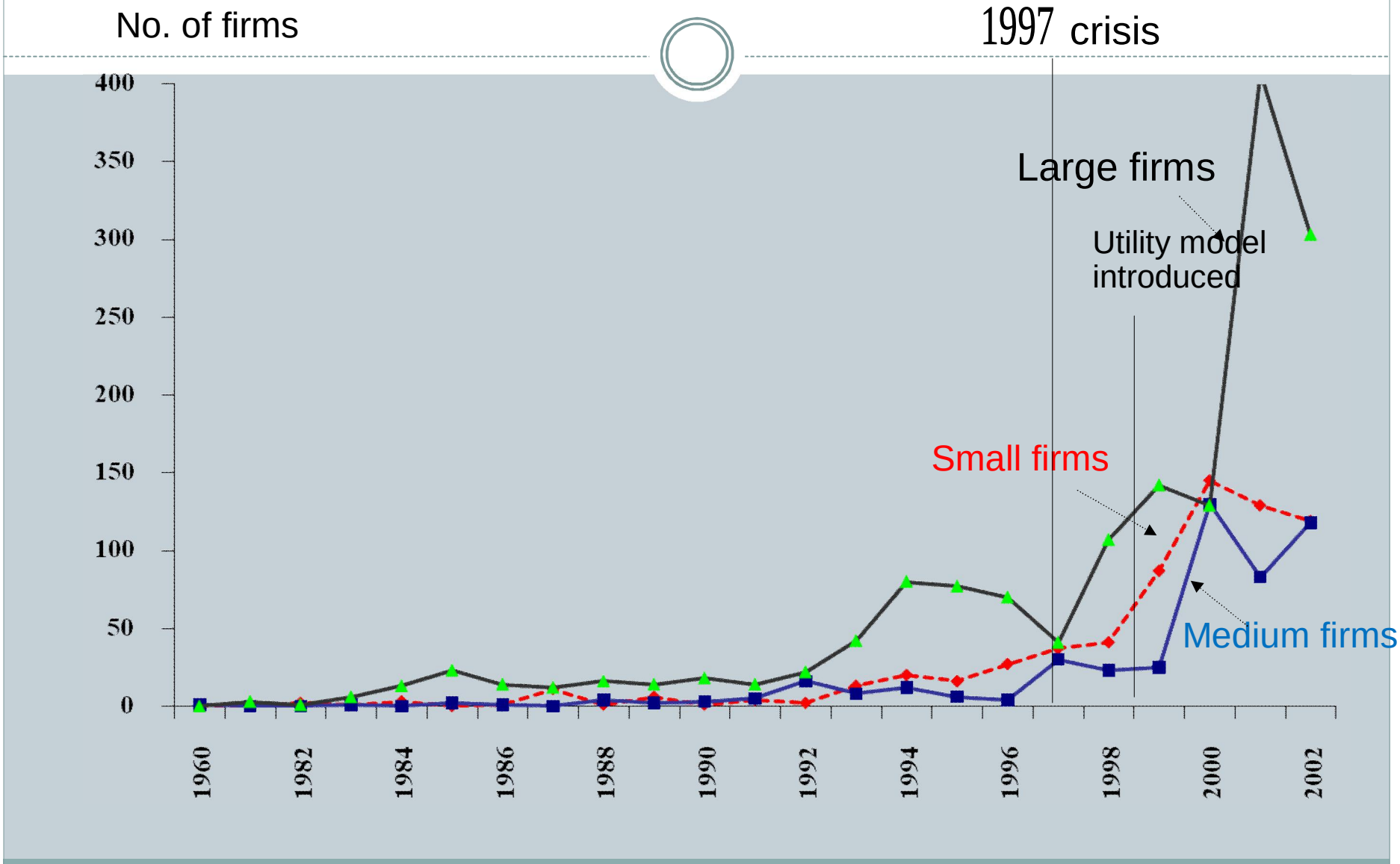
Trend in Patent Registration



Individual patent holders face constraints in terms of commercialization of IPR.

	Companies	Individuals
Time for registration	2 - 5 years	2 – 4 years
Time used for IP development	1-4 years	2 – 5 years
expenditure	USD 6000 – 150,000	USD 1515 - 3030
Not yet commercialized	20 %	70 %
Commercialized and cost recovered	50 %	10 %
Commercialized but cost not recovered	30 %	20 %

Source: Thailand Development Research Institute (2008), An Assessment of State Rules and Regulations Affecting Competitiveness of SMEs

1.4 Enduring Policy Dilemma (2)

(2) Transfer of Technology

- Need to assess the effectiveness of incentives in place in promoting new R&D
- Need to monitor the implementation and effectiveness of "technology transfer" commitment of promoted industries.

(3) Innovation, imitation and the "right" IP system

- Need empirical evidence of IPR protection and foreign FDI and R&D as well as local investment and R&D
- Need to implement IPR laws according to the specific economic need of the country.
- Where externality from R&D is high and gains are well dispersed, public funds should be committed to overcome market failure.
- Trade associations that are well organized can also overcome economies of scale hurdles.

(4) Discovery of country's IPR niche

- Needs a stable political environment, strong bureaucracy and focused private sector to be able to carry out clear industrial plan
- Need sufficiently detailed data at the industry level.

Part 2: Data – IPR Indicators

Indicators	Existing indicators	Proposed indicators
1. Ability to create intellectual properties		
1.1 quantity of IPs	Number of patents, trademarks and industrial designs registered by residents/non-residents in country *a*.	• number of IPSs classified into types of patents, residents/non residents, by industry, by size of entity, by type of entity (whatever that the registration base will reveal) • Number of intellectual properties registered overseas by nationals of country *a*.
1.2 quality of IPs		• cites per patent • patent citation indicators
1.3 significance of IPs at the industry level		• Revealed technological advantage (RTA) by industry by regrouping IPC to ISIC

Data – IPR Indicators (2)

Indicators	Existing indicators	Proposed indicators
2. Enabling environment		
2.1 R&D expenditure	- Expenditure on R&D by government and private sector (UNESCO)	• expenditure by classification based on of type of research – i.e., policy research? industrial research?
2.2 Technological transfer	- Connection between FDI and technological transfer (WEF)	• R&D conducted by foreign entities (surveys should specify nationality and perhaps size of the private entity)
3. Commercial importance of IP to economy		• ratio of renewed patents • royalty fees generated by local patent holders and geographical indications (GI) based on surveys or data from technology licensing offices.

THANK YOU

COMMENTS AND SUGGESTIONS ARE MOST WELCOME

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