

Report for System Dynamics Modeling of the Transition to a Harmonized Private International Law for E-Business

This report documents the objectives and outcome of the STSM (Short-term Scientific Mission) COST-STSM-IS0605-8951 entitled System Dynamics Modeling of the Transition to a Harmonized Private International Law for E-Business held at University of Ljubljana (Ljubljana, Slovenia) in the period from September 26 to 30, 2011, with Martin Waldburger of University of Zürich, Switzerland, as the guest researcher and Prof. Dr. Denis Trček and Iztok Starc as hosts.

1 Motivation and Planned for Outcomes

Jurisdiction determines a key contract parameter for dispute resolution in cross-border business transactions. Each sovereign state may define its own Private International Law (PIL) governing the state-specific set of connecting factors based on which own or foreign jurisdiction is established. This territorial approach to dispute resolution makes PIL a highly complex field of law.

A thorough assessment in previous research revealed that service providers and customers are confronted with a high level of jurisdictional risk and uncertainty when doing international electronic business in the Internet. This is mainly due to the fact that there is no harmonized set of rules that applies specifically to the (near-)global and (by design) border-less infrastructure of the Internet and, thus, to contracts concluded in the Internet. Therefore, a transition towards a single, internationally harmonized PIL for electronic business in the Internet is perceived as the dominant long-term strategy in order to foster certainty and trust in international electronic business. Such transition needs time as it involves a large number of stakeholders with diverging agendas, interests, and objectives.

The research question is which new strategy implications result for different strategy proposals and scenario assumptions from a long-term transition to a harmonized, electronic business-compatible PIL in an interconnected system of service providers, consumers, legislators, courts, lawyers, and lobbyists.

The STSM foresees the following outcomes:

- A study of the interconnected system of service providers, consumers, legislators, courts, lawyers, and lobbyists provides insight in inter-dependencies between shareholders of this system.
- A literature study provides problematic reference behavior.
- System Dynamics is applied in order to create a simulation model that reproduces problematic behavior.

The STSM results will be used to create different policies in order to design new strategies that support decision making and to simulate decision rules that have never been tried before.

2 Summary of Results

The STSM has produced a number of highly valuable results in all three areas of outcomes foreseen. The first step in the System Dynamics-based modeling procedure¹ consists in a **stakeholder analysis and ranking**. This starts with identifying the set of relevant stakeholders. The model for this STSM envisions the long-term introduction (30 years period) of a harmonized Private International Law (PIL) applicable to electronic services in the Internet – in particular with respect to questions of dispute resolution out of a contract with international connection, namely jurisdiction and applicable law. A focus on dispute resolution implies that the set of relevant stakeholders embraces all actors that have a stake – *i.e.*, that are involved – in the resolution of a given dispute. Involvement relates to either being an actor in a dispute brought to court or to terming the legal frame under which an involved court decides whether it has jurisdiction over a case and, if yes, under which state’s law a decision shall be found.

It shall be noted that this model deliberately limits its scope to Business-to-Consumer (B2C) contract relations. This means that the party providing an electronic service is assumed to be a legal person offering the service in question in relation to its commercial and professional activities. On the other hand, the party contracting the electronic service for purposes of service use, the service customer, is assumed to be a natural person that uses the service for private (non-professional) and non-commercial objectives. This results in a setting that assumes the service customer to be not only the contracting and paying party (narrow understanding of a service customer), but also the party that uses the service (the same natural person is service customer and service user). In short, this type of user is called consumer hereafter. Table 1 lists and characterizes all relevant stakeholders identified.

Table 1: Identified Stakeholders

| Stakeholder | Description |
|-----------------|--|
| Consumer | Natural persons contracting, paying, and using an electronic service in the Internet. The service is used for private and non-commercial purposes. This stakeholder is either claimant or defendant in a dispute out of the respective service contract. Either the contracted service or the contract itself has an international connection. Consumers may make a choice of jurisdiction and/or a choice of law in the service contract of question. As consumers, however, are generally regarded to be the contracting party with weaker bargaining power in the contract (when compared with the power of the service provider), choices of jurisdiction and law are typically limited in order to protect the consumer. The consumer is assumed to be willing to contract and use services with international connection in the Internet, while being risk-averse, not literate in law, and afraid of dispute resolution outside its state of domicile possibly held in a foreign language. This situation may differ to some extent in jurisdictions that allow for class actions – requiring, however, a consumer still to be aware of such legal instrument in the first place and the respective legal counsel being available and affordable. |
| Service | Legal persons contracting and providing an electronic service in the Internet. The |

¹ For details, see Sterman, John D. (2001), “System dynamics modeling: Tools for learning in a complex world”, California management review Vol. 43(4), pp. 8–25. Or see Sterman, John D. (2000), “Business Dynamics: Systems thinking and modeling for a complex world”, McGraw Hill, ISBN 0-07-231135-5.

Provider

service is provided commercially (for money) and it falls within the scope of the service provider's professional activities. This stakeholder is either claimant or defendant in a dispute out of the respective service contract. Either the contracted service or the contract itself has an international connection. Service providers may make a choice of jurisdiction and/or a choice of law in the service contract of question. Limitations in making such choices apply for reasons of consumer protection. Nonetheless, service providers typically impose choice of jurisdiction and choice of law provisions of their liking in the service contracts they conclude with consumers. The service provider is assumed to be more willing to take risks (than consumers do) and to have legal counsel at hand. Despite legal counsel, the service provider is assumed to not fully understand jurisdictional risks that might come with international service provisioning and contracting. While service providers are confronted with and are assumed to care about a high level of uncertainty and risk involved in offering electronic services with potential international connection, service providers are expected to be generally interested in as many customers (consumers contracting a service) as possible. Hence, service providers are perceived to care primarily about expanding their business – by which they are willing to accept consumers from as many markets as possible. The risks that come with international service provisioning and contracting are of secondary interest only, in terms of a necessity to cope with. In this light, service providers are seen ambiguous with respect to their long-term objectives: Service providers fear long arm jurisdiction as much as consumers do, but for different reasons. A single service provider is potentially confronted with a large number of individual consumers claiming (in different states, under different regimes, maybe bundled in a class action). A service provider wants to expand business, but keep transaction costs (and the risk of after-sales transaction costs) minimal. As long as there is no harmonized Internet-specific PIL, a service provider might want to keep the status quo in which hurdles for a consumer to claim are seemingly or effectively high. By that, a service provider may bet on a large number of consumers not going to court in the first place and, by that, outsourcing costs to consumers. In addition to an interest in an overall low number of disputes settled in court, a service provider is assumed in general to have an interest in a harmonized PIL specific to electronic business in the Internet, since such a legal basis would create a more understandable and more available legal framework reflecting a service provider's business directly.

Legislator

National or supra-national bodies with authority to negotiate, ratify, and enact PIL affecting jurisdiction and applicable law for contracts of commercial electronic services in the Internet with international connection. The legislator is not involved in any specific dispute resolution activity in court. The legislator is the stakeholder that shapes the legal frame that courts as well as the respective contracting parties (including their lawyers) have to be compliant with – in terms of PIL and particularly in terms of jurisdiction and applicable law. A legislator has a clear understanding of the respective connecting factor (or a hierarchy of connecting factors) that shall substantiate jurisdiction or applicable law for a given contractual relation. Understandings among multiple national or supra-national legislators may differ. One legislator may favor jurisdiction primarily in relation to what a contract party *has* (e.g., domicile, establishments, infrastructure), another legislator may favor jurisdiction primarily in relation to what a contract party *does* (e.g., advertisements, accepting international customers). Irrespective of national or supra-national level, a legislator seeks to attribute jurisdiction to the institutions it is related to, e.g., to the courts of the state the legislator represents. Contrary to their potentially diverging own interests, all legislators are assumed to be interested in lowered complexity of PIL, to foster electronic business (including international electronic business), to

accept and enforce foreign jurisdiction only if this involves courts of a state or supra-national organizations they know and trust and if a foreign decision is not against *ordre public*, to protect the weaker contract party (consumer), and to protect service providers from long arm jurisdiction.

Court

Bodies of national or supra-national relation with potential authority to hear and decide a dispute out of an international service contract. When a dispute is brought to court, the court answers two questions. The first being whether the court has jurisdiction over the case based on subject matter or an involved person. The second being under which state's law a decision shall be found if the court has jurisdiction. The respective applicable PIL of national or supra-national level determines the frame based on which these two questions are answered. In case a court does not have jurisdiction, PIL typically foresees foreign jurisdiction. PIL usually dictates a court to seize action in case of pending cases at another court (*lis pendens*), and it outlines rules under which previous foreign decisions are accepted and enforced. As cases with international connection are complex by definition, PIL is complex as well. For instance, a court may be forced to apply foreign law. In general, courts are assumed to have a strong interest in clear and well accepted rules about jurisdiction and applicable law, to be in favor of application of well known law (preferably law of their own legal system), and to increase efficiency (short procedures; avoid overload by an overall low number of to be settled disputes with international connection).

Lawyer

A natural person representing the interests of either a service provider or a consumer. This may include different activities ranging from legal advice to representation of a claimant or defendant in court. Legal advice may include the preparation of general terms under which a service provider foresees a choice of jurisdiction or choice of law to be made in a contract with a consumer. It may include a risk assessment for a service provider when a service provider plans to offer its services internationally. It may include a risk assessment for a service provider or a consumer when a service provider/consumer thinks of bringing a dispute to court. In general terms, lawyers are assumed to consult and represent service providers in all contract life cycles, while lawyers are assumed to consult and represent consumers only in presence of a specific imminent or ongoing dispute out of a contract. By means of their professional focus on PIL, specialized lawyers are significantly more knowledgeable in assessing the risks involved with international service provisioning and contracting. Due to PIL's inherent complexity with an immense number of territorial regimes in place out of different legal systems, however, even an experienced lawyer cannot be expected to fully grasp the complete set of risk factors and to conduct an embracing risk assessment. The same uncertainty emerges from a multitude of difficult to answer questions in relation to whether, how, and where a connecting factor applies in the Internet. A specific PIL might, for instance, substantiate jurisdiction based on where a service provider advertises a service. As on-line advertisements are handled typically by a third party (the advertiser) and since typically a detailed documentation about the algorithms in use for placing contextual advertisements are kept secret by the advertiser, a service provider cannot know where exactly advertisements are shown and to whom. This, in turn, results in incomplete information for a lawyer conducting a risk assessment for a service provider. In addition, while lawyers are expected in principle to represent the interests of their clients faithfully, they are also expected to perceive the complexity of PIL and the resulting uncertainty for a consumer and for a service provider ambiguously. On the one hand, the business model of a lawyer depends on its client's uncertainty to some extent. For instance, a (successful) class action representing the interests of a group of consumers against a service provider might be financially interesting to a specialized lawyer. On the other hand, an

internationally harmonized PIL would provide a more consistent and available legal basis with the potential to facilitate more precise risk assessment.

**Consumer
Lobbyist**

A natural person representing the interests of consumers on a policy level by taking influence in agenda setting, legislation preparation (e.g., during consultation period), and legislation enactment on national and supra-national level. A consumer lobbyist is either related to a non-governmental body (consumer organization or consumer cooperative) or to a governmental and parliamentary interest group (e.g., ministry of consumer affairs or parliamentary group on consumer affairs). While the first is seen as the typical case considered here for a consumer lobbyist, the latter is subsumed in the stakeholder type of a legislator as long as a member of a consumer-oriented governmental or parliamentary interest group is able to actively participate in the legislation process. The interests of a consumer lobbyist are assumed to be in principle in-line with those of the respective group of consumers represented. Nonetheless, a consumer lobbyist might not represent the interests of all consumers as the group of consumers might be heterogeneous with respect to individual opinions towards different questions. In terms of the overall characteristics outlined for consumers (risk-averse etc.), however, consumer lobbyists are assumed to represent the interests of consumers congruently. Accordingly, consumer lobbyists are primarily interested in simplified rules and procedures, in giving a consumer whenever possible the right to claim in the state of domicile/habitual residence, to have any dispute settlement in court held in application of the laws of a consumer's state of domicile/habitual residence and in the consumer's language, possibly to allow consumer-driven class actions, and finally consumer lobbyists are interested in fostering awareness about consumer rights among all relevant stakeholders, but primarily among consumers themselves.

**Industry
Lobbyist**

A natural person representing the interests of service providers on a policy level by taking influence in agenda setting, legislation preparation (e.g., during consultation period), and legislation enactment on national and supra-national level. An industry lobbyist is either related to a non-governmental body (e.g., business federation, chamber of commerce) or to a governmental and parliamentary interest group (e.g., ministry of economic affairs and commerce or a specialized parliamentary group). While the first is seen as the typical case considered here for an industry lobbyist, the latter is subsumed in the stakeholder type of a legislator as long as a member of an industry-oriented governmental or parliamentary interest group is able to actively participate in the legislation process. The interests of an industry lobbyist are assumed to be in principle in-line with those of the respective group of service providers represented. Nonetheless, an industry lobbyist might not represent the interests of all service providers as the group of providers might be heterogeneous with respect to individual opinions towards different questions. In terms of the overall characteristics outlined for service providers, however, industry lobbyists are assumed to represent the interests of service providers congruently. Accordingly, industry lobbyists are willing to defend the current strong position of service providers in dictating jurisdiction/applicable law provisions (whether these are valid or not is another question) in concluded contracts, since by that hurdles for claiming consumers are kept (seemingly) high, which leads to a presumably low numbers of disputes brought to court. Similarly, industry lobbyists are not interested in increased awareness of consumer rights among consumers, nor are they interested in increased consumer rights in PIL. On the other hand, industry lobbyists are expected to support an internationally harmonized single legal frame for electronic business, in principle, as service providers and their lobbyists realize this as an opportunity for growing business with higher certainty and less risk.

The second step and major achievement made within the scope of this STSM was the sketch of a **comprehensive causal loop diagram** involving multiple iterations during 3 consecutive days of modeling sessions. The resulting causal loop diagram is depicted in Figure 1.

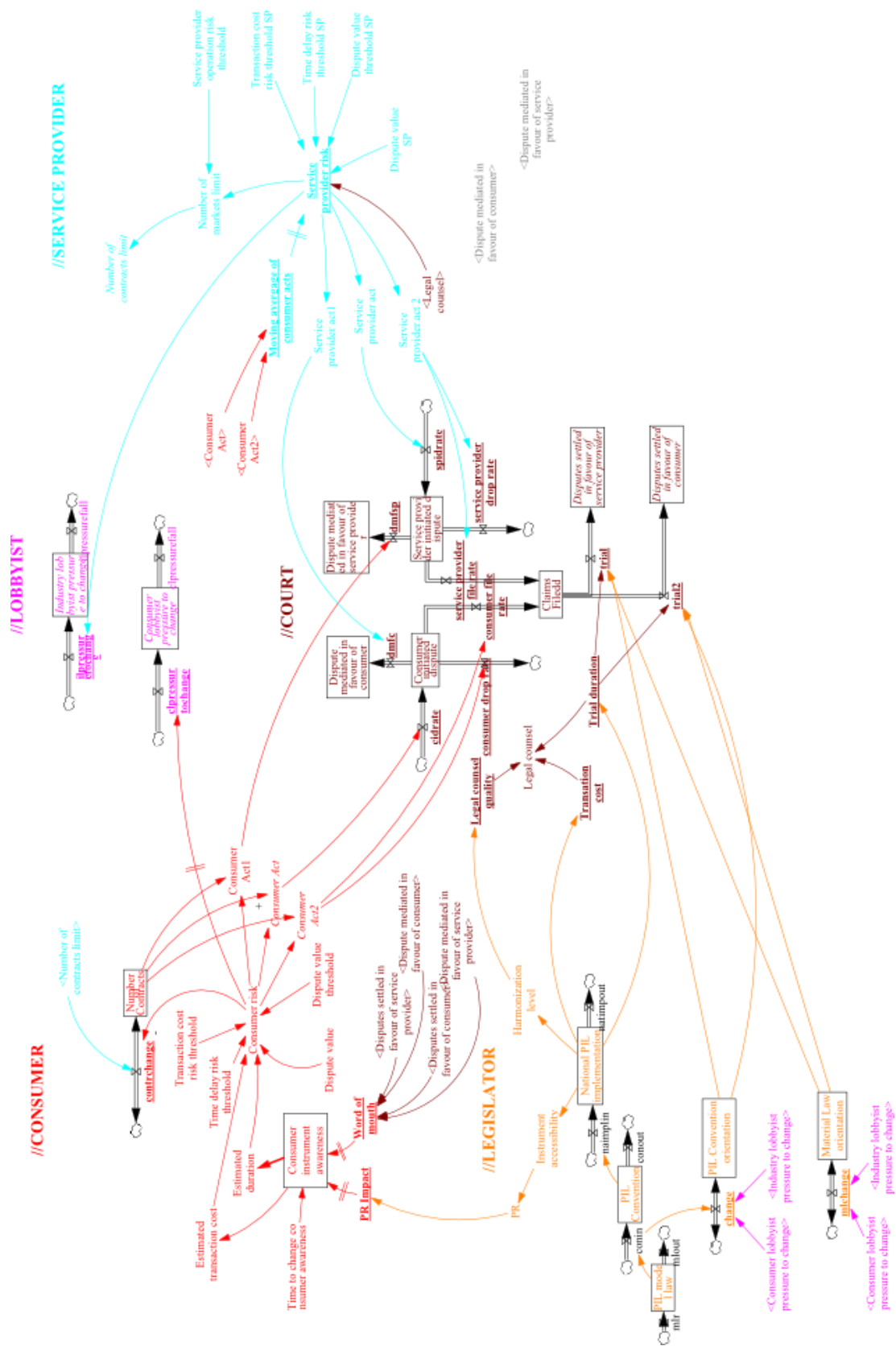


Figure 1: Causal Loop Diagram

Driven by the stakeholder description and the causal loop diagram, in a third step the **key indicators for each (considered) stakeholder** have been identified as listed subsequently. Furthermore, for each of these indicators, values for a “hoped for” and “feared for” scenario have been assumed as documented in Table 2.

- Consumer:
 - Consumer risk
 - Rate of consumer-initiated disputes settled outside court
 - Rate of consumer claims filed in court
- Service provider:
 - Service provider risk
 - Rate of service provider-initiated disputes settled outside court
 - Rate of service provider claims filed in court
 - Number of markets limit
- Consumer lobbyist:
 - Consumer lobbyist pressure to change
 - Consumer lobbyist decision on whether to lobby for procedural or material law change
- Industry lobbyist:
 - Industry lobbyist pressure to change
 - Industry lobbyist decision on whether to lobby for procedural or material law change
- Court:
 - Claims filed rate
 - Trial duration
- Legislator:
 - PIL convention orientation
 - PR
 - Material law orientation

Table 2: Key Indicators with Hoped/Feared² for Values and Indication on How to Change the Indicator

| Indicator | Hoped for | Feared for | How to change the indicator ³ | Unit |
|--|----------------------|----------------------|--|----------------|
| Consumer risk | 0 | 0.5 | Change awareness | [0,1] |
| Rate of consumer-initiated disputes settled outside court | 5 out of 10 disputes | 2 out of 10 disputes | Change consumer risk or service provider risk | Disputes/month |
| Rate of consumer claims filed in court | 3 out of 10 disputes | 0 out of 10 disputes | Change consumer risk or service provider risk | Disputes/month |
| Service provider risk | 0 | 0.5 | Change legal counsel or moving average of consumer act | [0,1] |

² Scenario assumption: Introduction of regionally (e.g., between the EU and USA) harmonized, e-business specific PIL including a fast-track procedure for low value disputes out of consumer contracts.

³ Should cover: Policy actions (e.g., consumer lobbyist starting to do PR on their own), needed time frame to implement policy action, efficiency of policy action (effect versus cost).

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|---|---|------------------------------------|--|-----------------|
| Rate of service provider-initiated disputes settled outside court | 8 out of 10 disputes | 5 out of 10 disputes | Change service provider risk or consumer risk | Disputes/month |
| Rate of service provider claims filed in court | 1 out of 10 disputes | 0 out of 10 disputes | Change service provider risk or consumer risk | Disputes/month |
| Number of markets limit | Unlimited | 6 | Change service provider risk | Markets |
| Consumer lobbyist pressure to change | 0.25 | 0.75 | Change consumer risk | [0,1] |
| Consumer lobbyist decision on whether to lobby for procedural or material law change | Material law (-0.5) | Procedural law (0.5) | Change claims rate filed, disputes settled in favor of consumer, disputes settled in favor of service provider | [-1,1] |
| Industry lobbyist pressure to change | 0.25 | 0.75 | Change service provider risk | [0,1] |
| Industry lobbyist decision on whether to lobby for procedural or material law change | Material law (-0.5) | Procedural law (0.5) | Change claims rate filed, disputes settled in favor of service provider, disputes settled in favor of consumer | [-1,1] |
| Claims filed rate | 4 out of 200 contracts (4 out of 10 disputes, with 1 dispute out of 20 contracts) | 0 | Change consumer risk or service provider risk | Contracts/month |
| Trial duration | 3 months | 6 months | Change PIL convention orientation or national PIL implementation | months |
| PIL convention orientation | Consumer orientation (-0.5) | Service provider orientation (0.5) | Change industry lobbyist pressure to change or consumer lobbyist pressure to change | [-1,1] |
| PR | 1 million EUR | 10 million EUR | Change instrument accessibility | EUR |
| Material law orientation | Consumer orientation (-0.5) | Service provider orientation (0.5) | Change industry lobbyist pressure to change or consumer lobbyist pressure to change | [-1,1] |