



Big Data Ethics Recommendations for the Insurance Industry

Evidence-based recommendations
from the NRP 75 project: “Between
Solidarity and Personalisation –
Dealing with Ethical and Legal Big
Data Challenges in the Insurance
Industry”





The question if, under what conditions and to what extent insurance companies should be allowed to personalise their insurance contracts based on Big Data analytics should **not be resolved indirectly** by applying the general principles of data protection and anti-discrimination law.



Background first recommendation

- The personalization of insurance contracts based on Big Data raises important questions in various bodies of the law, namely in insurance law, anti-discrimination law and data protection law.
- Our research indicated that not all of these bodies of the law are equally well suited to provide convincing solutions.
- In particular, anti-discrimination and data protection law are too unspecific and pursue goals that are very different from answering the question if, to what extent and under what conditions the personalisation of insurance contracts should be allowed.



The Swiss regulator should continuously monitor and anticipate the use of Big Data for the personalisation of insurance contracts, identify unwanted forms of personalisation, and **create specific provisions in insurance law**, where needed, to either prohibit personalisation or define the conditions and the extent of permissible personalisation.



Background second recommendation

- The personalisation of insurance contracts based on Big Data can have beneficial or unwanted effects both on an individual (insured and insurer) and a societal level. These effects mostly depend on the type of insurance and much less so on the data processing.
- The regulator or legislator will have to decide if, to what extent and under what conditions the personalisation of insurance contracts should be allowed. This question needs to be addressed for each type of insurance and it should be regulated (if necessary) accordingly.
- We assume that personalisation should be prohibited for some types of insurance (e.g. mandatory health insurance) but allowed for most other types (e.g. car insurance).



Insurance companies should avoid using data sources that are **not related to the insured risk**, as this may undermine the customer's trust in the products and services of the industry.



Background third recommendation

- Our research indicated considerable scepticism of customers when data is used for risk modelling that lacks a plausible link between the data source and the insured risk.
- A risk factor for trust is that models distant from an intuitive, folk understanding of the context and causes of the risk insured against, may undermine people's confidence in their insurer's assessment of risk.
- This creates a tension between the potential of Big Data mining and the trust expectations of customers.
- Therefore, insurers should carefully assess the trust-related risk posed by new models based on new sources of information and sophisticated machine learning techniques, before using them to make decisions on their customers.



Insurance companies should demonstrate to their clients how they **protect core values** such as privacy, fairness or solidarity from risks posed by Big Data analytics.



Background fourth recommendation

- Across the world, people have deep values of which they believe that they ought to be inviolable and protected from trade-offs. When clients expect such protected values to be under threat, they are likely to respond with outrage and objection.
- Our research has shown that some customers expect values such as privacy, equal treatment or solidarity as being put at risk by digital applications. Insurances should acknowledge such concerns.
- Ignoring them could backfire and cause losses of public trust and reputation.
- Ideally, insurances can provide certainty to clients that those values remain unviolated. Customers should be empowered to approve data collection adapted to context and own protected values.



Insurance companies should increase their awareness about the nature and impact of the **unwanted discriminatory use** of Big Data-based machine learning in prediction, pricing and fraud detection.



Background fifth recommendation

- Our research on the ethics of Big Data based prediction has shown an increasing sensibility in both data analytics and philosophy on the many pitfalls of preventing unwanted discrimination.
- The scope of the notion of indirect discrimination becomes extremely wide with Big Data – not only because one may always find correlations with socially salient groups (which have typically attributes protected by anti-discrimination laws), but also because ethically equally justified values may be in conflict.
- One way to balance these different considerations is to be guided by the idea that companies should attempt to sustainably achieve the long-term solutions that minimize the burden (e.g. cost and exclusion from insurance schemes) of the most disadvantaged individuals.



Insurance companies should adapt their general business ethics principles for **achieving accountability** to the systematic handling of ethical issues resulting from the digitalization of the industry.



Background sixth recommendation

- Our research indicated a growing sensitivity for ethical and legal issues within the industry but a potential lack of tools for effective “digital accountability”.
- Insurers should ask themselves what changes in their general business ethics principles and business practice would be necessary to handle the new ethical challenges of Big Data.
- Ideally, the operations of the company will include standardized procedures for ethical assessment and clear indications of responsibilities to ensure that someone is accountable when ethical principles are clearly violated.