PERSONAL INFORMATION ECONOMY

Consumers and the evolution of commercial relationships

An Ericsson Consumer Insight Summary Report
February 2013
Introduction

Personal information has been called the “oil” of the 21st century. The digital and mobile revolution has brought unprecedented possibilities of collecting and using consumers’ personal information to develop new personalized services (e.g. Becky’s story above). It has also brought possibilities of monetizing this information, finding new revenue streams and increasing profits. Personal information is the key component in the still evolving Personal Information Economy.

Efforts have been made by businesses, governments and institutions to understand and define the conditions for such a market. These efforts have largely been focused on systemic aspects such as legal rights, technical standards and regulations with regards to the collection, control and use of personal data. There is a corresponding need to broaden and deepen the perspective to also include individual consumers.

How do consumers understand and perceive the value of their personal information? Which are the sensitivity issues and risks involved with an increased use of personal information by enterprises, governments and consumers themselves? The purpose of the study has been to describe consumers’ understanding, needs, behaviors and attitudes with respect to personal information as an asset.
In the history of relationships between consumers and businesses, a vendor’s gathering of information about its customers in order to improve services is far from a novel concept.

Pre-Industrialization
Commercial trade before industrialization was predominantly conducted face-to-face meaning personal information was shared all the time, particularly in reoccurring and tailored services. Over time, the local vendor came to know a customer’s preferences. Hence personal information was gathered, but on a scale limited and comprehensible to those involved.

Industrialization
Industrialization removed the customer from the producer, creating mass markets and economies of scale. The familiar customer became an anonymous consumer. Later in this era, businesses started building brands in an effort to re-connect and create a sense of personalization that had been lost due to the emergence of the mass market and middle men.

Post-Industrialization
The mass-market still prevails, however digitalization has enabled vendors to gain supreme knowledge about the buyers’ individual traits due to their digital footprints and sharing of personal information. In the days of Big Data, the consumer no longer comprehends what is shared, to whom or how it is used. By instead utilizing personal information in a fair manner, the quid-pro-quo logic of pre-industrialization can be re-established.

KEY FINDINGS

> Consumer awareness still low - big data not an issue
Most consumers are aware that their personal information is collected for commercial purposes – more than 50% believe so. But why, how or exactly what it is used for is obscure to most. Sensitivity of personal information should be understood principally from the perspective of the individual consumer and not from a vendor or usage perspective; anonymous big data is rarely perceived as a big issue.

> Value creation over risk prevention
If the consumer can see a clear and desired benefit from sharing personal information, concerns about sensitivity diminish. If the option is between sharing information and gaining something on one hand, and guarding information to avoid risk on the other, many consumers will go for sharing. More than 40% are willing to “trade” personal information for personalization.

> Permission, transparency and value sharing – pre-requisites going forward
Involving consumers by asking for permission increases trust and willingness to share personal information. Transparency improves attitudes towards the commercial applications of personal information. Lack of transparency invariably causes suspicion. Value creation for one party should correspond to value being shared with the other.

> The value of personal information is in relationships
The primary value of personal information will lie in its potential to build strong relationships between consumers and businesses. Used according to consumer praxis, personal information can: improve user experience, increase loyalty and increase sales.
The world is at an inflection point, poised for a significant change in competitive opportunities for nations, business, societies and individuals. This change will lead to the emergence of the Networked Society where everyone and everything will be connected in real time, creating a globally-networked, digitally interconnected environment. Ericsson envisions that by 2020, there will be more than 50 billion connected devices. This means that unprecedented amounts of information will be generated by consumers and their household appliances, cars, mobile phones and other connected devices. Far-reaching technological advancements have enabled vast new opportunities for economic and societal value creation based on this personal information.

Personal information includes a host of different types of facts and data such as digital identity, relationships, preferences, behaviors, health and financial data as well as all the institutional data about us kept by public institutions. This information is sometimes voluntarily shared, other times observed by tracking our behavior or even synthesized by combining different types of data.

Stakeholders in a personal information market
The private sector, governments and public institutions as well as individual consumers are all stakeholders in how personal information is generated, stored and used today. Personal information is used today by private enterprises to develop and improve services and products, create new efficiencies and generate revenue and growth. Companies such as Google and Facebook have business models built around collecting, aggregating, analyzing and monetizing personal information.

For governments and public sector institutions, personal information can and is currently being used to improve public services such as health care, education and public transportation but is also valuable from the perspectives of law enforcement and national security.

Individual consumers are inevitably at the center of this potential common market for personal information. Understanding and adapting to consumers’ needs and behaviors with regards to personal information will be key for any stakeholder wanting to benefit from participation in this market.

A win-win-win situation
The current approach to managing personal information is typically fragmented and inefficient as technologies and laws fall short of providing a supportive infrastructure. A common market for personal information needs to cater to the needs of the private sector, governments and public sector institutions as well as individual consumers. In order to maximize benefits for all stakeholders, mutually supportive incentives need to be established, collective inefficiencies reduced and collective risks need to be addressed.

Pre-requisites for a framework for a sustainable personal information market are listed below.

*Targeted*
*Transparent*
*Technology-neutral*
*Role-specific*
*Flexible*
*Efficient*
*Cross-border tolerant*

THE UNAWARE CONSUMER

The gathering, storage and use of personal information is still an area that is relatively obscure to people in general. There is a basic awareness that personal information is actively or passively shared and that information is gathered by companies, but not to what extent this is happening.

Consumers are most clearly aware of the fact that mobile phone operators and different applications on smartphones are collecting personal information in different ways. On a general level, it is clear that people today view the sharing of personal information as a pre-requisite for participating in society, both socially and commercially.

The average person has difficulty fully understanding exactly how their personal information becomes valuable to companies. Consumers’ general understanding of the personal information value exchange is illustrated in figure 3.

Figure 2: Consumer awareness of personal information gathering

<table>
<thead>
<tr>
<th>Source of Personal Information</th>
<th>I think they use my personal information</th>
<th>I don’t know</th>
<th>I don’t think they use my personal information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies that make apps for smartphones and tablets</td>
<td>39%</td>
<td>39%</td>
<td>21%</td>
</tr>
<tr>
<td>Other IT companies like Yahoo! and Microsoft</td>
<td>41%</td>
<td>38%</td>
<td>21%</td>
</tr>
<tr>
<td>Apple and Google</td>
<td>43%</td>
<td>35%</td>
<td>23%</td>
</tr>
<tr>
<td>Social networking sites like Facebook and LinkedIn</td>
<td>52%</td>
<td>30%</td>
<td>19%</td>
</tr>
<tr>
<td>Mobile phone operators</td>
<td>53%</td>
<td>27%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Source: Ericsson ConsumerLab, Analytical Platform 2012

Figure 3: Consumer understanding of personal information exchange

Commercial application: Advertisements and offers

PERSONAL INFORMATION (obscure when, what and why)

Perceived benefit: Personalized services

Source: Ericsson ConsumerLab: Personal Information Economy study, 2013
If the commercial value of personal information is still essentially an obscure concept to most people, sensitivity is perhaps the more relevant way to relate to personal information. Sensitivity of personal information is highly contextual, but more than anything it is primarily tied to the individual consumer rather than to commercial value.

High sensitivity applies to information that is close at heart, that has the potential to cause harm and in cases of ambiguous information, such as personal photographs. Sensitivity connected with the commercial use of one’s personal information depends in large part on the relationship with the vendor at hand. It is also closely connected to transparency and perceived control, as well as the perceived or offered benefit.

"With a picture, the interpretation is all in the eyes of the beholder. That makes it scary and more sensitive"
— Female, 21, Student, San Francisco

Consumers and Big Data
Consumers clearly show less concern about companies using anonymous information, e.g. how many consumers that buy a certain service or product, rather than identifiable information such as the identity of the buyer.

From a privacy perspective, anonymous Big Data is thus not considered a problem. This does however highlight a continued lack of consumer understanding around the power of data mining. Most consumers give little or no thought to the fact that it is not impossible to reconstruct personally identifiable information from large anonymous data sets.

A clear benefit in the form of discounts or clearly improved user experience positively affects the willingness to share even sensitive information. Consumers are principally inclined to choose participation over isolation, sharing information for different forms of benefits rather than focusing on protecting themselves from risks.

Figure 4: If you were asked to share personal information online and you had no control over who could access or see your personal information, how would you feel about sharing the following information?

<table>
<thead>
<tr>
<th>Information</th>
<th>Feel good about it</th>
<th>Feel bad about it</th>
<th>Indifferent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religious beliefs</td>
<td>41%</td>
<td>48%</td>
<td>11%</td>
</tr>
<tr>
<td>Political views</td>
<td>41%</td>
<td>49%</td>
<td>9%</td>
</tr>
<tr>
<td>Purchase behavior</td>
<td>47%</td>
<td>46%</td>
<td>8%</td>
</tr>
<tr>
<td>Usage of online services and apps</td>
<td>48%</td>
<td>45%</td>
<td>8%</td>
</tr>
<tr>
<td>Internet search and browsing behavior</td>
<td>53%</td>
<td>40%</td>
<td>7%</td>
</tr>
<tr>
<td>Current location</td>
<td>56%</td>
<td>38%</td>
<td>7%</td>
</tr>
<tr>
<td>Medical records</td>
<td>67%</td>
<td>28%</td>
<td>9%</td>
</tr>
<tr>
<td>Information or files stored on your phone</td>
<td>73%</td>
<td>23%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Source: Ericsson ConsumerLab, Analytical Platform 2012
The Rules of Engagement

Consumers’ view on the issue of ownership of personal information and consequent rules for vendors to use that information is flexible and based on the relationship with the vendor at hand.

Clearly, when it comes to personal information generated through a specific service, e.g. viewing habits on video streaming services, consumers grant vendors at least partial ownership of that information. Partial ownership in the sense that it is ok for vendors to use that information to develop and personalize the service and even use it for other commercial purposes such as targeted advertising. But the important requirement is that this is done transparently and with a degree of control on behalf of the user, granting him or her the opportunity to opt in or out of using the service under these conditions. It is apparent that consumers are most willing to accept the collection and use of their personal information in those cases where this is perceived to be done within the confines of a particular service.

Transparency and respect, offering the ability for consumers to opt in or out of a service and returning user value will increase consumer engagement and strengthen the relationship.

“..."It would be great if my refrigerator could tell me what I needed to restock. But if it would tell me what I needed less of, that would be creepy!"
— Female, 23, Student, San Francisco

Figure 5: For what purposes would you allow companies to use your personal information?

- To personalize offers to you: 44%
- To use the information in order to improve their current services or develop new services: 41%
- None of these purposes: 29%
- To personalize advertisements to you: 22%
- To charge you depending on your level of usage of the service: 19%
- To charge everyone individually according to their ability to pay: 13%
- To sell the information to other companies: 5%

Source: Ericsson ConsumerLab, Analytical Platform 2012

More than 40% would allow companies to use their personal information when an offer is personalized to them, to improve current services and develop new ones.
The importance of owning the first consumer interface in order to gather personal information will continue to increase. These interfaces can be smartphones, refrigerators, TVs, PCs, home security systems, dishwashers or different services.

The same branded devices and services can be used by the company to provide customers with recommendations and information based on the personal information gathered.

Examples of such recommendations and targeted offers could include automated suggestions from your refrigerator of which groceries to re-stock, coupled with a discount offer on the same products from a specific store. A company’s share of this eco-system of consumer interfaces will be one crucial factor in building relationships with consumers.

Relevance through reputation
Reputation is a key element of the personal information eco-system - the reputation of companies as well as the reputation of individual consumers. In the coming years, we should expect to see the emergence of new and more practical applications of reputation.
The importance of personal information will remain high – for the private sector, governments and public institutions as well as the individual consumer. With regards to the issue of where control over personal information will reside, the possibilities range between two extremes: consumers controlling all their information and consumers having no control whatsoever. A likely future development will lie somewhere in between.

**NO CONSUMER CONTROL**

Personal information is acquired without the consent of consumers and sold between vendors to maximize profit. The uncontrolled usage of personal information aggravates and causes privacy harm. This might trigger new business opportunities to protect consumer information, e.g. increased usage of VPN-tunnels and similar tools. This extreme will provide no or little value for the consumers who probably will shun many online services.

**MUTUAL UNDERSTANDING AND GAIN**

Personal information is gathered and used with consumer consent, providing value in return. Shared responsibility between all stakeholders including consumers is encouraged through effective and flexible, yet limited legislation protecting the consumer and his or her rights. Successful service providers caring about their reputation will respect consumers’ integrity and handle their information accordingly.

**100% CONSUMER MANAGED**

The individual consumer is in charge of and responsible for their own personal information and can allow or block companies from accessing certain parts of information about them. Inflexible legislation forcing companies to continuously ask for permission to access or use consumers’ information for every single purpose will hamper the development of new services and personal information opportunities for companies. This will also require more consumer effort and knowledge to administer.

Figure 6: A likely future development of control

Source: Ericsson ConsumerLab: Personal Information Economy study, 2013
BUSINESS OPPORTUNITIES TODAY

There are several business opportunities related to the handling of consumers’ personal information. The prime opportunity lies within developing stronger relationships with existing and potential customers.

As already mentioned development of personal information based services and business needs to build on three key components: permission, transparency and value sharing.

– Companies need to acquire and facilitate consumer permission. Enabling consumers to give their permission will be a key factor for companies to build trust.

– Transparency with regards to the collection, storage and use of personal information increases consumers’ willingness to approve of commercial applications. A lack of transparency almost invariably leads to consumers adopting a more hostile attitude towards a vendor.

– Commercial value creation based on personal information needs to be coupled with value creation for the customer in the form of personalization of service, discounts etc.

Potential commercial benefits

Today, companies craft an understanding of markets through consumer segmentation. Going forward, understanding the individual consumer through personal information will be vital to success.

Utilizing personal information to build a stronger relationship with the consumer can improve consumer experience and increase loyalty as well as sales. In short, this recreates the close relationship between seller and buyer from the pre-industrial era as described in page 3.

Improve consumer experience

Whether a one-time only customer or in it for the long run, consumers want a great experience when using a service. Personal information can help companies better understand needs and preferences, usage patterns and habits. It enables personalization of products and services in order to make them more relevant, easier and quicker.

Increase loyalty

One reason for staying in a long-term relationship is the knowledge of the benefits it brings. For operators and other vendors, long-term relationships mean a steady revenue stream and lessened risk of churn. With the use of personal information a service can be more flexible and communication can be more relevant and better support consumer needs.

Increase sales

Knowing the individual consumer and his or her situation at any given time brings about unprecedented opportunities for product and service development. A customer moving to a new address, lacking the high speed fixed broadband he or she had at their previous residence, is likely to want to upgrade to a better mobile broadband.

With access to consumers’ personal information the provider can offer the right products, at the right price, through the right channel at the right time.
EMERGING BUSINESS OPPORTUNITIES

Information gateway
An information gateway could allow consumers to easily manage what personal information is shared and ensure that only selected companies can access and utilize it, preventing irrelevant information and offers. It could also support consumers in opting in and out from different services. Companies could utilize an information gateway to reach their target audience without intruding.

Digital identification
Digital identification is needed in several situations; for public services, for payment services and for personal services like email, social networks, etc.

With an existing physical presence, banks and operators are ideally positioned to offer identification services in the physical world as well as online. Some banks and operators in certain markets are already today offering identification both online and IRL.

Protection and insurance
Who do consumers turn to when exposed to fraud, identity theft, lost information or not being able to opt out of a service? There is an opportunity for offering protection to consumers, including cleanup services, overview of shared information, legal counseling and backup services.

Personal cloud
A personal cloud service is a virtual computer taking on different capabilities as the consumer chooses. It could enable consumers to view, control and manage their personal information, rather than access their information through limited import and export capabilities as in today’s cloud services. Reputation will be a key element in future personal cloud systems. Hence, service providers within this area will be ideally positioned to also offer services within reputation.

Methodology
Personal Information Economy study 2013
6 consumer interviews, 15 student diaries and a workshop in San Francisco
7 experts from the US and Europe
October 2012 - January 2013

US, UK, Germany, Sweden, Italy, Brazil, China, Hong Kong, Japan, South Korea, Australia, India, Indonesia, Russia, Ukraine
>23 000 online interviews, age 15-69 ~1500 per market
May 2012
Ericsson ConsumerLab, Analytical Platform 2012
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