

**"LOCAL INNOVATION SYSTEMS, AND SOCIAL
CAPITAL : NEW RESEARCH AGENDA FOR THE
MAGHREB COUNTRIES"**

Abdelkader Djeflat

University of Lille (France)

Chairman : the MAGHTECH Network

Four key questions are asked

- 1/ The need for innovation: the global conditions and challenges
- 2/ Performances and
- 3/ obstacles to innovation in MCs: the NSI perspective
- 4/ Success stories and lessons to be learnt.
- 5/ New research avenues: social capital and Local Innovation Systems

1. Global conditions & challenges

Major Challenges

- **internal challenges**

- Unemployment 20% (graduates)
- Erratic growth,
- Increasing Poverty
- Brain drain
- Heavily resources-based economies

- **External challenges**

- digital divide
- competition
- free trade zones
- External debts
- Crisis of foreign direct investments etc.

Target to solve major economic & social problems

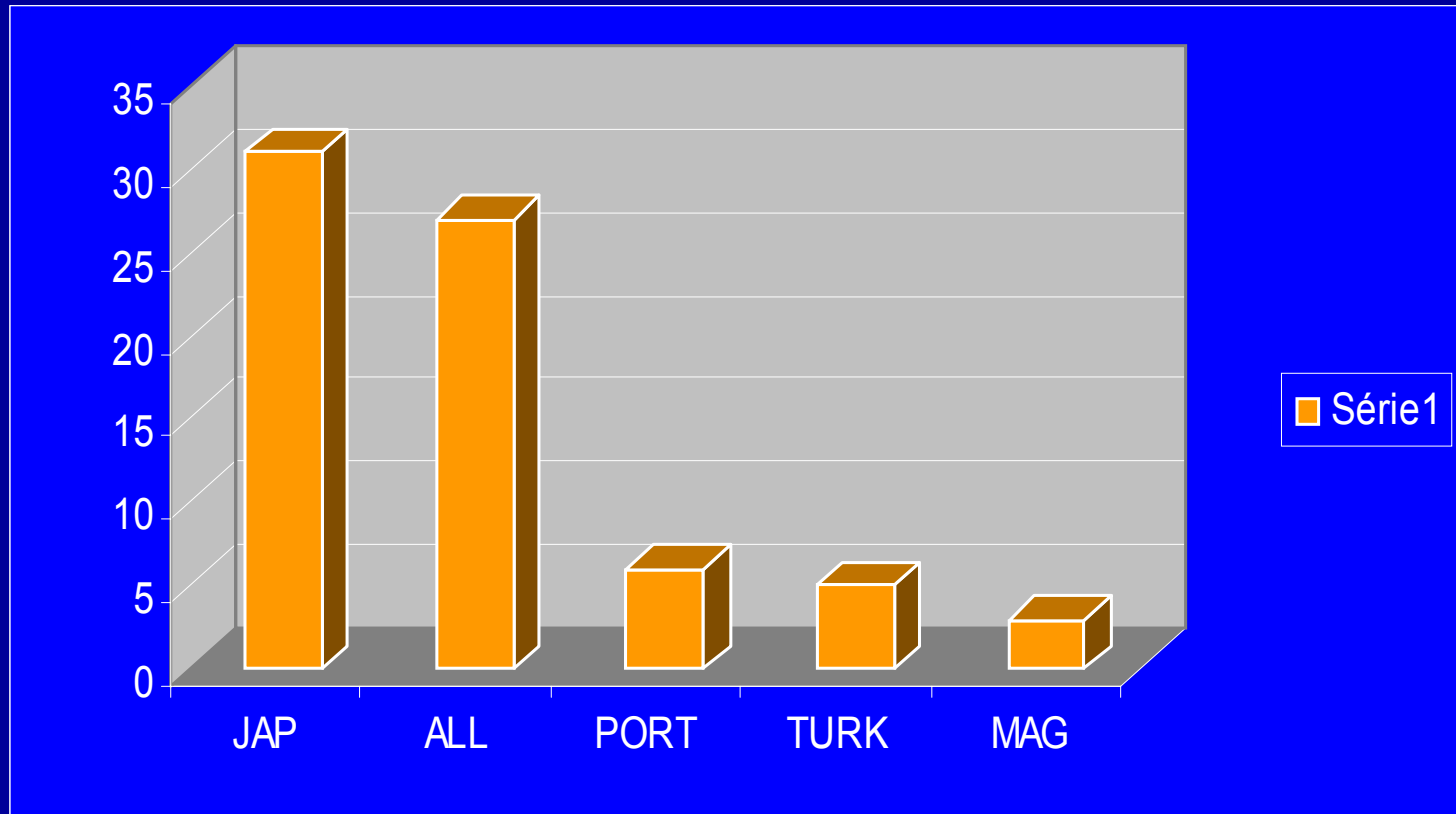
- **New growth regime needed**
 - Annual growth needed: 6% a 7%
 - **More diversified production**
 - **Choc absorbing economies**
 - **Higher total factor productivity**
 - Shifting from low wage based to INNOVATION-based competitiveness

2. Performances and obstacles in S&T

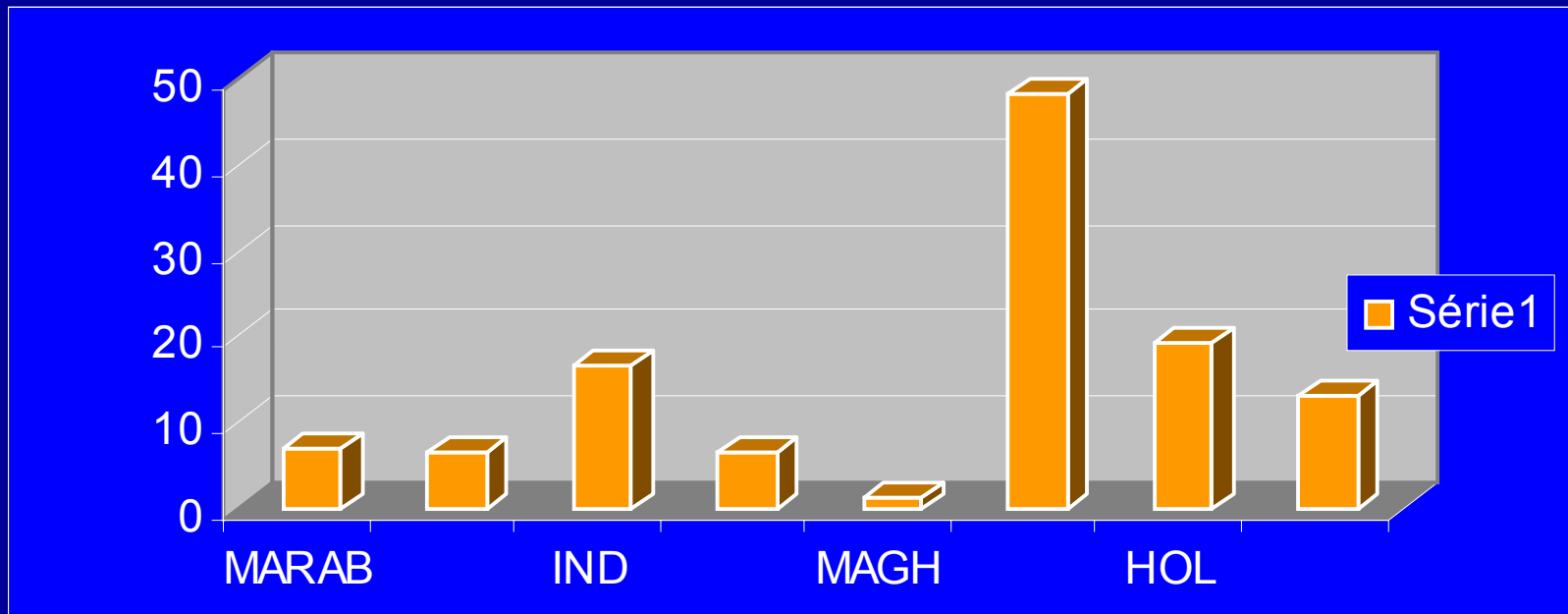
Performances in innovation

	ALGERIA	TUNISIA	MOROCCO	S.KOREA
R&D/GDP	0,3%	0,31%	0,3%	1.92
Patents	200	178	333	
Publications (1995)	311	342	597	6353

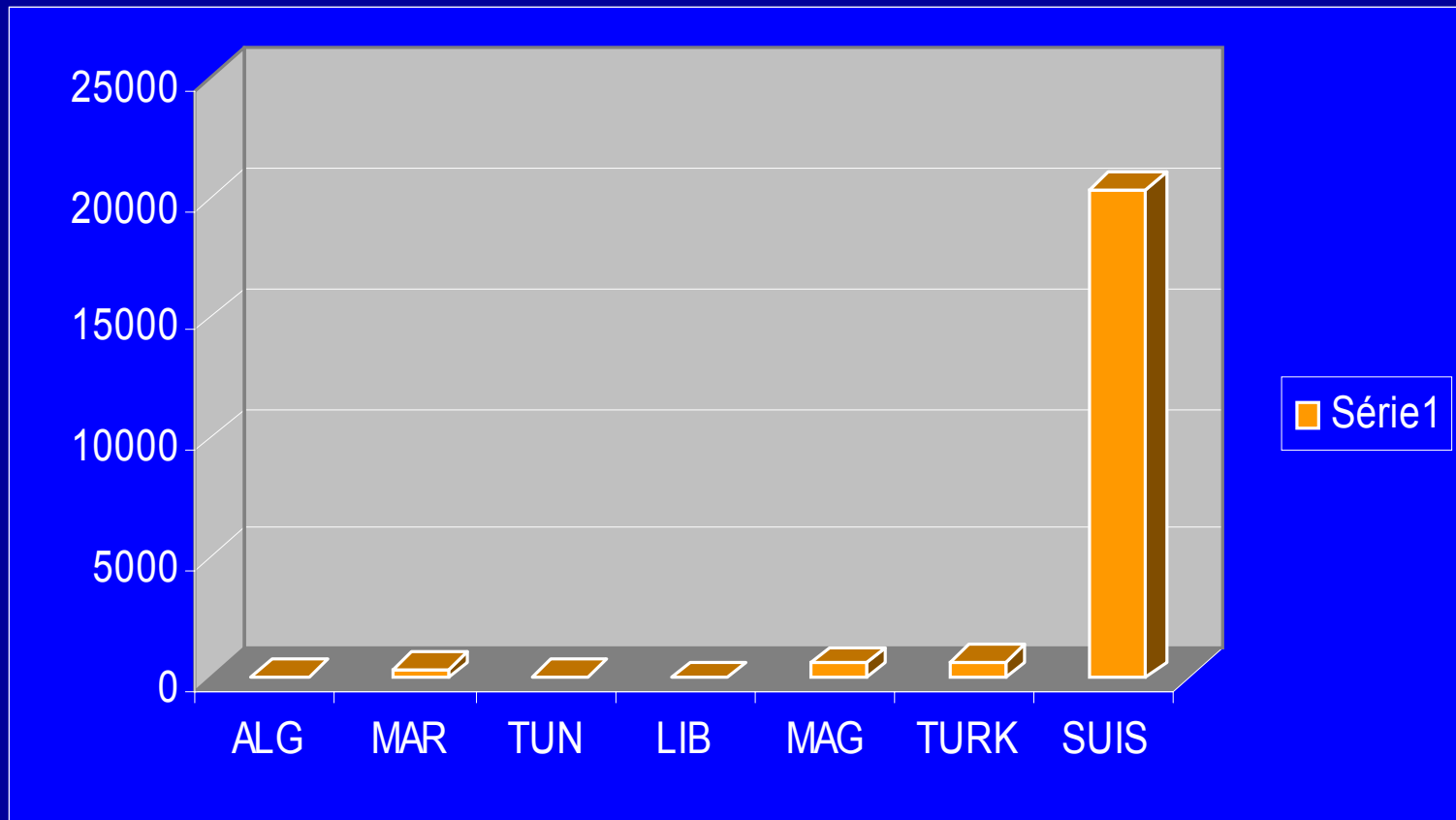
R&D/GDP expenses



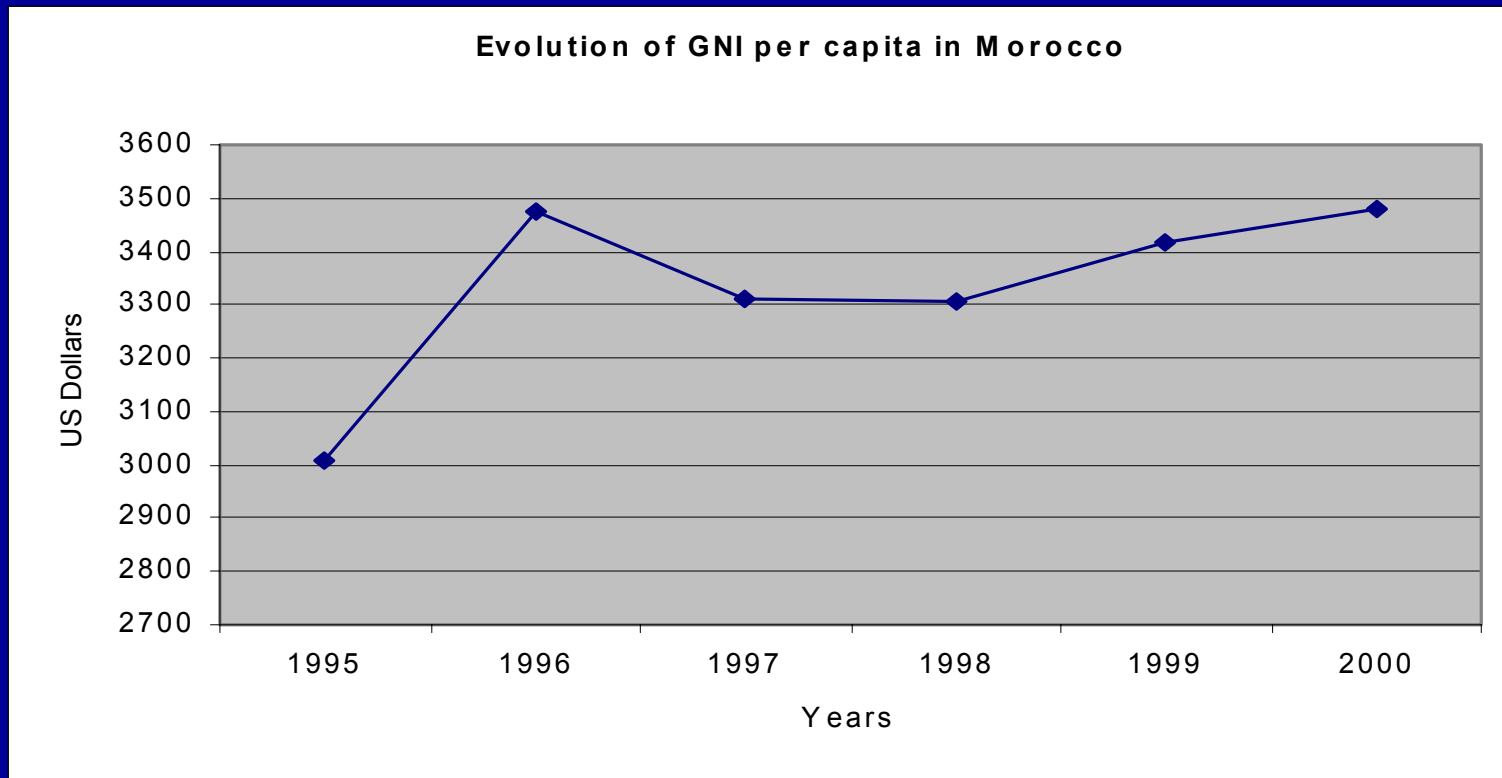
Publications



Patents



Exports of manufactured products



Share of technology-intensive exports

Algeria	9%
Tunisia	22.8%
Morocco	20.7%
South Korea	66%
Malaysia	67%

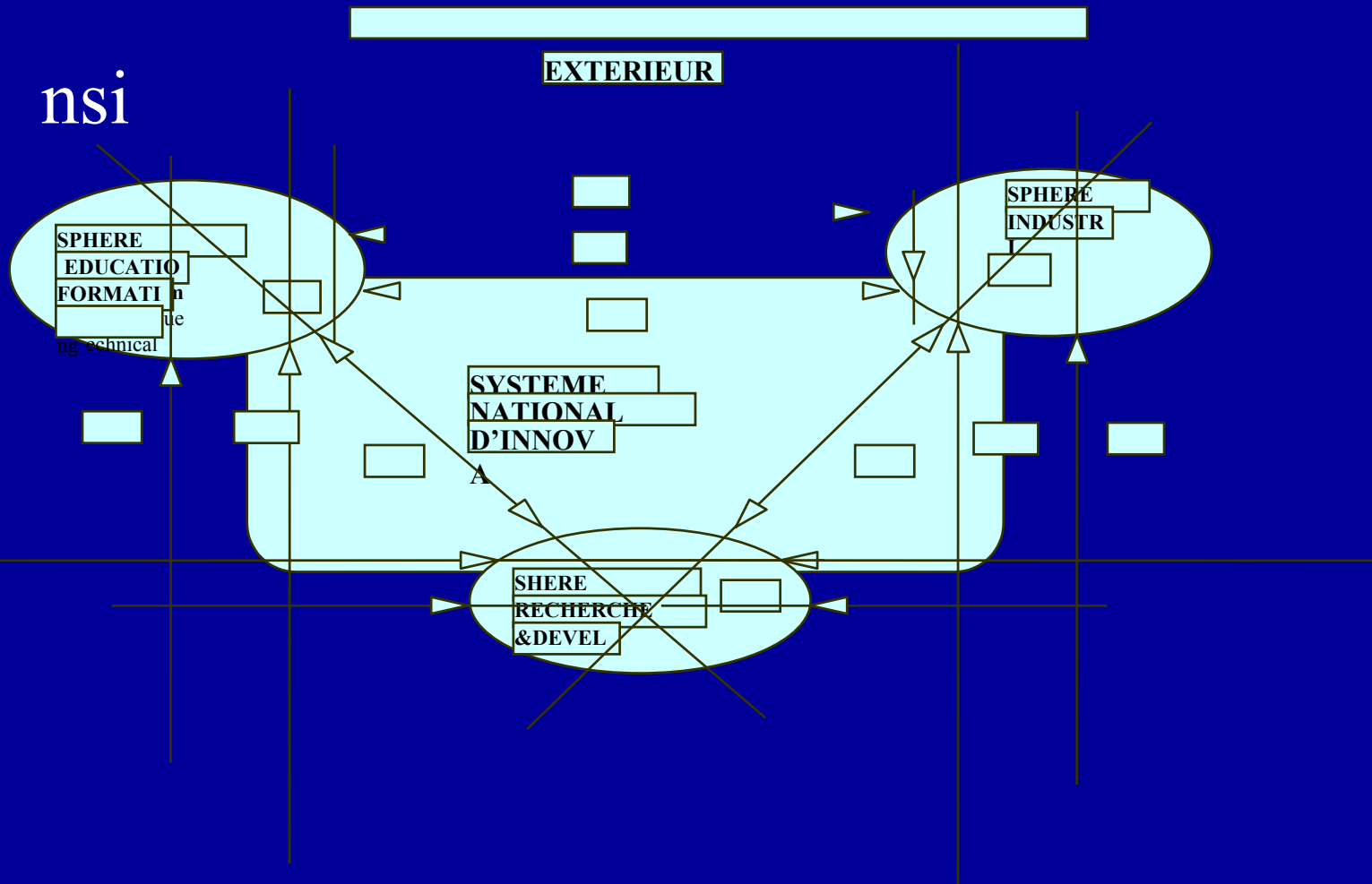
3. Obstacles

What are the obstacles?

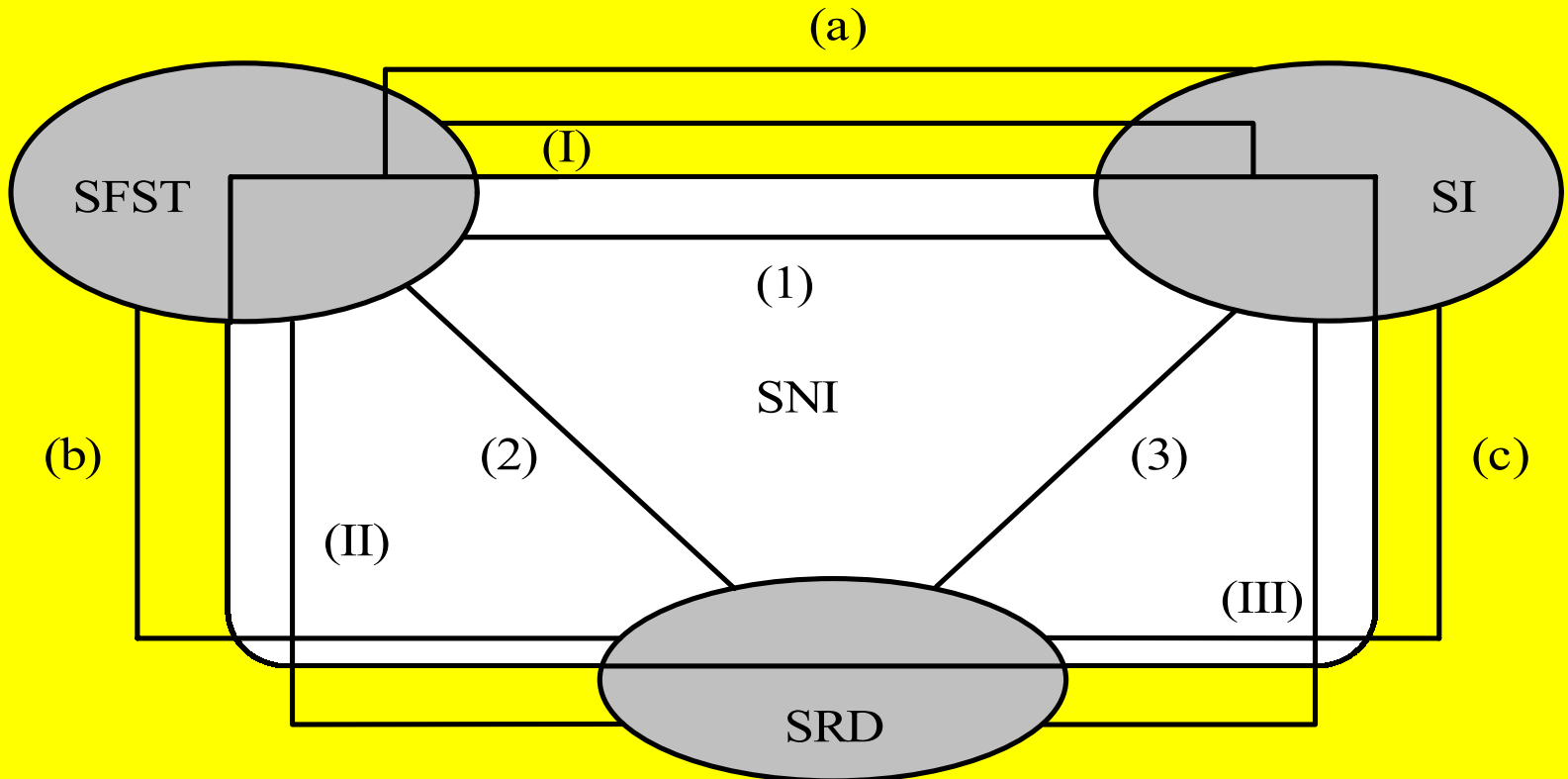
- **Weak Human capabilities** : education, training
- **Lack of Services**: information, infrastructure
- **Institutions** : coordination
- **Actors** : rent-seekers, gatekeepers,
- **Financing**: venture capital
- **Infrastructures**
- **Market and State failure** :
- **Culture and values** : etc.

NSI: Standard framework

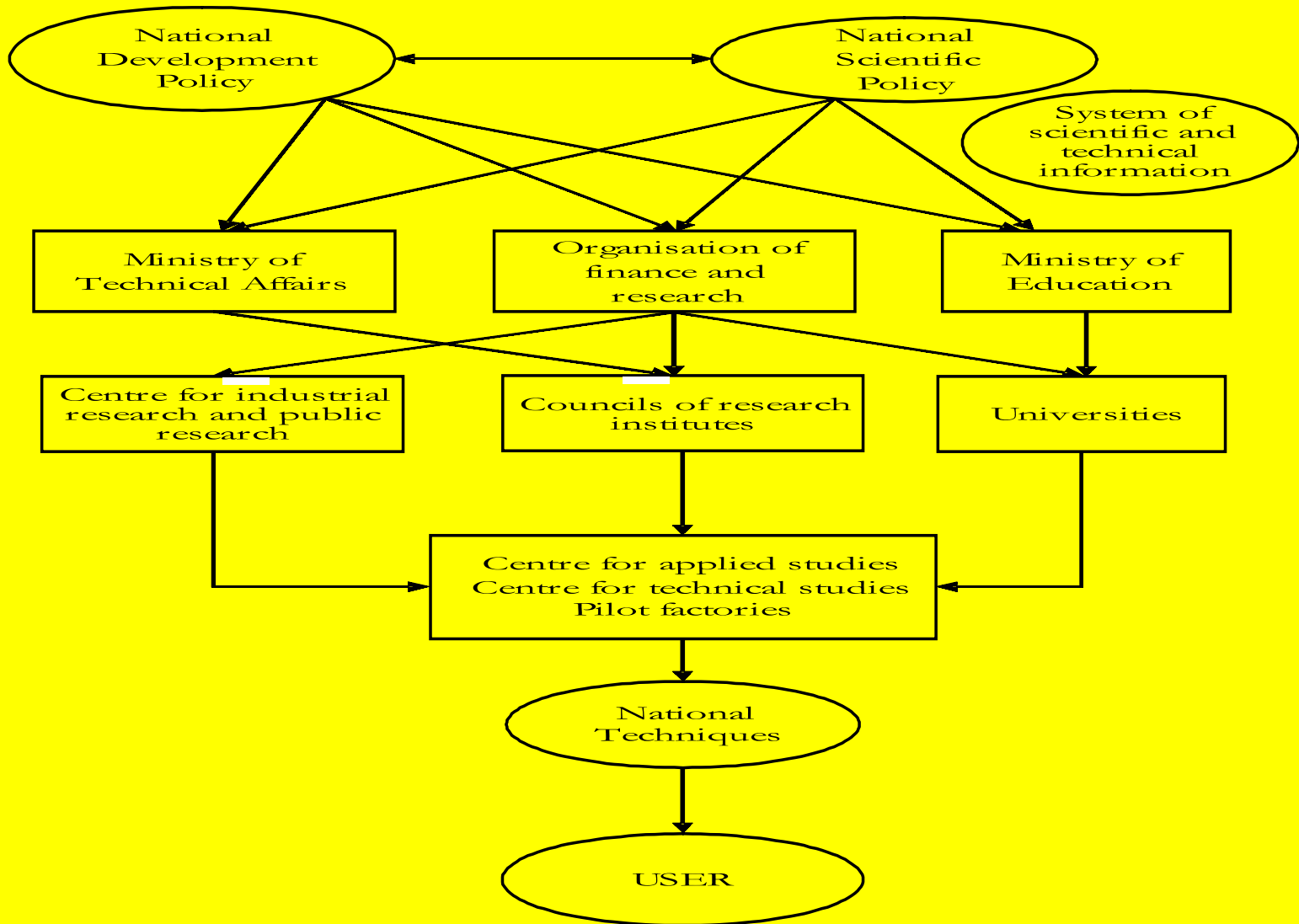
- nsi



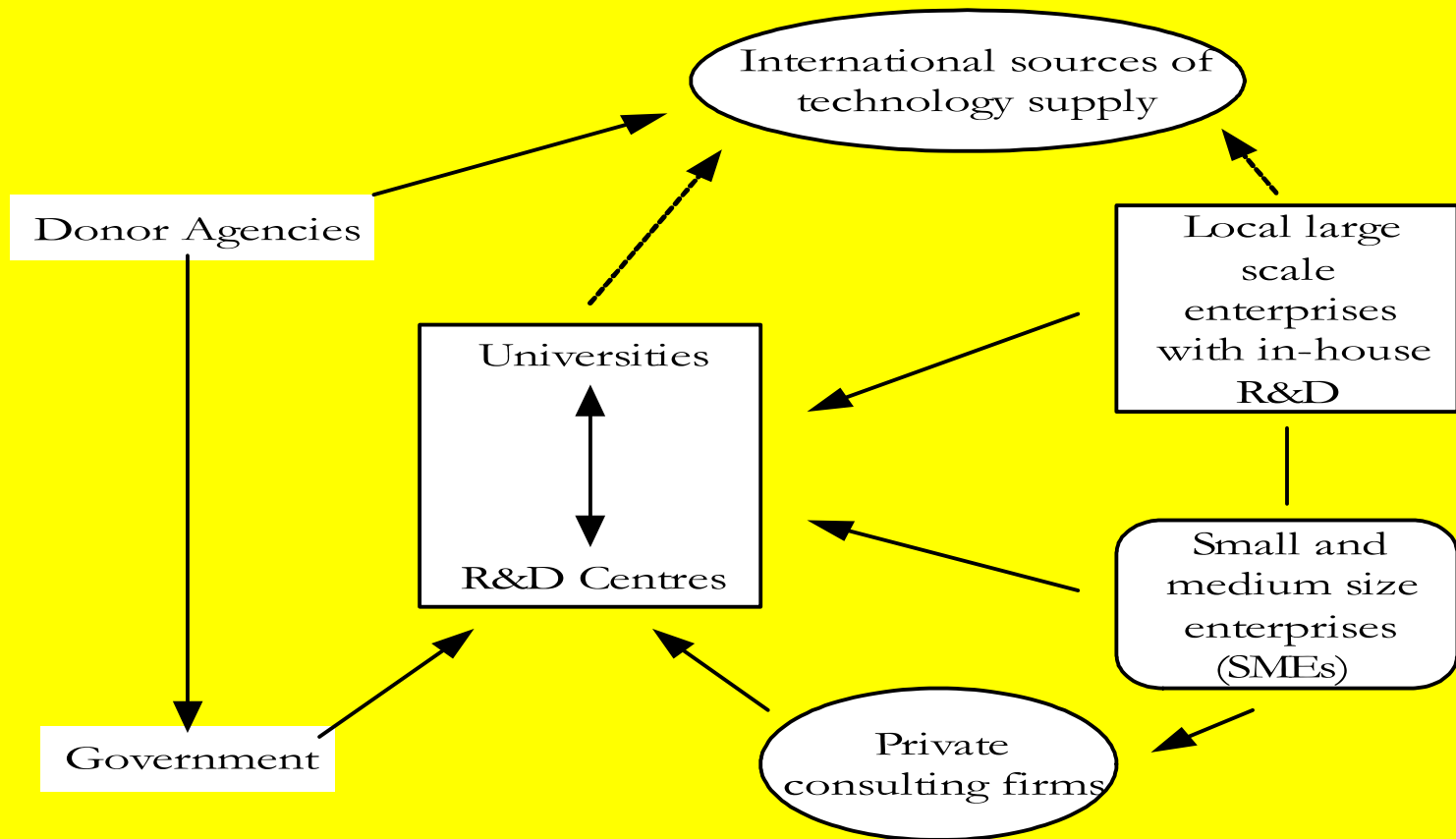
NSI AS OPEN SYSTEM



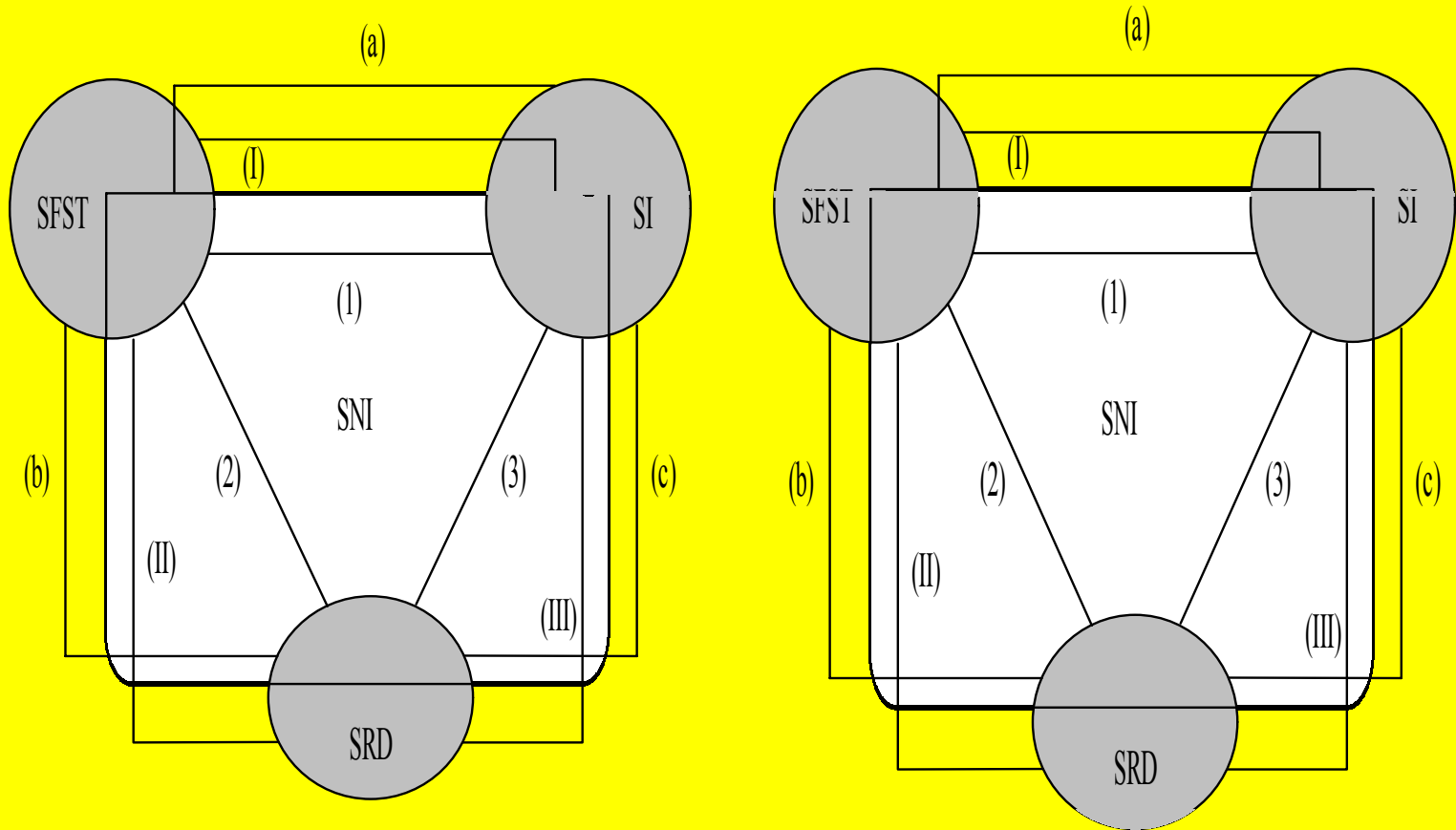
NSI AS COMPLEX SYSTEM



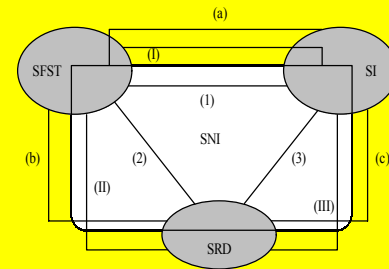
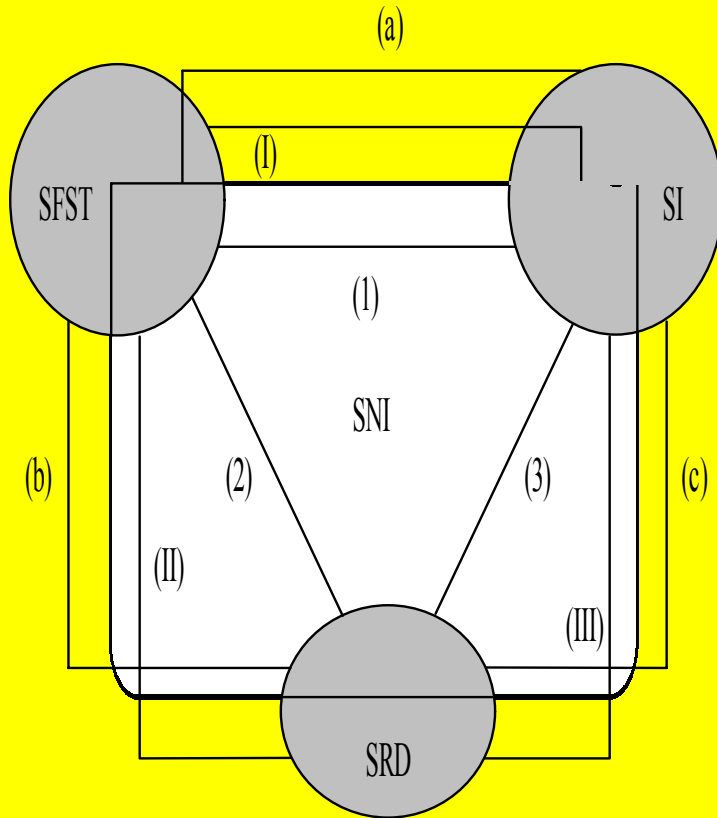
NSI AS COMPLEX AND OPEN SYSTEM



NOT CONNECTED WITH THE NSIs IN THE NORTH



WEAK ATTRACTION AND NEGOTIATING POWER



4. Success stories: individual cases

- Several success stories exist: it can be done
 - **Public** : SAIDAL: pharmaceuticals in Algeria
 - **Private** : POULINA Group: various activities in Tunisia
 - **MAGHTECH** : knowledge network of university researchers

Saidal (Public)

- **Performances**

- **NEW Product (10 en 2001)**

Domestic market share from 15% to 40% within 5 years

- **Price reduction of 5%**
- **Exports : 10Mns USD en 2001 to 10 countries**
- **Annual growth 30% (2002)**
- **Position of Leader internally**

- **Impact**

- **Imports reduction**
- **Certification ISO 9001/9002**
- **Employment creation from 14000 jobs from 1998 to 2001**
- **Confidence to the local industry that they can innovate and compete**

POULINA (Tunisia)

- Creation 1967
- Capital private
- Shareholders 3000
- Size 7000
- Annual growth 10%
- Innovation : Various : agro-food example: exhaust pipes, electrical goods etc..
- Success in exporting to Europe and other LDCs

The MAGHTECH network a knowlege network

- A network of university researchers and some practitioners (15%)
- Born in 1994 with a group of 30 researchers
- Currently 350 members in 7 countries
- 6 books published , 5 international conferences
- Consulting with various governments anf international organisations
- Leading organised group in the sub-region in te area of research on S&T

5. What are the major prospects?

Current research questions

- **Using the social capital tools to enhance innovation,**
- **Looking at the local Innovation systems approach**

Conditions

- **human capital** and local capacity
- **leadership** : to mobilise knowledge
- **social capital** : vital to overcome bureaucracy and mistrust and resistance to technical change
- **Breaking the wall** between intermediate institutions
- **Institutional networking**
- **Mobilising of pré-existent relationships** and creation of new relationships

Social capital

- **The common ingredients in the three experiences:**
 - Long-term relationship (poulina/maghtech)
 - Trust and confidence amongst the actors
 - A great of informal relationships
 - Sharing of values
 - Code of conduct (norms)
 - Referent power

Local Innovation Systems

(cappelin 2002)

Receptivity	Accessibility	Innovation
Identity	Value	Customer
	Creativity	

Simultaneous Management of LIS

1. **Manage accessibility and technological capital**
2. **Manage receptivity and human capital**
3. **Building identity and institutional/organizational proximity**
4. **Lever creativity and internal organizational capital**
5. **Enhance entrepreneurship and innovation capital**
6. **Customers satisfaction**
7. **Financial performance and creation of value**

New Agenda for North-South Cooperation

- **Building proper NSI and strengthening existing ones**
 - education and training
 - contribution to brain gain
 - helping with coping with new property rights protection (WTO)
 - Funding of R&D

- **Promoting Innovation partnership at local level**
 - decentralised innovation-based cooperation
 - strengthening intermediate institutions
 - mobilising tacit knowledge

Social capital and north south cooperation

Innovation has definitely to come into the agenda of the various agreements and negotiations (eg; Barcelona agreement and the free trade zones Magreb-Europe)

- promoting continuous flow of S&T knowledge

- building trust between institutions & organisations (SMEs, NGOs, Gov.)

- encouraging north-south networking,

- encouraging informal and social interactions amongst actors (enterprises, NGO, institutions and individuals : visa issue)