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Future of ICT regulation

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Need for regulation

Essential need for ICT

- Most production and services processes include ICT elements
- Society need continuous and reliable ICT services
- ICT becomes one of the basic utilities of information society

➤ ***Regulation should ensure reliable ICT services***

Co-dependencies in ICT

- ICT is a networked industry, where co-operation produce value surplus
- ICT providers handle valuable data and metadata of their customers
- ICT provider should be a trusted agent

➤ ***Regulation should handle co-dependencies***

ICT market trends and regulation

Market concentration:

- Profit in strictly regulated industry decreases
- Reaction of ICT providers is to concentrate themselves to achieve growth at corporate level
- Market concentration might lead to new monopolies
- ***Regulation should avoid build up new monopolies***

Innovative competition:

- Innovation is the key element of competition
- New technologies provide better or/and cheaper solutions for the needs
- Introduce new technologies investment is needed
- ***Regulation should be technology neutral***

ICT market trends and regulation

Backward integration

- Endusers have contacts with application providers, and ICT providers might lose their contact to them
- New application providers need cheaper input in the supply chain

➤ *Facility based or service based competition becomes a big debate in regulation*

Application based services

- New applications bring new services
- The income comes mainly from the new services
- The spreading ICT becomes engine of the GDP production

➤ *Regulation should enhance the variety of new services*

Scared resources

Spectrum

- Wireless technologies provide mobility and need frequency bands
 - Free frequency bands open the door to new adaptivity in spectrum and new generation of mobile devices
- ***The choice in spectrum allocation is choice among technologies***

Numbering

- For entering to the ICT market, new players need new numbers for their new services
 - Identity numbers of the objects also will be necessary to send messages for embedded computers
- ***Numbers become essential assets to the game on the market***

Standardisation as self regulation

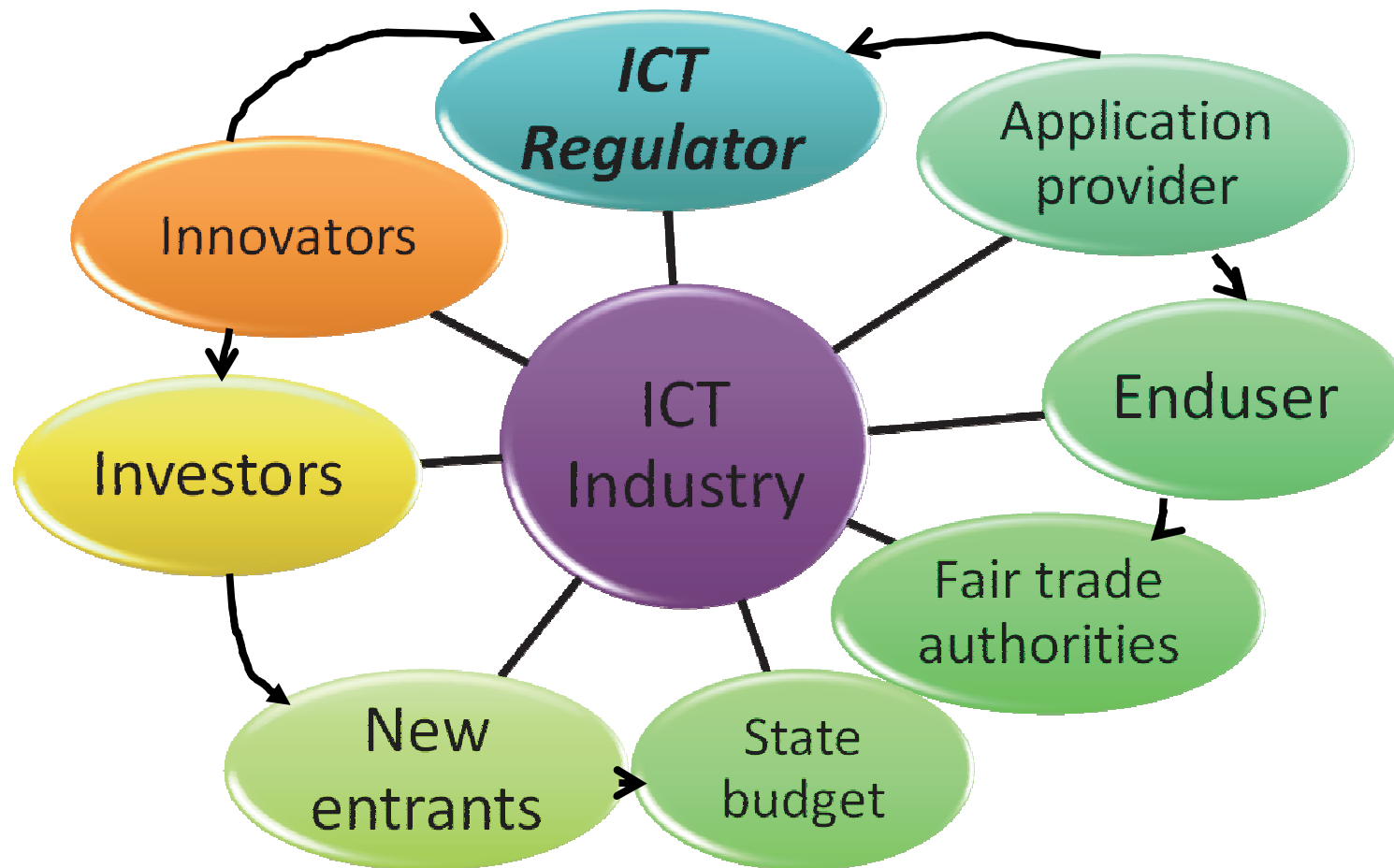
Co-operation

- Standardisation is a co-operation among market players spending on innovation
- Pre-competitive co-operation in ICT is to grow network externalities
- ***Regulation should monitor standardisation processes***

Games of industry players

- Common game is to increase the risk and investment needed of potential new entrants
- Individual game is to become a standard without relevant changes in technology already invented
- ***Regulation should play for customer choices***

Stakeholders in ICT regulation



Analysis of Stakeholders

Stakeholders	Expectations	Power
ICT industry market players	<i>facility based competition or forward integration</i>	High
New entrants	<i>Service based competition</i>	<i>Depends on...</i>
Application service providers	<i>Reliable ICT services basis at low prices or backward integration</i>	<i>Depends on...</i>
Investor	<i>High return on market</i>	High
Innovator	<i>Innovative competitions</i>	Low
Enduser	<i>Reliable ICT and application services at fair prices</i>	Medium
ICT regulator	<i>Investment and reliable ICT & application services</i>	Medium
Fair trade offices	<i>Customer deffence and competition on the market</i>	Medium
State budget	<i>Income from taxes and scared resource fees</i>	<i>Depends on...</i>

Power to influence regulation

High power players:

- ICT industry players have investors behind and pay high taxes
- New investor may decide among ICT players, new entrants or application providers

Players in depending position:

- Application provider may produce positive externalia in GDP growth and tax paying
- New entrant may have large investors behind
- State budget might need for short term incomes due to debt

Medium and low power players:

- Competition office, customer defense office have ex post decisions and penalty
- ICT sector-specific regulator should balance among expectations
- Enduser have limited choices
- Innovator should achieve standardisation level and seek an investor

Economic and tax effects

New ICT entrant:

- Service based competition – less VAT, more duties for authorities
- Capacity surplus to provide ICT services – intensive competition at lower prices – less VAT
- Effective employment – less income tax
- Innovation spending – no direct tax influence
- Lower prices for customers – less VAT

➤ *State budget is not very interested*

Application provider:

- New investment into service applications – more VAT
- Demand for knowledge intensive workforce – no direct tax influence
- New employment – more income tax
- Innovation spending – no direct tax influence
- New consumption of endusers – more VAT

➤ *State budget may be interested.*

Expected regulation

Normative regulation
through legislation

Decision-based regulation
by implementing
authorities

Trends of regulation

National level

European level