The value of journalistic content for the Google search engine in Switzerland

A behavioral economics approach to ancillary copyright

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This study was carried out by FehrAdvice & Partners AG, an independent research and consulting company on behalf of the SWISS MEDIA publishers' association (VSM). The academic supervisors of the study were Ernst Fehr, Professor of Microeconomics and Experimental Economics at the University of Zurich and Stefano Brusoni, Professor of Technology and Innovation Management at ETH Zurich. The field time of the study ran from 26 January until 8 February, with 1573 respondents in Switzerland representative in terms of gender, age (18-64) and in German-speaking and western Switzerland.

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1 Introduction

Access to high-quality information and news is crucial for a sustainable society and a functioning democracy (The United Nations Correspondents Association, n.d.). Search engines have revolutionised the way in which we gather new information. In being able to find relevant answers to our questions in one place, an entire ecosystem of different stakeholders has developed. In the centre of this ecosystem are the people who have a need for current, **relevant and credible information**, and who access it several times per day. The role of aggregators, such as popular search engines like Google and Bing, is to connect users with the information they seek by bringing together the search and the answer. Meanwhile, content providers, including publishers and media houses, make their content available through these aggregator platforms. Advertising providers, on the other hand, benefit from the increased visibility and attention of users on these platforms. Collectively, these entities form a **dynamic information ecosystem** that can evolve through the continuous interaction of its participants.

In today's digital age, a majority of people use aggregators like Google as their first point of contact with the information ecosystem to search for relevant information. Often, people manage to find the answer to their search query directly on the platform without clicking further on the relevant source of the information (Höppner, 2017). As a result, **a large part of the added value remains in the platforms** and does not lead to the platforms of other stakeholders in the ecosystem. It is conceivable that this would create negative incentives for the production of high-quality journalistic content. This means that the **diversity and quality of reporting could decrease** and the balance of the information ecosystem could be affected, as described by Höppner (2017).

In order to ensure the quality and sustainable existence of this ecosystem, the ecosystem must remain as **robust, productive and innovative as possible** (Iansiti & Richards, 2006). To avoid an **imbalance within the ecosystem, cooperation between the media and platforms that produce, collect and disseminate information** is essential (Donovan & Boyd, 2021). If the balance in the ecosystem is disturbed and the users are no longer drawn in by attractive and quality content, they may switch to other platforms that are better adapted to their needs. It is therefore necessary that the profit generated on the platforms is distributed in a **fair and balanced relationship between all participants in the ecosystem**. This can be done within the framework of a **law on ancillary copyright protection**, as has already been implemented in some other European countries.

For this study, it is therefore crucial to find out whether the information ecosystem is currently balanced. This includes a review of the relationship between aggregation platforms and press publishers, as well as of the possible disadvantage of certain stakeholders in the ecosystem, which could entail the risk of a collapse of the entire ecosystem. It is also important to consider the different **roles and responsibilities of the different stakeholders within the ecosystem**.

This study therefore deals with the core question of **what is important to people** as users of this ecosystem, what value the individual providers in the ecosystem give to each other, but also to the people in Switzerland and **whether there is a balance in this ecosystem**.

2 Derivation of hypotheses

What kinds of searches are there?

The internet offers access to an inexhaustible amount of information and many ways to search and find information. However, there are different types of searches that have different objectives. As the research shows (cf. Broder, 2002; Rose & Levinson, 2004; Jansen, Booth & Spink, 2008), there are three main categories of search queries: **information search, transaction search and navigation search.**

The term "**Information search**" describes a search which is used to find information about a certain topic. For example, a person can look for a recipe for cooking a meal. **Transaction searches** are where people are looking for products and services to buy or simply to use. Typical examples of transaction searches are searches for a hotel room or an airline ticket. The third type of search is the **navigation search**, which is used to find a specific website. Here, the user enters specific words in order to quickly reach the desired page. An example of a navigation search would be to enter "Facebook" in the search engine to access the Facebook website. The distinction between these three types of searches is important because they have different objectives and methods.

The information search often requires **extensive research** and the use of various sources to get a complete answer. The transaction search often requires a quick and accurate search for a specific product or service. The navigation search often requires a detailed knowledge of the website and its functions. Of the categories above, the **information search is given the greatest significance**.

In their book, “Digitale Werbung und das Google Ökosystem” (2022, p. 264 ff.), Prof. Thomas Höppner and Tom Piepenbrock cite statistics showing the proportions of the various types of online searches:

According to these surveys, around 55% (between 50-60%) of internet searches are information searches. Some studies, such as Rose and Levinson (2004), even estimate that more than **80% of web requests are informative in nature**, with about **10% being navigation-related and 10% transaction-related**.

This indicates that the internet is considered by many people to be an essential source of information and a technical medium for obtaining information. Despite the social network boom and the discovery of the entertainment and social uses of the internet, the primary importance of the **internet as an information ecosystem** will remain (Schweiger, 2010).

What is important to people when looking for information (and more specifically for news)?

When searching for up-to-date information, people usually prefer a **convenient and time-saving method**. Aggregation platforms, such as search engines or news aggregators, offer a practical solution for this. According to Ofcom’s 2022 discussion document, **convenience** is a key factor in the use of such platforms (Ofcom, 2022). Users want **a quick and reliable overview of the desired information to save time and effort** (Höppner, 2017).

People tend to use sources that **they can trust**, because they provide them with the latest news in a clear and concise format. When using aggregation platforms such as Google to search for information, users rely on the search engine to sort and display the results according to their relevance. This trust in news portals or aggregators to curate content **saves the users the cognitive effort**.

Trust is therefore a critical factor in reducing the time and effort involved in finding relevant information, and is an important aspect of information gathering (American Press Institute, 2016).

Results from the research show that besides trust, the **quality and accuracy** of the content play an important role in a search. Around 85% of people consider it extremely or very important that the news they receive **correctly reflects the facts**. In addition, **three quarters of adults** consider it critical that the information helps them stay **up-to-date** with the latest news (American Press Institute, 2016).

Furthermore, about 72% of people value news that is concise and provides orientation. They prefer messages that are easy to **navigate and use** (American Press Institute, 2016). People are therefore looking for orientation. In the digital news environment, they want to find the right piece of information that provides them with this orientation, because they can only process a certain amount of information at once. (Eppler & Mengis, 2004).

77% of people say that **completeness**, that is, the fact that all important news and facts are included, is very important for them (American Press Institute, 2016). As research shows, news aggregators are able to present information in the form of headlines, images and short texts that enable users to **perceive it as complete** (Engelmann et al. 2021).

A large majority say that **transparency and independence** are important factors. This includes the organisation explaining how they came to the news. Research findings have shown that people may want to examine several sources to confirm whether the information is factual and verified (American Press Institute, 2016).

In summary, the **quality, relevance and up-to-dateness of information are of crucial importance to internet users in a search**. Other important factors are how **quick and easy** it is to find relevant information, as well as the **user-friendly and clear** presentation of the search results. The trustworthiness of the information sources is also crucial for this. The first hypothesis to be tested in this study is therefore:

When searching for information, people are concerned with the quality, completeness, trust, independence, up-to-dateness & orientation.

How is the "information ecosystem" structured?

In recent years, a **diverse ecosystem** of numerous stakeholders, providers and platforms has developed, which is tailored to the above **needs of users when searching for information (news)**. In the ecosystem, there are users who have a need for information and are actively searching for and sharing or commenting on it. There are also content providers that produce and publish content, and aggregators and gateways, such as search engines, which collect and structure that content. Advertising partners also play an important role by providing money to support the production and dissemination of information. **Together, these members form a complex information ecosystem that constantly evolves and adapts to the needs and expectations of users and society**.

The rapid development of technology plays a central role in the **further development of the information ecosystem**. Due to the rapid technological development, the digital world has become very important in almost all sectors.

Digital platforms in particular also play an important role in promoting competition and innovation in the information ecosystem (Ozalp et al. 2022). In Switzerland, digital channels are an important source of information for around **half of the population** (fög, 2022).

In a diverse information ecosystem, the **constellation of stakeholders and their content leads to positive network effects**, in which the value of an ecosystem increases as more users log in and use it. A well-known example of positive network effects is the social network Facebook. The more users Facebook has, the more advantages it offers, such as a greater variety of content, more interaction possibilities, and a greater reach for shared posts. In addition, the network is more attractive to companies because it can reach a larger target group. These advantages attract more users who make the network more valuable, which can lead to exponential growth. **Network effects create incentives for existing users** to stay on the platform as the value increases with the size of the user base. However, for the ecosystem to function, a balance must be struck which provides **incentives and opportunities for all stakeholders to be and to remain part of the ecosystem** (Ozalp et al. 2022).

What role do search engines such as Google play in this information ecosystem?

In this context, platforms such as Google have emerged as key players, enabling consumers in the ecosystem to **access a large variety of content** (Camacho et al., 2019), by collecting and presenting the news content in compressed form in their own locations (Ofcom, 2022). In the digital age, they play an important role in the information ecosystem and, as online intermediaries, take care of the **distribution of news content from the news creators and producers to their audience** (Ofcom, 2022). There are three main types of online intermediaries:

Search engines such as Google or Bing that help users to find content from available websites; **social media platforms** such as Facebook or Twitter, on which end users can create and share information and interact with content; and **news aggregators**, such as Apple News, that collect news content from multiple sources (Ofcom, 2022). The focus of this study is on the first type of online intermediaries: **the search engines**. These help the user to find relevant information in a clear place in this ecosystem. They connect information seekers with relevant content and offer media publishers the chance of visibility and via the links from their websites, they also offer the possibility of monetisation through advertising or paid content.

Recent studies suggest that **90% of people search for information via search engines** on the internet (Pew Research Centre, 2012). A high proportion of people start and stop searching for information on Google and **do not click on linked webpages from content providers such as the media**. A snippet is an example of a search engine function used by Google and other search engines to give users in search results a short summary of the content of a website. As a result, uses can **see the search results directly in the search engine results** without having to click on another website. This practice is referred to as “zero-click search”, because the required information is displayed directly on the Google search results page and the user does not have to make any additional clicks on an external website (Ye et al., 2022).

The second hypothesis that we tested in our experiment is this:

A large proportion of people in Switzerland are informed about current topics via Google, and then remain in the Google ecosystem because the answer can be found there directly.

What role does the media play in this information ecosystem?

The **content creators** play a major role in information ecosystems, because without them there would be no information that a search engine can provide. Media companies, journalists and other content providers produce a wide range of high-quality content and ensure that the **public gets correct and trustworthy information**. They play an important role in maintaining a diverse and informed society. Through their **independent reporting and opinion formation**, they make an important contribution to the information ecosystem – and thus to the protection of freedom of expression and democracy (The United Nations Correspondents Association, n.d.)

Users appreciate the qualities of journalistic content. According to a study by the Reuters Institute, 45% of Swiss people want to stay up-to-date on news because it has personal relevance, and 39% see a possibility of learning new things when consuming news (Newman et al., 2021). In another study by the Reuters Institute, a "trust gap" can even be identified: people's trust in news on platforms such as Google or Facebook is lower than trust in news in general (Mont'Alverne et al., 2022). **It is thus to be expected that the high level of trust that people have in news has a positive effect on trust in Google as a platform and thus creates an advantage for Google.**

But it is not merely the content of the media, but also its methods which create value for the information ecosystem. In particular, the method of the "inverted pyramid" in journalism proves to be extremely advantageous for users as well as search engines within this ecosystem. Here, the most important part of the story, particularly the title and the lead, is presented first, followed by less important details and background information (Pöttker, 2003). The "inverted pyramid" means that the essential parts of the story can be read right at the beginning, which allows search engines to use this structure and to present all relevant information in the displayed "snippets" of the search results (Giomelakis & Veglis, 2015).

This helps to ensure that users no longer have to click on the original source to obtain the required information – a zero-click search (Ye et al., 2022). Users thus appreciate the availability of journalistic content and therefore also use an ecosystem in which this content is contained. The third hypothesis we are pursuing in our experiment is this:

Journalistic content contributes to the attractiveness of Google, as it makes Google more valuable, more credible and more complete.
As a result: people choose to have a Google with journalistic content.

How can this ecosystem evolve?

As mentioned above, Google and the media play a central role together in the ecosystem. However, in order for the ecosystem to function sustainably, a balance must lie in the added value that benefits all stakeholders in the ecosystem (Ozalp et al., 2022). In order to achieve a successful **long-term and sustainable cooperation** of all stakeholders in the ecosystem, a balance is needed between competition among the participants in the ecosystem (Bhargava et al. 2022).

Digital platforms like Google are able to achieve power and scale through network effects by connecting producers and consumers. Google benefits from network effects by attracting more users and advertisers to its platform, which in turn increases the supply and demand, and sets a positive cycle in motion. The more users that use Google, the more data it can collect and analyse to improve its search results and advertising campaigns. This in turn leads to a better experience for users and a higher ROI for advertisers, which in turn attracts more users and advertisers and strengthens the cycle.

While the platforms, such as Google, frequently use a kind of (linear) revenue sharing model with a standardised commission rate to promote the involvement of producers of different sizes (e.g. media) (Bhargava et al. 2022), the question arises whether these companies return to their users and partners the same value that they derive from the analysis and use of data for their profits. The question remains whether big-tech companies can achieve a sustainable balance between their own profit and the benefit for others (Ozalp et al. 2022). As Bhargava et al. (2022) demonstrate, in the current constellation, the platforms in particular benefit. Technology companies operating in the information ecosystem can create added value by collecting and analysing data and by providing data infrastructure services. However, when large technology companies such as Google or Facebook gain access to this data, they can gain a competitive advantage over others in the ecosystem and become very influential in industries such as advertising or retail where they can use the acquired data (Ozalp et al. 2022).

It is important to note that control over data and content can also lead to the ecosystem becoming increasingly **out of balance**. A supremacy of big tech companies could lead to smaller media companies having difficulties in the future to be present on the platform and thus not be able to generate user loyalty and satisfaction. However, when more and more media companies hide their content behind payment barriers or withdraw from platforms, this can lead to a loss of diversity and quality of reporting (Höppner 2017), and at the same time change the behaviour of users when searching for information, but also have negative consequences for Google. **When the ecosystem is out of balance and there is no more attractive content for users, they may migrate to other platforms that are better suited to their needs.**

It is therefore crucial that the platforms ensure fair and equitable treatment of all participants in the ecosystem and create a balance between their own profits and the benefits for others. To keep pace with the ever-increasing innovations in the information ecosystem and with the arrival of new players such as ChatGPT, it is also crucial that the balance and stability are maintained. Another hypothesis tested in the present study is therefore:

When the ecosystem is out of balance, people leave it and look for better alternatives.

3 Empirical approach

The focus of the study is on the **search behaviour of Swiss people** searching for information online. The search behaviour refers to **cutting-edge topics from January 2023** and was presented in the form of realistic Google searches where participants felt like they were actually using Google and seeing search results, with the aim of gaining insights into how people search for information online and use the Google search engine.

The online experiment as the method of choice

The experiment was implemented in an online environment which, compared to conventional surveys and focus group discussions, not only captures the opinions of the participants, but also their **behaviour in decision situations**.

In Figure 1, classical surveys are compared with innovative online experiments on the axes of complexity and precision. In spite of the high degree of complexity required for online experiments, the expected results can be justified by the high degree of precision of the data. To ensure the validity of the results, a **real-life environment** is created and the experiment is designed to be entertaining in order to increase the motivation of participants. In this way, decision situations can be made realistic so that the answers serve as a valid indicator of actual behaviour. Furthermore, implicit association tests are also used in the experiment (Greenwald et al. 1998).

Where classical surveys often only capture so-called stated preferences, i.e. preferences chosen by people in hypothetical scenarios, experiments designed to resemble real-life conditions lay bare the so-called *revealed preferences*. These are a precise indicator of the actual behaviour of the participants, which can be observed in reality.

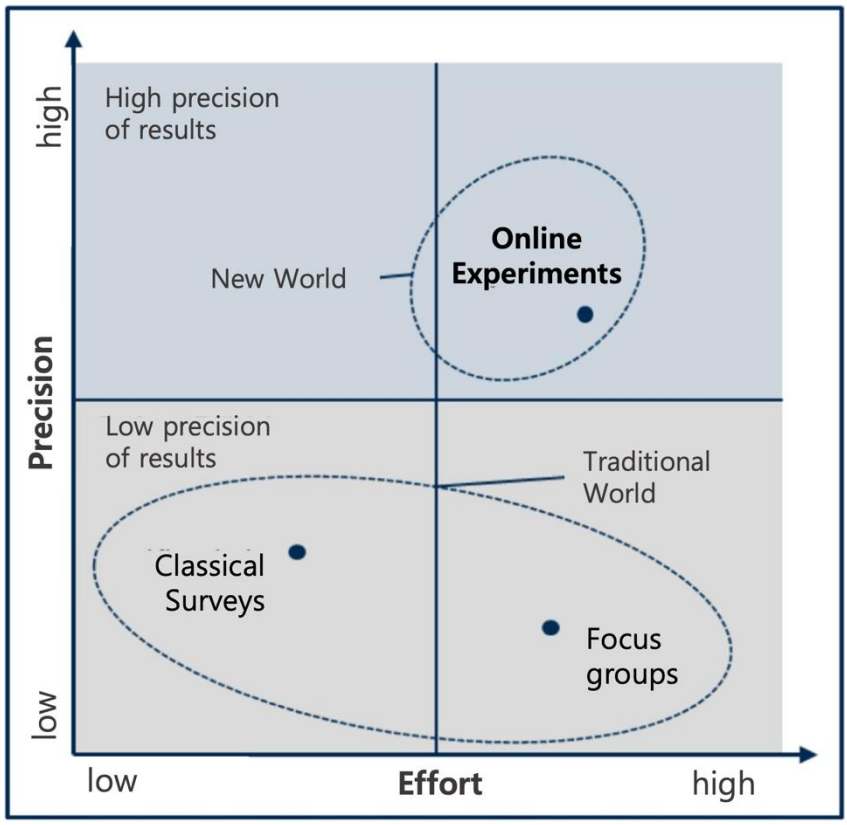

Figure 1 shows the comparison between traditional surveys and modern online experiments based on complexity and precision. Online experiments are more complex, but deliver more accurate results, while traditional surveys are less complex but also less precise.

Structure of the experiment

In the context of this study, the participants underwent an online experiment in which they experienced everyday situations on the computer and had to make decisions during an information search on Google. The users were assigned to one of three thematic groups – **society, politics and the economy** – based on their interests, which they were asked about at the beginning of the experiment. The participants were instructed to search for up-to-date information in a realistic everyday scenario. The division in the experiment is illustrated in the following figure:

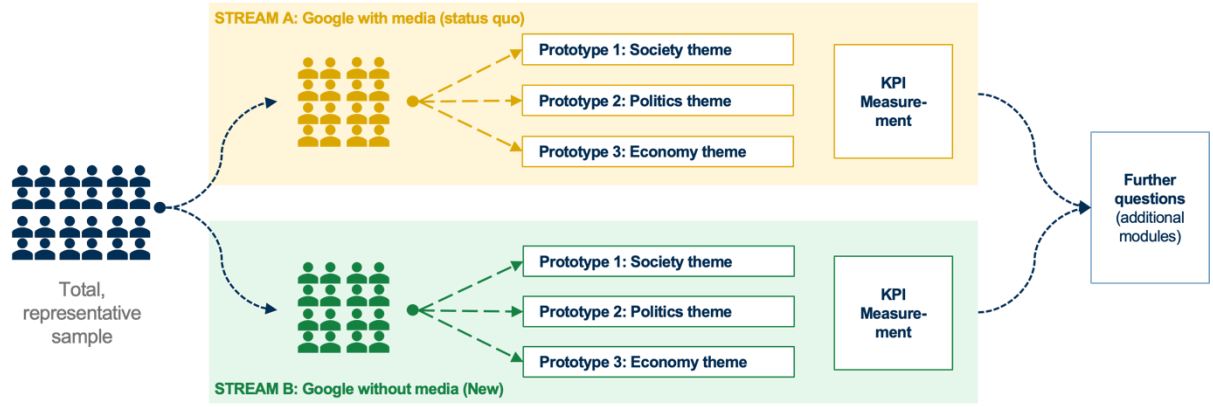

Figure 2: Basic structure of the experiment

The design of the experiment is a **between-subject concept**, where participants are randomly assigned to one of two groups: the "**Google WITH journalistic content**" group or the "**Google WITHOUT journalistic content**" group. Each group experiences a different version of the search engine, with one group seeing search results with journalistic content (e.g. snippets of online newspapers) as normal, and the other group seeing search results without journalistic content. This approach ensures that any perceived differences in perception of behaviour can be attributed to the embedding of journalistic content, rather than to other factors such as individual differences between participants.

A detailed look into the course of the experiment

The process is shown schematically in the figure below:

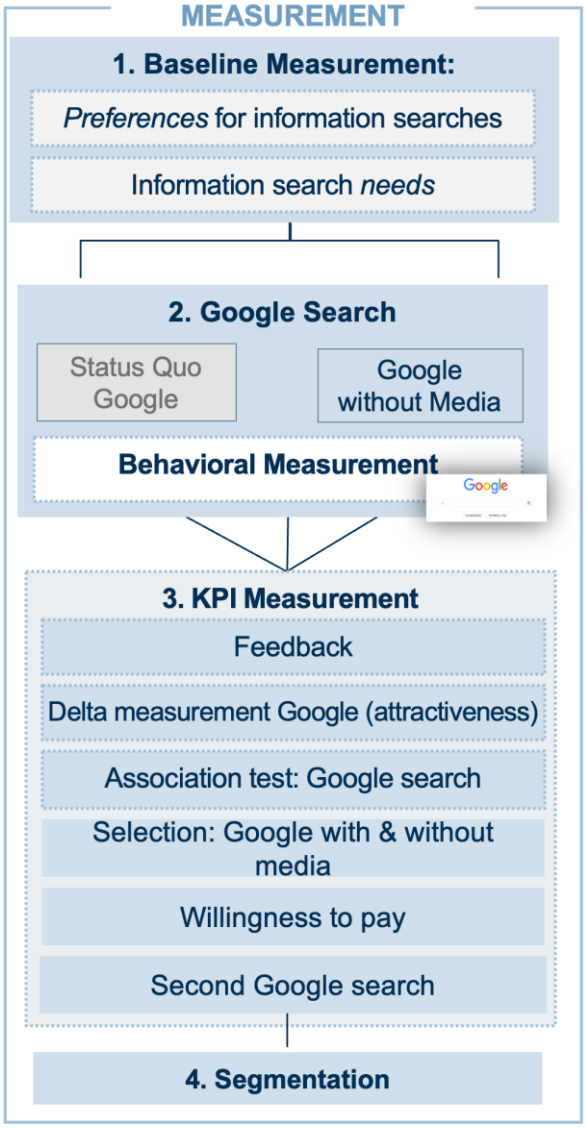

Figure 3: Flow of the experiment

1. Baseline measurement

At the start of the experiment, the users are asked how they usually **search for information** and which topics they prefer to research. In addition, the factors that are **relevant to them** when they search for information are also recorded.

2. Google search

During the experiment, the participants are placed in a realistic situation and asked to search for **relevant and current information** on a specific topic.

In order for the experiment results to reflect behaviour that is as real as possible, it was necessary to define search terms that exceed a certain relevance threshold among the Swiss population. Therefore, the selected search results should, as far as possible, **arouse the interest of the population**, **be up-to-date**, and also **relate to Switzerland**.

An introductory question in the experiment ensured that the participants were each assigned a **search term for a topic** they were **actually interested in** (the participants were able to select which of the three topics: politics, the economy and society, that they were most interested in and were given the respective search term on the basis of this answer). The search terms were then selected on the basis of various internet sources including Google Trends, which emphasised the relevance of the three search terms. In this way, it was possible to ensure that these are the topics on which people in Switzerland actually wish to obtain information.

In order to search for information, the participants see search results in the Google search engine, which they can search by clicking and scrolling. They can click on various terms in the search results list, such as media articles, social media posts, other websites such as Wikipedia, or items within the Google ecosystem (such as Google Images). The users can freely choose how they wish to proceed in order to carry out their information search. If they have already found an answer to the question by looking at the search results, they can also state this and stop the search without clicking on a website. In this essential part of the experiment, the behaviour and the decision is measured whether the way the search is presented to others (i.e. WITH or WITHOUT journalistic content) causes them to stay in the Google ecosystem or whether they decide to visit other websites.

How were the searches and answers put together? The searches shown in the online experiment are the results of real Google searches. Screenshots of the following search terms were taken very promptly before the start:

- Politics: “Swiss National Bank loss”
- Economy: “Credit Suisse crisis”
- Society: “Marco Odermatt”

The search topics were particularly timely relevant to the whole Switzerland at the time of the experiment. To include the screenshots of the relevant search results, the following settings were checked to ensure consistency:

- Search on: www.google.ch
- Location of the IP address from which to search: Zurich, Switzerland
- Country selection for search results: Switzerland
- **Language: German** or French (depending on the language version of the experiment)
- Browser: in private mode, with deleted cookies and cleared cache
- Search results per page: 10
- Personalisation of search results: no
- Log-in status for online services such as Google: no

These settings were selected for both desktop and mobile results. Suggestions for similar or other relevant search terms have been removed from all search results. Google generates these automatically and inserts them between the generic search results. However, it was not the focus of this experiment to measure the refinement or “drift” of the users during searches. Instead, it was a question of whether users can find an answer to their search query and whether they click on other links to do so. If the links to similar searches had been included in the treatments, we can assume that the proportion of people who stay in the Google ecosystem when searching would be **even higher**.

How were search results without journalistic content generated from the real Google search results which contained journalistic content? The results that were classified as media content were removed from the first search page. This resulted in gaps in the search results, for example, 6 out of 10 search results were missing from the first page. These gaps were then filled with results which cannot be classified as journalistic content, taken from the pages to follow, until the 10 search results on the first page were “filled” again. The order of the search results was strictly adhered to, since Google is known to rank search results according to criteria such as up-to-dateness and relevance, among other things.

How were the results from media defined as journalistic content? The decisive criterion for this definition was whether the **publishers of the content or operators of the website are a media company and also use the website as a channel for current content**. The following are sufficient conditions for a website to be counted as media content:

- The website is the digital channel of an existing analogue medium (e.g. Neue Zürcher Zeitung or Swissinfo)
- The contents of the website are created by a journalistic editorial team (and this is also indicated on the website, in the legal notice, for example).
- The content is mostly “news”, i.e. information with an up-to-dateness value. For example, an edited, digital photo wall with artistic photographs without any reference to current (global) events would not be media content in the sense of this study. The crucial question here is whether the content would lose relevance over time or not.

It was not decisive for the identification of media content, for example, whether the content is actively marketed on the website (e.g. via advertising or a paywall) or is available free of charge, whether the publishers or owners are based in Switzerland or abroad, exactly how the domain is and which “top level” it uses (.ch, .tv, .fm, .info, .com etc.), whether the website provides other services in addition to media content (e.g. a product comparison search function).

The treatments were thus compiled for three search topics (politics, economy, society), two languages (German, French), two device types (desktop, mobile), and two conditions (WITH media, WITHOUT media). In the experiment, users see the first page of the search results. For this, the assignment of the condition is chosen randomly (WITH media, WITHOUT media). All other parameters are “endogenous”, i.e. they are either actively selected by the participants (such as the language or the search topic) or determined from via the device which they are using to participate in the experiment (desktop, mobile).

3. KPI measurement

In the following part of the experiment, various variables were recorded which can better represent the behaviour and preferences of the participants.
First, we ask for **general feedback** on the search, to find out which version of Google is better for the participants. Subsequently, the **delta attractiveness** is measured as a proxy for how the version of Google viewed by the participants was perceived. Various aspects are compared, such as the general popularity, the completeness of the information, the credibility and the perceived quality. This examines whether there are differences between Google with and without media. The FehrAdvice & Partners Identity Study (2021) highlights three key aspects of why measuring attractiveness (identification with the company) is of central importance for companies today: a higher degree of identity (attractiveness) leads to lower price sensitivity and increases the loyalty of customers, customers spread the identity of the company to the outside world and thereby act as ambassadors for the brand and, especially in a dynamic and digitised world, customer identity is a central success factor.

Traditional survey methods such as questionnaires fail to capture implicit preferences (Brunnel et al., 2004, cited in Niemand et al., 2014). In order to reveal the implicit attitudes concealed from the classical survey methods, the method of the implicit association test (IAT) is largely used in research. (Hofmann et al., 2005 cited in Niemand et al., 2014). With the aid of predetermined assignment tasks, the IAT measures the reaction times of the subjects (Niemand et al., 2014). The association test measures the participants' beliefs about how well Google meets their needs when searching for information.

Furthermore, in order to capture the preferences between Google with media and Google without media, participants are asked to choose their preferred option (Google with vs. Google without media). Likewise, their hypothetical willingness to pay is measured for both versions of Google (they can freely specify what amount they would be willing to pay). Finally, participants are asked to imagine that they need to find information on an additional topic. This is a measure of how they would choose in an **information search in the future**.

4. Segmentation

A renowned external panel ensures that the population in Switzerland (German-speaking Switzerland and western Switzerland) is represented. Other than the representation of the Swiss population, there were no additional requirements for the sample. At the end of the survey, additional segmentation variables are queried, such as media usage or the use of different channels for message consumption. The specific questions and visualisation can be looked up in the appendix.

Characterisation of the experiment participants

The online experiment involved **1,573 participants**. The gender distribution was balanced with 50.2% female and 49.8% male participants. The age of the majority of the subjects was between 20 and 60 years (cf. Fig. 5).

With approximately 30% of the participants, the largest age group consists of persons aged between 30-39 years (474 persons), followed by the group consisting of subjects aged between 40-49 years with approximately 26% of all participants (407 persons). In addition, 254 persons (16.2%) aged between 20-29 years and 217 persons (13.8%) aged between 50-59 years participated in the online experiment.

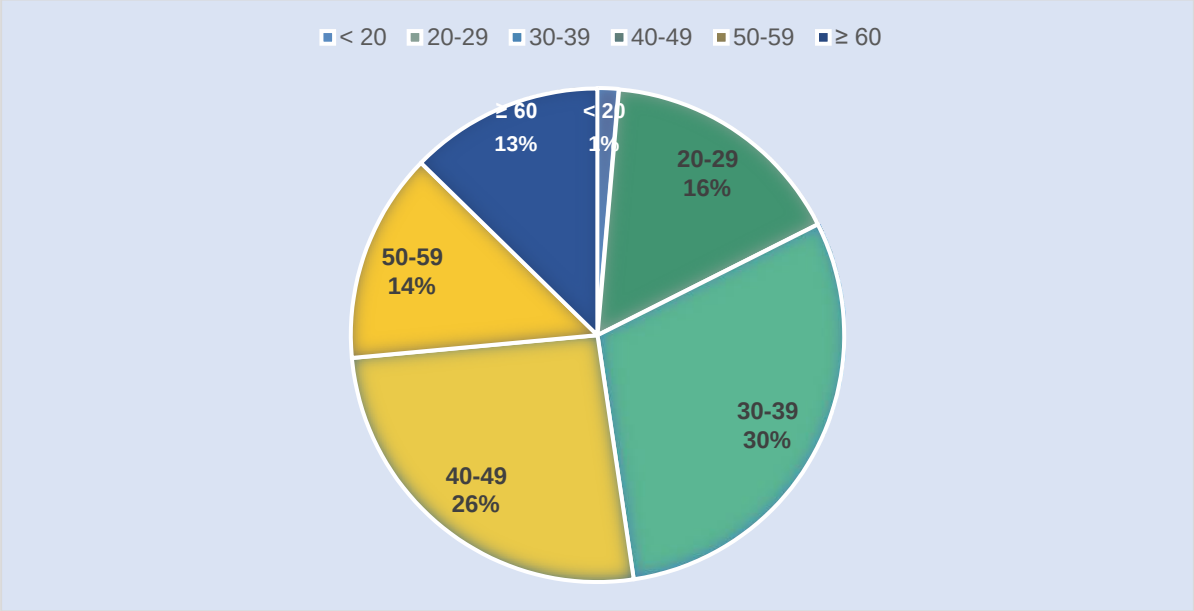

Figure 4: Age distribution in the online experiment

In total, approx. 78% (1224 persons) of the participants are resident in German-speaking Switzerland, while the remaining 22% (349 persons) reside in western Switzerland.

In terms of education, the majority (663 persons; 42.2%) of the participants of the online experiment have completed a vocational apprenticeship. At approximately 34.5% of all participants, the second largest group have university or technical college degrees, followed by those with a completed Matura, or higher education entrance qualification (138 persons; 8.8%). In addition, the sample consisted of participants with primary or secondary school leaving certificates (196 persons; 12.4%) and a few people with a different degree, or no degree (34 persons, 2.2%).

Income figures indicate a uniform distribution with a slight skew to the right. The majority of persons (58.4%) are on the interval of CHF 15-90 annual income, while approximately one in five persons has an annual income of over CHF 90k.

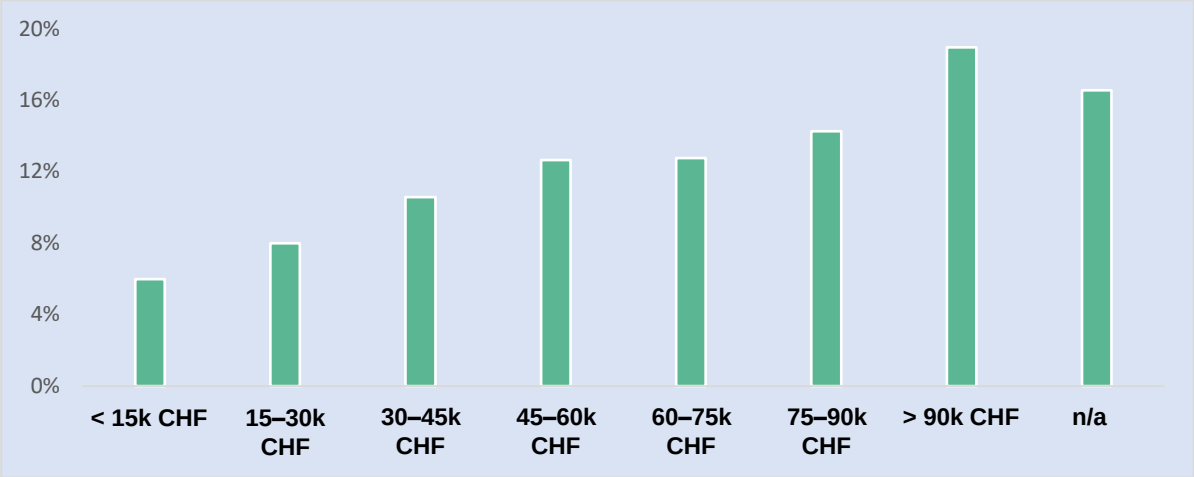

Figure 5: Distribution of income

A look at the media consumption of the experiment participants highlights the omnipresence of media contributions in the everyday life of people. Around four out of five participants (1250 persons; 79.5%) obtain information about current events daily or even several times per day using various channels. Only around one in 30 people (50 people; 3.2%) reported that they consume media less than once per week.

4 Testing the hypothesis

4.1 What is going on when people are looking for up-to-date information?

"When searching for information, people are concerned with the quality, completeness, trust, independence, topicality & orientation."

The results of our experimental study show that the Swiss population has high demands on the results of an information search. For **over 90% of respondents**, it is important that the information they are looking for is complete, of high quality and objective. 96% of respondents also emphasise the importance of having confidence in search results. The vast majority also want the search results to reflect current events (92%) as well as easily understandable information (89%).

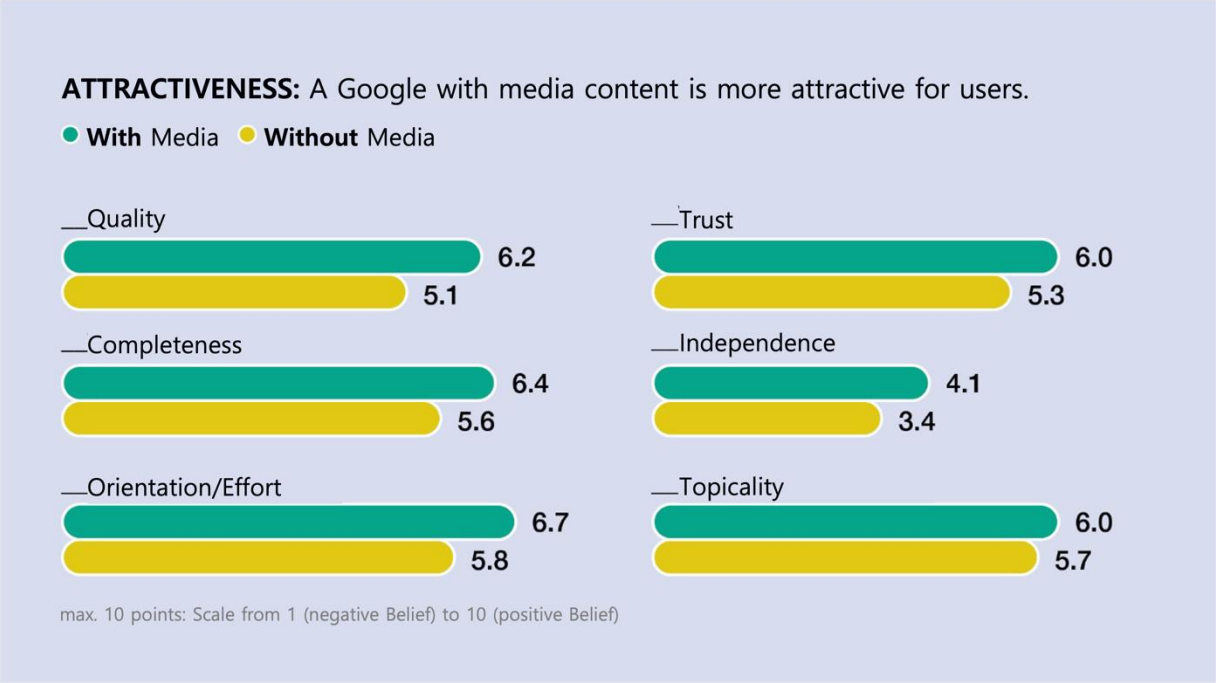

Figure 6: Attractiveness WITH and WITHOUT journalistic content

The fact that all aspects (quality, trust, completeness, independence, topicality and orientation) were considered important by the vast majority of participants underlines the complexity of the information needs of the people of Switzerland. It is therefore of great importance that the **search experience can meet these needs** and that high-quality, trustworthy, and relevant information is provided.

Thus, the hypothesis that people want quality, completeness, trust, independence, topicality, and orientation when searching for information can be confirmed.

4.2 How does Google benefit from the current media integration?

"A large proportion of people in Switzerland are informed about current topics via Google, and then remain in the Google ecosystem because the answer can be found there directly."

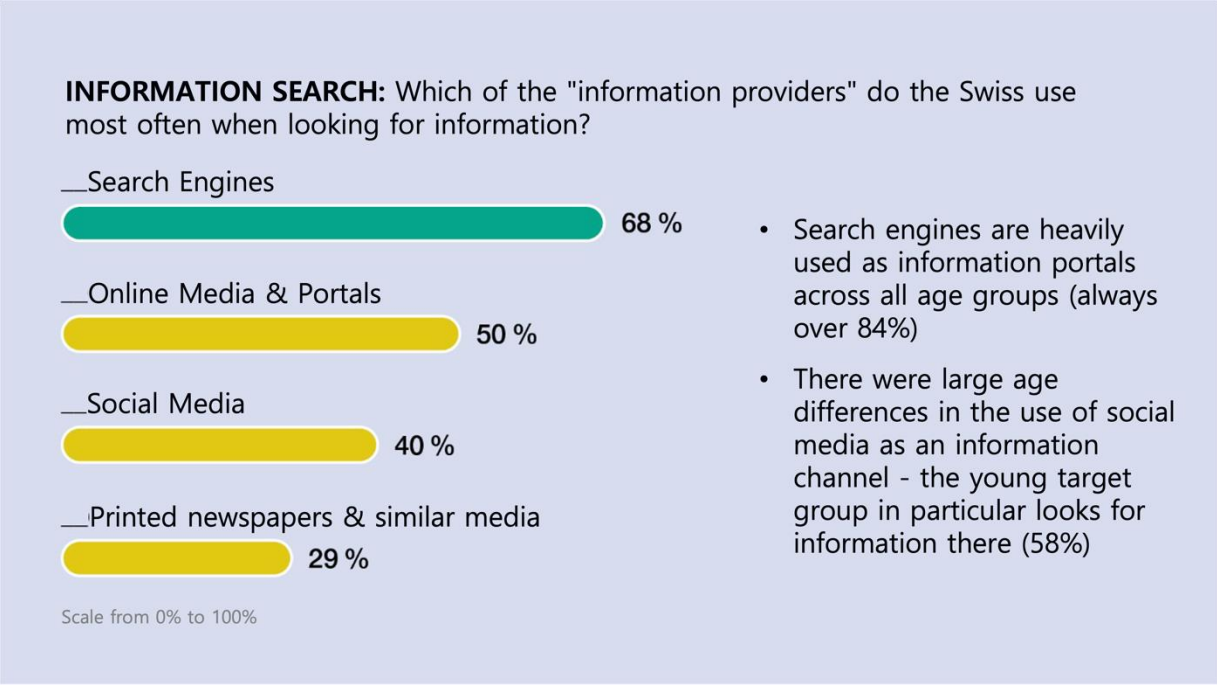

Figure 7: Sources for the information search

The results of the experiment show that search engines like **Google are by far the most used sources of information**. More than 86% of the participants use search engines, followed by online media and portals with a usage of 50%, social media is used by 40% of participants, while print newspapers and similar media are used by only 29% of participants to search for information.

The results show that **digital information sources**, especially search engines, are of great importance in Switzerland. Interestingly, search engines rank first across all age groups, while social media is a source of information with even greater differences between age groups (though generally at a lower level).

Overall, it can be concluded that the first part of the hypothesis, according to which a large proportion of people in Switzerland are informed about current topics on Google, was confirmed by the results of the experiment. In addition, the results suggest that digital information sources are generally preferred.

Does the majority also remain on Google when searching for information there?

Overall, we see in our experiment that the **majority (53%) remains** with Google when they go on a realistic Google search for information. This means that most people, after seeing the search results, leave the search (a so-called “zero-click search”) or continue to click on a Google product (such as Google Images).

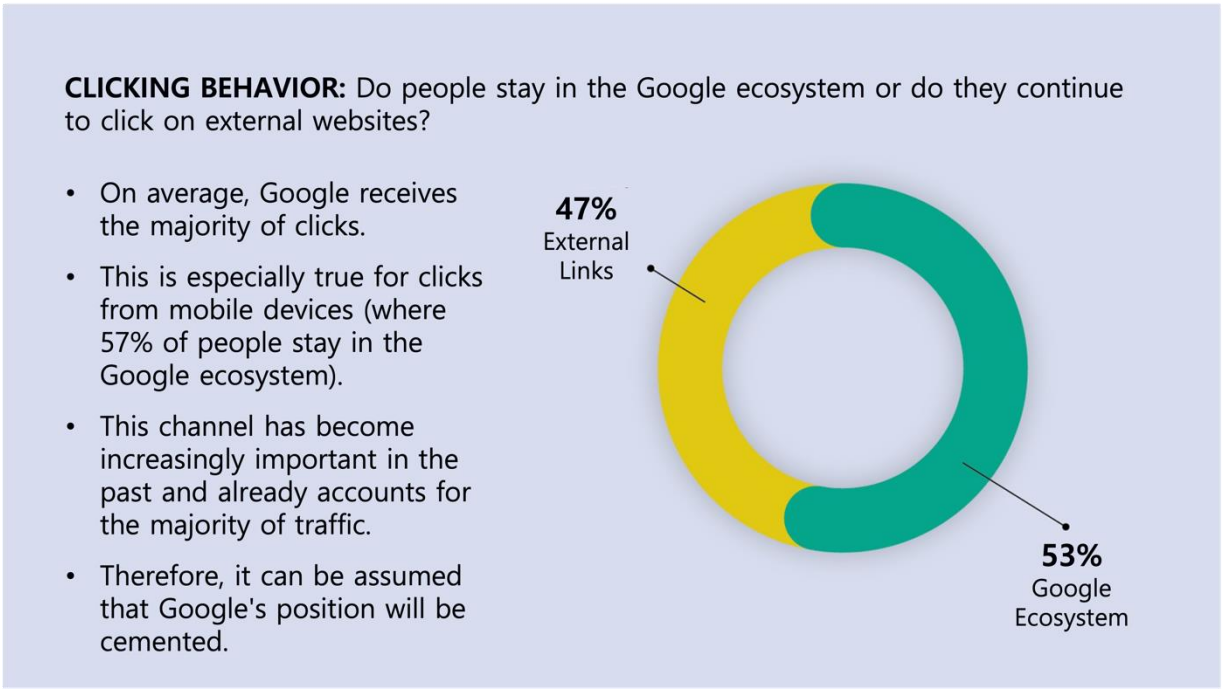

Figure 8: Google ecosystem and external links

Here, there is a focus on the increasingly important target group of mobile users. Google itself already changed its search engine indexing to “mobile first”.

This means that Google now uses the mobile version of a website as the primary source for indexing, which highlights the value of mobile users (Google n.d.).

The data from our experiment clearly proves that mobile users are increasingly staying with Google (“zero clicks” or clicking on a Google product). 57% of mobile users remain with Google, while 46% of desktop users remain with Google. Given the increasing importance of mobile users, it is likely that the number of people who stay with Google will continue to increase and thus the position of Google will be further strengthened.

It should therefore be noted that the majority of users stay with Google and do not click on external links, such as newspaper media or other sources. This becomes particularly clear in the increasingly important channel of mobile devices.

Thus, the second part of the hypothesis can also be confirmed, since a large proportion of the users remain in the Google ecosystem or "zero clicks", especially on mobile devices.

4.3 Do people stay with Google when journalistic content is no longer integrated?

"Journalistic content contributes to the attractiveness of Google, as it makes Google more valuable, more credible and more complete. As a result: people choose to have Google with journalistic content."

These characteristics (quality, credibility, completeness, independence, etc.) are particularly important for people with approval rates above 90% when searching for information. Therefore, the question arises whether the inclusion of journalistic content in the search results strengthens the perception of these positive characteristics of Google. In order to test this hypothesis, the data of the participants in the experiment who have seen Google WITH journalistic content (such as snippets from online newspapers) are compared with the data of the participants who have only seen Google WITHOUT journalistic content.

The results show that participants who saw Google with media are more satisfied and have a higher success rate in their Google search.

The satisfaction score shows a significant difference between groups: with journalistic content, the participants rated the search results with an average of 4.1 of 5 points, while the rating without journalistic content was only 3.9 points, which corresponds to a difference of 0.2 points.

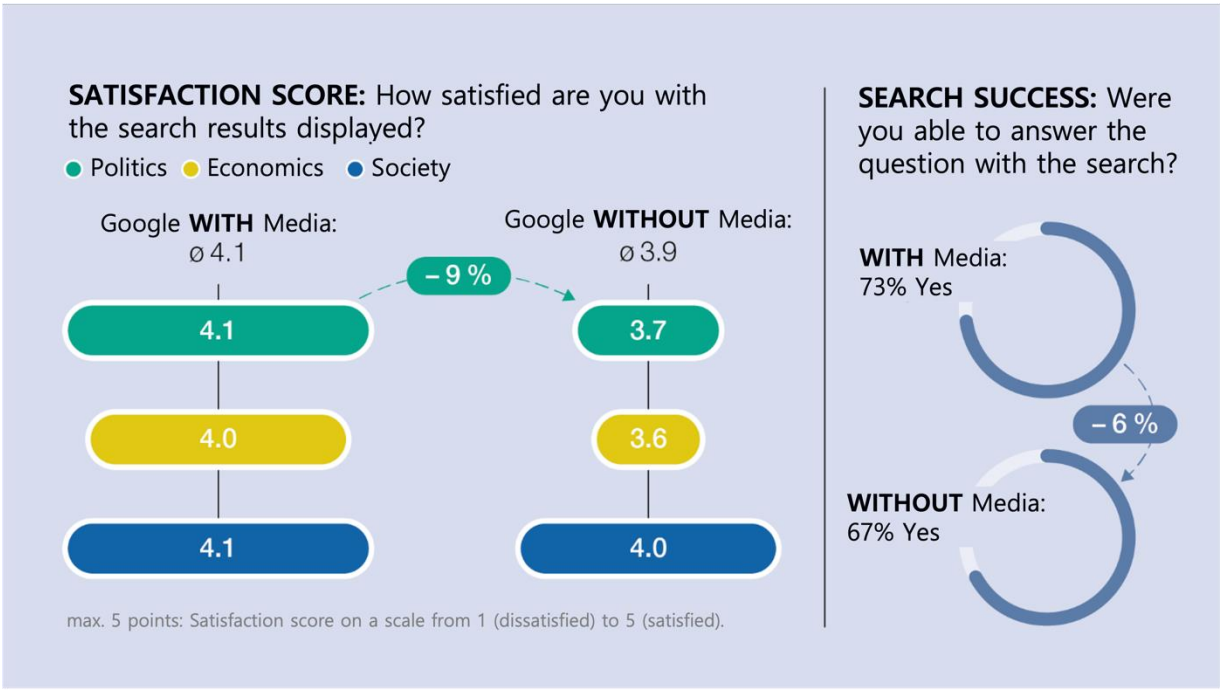

Figure 9: Satisfaction score

There is also a significant difference in search success: while 73% of people who saw Google with journalistic content were able to answer their query, only 67% of those who saw a version of Google without journalistic content were in favour.

The integration of journalistic content into the search results makes Google more attractive, more credible, more high quality and more complete for Swiss citizens throughout – albeit on a smaller scale. The beliefs of the people regarding the criteria quality, completeness, orientation/complexity, independence and up-to-dateness regarding Google with media were consistently better than regarding Google without media. **The results thus confirm the first part of the hypothesis that journalistic content contributes to the attractiveness of the Google search engine.**

But how do people decide when they have an explicit choice?

In order to answer this question, the participants of the experiment were able to make an explicit choice between a Google search engine with journalistic content and one without journalistic content.

This showed a clear preference for a version of Google with journalistic content: 70% of the respondents opt for journalistic content in their search engine. Only those in the segment of people who generally consume less media prefer Google without journalistic content. This result is not surprising, as participants who generally consume little or no journalistic content do not expect it in their Google search results.

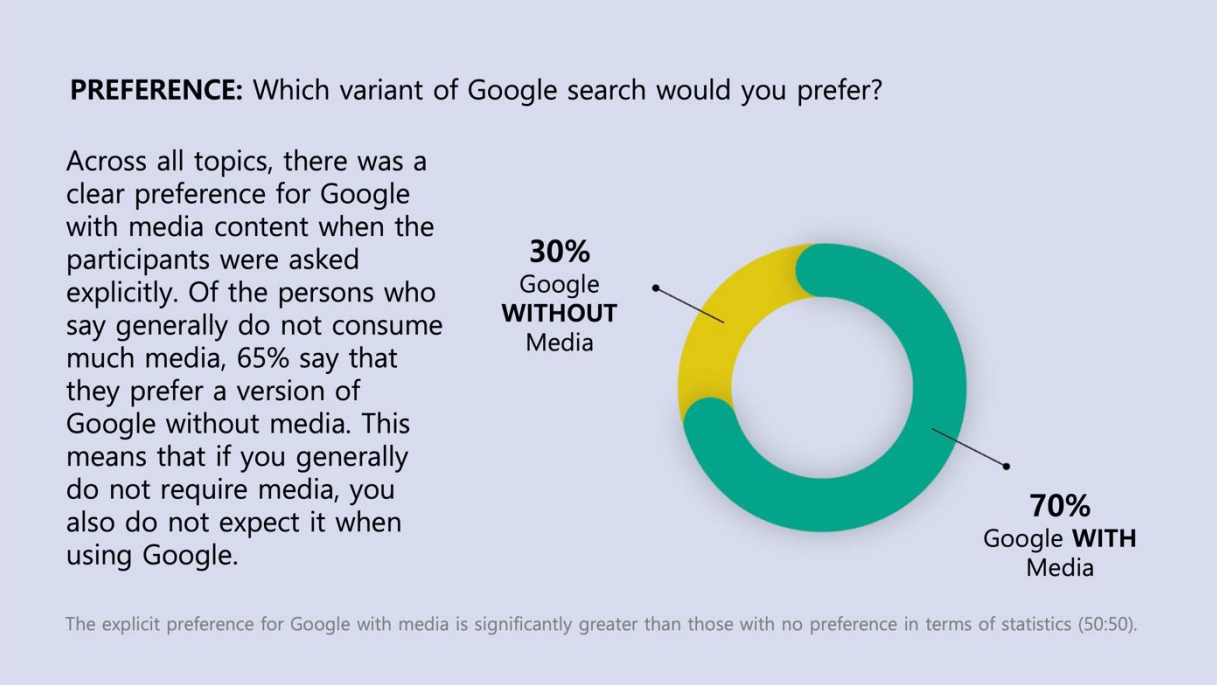

Figure 10: Preferred variant

Participants were also asked about their hypothetical willingness to pay for a version of Google WITH versus WITHOUT journalistic content. This hypothetical willingness to pay serves as a proxy for how much people value the product, in this case Google. Participants were therefore asked whether they would be willing to pay monthly for Google searches.

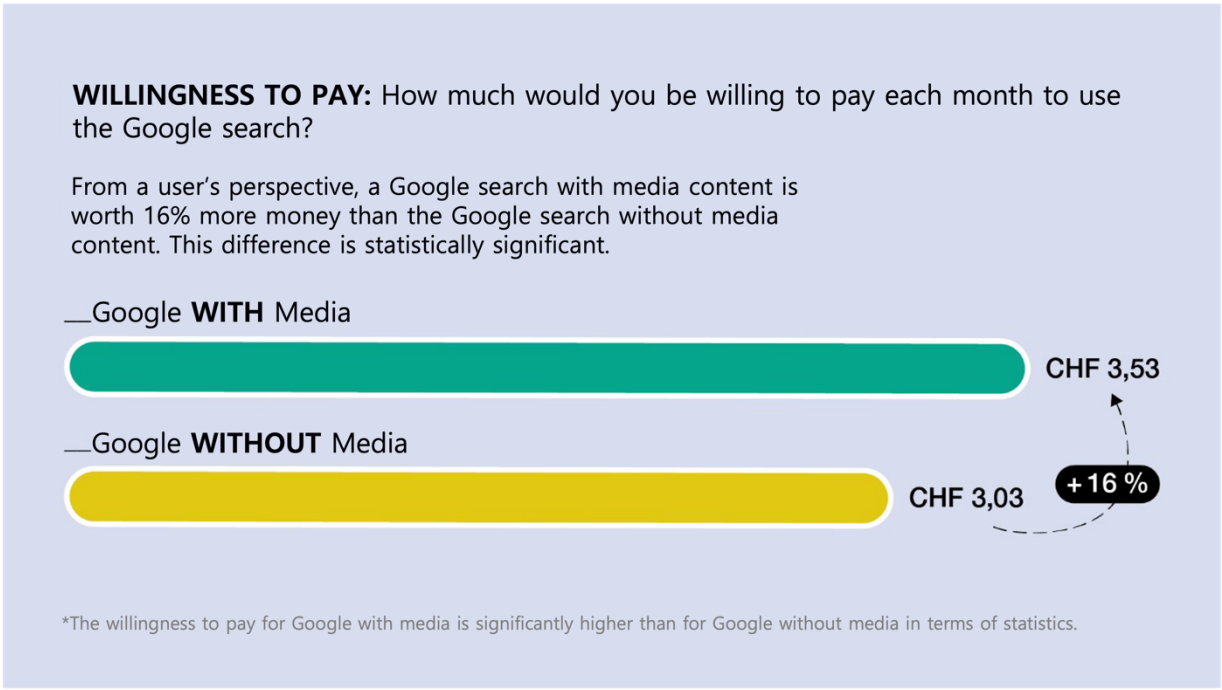

Figure 11: Willingness to pay

This showed that more than half of the Swiss people are generally willing to pay monthly for Google's search engine offer. **On average, however, the willingness to pay for a version of Google with journalistic content is 16% higher than for a version of Google without journalistic content.** This difference is statistically significant. Journalistic content therefore makes search results more visible to users.

Overall, it can be said that users clearly prefer a Google search with journalistic content and rate it more highly than a Google search without journalistic content. The results thus confirm the second half of the hypothesis that people opt for a version of Google with journalistic content.

4.4 How would people decide when searching again?

“When the ecosystem is out of balance, people leave it and look for better alternatives.”

This hypothesis states that without journalistic content, Google could be harmed in the long term as customers would migrate from the Google ecosystem.

So, how would users react if the information ecosystem were out of balance and, as a result, no longer contained journalistic content? The results of the online experiment show: in a new information search, people who have just seen a version of Google without journalistic content are more likely to navigate media websites directly than they are to use Google again. In numbers, this means that even in the first search after seeing a version of Google without media, 8% fewer people would use Google again compared to those who saw a version of Google with journalistic content. From this data, it can be seen that there is an immediate effect on the behaviour and a proportion of the people change their search behaviour immediately and migrate away as soon as they see a Google search results page without journalistic content.

If you take this direct comparison between the two groups, it is noticeable that if you search again, around 55% more people would directly access the websites of the media providers if they have not seen any journalistic content on Google in the previous search. Based on this, media websites are used much more frequently during a second information search if no media content has been displayed on Google before.

This indicates that **an absence of journalistic content may have long-term effects on Google**. If the Google search cannot answer the question asked, this leads to frustration among users: in the future, they are more likely to inform themselves directly via the media websites about current events. **Overall, the results support the hypothesis that people would migrate from the Google ecosystem if the balance in the information ecosystem is disturbed.**

In summary, it can then be said:

When searching for information, people are concerned with the quality, completeness, trust, independence, up-to-dateness & orientation.

A large proportion of people in Switzerland are informed about current topics via Google, and then remain in the Google ecosystem because the answer can be found there directly.

Journalistic content contributes to the attractiveness of Google, as it makes Google more valuable, more credible and more complete. As a result: people choose to have a Google with journalistic content.

When the ecosystem is out of balance, people leave it and look for better alternatives.

5 Deriving value

From the academic literature and the newly gathered data, it becomes apparent that the interaction between news creators, search engines and aggregators as well as advertisers is ultimately **to the benefit of users** – that is, the people. Thanks to this system, users can find the desired information easier and faster. It also shows that users explicitly welcome the integration of news content into search engines such as Google.

In economic terms, **this ecosystem generates an added value of "advantage" for people**.

And if you think in terms of advantage to people, the question is clear: *how can the ecosystem be designed to function sustainably?* In this case, sustainable means: how can the ecosystem be operated in such a way that it can, in principle, continue to exist *ad infinitum* for the users under constant conditions without central stakeholders falling out of the ecosystem or being permanently disadvantaged?

The internet has given users easy access to an unprecedented variety of news and media content. In addition, this access is in many cases financed by advertising and thus largely free for the users. Diverse journalistic content makes the digital information ecosystem attractive to users. Without this, the information ecosystem would be **less trustworthy, independent, complete, and of a lesser quality** – and thus less relevant – to people.

The study presented here proves that the users want to find and consume journalistic content on the internet in a dedicated manner; on the other hand, the ecosystem of the web search, as it is currently organised, does not offer the media fair participation or participation in the long term. In order to be able to set up the ecosystem sustainably in the interests of the users, a **fair division of the value** generated online by the journalistic content is therefore required.

What is a fair division of value added and how can it be quantified? In order to be able to approach this division in an evidence-based manner, it is necessary to investigate the value which the stakeholders in the ecosystem really give to each other. This includes the key question of what value the media gives to search engines such as Google. In the following, this value is derived from the evidence gathered and publicly available data. In this case, both as a point estimator and a range (always indicated in brackets) are always calculated in order to contextualise the numbers of the derivation in a meaningful way. The derivation is carried out here as an example using Google as the market-dominant search engine. However, derivations for other search engines or aggregators can also be made according to the same principle. This derivation is limited to the value added in Switzerland but can also be carried out in other countries according to the same principle.

The first question is how much revenue is generated in Switzerland by Search Engine Advertising (SEA), the revenue source for web search. The representative of the digital advertising industry IAB (Interactive Advertising Bureau) estimates that this amount totals approximately CHF 1.1 billion (CHF 1.0-1.2 billion) net annually (AdEx Benchmark 2021 Report, published in June 2022). For comparison: taken together, all advertising channels of the tech giant Google (YouTube, Search, etc.) generated just under CHF 2.5 billion in revenue in Switzerland in 2022. This is shown in the 2022 annual report by the analyst Mediafocus (Fixle, 2023). Of course, not all SEA revenue is apportioned to Google. Since Google does not detail its own revenue with SEA in Switzerland, we have to approach this indicator via the market share in internet search.

According to Statista (Statista, 2023), Google's market share for online searches in Switzerland was 90.8% in 2022. The other search engines such as Bing, Yahoo, Ecosia, DuckDuckGo etc. reach less than 10% when taken together. 90.8% of CHF 1.1 billion (CHF 1.0-1.2 billion) equals approximately CHF 999 million (CHF 908-1,090 million) SEA revenue attributable to Google.

Google, or its parent company Alphabet, says in its latest global report that in 2022 they had implemented more than USD 42 billion with "Search & other", approximately forty times the estimate for the corresponding revenue in Switzerland.

This suggests that the estimate is in the right order of magnitude.

Not all Google searches target information. As well as the information searches, there are also product searches and navigation searches (cf. Broder, 2002; Rose & Levinson, 2004; Jansen, Booth & Spink, 2008), for which the added value of the media content is somewhat lower. The revenue must therefore be reduced to the proportion of information searches relevant for journalistic content. In their book "Digitale Werbung und das Google Ökosystem" (Digital marketing and the Google ecosystem, 2022, p. 264 ff.) Prof. Thomas Höppner and Tom Piepenbrock cite surveys for the shares depending on the type of online search. According to this, about 55% (between 50-60%) of searches on the internet are information searches. Revenue with Google searches, for which media content is the most relevant, thus amounts to approximately CHF 549 million (CHF 454-654 million).

How much of the revenue from information searches does the media content contribute? In order to answer this question in an evidence-based manner, we must draw on the explicit preferences of the users of the ecosystem itself. **How many people want media content to be embedded in the responses of their Google searches?** How many people definitely do not want that? The logic behind this is simple: anyone who decidedly does not want any media content will not benefit from it, and also does not search on Google because of the presence of media content.

In the survey presented here, 70% (with a 95% confidence interval of 68% to 72.6%) of the participants explicitly state that they want Google searches with media content. This 70% could in turn migrate from Google as an answer engine for information searches if Google were to stop displaying media content. 70% is thus the share of revenue with information searches, where the media content makes a value contribution.

And this explicit presence of the users does not come about by accident. The data shows that this preference is related to changes in behaviour and other settings that demonstrate the added value of journalistic content for Google.

The most important contexts with explicit preference are summarised here: users who definitely want a version of Google WITH journalistic content…

- …would also pay more for Google
- …search twice as often directly on the media's websites if they don't find what they were looking for on Google
- …find Google more attractive
- …identify more strongly with Google
- …are more likely to click on external links – both media and non-media links

…than users who definitely want a version of Google WITHOUT journalistic content.

At 70%, Google's media-relevant SEA revenue in Switzerland is CHF 385 million (CHF 309-475 million). But what is a fair distribution of this revenue that the media generate for Google? **What "fair share" can sustainably stabilise the ecosystem.**

The answer is a comparison with a similar ecosystem, in which Google does not have a market-dominant monopoly position and yet has been operating sustainably for decades. At this point, the function of the **advertising ecosystem** must be explained briefly:

Google brings the content of different media providers together at one point and thus creates such a high benefit for the people that they come back again and again, and markets this attention to advertisers. The content of the media is the crucial factor in its use and attractiveness. In summary, **four players are required**: **content providers (media), the attention of the people (users), the advertisers who bring in the revenue, and the platform (search engine or online marketer), which combines supply and demand.** Normally, content providers and platform providers (marketers) share the proceeds in a fair proportion that allows for balance.

What does this balance look like? As an operator, you can use Google AdSense to display advertisements on your website that generate revenue. In doing so, Google takes care of the allocation and playback of the advertisements and the distribution of the resulting income. The website operators, on the other hand, take care of the creation of attractive content, i.e. the reason users come to the website in the first place. In this online advertising market (online advertising marketing), Google is not a monopolist and has serious competition from providers such as Goldbach Group, Admeira, 20 Minuten Advertising, Teads, plista, Schaltplatz, adiro or even through the affiliate programs of Amazon or eBay.

How much AdSense revenue does Google retain and how much does it forward to content creators? **In this market, Google is willing to forward between 51% and 68% of its revenue to the website operators, depending on whether it is AdSense for "content pages" or "search results pages"**(source: Google AdSense Support for AdSense revenue share).

Another example of revenue sharing is the Microsoft Content Network. Microsoft integrates current content from media companies on its websites, for example on msn.com, in the Microsoft apps or in the search engine Bing and markets the advertising spaces all around. In the process, **Microsoft** offers content providers (publishers) a revenue share of **60 percent**.

It should be noted that in those markets where the platform does not have a monopoly-like position, Google is willing to share the proceeds with the content creators. Other market players, which have a market share of less than ten percent, such as Microsoft with its Bing search engine, and are therefore under strong competitive pressure, are also willing to share their proceeds.

Google does not currently share the proceeds from the integration of media content with publishers in Switzerland. It should therefore be noted that there is a market failure caused by Google's monopoly-like position.

It should also be noted that the sharing of proceeds in the online advertising industry is based on revenue sharing rather than profit sharing. This may be related to increased transparency, traceability, practicability or even the decreasing marginal costs. For the study and the derivation, it is merely pointed out that there are industry-standard contracts which provider for a fair division between 30 and 60 percent on the basis of the generated advertising revenue.

If the market logic of fair revenue sharing between content providers and marketers is transferred to the search engine, recognising that the contribution of Google's search engine is higher because different information providers are brought together in one place, then the division ratio which was learned and found to be successful in the competitive environment should be applied. In analogy to the Google AdSense program, the fair and industry-standard division ratio is between 32% and 49% (on average 40%), which are passed on to the media. In other partnerships between technology platforms and media companies, such as Microsoft's news aggregator MSN, a revenue share model has also been established, in which the technology platform receives 40% and the content supplier receives 60% of the revenue generated.

We can then summarise the derivation of the added value of media content for Google in two simple steps: ***what SEA revenue does Google generate annually in Switzerland through media content?*** **The answer is: approx. CHF 385 million (CHF 309-475 million).** ***What is a fair share of this revenue, which is due to the media for the sustainable survival of the ecosystem?*** **If we take Google's own willingness to share from AdSense as a benchmark for this, the payment to the media companies should be approx. CHF 154 million annually.** This amounts to between a **minimum of CHF 99 million** and a **maximum of CHF 233 million** annually, if the calculation of "fair share" always assumes the smallest or largest extreme values.

6 Conclusion

The ecosystem, which consists of search engines, content creators and users, is a central building block of an enlightened and democratic society. This ecosystem currently generates a **wide variety of benefits for society** – allowing users to access reliable, high-quality and credible content that can be quickly found in one place.

However, in order to ensure that this ecosystem maintains its benefits for society, it is essential that stakeholders are **paid fairly and on an equal basis**. This means that content creators must also be fairly remunerated for the contributions in order to maintain an effective incentive structure or creating high-quality content. At the same time, search engines and aggregators should also receive some of the proceeds for the performance in compiling and ranking the content, and for making it available. It is therefore important to ensure a **market-oriented distribution of the proceeds within the ecosystem in the future, within the framework of ancillary copyright protection in Switzerland**. **For this purpose, there are also market-standard division ratios (40/60) based on the generated advertising revenue, which can be used to derive specific amounts.**

The present study deals with the question of what is important for users in this ecosystem, what value the individual providers create in the ecosystem and **where a sustainable balance can be found in this ecosystem**. With the help of a behavioural-economical optimised online experiment, the needs and behaviour patterns of the users could be examined more closely and the risks of imbalance in the ecosystem identified. In this experiment, a representative sample of the Swiss population was placed in a realistic situation with the help of immersive storytelling and asked to search Google for relevant and current information. Half of this sample saw their usual Google with all the familiar search results.

But the other half of the sample saw a version of Google WITHOUT search results based on journalistic content – no snippets of online newspapers, headlines from media outlets, links to media websites or the like – only non-media-based content.
The results show that Google has established itself in Switzerland as the first point of contact to meet information needs and has thus assumed a key role as gatekeeper for visibility in the competition for attention, and as a "distribution centre" for access for media. However, it is the integration of the media into the Google search results that strengthens the **positive user experience** as well as the **intensity of the usage** of Google. In addition, journalistic content increases the **attractiveness** of Google and increases the **willingness of users to pay** for Google. Conversely, the **probability of using Google** decreases if journalistic content is removed from the search results completely.

It also appears that Google distributes a smaller proportion of incoming visits to the (content-contributing) media, and the larger proportion of visits is retained in Google's own ecosystem. **Google is thus holding back the much greater opportunities for commercialisation.** The division ratio of the "online traffic" relevant for the proceeds thus unequivocally works in favour of Google. In short: **media provides the content that positively improves the experience of using Google, but in the majority of uses, this is without gain in a commercial sense.**

How can the **media's contribution** to the value-adding "Google Search" ecosystem be compensated in such a way that the ecosystem can also **sustainably** offer its clearly **positive benefits for people**? To this end, the value contribution of the media to the ecosystem must be measured in an evidence-based manner. This is based on two key questions: firstly, what is the right **benchmark** for Google's revenue from media content? And secondly, what is a **"fair share"** of this benchmark that should be due to the media?

When search engine advertising revenue is reduced to the relevant market share of Google searches for information that are answered using the media content, a **benchmark** of **approximately CHF 385 million** (net) is shown annually.
If Google were not in a dominant monopoly position in web search, and instead had serious competition online as in other functioning advertising markets, **40% of this revenue** would be a **market-standard remuneration** of the media's value contribution. This puts the **"fair share"** that Google owes to the media at around **CHF 154 million per year**.

In Switzerland, the media make an **important contribution** to the formation of opinion with their high-quality and independent information. From a behavioural perspective, a **cooperative balance** of the shared contributions to this ecosystem is a sensible and realistic solution to guarantee added value for the users in the future. This study helps to ensure that possible solutions to this balance, such as ancillary copyright protection, as has already been implemented in many other European countries, can be found on the **basis of solid facts**.

With the current and rapid development of artificial intelligence and chat-based response systems, such as the recent ChatGPT and the Bing search engine from Microsoft, a particularly opportunistic window is opening up to lead the discussion about solutions. For example, if users are able to respond to their questions using chatbots or other tools instead of using Google, this may result in a decrease in search traffic on the Google platform. As search engines evolve into response engines in ever faster steps, Google may be facing serious competition in the Swiss search engine market for the first time in decades. This could introduce a **dynamic into the ecosystem** that makes finding a sustainable solution for the sharing of contributions even more urgent.

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8. Appendix

The following shows some excerpts from the survey. The aim is to provide an insight into the environment of the survey.

a. Baseline measurement

Question 1: Status quo information search

Question 2: Interest query

Question 3: Recognition

Which of the following information providers do you know?

Select:

- *20 Minuten, Blick, SRF, blue News, watson, Tages-Anzeiger, Luzerner Zeitung, Berner Zeitung, Aargauer Zeitung, NZZ*
- *20 Minutes, RTS, Le Matin, Le Nouvelliste, 24heures, Tribune de Genève, Blick, watson, Le Temps*

Question 4: Attractiveness measurement of various information providers / before being confronted with the information search

- Please rate the information providers listed below by how much you like them:
  I don't like this information provider at all (1) – I like this information provider very much (9)
- How credible do you think the following information providers are?
  Very low (1) – very high (9)
- How do you rate the quality of information from these providers?
  Very low (1) – very high (9)
- What do you think? How complete is the information from these providers?
  Very low (1) – very high (9)

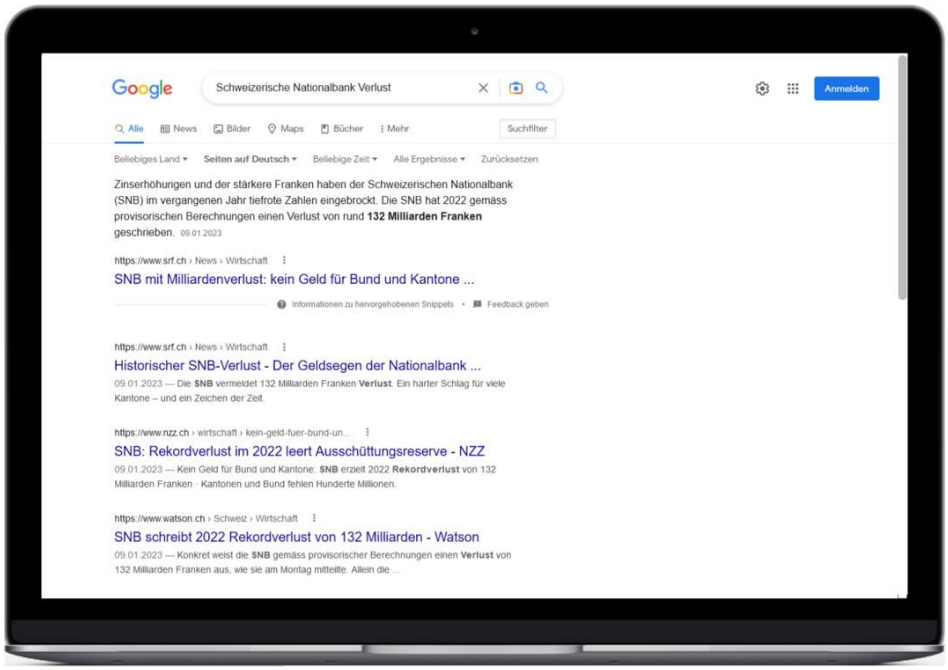
Question 5: What is important to you when searching for information?
When searching for information, it is important to me that …

- …the information is correct.
- …the results are informative.
- …the information is true.
- …the information is of high quality.
- …my question is answered.
- …I am not frustrated by the search.
- …little advertising is included.
- …no clickbait is included.
- …the information is complete.
- …all aspects are highlighted.
- …different opinions are represented.
- …several sources are considered.
- …the results are diverse.
- …there are many results.
- …the results are not superficial.
- …the information comes from trustworthy sources.
- …the information comes from well-known sources.
- …the information is reliable.
- …the information is credible.
- …the information is serious.
- …the information results were generated by experts.
- …the information results can be trusted.
- …the information comes from known sources.
- …the information is neutral.
- …the information is objective.
- …the information sources are independent.
- …only my own opinion is confirmed.
- …not only paid content is shown.
- …the information comes from regional sources.
- …the results are relevant for my region.
- …the results are in my language.
- …the information is important for people in my region.
- …the information maps out regional events.
- …the information is new.
- …the results take into account current events.
- …current events are mapped out.
- …innovative content is shown.
- …it is on the pulse of time.
- …I am offered orientation.
- …information is relevant to me personally.
- …I can find the answer quickly.
- …the information is easy to understand.

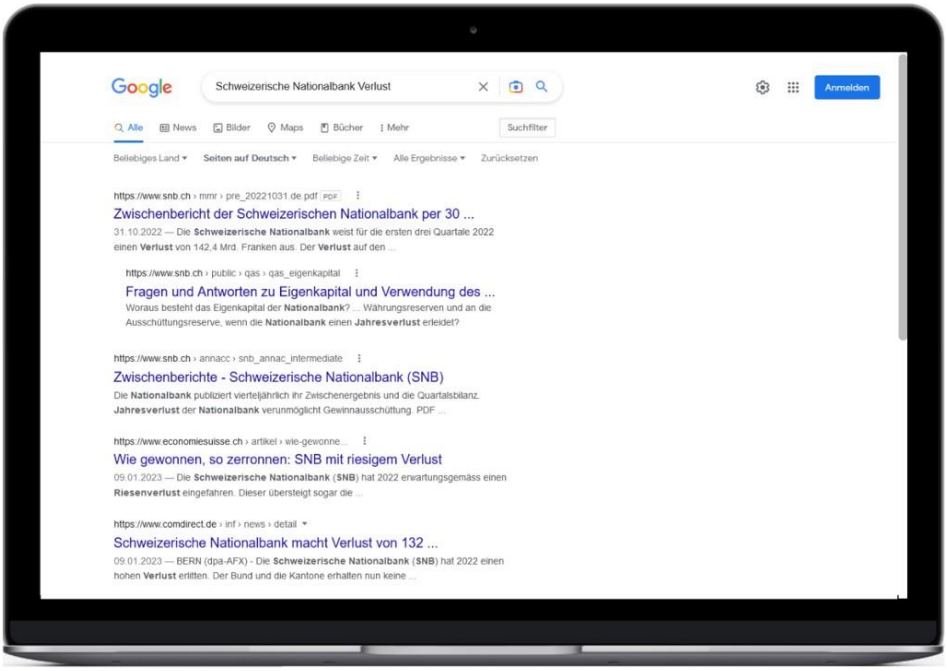
- …the information can be consumed quickly.
- …the content is free.
- …it doesn’t put me through any effort.

b. Google search

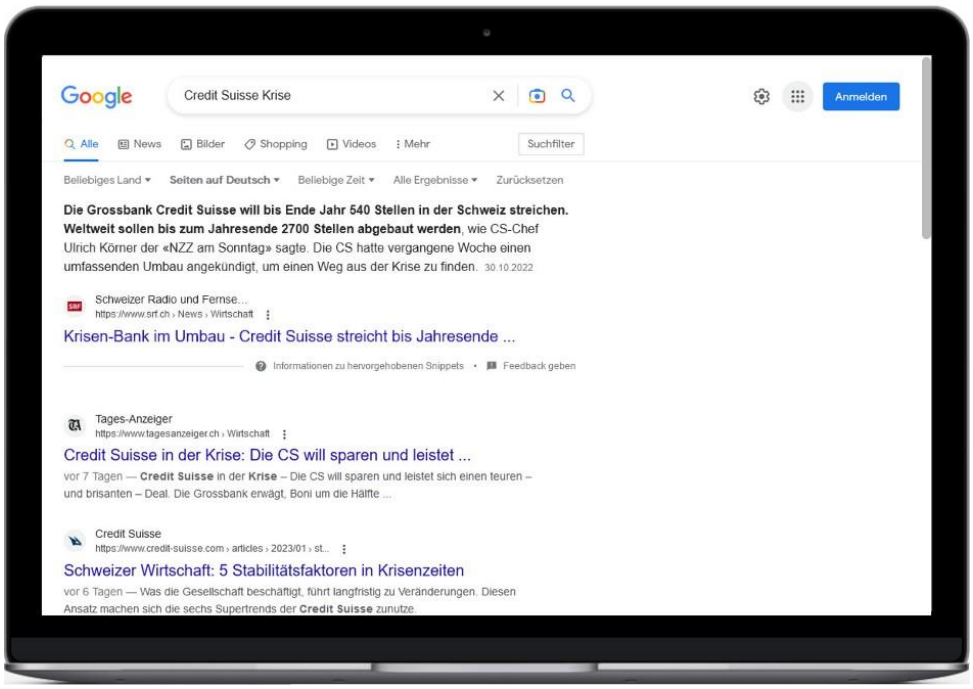
Topic 1: Swiss National Bank loss – with media



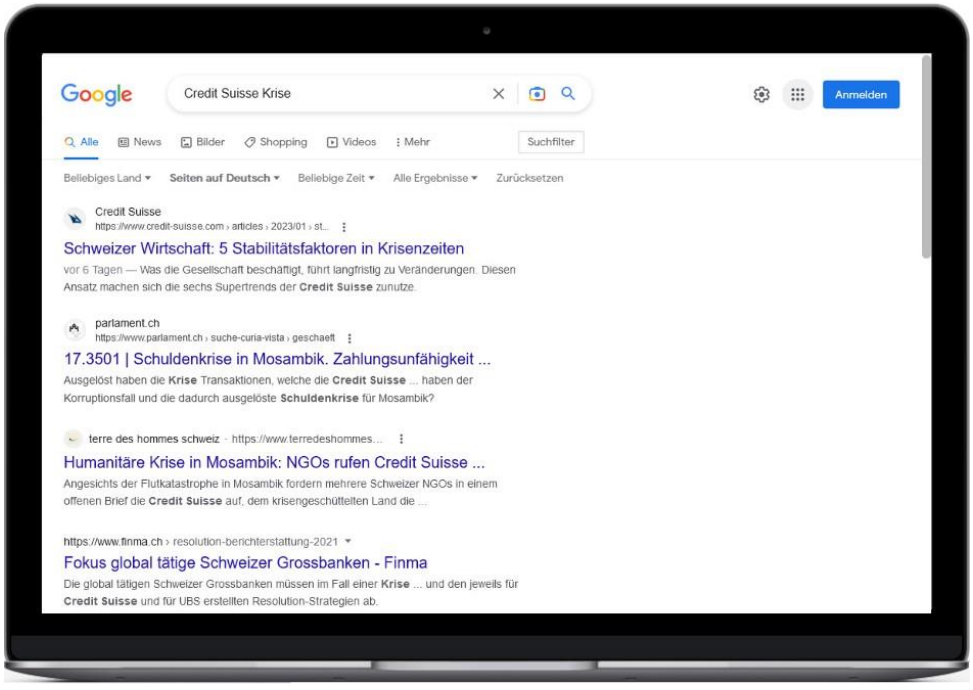
Topic 2: Swiss National Bank loss – without media



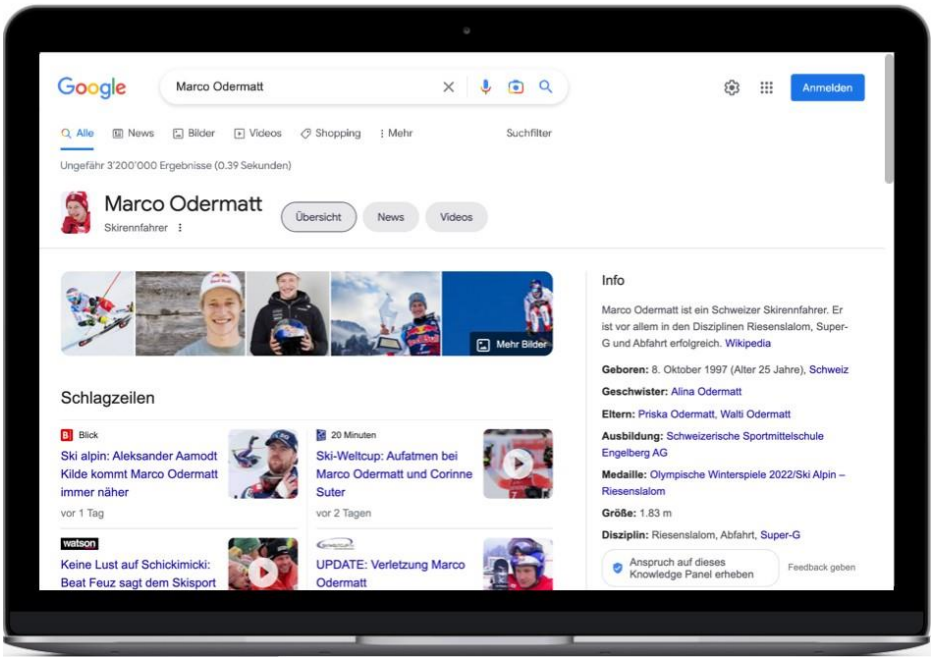
Topic 3: Credit Suisse crisis – with media



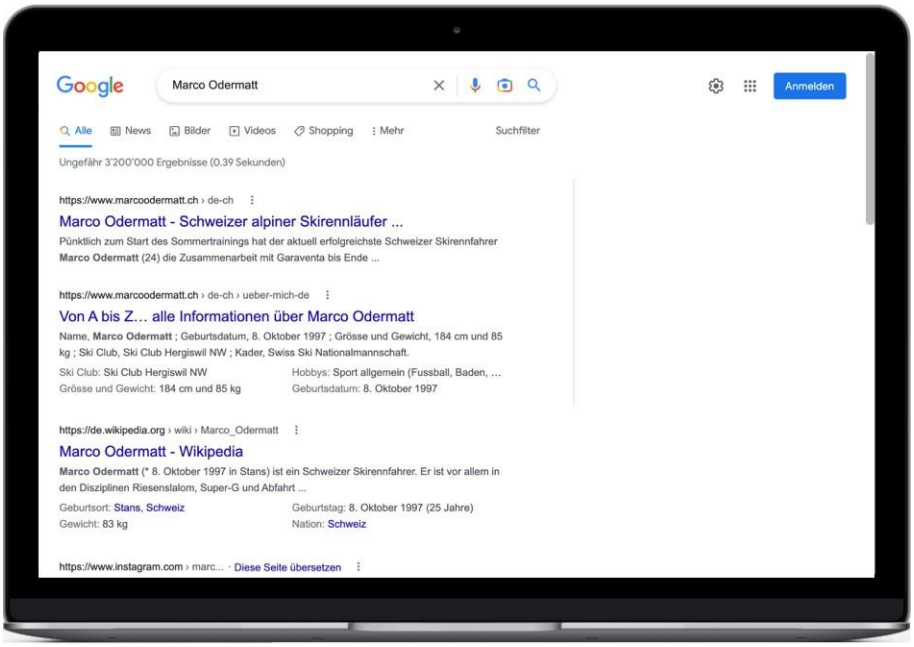
Topic 4: Credit Suisse crisis – without media



Topic 5: Marco Odermatt – with media



Topic 6: Marco Odermatt – without media



c. KPI measurement

Question 1: Feedback

Question 2: Were you able to answer the question using the search?

Response options: *A) No, I did not find an answer, B) I don't think that one of the websites in the search results would answer the question C) Yes, I could see the answer directly in the search results.*

Question 3: Delta

query Part A:

Part B:

Part C:

Part D:

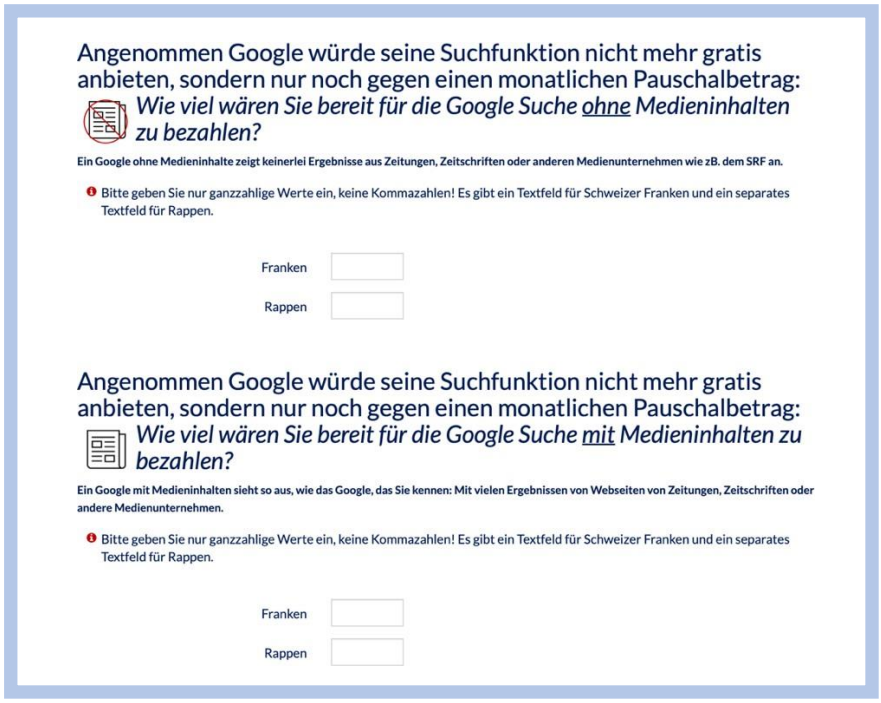
Question 4: Association test

In the Google search results I just saw, I am sure that …

(response options identical to page 5)

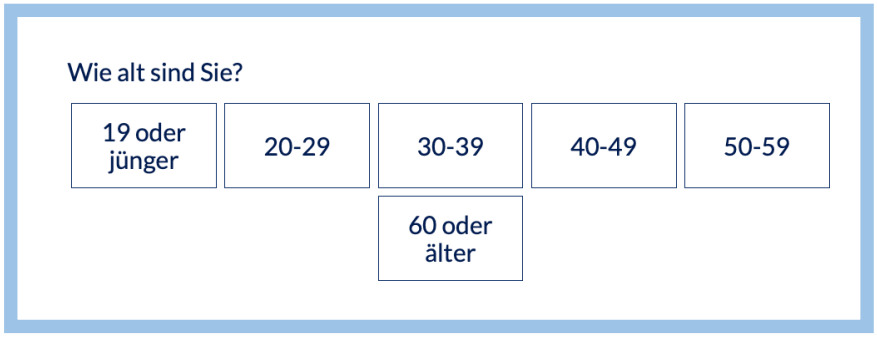
Question 5: Direct choice between Google with and without media

Question 5: Willingness to



Question 6: Demographic questions

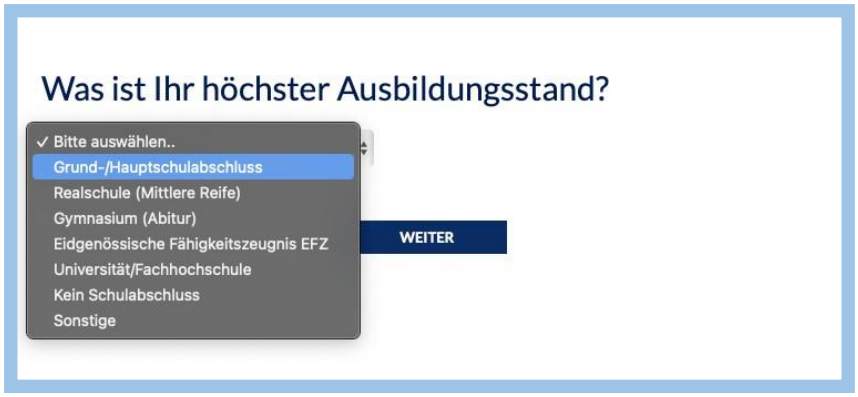
Part A:



Part B:

Part

Part D:

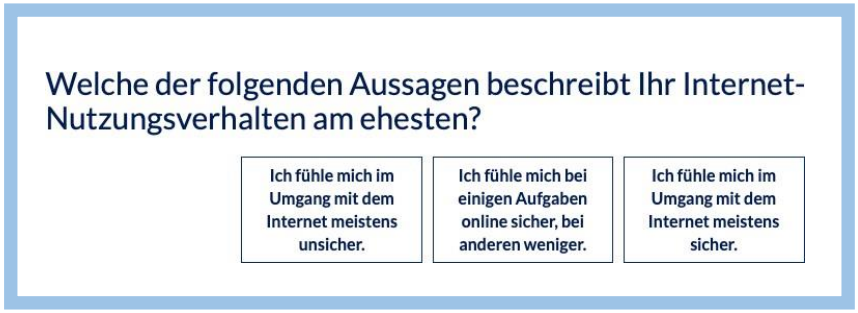


Part E:

Question 10: Question about channel preference

Question 11: Frequency of news consumption

Question 12: Internet usage behaviour



«Alles Wirtscha9en beruht auf Verhalten. Deshalb bezweckt jede Wirtschaftsberatung die Beeinflussung menschlichen Verhaltens.»