

Willing to share? When it comes to data, who will share what and why?

Consumers are becoming increasingly aware of the value of their personal data. As privacy laws are updated and consumers become more cautious about their personal data, sharing really is caring – and companies need new ways to make their customers care enough to share their data. **The Institute of Marketing Management** at the Zurich University of Applied Sciences has developed a model to predict consumers' willingness to share data across a variety of different contexts.

If you use the internet – and chances are, you do – then companies have been collecting your data. The last two decades have seen a radical change in the number of people online, whilst privacy laws have remained relatively lax. European marketing firms have been part of an industrial revolution of their own: a golden age of data where they can easily collect and share data on almost everyone.

As technology has progressed, more ways have become available for collecting data. From investment management firms to coffee shops, companies from all industries have developed smartphone apps or online services. Consumers take it for granted that many of these services require personal data to function, but the services often have the ability to collect 'richer' data, like what, when and where you buy things, how many steps you take per day and where you go. The level of detail in this kind of data is unprecedented. Companies may also choose to buy more data to build up profiles on consumers containing a broad array of details – think postcodes, email

and IP addresses, and also psychographic details like religious beliefs and political values. Understanding consumers on such a deep level not only improves the company's marketing capabilities – it could also be the key to finding users who are willing to share 'richer' data. Being able to target those most likely to share their data is a key challenge for companies.

WHAT ARE CONSUMERS WILLING TO SHARE?

Entire business ecosystems rely on companies collecting and storing data. It is convenient for these companies that consumers remain largely ambivalent about digital privacy. According to the PWC report *Consumer privacy: What are consumers willing to share?*, "The majority of consumers have accepted the fact that companies collect and use their personal information, and are comfortable sharing basic information such as names, addresses, gender, and even home phone numbers". However, as people become more aware of data usage practices, their concerns are also increasing. In a 2015 survey of EU citizens, only 35 per cent of respondents agreed that providing

The Institute of Marketing Management explores the relationship between companies and consumers, with the aim of finding new methods to collect data in a way to benefit all involved



ADAPTING TO NEW LEGISLATION
In Europe, newly-approved General Data

protection Regulation (GDPR) rules mean that companies will have to gain consent from users to collect and store their data. As the GDPR deadline looms, companies may have to completely re-think their data collection strategies to accommodate the need for consumer consent. Since GDPR legislation was announced in April 2016, companies have been scrambling to adapt their data collection and storage practices to meet new requirements before the May 2018 deadline. The consequences for failing to meet requirements can extend to company-bankrupting fines. These fines are so large that an industry of 're-insurance' companies has emerged, providing insurance to GDPR fine insurers.

Also, consumers may feel that some types of data are more important to keep private. Location, fitness or driving data could have large implications for a user if it ended up in the 'wrong hands'. For example, a health insurance company could change its pricing based on data about your heart rate, weight and smoking history. This may be beneficial for the healthy and active consumers, but may pose a threat of price discrimination towards consumers who pursue a less healthy life-style.

A more familiar example of this kind of technology are 'black boxes' installed in cars, also known as 'telematics insurance'. Those struggling with high car insurance costs may opt to have a black box installed into their car by an insurance company. The device keeps data on driving speed, acceleration and when the car is driven, and insurance companies adapt their pricing based on the level of perceived risk. According to MoneySuperMarket.com, telematics policies are around £200 cheaper for 17-20-year-old drivers (<https://www.moneysupermarket.com/car-insurance/telematics/>).

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With consumers becoming more aware of the value of their data, and GDPR legislation meaning that many companies will have to start from scratch with data collection, brands and AdTech companies will have to find new ways to convince users that sharing their personal data is worthwhile.

MUTUALLY BENEFICIAL DATA COLLECTION

A 2012 PWC survey found that 73% of users said they would be willing to provide personal information to a brand, provided that there was some incentive. Working on this basis, and with the aim to deepen the understanding of the

drivers and barriers around what consumers are willing to share, the Institute of Marketing Management (IMM) at the Zurich University of Applied Sciences began research to explore the drivers of consumers' decisions to share data with companies. In the context of this undertaking, the IMM – in collaboration with AZ Direct – developed an index that can predict an individual's willingness to share data with a company given particular situational characteristics.

To develop this index, researchers from the IMM conducted an online experiment with over 20,000 participants in Switzerland, from a broad range of demographics. Participants were presented with scenarios involving types of industries asking for certain kinds of data in return for incentives. Also included in the scenarios were details about how the data would be used and whether the data will be collected anonymously. Participants were then asked to decide if they would share their data in the given scenario. The results collected were matched to data provided by the marketing company AZ Direct, which holds sociodemographic data on almost every household in Switzerland. The matching was conducted in an anonymised way to meet privacy standards, so that neither the IMM nor AZ Direct had access to both the participants' names and their answers in the online experiment at any point in time.

SITUATIONAL AND PERSONAL FACTORS MATTER

The results of the analysis showed that every variable in the scenario had a significant effect on whether individuals would share their data. In other words, it matters to consumers who is asking for their data, why they are asking, the kind of data being asked for, and how that data will be used. Sociodemographic factors also affected whether a particular scenario resulted in consent being given. Amongst the most important demographic factors were gender, age and household income.

THE WILLINGNESS TO SHARE INDEX

These outcomes may not surprise you – everybody trusts different brands or industries, and will be persuaded by different incentives. However, the IMM has been able to use the data collected to create a model which can predict the probability of an individual sharing his or her data. The model can also predict the effects of changing each variable in the scenario or choice of sociodemographic group. The output of this model can be termed a "Willingness to share" or WTS index.

The marketing company AZ Direct is able to use this model to maximise the number of people who choose to share their personal data as well as to find ways to more efficiently address their customer base. For a given brand after a certain kind of data, this can be achieved ►

by choosing certain incentives or targeting certain demographics. For example, a retailer wishing to collect data on purchase behaviour will be able to predict the kinds of incentives which lead to the largest number of people deciding to take up their offer. Alternatively, the retailer might choose to target a demographic more likely to feel comfortable sharing their data – younger people, for example. Some companies may even want to adapt the kind of data requested in order to avoid changing the incentive offered.

The index is now being tested in the real world. These tests compare the WTS of an index-selected group with a randomly selected group. If the index-selected group is consistently more willing to share data than the randomly selected group, like the researchers from the IMM expect, then the index will have proven its worth as a tool for those firms on the hunt for consumer data.

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BIO



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Bettina Gehring M.A. HSG has held the position of research associate and lecturer at ZHAW Zurich University of Applied Sciences, Institute of Marketing Management, since 2012. Her research interests include consumer behaviour, customer experience management & service design, experimental research, preference analyses, and mixed methods research.



Dr Kurt A. Ackermann is a research associate at the Center for Behavioral Marketing within the Institute of Marketing Management at ZHAW School of Management and Law. He has a background in psychology as well as economics and earned his PhD at ETH Zurich in the field of Decision Theory and Behavioural Game Theory. Before he joined the ZHAW he worked as a senior consultant specialised in Behavioural Economics.



Dr Linda Miesler received a diploma in psychology from Humboldt University of Berlin in 2006 and completed her PhD in business administration/marketing at the University of St Gallen in 2011. She is currently senior lecturer in consumer behaviour at the Institute of Natural Resource Sciences (ZHAW). Her research areas are consumer decision making, informational nudging, and behavioural change in the context of sustainability.

Q&A

with Dr Kurt A. Ackermann

The index is currently being tested to see if groups selected using the index are more willing to share their data than random samples. Are there any plans to test the index in other ways – for example, by offering different incentives?

In principle, there are three ways in which the index can be used. First, the index can be used to identify people who are most likely to share their data given a particular scenario (who is asking for the data, what kind of data is asked for, what incentive do you get for sharing your data, etc.).

Second, as these scenario variables are input parameters in the model, it is also possible to use the model to test different specifications of a scenario. For instance, will the proportion of people willing to share their data be higher if you offer incentive A rather than incentive B in a given scenario? Hence, if a company knows what parameter constellation (e.g., what kind of incentive works best given a particular data type) will lead to the highest expected conversion rate, it can react to that and adapt its use case accordingly.

Third, by testing different scenarios for a company of a particular industry, for instance, the most promising parameter constellation can be identified. Hence, the index can also be used for advising firms with respect to designing a use case from scratch.

How well do you think the WTS index will perform in predicting the best possible conditions for consumers sharing their data?

This is a difficult question to answer. We hope, of course, that the index can dramatically improve targeting efficiency and accuracy in identifying best fitting conditions. We performed statistical validation techniques with the experimental data, of course, and the corresponding results are very promising. If, for instance, you select people based on their WTS-index as compared to just drawing a random sample, the proportion of people indeed willing to share their data is twice as high, meaning the targeting efficiency

is doubled. This is a substantial improvement and translates into significant beneficial consequences in monetary terms. We hope, of course, that this lift will be confirmed (or exceeded) when validating the index in the context of a real application in practice.

When conducting the survey you varied the types of industries and incentives, amongst other things. How did you decide on the types of brands and incentives, and how easy will it be to expand the index for new types?

The decision of what parameters to include and to test was a tough one. It was not possible to include any kind of company from any kind of industry, or any kind of incentives theoretically conceivable. Hence, we based the selection on literature research and a review of most commonly encountered application types in recent times.

Expanding the model itself to take further conditions as input is difficult, as the model would have to be fitted to new data again. However, we think that the model has enough input parameters so that even cases that are not represented 1:1 can be evaluated by specifying a scenario that is reasonably close to the one at hand (kind of a proxy-case) so that corresponding results are meaningful and can be used for targeting or adapting certain elements of the use case.

It's clear that many companies stand to benefit from technologies like the index you have created. What benefit, if any, do you see to consumers?

I think the benefit for consumers is at least two-fold. First, concerning targeting, the index is used to address people who are likely to share their data given a particular scenario, which also means that they are likely interested in the corresponding use case. Hence, the

index helps providing people with offerings and opportunities that are likely relevant for them and which they will likely find interesting.

Second, by adapting a use case according to the index, consumers will likely be confronted with a case that fulfils their needs and expectations. That is, the index helps to come up with use cases that provide a real benefit for consumers, in the sense that they are offered the incentives they were looking for and profit from how the data is used by a corresponding company (e.g., when a company uses the data to improve customer experience). In addition, the index intends to benefit consumers insofar as it compensates them for sharing their data, hence it emphasises the value of data.

How do you see WTS indices changing the relationship between companies and consumers?

We think that using the WTS-index is a great opportunity to affect the relationship between companies and consumers in a positive way by ensuring the best possible match between the companies' interests and the consumers' interests. For example, according to the index, we would not advise a bank to ask for medical data and offer cash as an incentive while using the data for selling them to other companies. Scenarios like these would very likely lead to the ringing of alarm bells in the customers' heads and decrease the costumers' trust in such a company. Rather, the index suggests the provision of use cases that are accepted by the consumers and provide them with relevant and attractive services to the benefit of both parties, hence increasing mutual cooperation and trust with beneficial consequences for the relationship between provider and client.

We hope, of course, that the index can dramatically improve targeting efficiency and accuracy in identifying best fitting conditions



Detail

RESEARCH OBJECTIVES

The objectives of the WTS-index research project include: shedding light on the conditions under which consumers are willing to share their data; developing a model that predicts an individual's likelihood of sharing personal data given characteristics of the situation (what data, what company, for what purpose, etc) as well as the corresponding person's characteristics (e.g., sociodemographics); using the model to make predictions and make targeting more efficient (for AZ Direct); using the model to allow AZ Direct to consult other companies on how to design interventions or use cases to maximise conversion

FUNDING

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COLLABORATORS

AZ Direct provides a data-driven multichannel marketing service, connecting 7 million private individuals and 800,000 companies with more than 400,000 contacts. It brings its users into dialogue with customers and potential customers both on and offline.

AZ Direct

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