

The Impact of Legal Regulation on Competitiveness

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Regulation of new technologies – An example

- Electronic invoice
 - Advantages: Faster, easier to send/receive, and cheaper than invoices on paper
 - Problem: Requires a legally valid signature (“advanced signature”) to reclaim VAT
 - Note: Invoices on paper do not require **any** kind of signature!
 - Reason: Fraud (reclaiming VAT which had not been paid; e.g. by fake invoices)
- Results of this legal regulation:
 - Widely used when sending to end users → These cannot reclaim VAT
 - Almost no use between companies → Too much work, too complex, too many rules...
 - Companies dedicated to handle el. signatures have problems
 - El. signatures are still not widely used: no useful (=cost/work/... reducing) services
- Note: Technically everything works with/-out signature!

General problems regulating technology

- Are all (types, nationalities, ... of) companies affected the same?
 - Requiring expensive pre-testing/-investment favours large companies
 - Chip factories, glass fibre cables etc.
 - High insurance favours long-existing/large companies (→ problem for start-ups)
 - Restrictive laws in one country favour companies located elsewhere
 - Regardless of the location of the final market!
- Most important for compet. is less content of regulation than certainty and delay!
 - If a positive outcome is uncertain (note: all conditions fulfilled!), e.g. because of bureaucracy or frequent legal changes, competitiveness is reduced
 - Report: Drug approval is much faster in EU than USA → Fewer drugs in the US
 - When permissions (again: everything fulfilled) require a long time → Less competitive
 - Speed is often of essence, as compared to competitors

Problems of laws regulating new technology

- Existing laws might not fit well or not at all
 - Examples: Patents have served very well, but software patents are a problem;
Fraud requires deceiving a human → Inserting an illegally copied card into an ATM?
- When the technology is new, little is known about it
 - Even less is known about its dangers
 - Privacy came long after the computer; mobile phones and their radiation!
 - Scientists investigate how to do it, but not why not to do it!
 - Default legal state: You must cover (and are liable for) known dangers only
 - And those, which could reasonably have been expected
 - Little incentive for additional research into problems and potential dangers
 - When problems surface, you must confirm them and change your products

Regulation may improve competitiveness (1)

- Possible in two ways:
 - No or little regulation → Do what you want (even if its unsafe!) → Cheap
 - Example: Software. This is the reason for the huge number of buggy programs!
 - Note: This is not necessarily bad → Only good software is successful!
 - Difficulty: What happens in case of problems?
 - Especially to customers of these products (→ x-ray machine)!
 - Effective procedure needed for compensation, punishment, ...
 - Counterexample: Too much regulation won't help
 - Only very big companies, with lots of certificates + ... may bid on large contracts for public administration: Still most of them fail and the rest is enormously above the budget! → All this (less formal) regulation didn't help!

Regulation may improve competitiveness (2)

- Prescribing interoperability/permissions to access monopolized goods
 - Internet: Works and is so huge, because everyone uses same basic protocols
 - Everyone benefits from the network effect from the increased size
 - “Enabling” competition to take place at all
 - Access to CIFS (=MS Filesharing protocol) had to be regulated legally
 - Improved competitiveness of Linux (although they must still invest a lot of work in implementation!) through interoperability
 - Improved competitiveness of Microsoft (AD is not part of it!) because they can reach areas completely excluded before too (servers for Linux clients)
 - Microsoft lost also come competitiveness: Monopoly!
 - Norms for infrastructure: Power plugs, protocols for access to “last mile”, ...

Conclusions

- Existing rules often apply badly to new technology
 - General rules should be very general, but specific rules very specific!
 - I.e., specific rules should only apply to **known** technologies and not be too general
- Content of regulation is often less important than procedure and stability
 - Frequent changes prevent matching the technology to the rules
 - Countries without regulation can't be beaten, but swift procedures can reduce the gap significantly and prevent evasion
- Less pre-checking and more ensuring that problems occurring can be rectified
 - Not: Atomic power industry → No insurance (unnecessary costs when not needed) and nationalization on problems (company is “dead” anyway)!
- Tying the risk to the responsibility

Thank you for your attention!

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