

The media representations of Big Data

An international comparison between Switzerland and the USA

Introduction

The notion of Big Data has received high interest in recent years, both within academia and industry. Data is labelled as the “oil” of the 21st century in the sense that it will be the key commodity for an information society.

The term Big Data is relatively new and is commonly defined by the four “V’s” which refer to the specific and unique properties of Big Data: high volume, high velocity, high variety and high veracity. Big Data applications rely on new technologies (hardware, software) and are used in various industries ranging from social media and marketing, to the health and insurance industries.



Newspapers aim to simplify social reality and bring events and specific topics closer to society. The analysis in communication studies involves the research and description of the content communicated to the public.

In our study, we apply an explorative media analysis to investigate how Big Data is represented in Swiss and US-American newspapers, which opportunities and risks are described, and which differences can be identified between the two countries?

Aim of this study

- 1 Which opportunities and risks regarding Big Data are discussed in the newspapers?
- 2 Which frames can be derived from the newspaper content analysis?
- 3 Are there any differences in terms of the frequency of the frames portrayed in Switzerland and the USA?
- 4 How has the debate regarding the different frames changed over time?

Methodology



Newspapers	N° of articles	Newspapers	N° of articles
NZZ & NZZaS	178	New York Times	237
Tages Anzeiger	63	USA Today	19
Blick & BlickaS	10	New York Post	2
Total	251	Total	258



⇒ Cluster the individual opportunities and risks into major frames in both countries

Conclusions and further steps

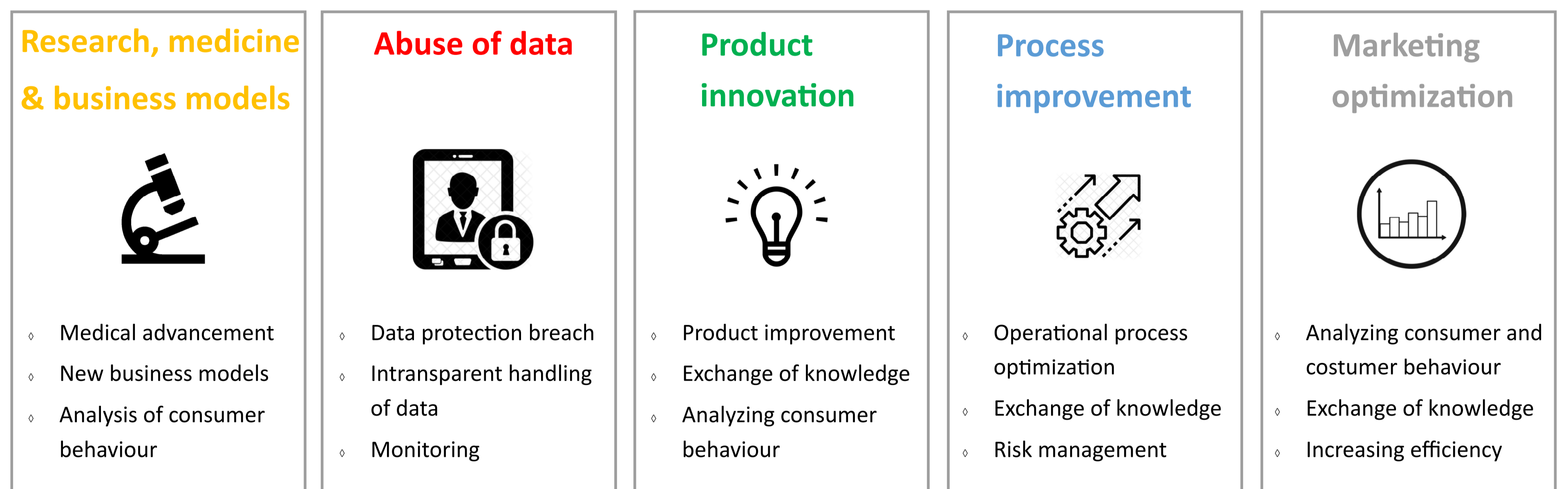
- ⇒ Most frames are opportunity-oriented
- ⇒ One frame is risk-oriented
- ⇒ The newspaper coverage in the USA focuses more on product innovation
- ⇒ The newspaper coverage in Switzerland focuses more on marketing optimization and process improvement
- ⇒ The risk-oriented frame, abuse of data, seems to be more discussed in Switzerland than in the USA

Further steps:

- ⇒ Analyze further variables that were collected (e.g. where are these data used)
- ⇒ Identify if there are any other differences between Switzerland and the USA with regard to those variables

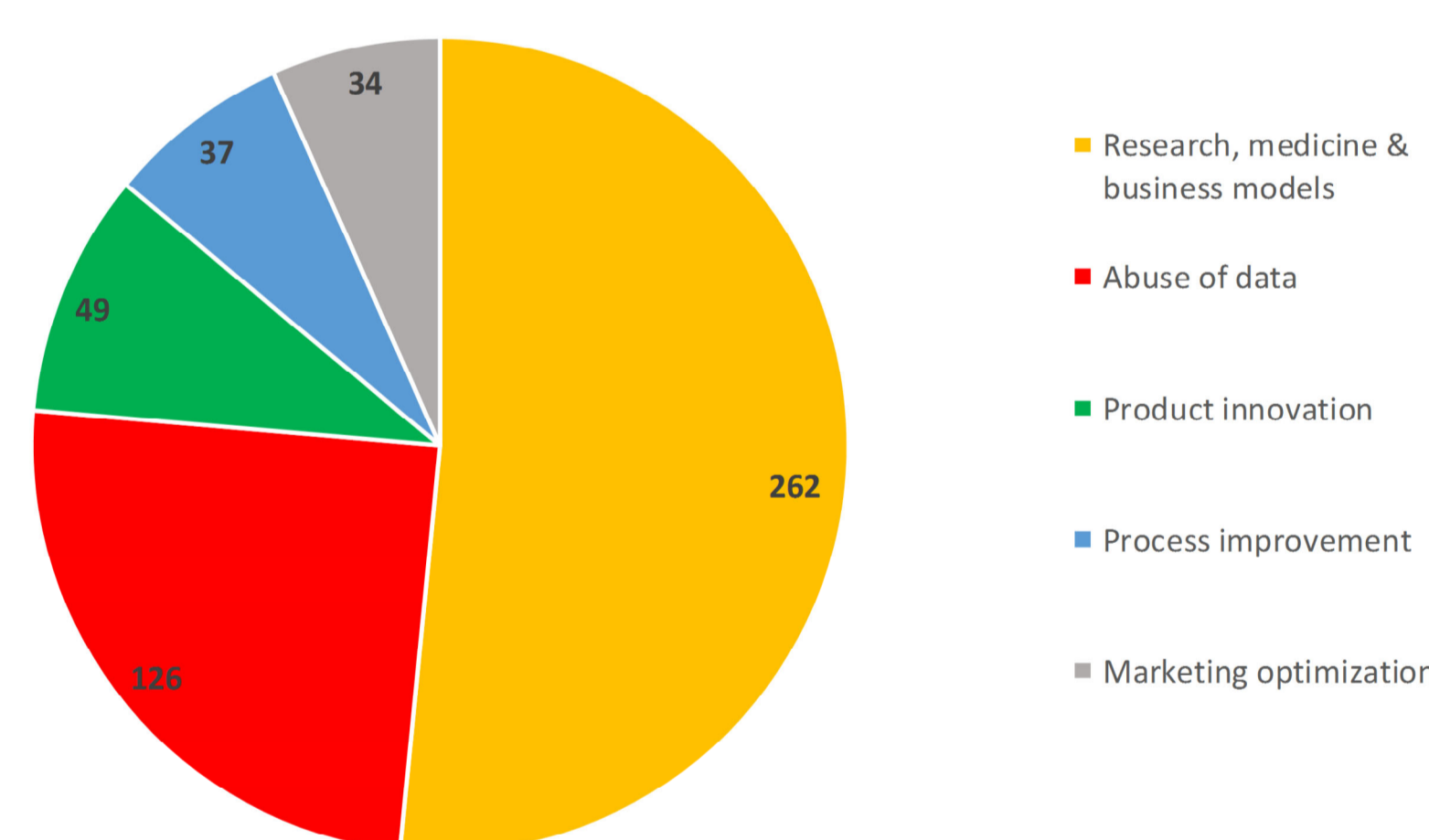
Results

- 1 The cluster analysis brought us to the conclusion that five frames can be identified. The opportunities and risks mentioned most in the articles are discussed and can be identified within the following five topics:



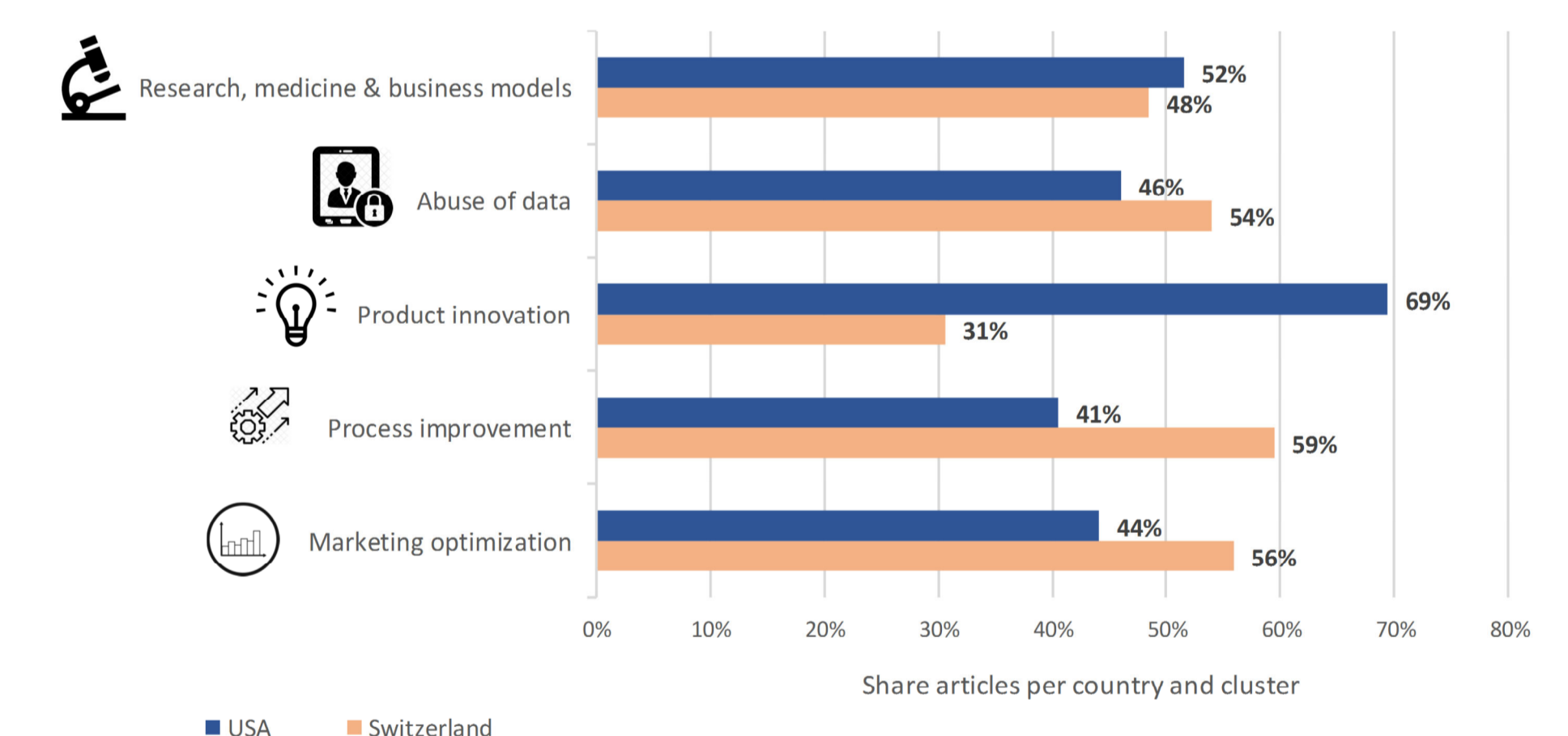
2 Frame analysis

Pie chart illustrating the number of articles per cluster from the total sample



3 Cluster divided by country

Bar chart comparing the proportion of articles per cluster in Switzerland and the USA



4 Temporal development of the frames from 2011 to 2018 (April) in Switzerland and the USA

