

Fondazione Rosselli



**Workshop on the Economic  
Impact of the Development  
Risk Clause as Provided by  
Directive 85/374/EEC on  
Liability for Defective Products**

# The Economic Impact of Development Risk Clause

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## Background: the current perception

- A step away from strict liability regime.
- VS.
- Crucial safeguard to preserve incentives to innovate
- A way to control insurance costs

## Background: how relevant in practice?

- Risk development clause is, *in theory*, a significant factor in achieving the Directive's balance between the interests of consumers and producers.
- Though, in practice, it seems to be interpreted so narrowly that it is of little practical value to producers. (very few reported examples).

# Basic economics of strict liability

- Injurers are forced to internalize the costs of accidents they cause.
- Victims are compensated for any injury they bear.
- Courts need not to enquire into injurer's prevention activities.

# What may be wrong with strict liability?

- Undermines victims incentives to avoid accidents (moral hazard).
- Over-insurance: consumers obtain greater coverage than they would get from accident insurance. Unbundling is not possible.
  - Argument in favor: mandatory bundling is good when there is systematic misperception of risks and damages.

# What may be wrong with strict liability?

- Unpredictability of the jury system undermines manufacturers incentives to prevent defects.
- Extensive use of the liability litigation system, very high transaction costs.
- Strict liability allocates all risk on producers: this is reflected in higher prices and reduced product innovation.

# The basic economics of strict liability

- There are some imperfections and under-compensation may emerge:
  - Some harms are too ephemeral to be compensated (e.g. pain vs. fear)
  - Some harms are too speculative to allow compensation (e.g. unrealised profits)
  - Some harms are too remote to be compensated.
  - Some harms are too enormous to be compensated (e.g. death).



# Strict liability and industry size

If consumers are ignorant about the risk, strict liability will reduce demand for that product by increasing costs and prices. (in this case a negligence rule would perform better).

# Strict liability and insurance

- Argument: the purpose of liability is to provide incentives for precaution. Since insurance undermines incentives for precaution, it should be forbidden.
- This argument assumes that injurer's care decreases with insurance.

# Insurance

- Possibly untrue:
  - insurance monitoring policies may create a *de facto* negligence rule.
  - insurers try to resolve information asymmetries by acquiring information and setting premium-performance schemes.
  - If one looks at management of operations, any liability regime boils down to negligence with respect to (possibly tighter) standards. (Quality manuals, testing protocols,.....).
  - Companies are not the right actor to perform as insurers (see above and bankruptcy

# What does DRC actually change?

- The producer is not liable if he can demonstrate that the defect was unforeseeable, given the state of the art of knowledge.

## Effect on innovation.

Basic argument: strict liability is not appropriate for innovation-intensive industries. Innovation becomes a too risky activity.

# Effects on innovation.

- DRC is claimed to restore incentives to innovation by:
  - Reducing the innovation related risks.
  - Not diverting resources from R&D to Insurance
  - Pushing firms to get an hold on *state of the art knowledge*

## Other (producers') claims on the virtuous effect of DRC on innovation

- The benefit of innovation activity is shared between producers and consumers. Why should the risk be entirely borne by companies?

# Any empirical evidence available?

- Not strictly on DRC
- More generally on strict liability regimes:
  - controversial evidence, but some hints that strict liability regimes deter innovation.
  - One single sound theoretical prediction: it depends on the size of damage.
- Evidence from US to be treated carefully, strongly dependent on judicial systems.



# Effect on innovation

- Possibly, the question is more articulated.
  - Market structure & competition
  - Product life cycle issues
  - Dynamics of innovation
  - Technological regimes
  - Information asymmetries
- See following discussion

## Other (important) problems.

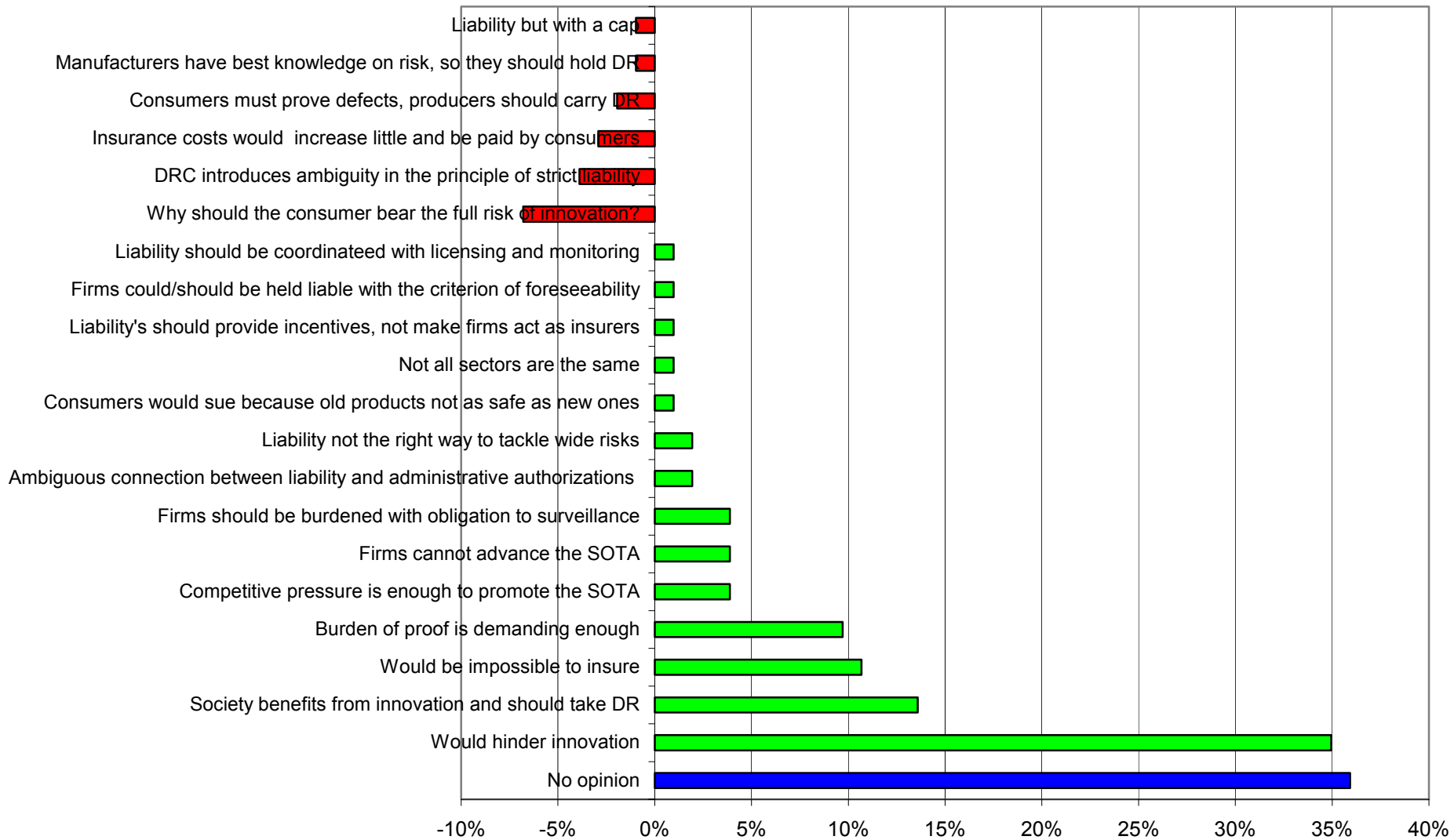
- Asymmetric application of Art. 7e within Europe. Costs of asymmetric competition in Europe.
  - Unequal competitive conditions.
  - Risk of adverse selection
- Europe's competitiveness versus US and Japan. Any threat?

# Is the development risk clause (DRC) a real issue?

- Few instances of use in court
- Differences in national law apparently have not determined different impact
- The interpretation of “state of the art” is so “strict” to be of limited use to firms
- ... does the DRC matter to the “average” firm or – rather – to “outlying” cases?

# Replies to the Green Paper on the DRC

Findings	Possible consequences
36% of contributions did not deal with it	DRC “not a common issue”
DRC supported by a variety of motivations (14), contrasted by fewer (6)	Consumers’ position is less complex. Suppliers’ side is multi-faceted (a problem requiring classifications?)
Innovation is a key issue in both positions	Need to study relationship between DRC and innovation



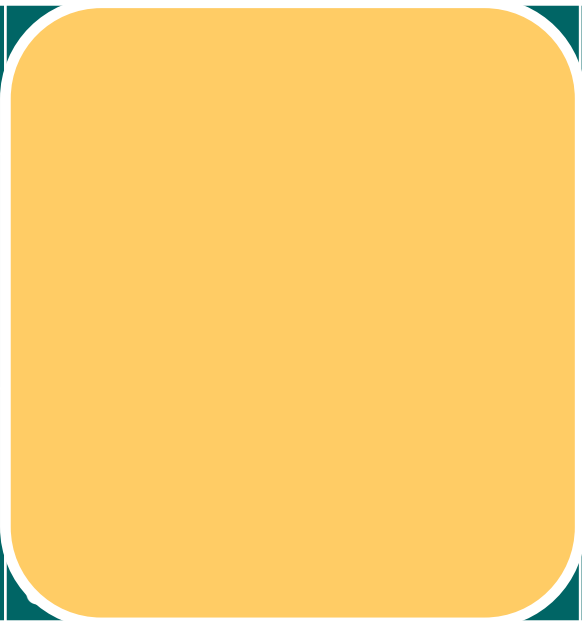
# Innovation-related replies to the Green Paper on DRC

- Taking out the DRC would hinder innovation
- Society benefits from innovation and should bear DR
- DR can't be insured but can be covered through different means

- Firms, consumers and the society benefit from innovation... why should only the two latter bear the risks?

... but innovation is a complex phenomenon.  
Let's analyze a few facts and/or speculations

# Industry structure: the DRC provides firms with an incentive to...

Knowledge creation Industry structure		Exogenous
Monopoly or oligopoly with collusion		<b>DRC</b> ...keep at the SOTA ("clear" boundary)
Competitive		<b>DRC</b> ... move towards the SOTA until unprofitable
		<b>DRC</b> ...keep at the SOTA ("clear" boundary)
		<b>DRC</b> ... move towards the SOTA until unprofitable

## Notes

- envisaged effects do not consider using safety as a competitive feature
- costs of accessing exogenous SOTA depend on status of knowledge (e.g. public vs. private) and closeness of relation to industry (e.g. public industry-specific research bodies vs. other industries)

# Speed of innovation: the DRC provides firms with an incentive to...

Problem	Types of industry	Industries with rapid pace of innovation	Industries with slower pace of innovation
Enhancing safety often requires multiple iterations between firms (providing new and improved products versions) and markets (testing them under different conditions and over time - with respect to fatigue, long-term health effects, etc.)		<p><b>DRC</b> ...promote quick but “open-chain” innovation.</p> <p><b>DRC</b> ... slow down the pace of innovation and keep it in line with feedback arising from the market</p>	<p><b>DRC</b> ...<i>no significant effect</i></p> <p><b>DRC</b> ... <i>no significant effect</i></p>



# Localization of defect: the DRC provides firms with an incentive to...

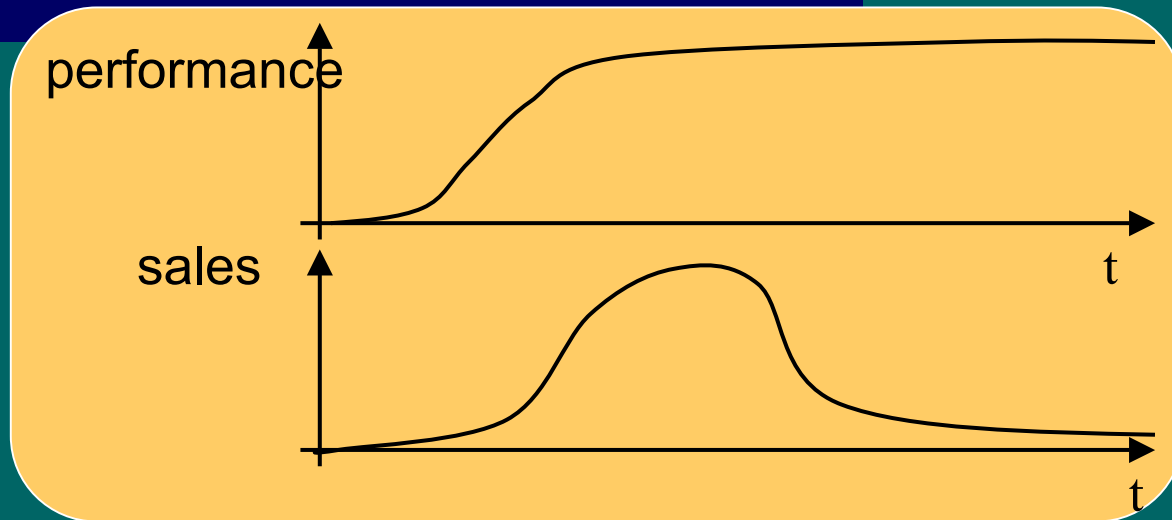
Localization of defect Problem	Defect located in the dominant design	Defect located in a specific detail
<p>Defects can be located in the “<b>dominant design</b>” of the product (e.g., “EM radiation from mobile phones using the GSM standard”) or in some <b>detail</b> (e.g. allergy from materials used in mobile phones).</p> <p>The dominant design is</p> <ul style="list-style-type: none"> <li>● shared by industry,</li> <li>● promotes diffusion</li> <li>● requires specific investment</li> </ul>	<p><b>DRC</b> ...pursue the technically more efficient dominant design without too many concerns for safety</p> <p><b>DRC</b> ...make the adoption of a dominant design a slower process, due to specific investment and potentially catastrophic effects</p>	<p><b>DRC</b> ...<i>no significant effect</i></p> <p><b>DRC</b> ...<i>no significant effect</i></p>

# Scope of innovation: the DRC provides firms with an incentive to...

Type of innovation Problem	Radical	Incremental
<p><b>Radical</b> (new-to-the-world) innovations entail considerable DR, while DR is less for <b>incremental</b> innovations.</p> <p>Analytical models show that high DR and potential liability leads to extreme behavior by firms</p> <p>For radical innovations, consumers may both underestimate DR or overestimate it.</p>	<p><b>DRC</b> ...pursue innovation without too many concerns for safety. Diffusion could be hindered by consumers' fears.</p> <p><b>DRC</b> ...either promote or stop innovation, depending on the amount of potential liability and the attitudes of customers (a firm taking DR can signal confidence to fearful customers).</p>	<p><b>DRC</b> ...<i>no significant effect</i></p> <p><b>DRC</b> ...<i>no significant effect</i></p>

# Putting it all together: different effects of the DRC along the product life cycle

- DRC is critical
- DRC beneficial
- No preference



Monopolistic / collusive industry	<span style="color: red;">■</span>
Industry initiated by multiple competitors	<span style="color: green;">■</span> <span style="color: blue;">■</span>
Rapid pace of innovation	<span style="color: red;">■</span> <span style="color: blue;">■</span>
Dominant design	<span style="color: blue;">■</span> <span style="color: red;">■</span> <span style="color: blue;">■</span>
Radical innovation	<span style="color: red;">■</span> <span style="color: blue;">■</span>

# How do alternative measures perform within these different instances?

- Allocation of DR to producers
- Insurance (compulsory or voluntary?)
- Special compensation funds for damages related to development risks (Inter-industry or intra-industry)
- Public compensation funds for victims
- Complementing liability with authorization and monitoring schemes
- Establishing public institutions for safety research
- ...compensation funds do not seem to work effectively
- ...any other ideas?

# Open questions

The risk development clause has had little practical impact in countries where it operates. What are the reasons?

Is DR a general issue or does it matter more in specific instances? Should it be tackled in general or where it matters the most?

# Open question

DRC is a step away from strict liability regime that has no practical or economic justification.

DRC is a crucial safeguard to preserve incentives to innovate

DRC is a way to control insurance costs.

# Open question

- Insurance cost unbundling is detrimental to consumers' rights. Consumers should be allowed to choose the level of insurance that best fits them.
- DRC is an efficient way to let consumers get rid of unwanted excessive insurance
- Long term innovative activities are characterised by systematic misperception of risk: in this case overinsurance is not a issue and DRC cannot be justified in these terms.

# Open question

- What dimensions are most convincing in profiling critical instances for DR (industry structure, speed of innovation, defects in dominant design vs. in details, radical vs. incremental innovation)?



# Open question

- Would it be possible to enact situation-specific measures (i.e. how can legally “fuzzy” classifications be avoided?)

# Open question

- Which system (i.e. set of complementary measures) could effectively cope with DR within different settings?