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MASTER THESIS

## **Market Research on the B2B CAQDAS Market**

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# Abstract

Qualitative Data Analysis (QDA) is a quintessential practice of theory building in academia, commercial research contexts and more. Analyzing unstructured text for themes, sentiments, and speakers is done in nearly every field of research from social sciences to information systems. Computer-Assisted Qualitative Data Analysis Software (CAQDAS) supports the collection and categorization of this unstructured data. *QDAcity* is one of these softwares that is a potential new contender in the well established market of CAQDAS products.

This thesis outlines the feasibility of entering the existing CAQDAS market by combining three methods of research. Furthermore, this thesis specifically addresses the Business-to-business market, where *QDAcity* would seek to sell licenses specifically to other organizations – as opposed to selling licenses to individual consumers. The method triangulation, more specifically is a market analysis of CAQDAS sourced from openly available market data, a competitive analysis of the key players in the CAQDAS market, and finally a survey targeting researchers who analyze qualitative data in group contexts.

The outcome determines there is untapped potential for CAQDAS within the contexts that are analyzed – namely academic research and the market research industry of which *QDAcity* could take advantage. This outcome is based on the market analysis showing a positive forecast trend of independent software vendors (ISVs) as well as the CAQDAS market and academic literature that indicates a growth of instructional research classes utilizing CAQDAS as the teaching medium. The competitive analysis shines a light on features that differentiate *QDAcity* in the CAQDAS market. Finally, the survey with 84 respondents who conduct QDA provides a view into user expectations of CAQDAS that can be leveraged into a marketable strategy for *QDAcity*.

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# Glossary

**24/7 Support:** Support availability all hours (24) of every day of the week (7)

**B2B:** Business-to-Business

**CAQDAS:** Computer-Assisted Qualitative Data Analysis software

**ISV:** Independent software vendor

**On-prem:** On premise hosted software

**QDA:** Qualitative data analysis

**SME:** Subject matter expert

**UI:** User interface

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# 1 Introduction

Since the mid-1980s, CAQDAS has supported the analysis of qualitative data (Flick, 2013). The software does not do the analysis, however is more capable than ever to aid the researcher in discovering patterns or forming theories from the data. The SAGE handbook on QDA states “qualitative data analysis [...] can be the central step in qualitative research to which all other steps are subordinated” (p.10, 2013) CAQDAS usage is becoming more ubiquitous across all dimensions of research, particularly in academia where it is an expected skill (Michalovich, 2021). This type of software enables researchers to code their data, where labels are applied to different segments of the media that relate to the concepts of research. The users of the software, researchers across all sciences, have the ability to import their data in diverse forms, link their analysis across different sets of data and organize their thought process while coding. Various forms of theory building are based off of qualitative data analysis and thus enhanced by the usage of CAQDAS in the analysis. As sources for qualitative data become more varied, for example social media posts or various digital acoustic media, a technical tool such as a CAQDAS facilitates researchers in finding emerging patterns and data management. Furthermore, as researchers work with increasing collaboration, the ability to support a team on one platform via an online functionality is important.

*QDACity* is once such example of a CAQDAS. Founded within an academic setting, it is entirely cloud based and was built from a researcher and instructor’s viewpoint. Currently *QDACity* is being utilized in a limited context – within the department chair it was developed for research and instructional purposes. Because of the unique insight behind the origin of this software – both as instructional facilitators, users of CAQDAS and researchers, there lies potential in expanding the usage of the tool. This thesis examines the potential of bringing *QDACity* to the market to be sold to other organizations (e.g. other universities, research institutes, commercial organizations).

The market research for *QDACity* is done by utilizing multiple methodologies. However, firstly, a series of hypotheses to test the market potential are laid out. These hypotheses are organized by their relevance and corresponding methodologies. The selling of the software to other organizations is what is referred to as B2B and is further explored in section 3. The context here is specifically the B2B software selling market which provides a scope of the size of the market and market trends but also considerations that *QDACity* as a vendor must take into account.

Next, the methodologies are introduced and reviewed to provide an insight into the research flow. The three research methodologies used in this thesis are: a market research, including a current market analysis and market trends, a competitive analysis of the top three players in the CAQDAS market and finally a survey that was conducted with potential users of *QDACity*.

Within section 5 of results, the findings of all the research methodologies are reviewed with the corresponding results. Within the market analysis, there was an assessment of the current size of the market, market trends as well as a review of academic papers that forecast increasing demands of research methodology courses that are supported by CAQDAS. A competitive analysis overviews the features the key competitors offer as well as their collaboration offerings and price points. Next, a survey was conducted with potential users of CAQDAS that aids in managing user expectations.

In section 6, limitations are outlined as well as the mitigations taken to appease them. Finally, the conclusion is offered which checks against the hypotheses as well as the key findings from the results. Also included is the recommendations for *QDAcity* as a marketable software product as well as potential for further research.

## 2 Hypotheses

The dominant problem statement of this thesis is “there is feasible entry into the B2B market for *QDAcity*.”

This broad statement is divided into three subgroups of hypotheses to support the overarching hypothesis. The subgroups are related to hypotheses concerning the market of CAQDAS, the competitors within the market and the expectations of users of CAQDAS.

### 2.1 Market Relevant

The hypotheses in this section 2.1 are related to the market of CAQDAS.

- The market for B2B CAQDAS is large enough for *QDAcity*.
- The market for B2B CAQDAS usage has an increasing trend.

### 2.2 Competitor Relevant

The hypotheses in this section 2.2 are related to the major established players in the CAQDAS market.

- There are other established players in the CAQDAS market.
- *QDAcity* has significant differentiating features from the other players.
- *QDAcity* is missing key baseline features as seen in other major players.

### 2.3 User Expectation Relevant

Within this section 2.3, the hypotheses test what the expectations of users of CAQDAS in a group context are.

- B2B Customers will be purchasing for many (>20) users.
- B2B Customers are interested in purchasing licenses on a subscription base per number of users.
- It is critical to have multi-browser utilization of the application.
- It is critical to support multiple file types for import.
- It is critical to support multiple file types for export.
- It is important to be able to utilize the application offline.
- Collaborative coding is important to researchers in group contexts.
- It is important to be able to transcribe audio from audio files into a text format.
- Instructors of a research course using CAQDAS would like to offer practical exercises at scale.
- Instructors of a research course using CAQDAS are interested in automated evaluation.
- QDA tools are being used for market research.
- B2B Customers are concerned about their data being hosted in the cloud.

- B2B Customers are sensitive to data privacy when utilizing a cloud-based CAQDAS.
- 24/7 support for all technical issues is required by organizations using *QDAcity*.
- Customers require UI and support in their native language

### 3 B2B Market

This thesis specifically focuses on the B2B market for software licenses. This is defined as one company (in this case, *QDAcity*) selling software to another organization. In a B2B context for qualitative data analysis, the purchasing organization can take on many forms. As shown in section 5.3.2, respondents were from diverse industries: university, commercial, government and not-for-profit. Across these industries, there are multiple forms of research collaboration. For example, in a university context, collaboration could take the form of a group of researchers working on the same topic or someone teaching a course on research methodologies, utilizing a CAQDAS as the instruction medium.

A B2B context indicates special considerations for the vendor, namely licensing packages and technical support for the purchasing organization (SUSE, 2018). *QDAcity* has a position as an independent software vendor, otherwise known as an ISV. ISVs typically offer their products on a software as a service, or SaaS, basis, often leveraging cloud services from cloud platforms, such as Amazon Web Services or Microsoft Azure (10Duke, 2020). Often ISVs bring competition to markets by driving niche software product options and by challenging the pricing of competitors.

In sections 5.1 Market Analysis as well as in 5.2 Competitive Analysis, major players in the market are addressed. The key features expected of a CAQDAS and the trends of the B2B market are highlighted as well as the features that differentiate *QDAcity* as a product to best fit enterprise customer needs.

## 4 Methodology

### 4.1 Market Analysis

#### 4.1.1 Market Size

The market size was taken from open market research one pagers offered by multiple market research companies.

The markets specifically analyzed are those of the general B2B software and services as well as the specific global qualitative data analysis software market.

To begin with, the over-arching B2B software market was researched. As this is quite a general and large market (as seen in section 5.1, over \$300 billion in 2020), it was cross-analyzed with the size of the independent software vendor market.

The report from Verified Market Research was referenced often when researching the specific qualitative data analysis software market, and is the leading one page report for the market size estimation.

#### 4.1.2 Market Trends

Market trend information was taken from the open market research report one pagers offered by multiple market research companies. As market research is confirmed to be a significant area where QDA is practiced (see section 5.3), the trends of market research and qualitative data methods were analyzed.

#### 4.1.3 Academic Context of CAQDAS

QDA methodologies span across diverse realms of academic research and it is therefore important to analyze CAQDAS in this context. However, as it is not possible to ascertain the size of an academic research market, key papers were reviewed that specifically delve into qualitative methods instruction, with CAQDAS as the tool embedded in the instructional model.

Papers were gathered using Google Scholar, specifically from the year of 2014 until 2021 searching for the following terms:

- CAQDAS course instruction
- CAQDAS methodology instruction
- Academic instruction with CAQDAS

There was a considerable overlap of number of papers from these search terms and ultimately six papers were analyzed, all taken from the first page of search results.

### 4.2 Competitive Analysis

Within section 4.1 Market Analysis – both in the market size and the academic literature reviews, the top three competitors with the largest recognition and size are Atlas.ti, MAXQDA and Nvivo.

All three competitors have been well established commercial CAQDAS providers as early as the 1990s. (Atlas.ti – 1993, MAXQDA – 2001, Nvivo – late 1990s).

Three dimensions of these competitors were analyzed – features comparison, online collaboration offerings and their pricing.

### **4.3 Survey**

A survey was the methodology of this thesis that specifically addressed the user expectation group of hypotheses as to best understand the users of CAQDAS who research in groups. Contacts were selected from various industries, with the majority collected from universities in Europe. Research institutes and market research companies were also contacted for potential respondents. Email addresses for potential respondents were collected from their university profiles or from other websites of institutes or companies. In total around 3000 contacts were collected and contacted with an invitation to complete the survey. From all those that were contacted there were 84 responses to the survey, 43 complete and 41 partially completed. The survey was comprised of 18 total questions, all optional for the user. As seen in the flow chart below, not all 18 questions were displayed as there were conditions based on if the user did indeed analyze qualitative data, their industry type, if they taught a research course via a CAQDAS and whether they had concerns with their data hosted in the cloud.

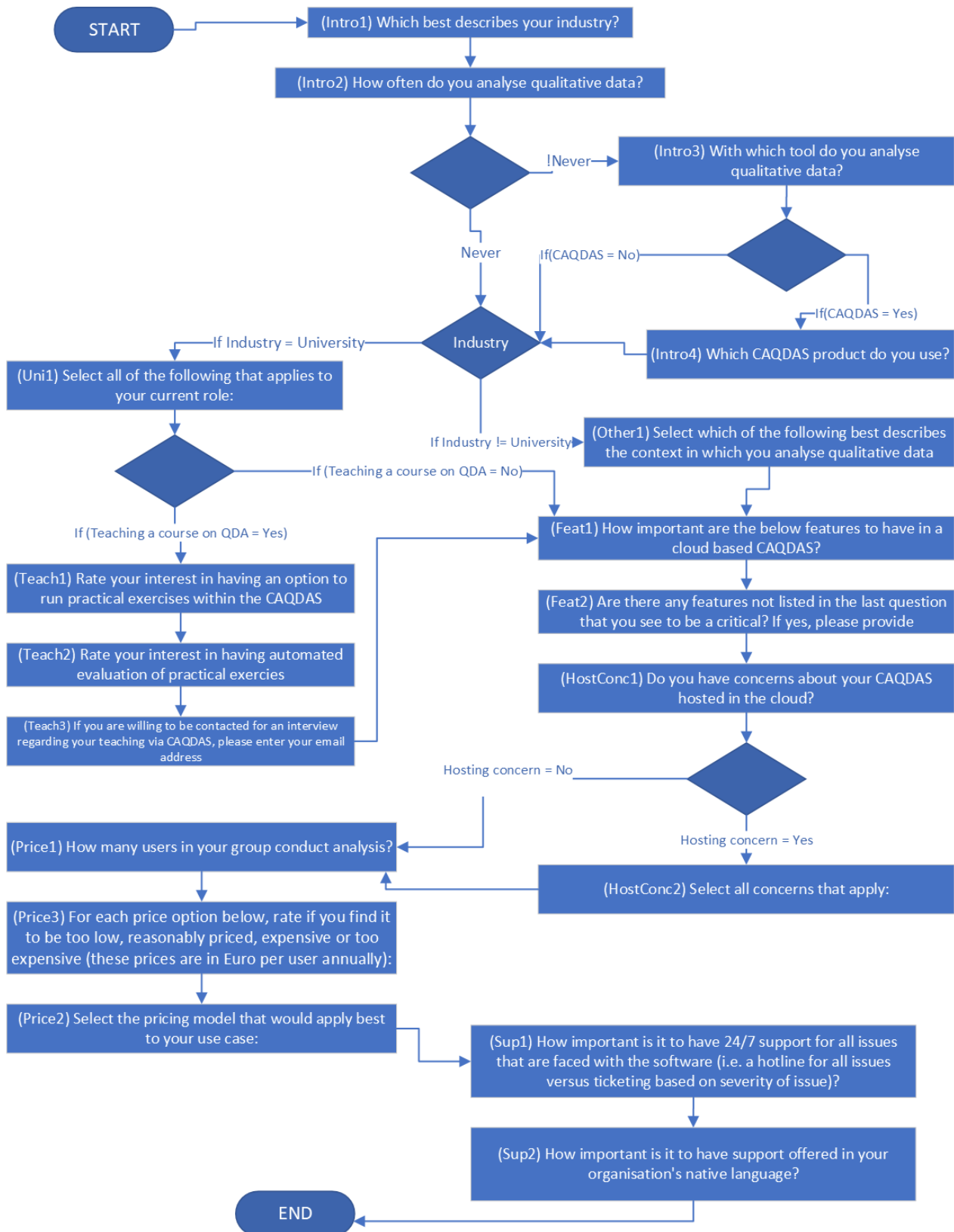


Figure 4.3.1: Flowchart showing the conducted user expectation survey, including all possible conditions.



## 5 Results

### 5.1 Market Analysis Results

#### 5.1.1 Market Size

Grandview Research Market Analysis report estimates the size of the global business software and services to be almost \$390 billion in 2020. This includes industries such as finance, sales and marketing, supply chain and others. On-prem software accounts for over 60% (Grandview, 2021).

Further drilling down, MarketWatch estimated the 2019 market value of ISVs to be \$202.85 million. It is noted that the market of ISVs is highly competitive and innovative. North American ISVs are the driver, followed by Europe with Indian vendors gaining momentum as competitive software creators. Cloud computing technologies are a major focus due to many companies advancing digitalization strategies to sustain in their respective competitive environments (MarketWatch, 2021).

Finally, using Verified Market Research's one pager, the size of the QDA software market is estimated as \$1,071 million in 2019. In the below figure, the key users (by Material) are large enterprises as well as SMEs (Verified Market Research, 2021).



*Figure 5.1: Qualitative Data Analysis software market one page overview from Verified Market Research*

### 5.1.2 Market Trends

- Market growth

Each single page market report also included a forecast of growth – or the Compound Annual Growth Rate (CAGR) for the next 5 to 10 years.

The B2B software and services market growth is expected to be 11.3% annually until 2028 and the global ISV market has a forecasted 10.5% CAGR until 2026 (Grand View Research, 2021; Market-Watch, 2021).

As for the specific qualitative data analysis software market, there is also a CAGR estimated to be 6% from 2020 to 2027 (Verified Market Research, 2021).

All reports relate this healthy growth of the market to increasing software supported analytical capabilities of companies due to the exponential increase of data that needs to be managed.

- Market research

As seen in section 5.3, market researchers are a considerable user group of CAQDAS due to the nature of their research. Therefore, the single page report of Market Research industry from Statista was also reviewed. As of 2019, the global revenue of market research companies is \$73.4 billion with an annual growth of 3.9% from 2008 (Statista, 2021). There are specificities to the German market as well, such as the revenue of the German based research company GfK – estimated to be \$1.43 billion. Additionally, the market share of spending on online market research in Germany is 50%. This is indicative of the German market's increasing focus on digital spending. There is also a structural foundation of market research within Germany, as the leading market research company accounts for 2% of total global market research revenue.

- Qualitative data methods

Statista provides a drill-down of the most used qualitative methods. In Figure 5.2, it can be seen that tIDI (in-depth interviews) is a method used regularly across different mediums as well as focus groups. Both of these methodologies require thematic analysis of free text. This is a positive outlook for *QDAcity* as there is significant demand for methods that are well suited for CAQDAS usage.

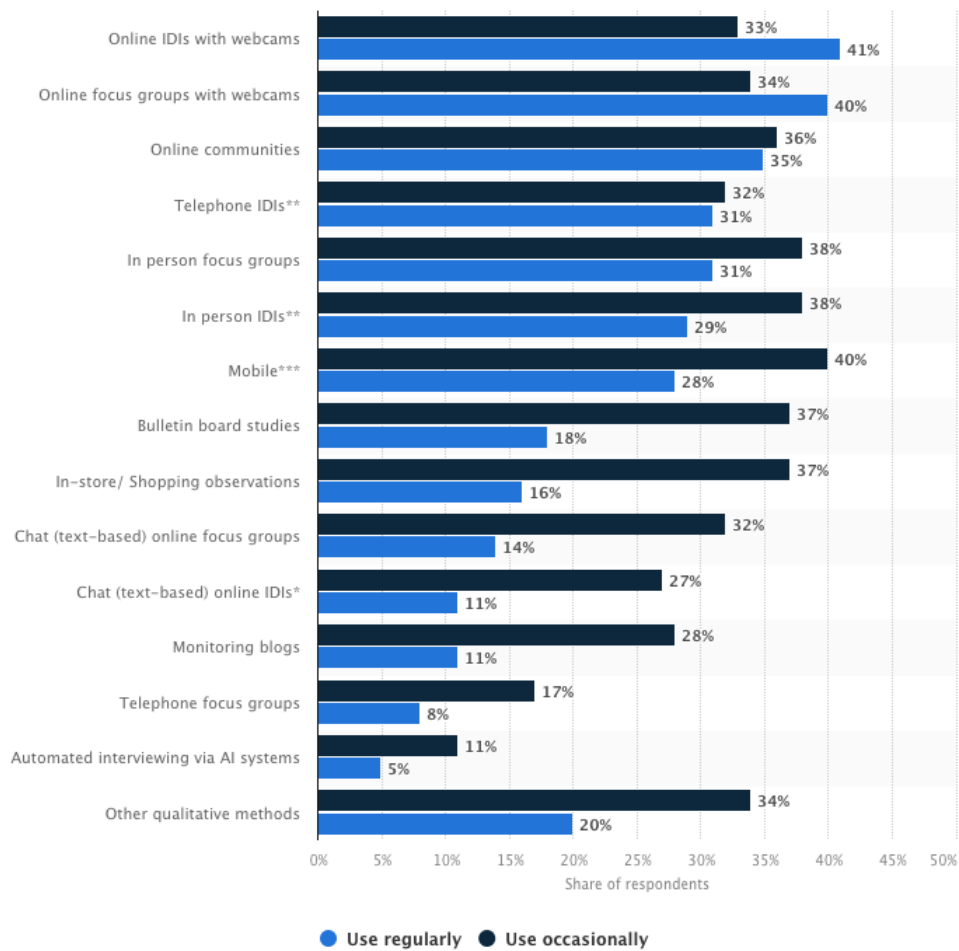


Figure 1: Bar chart showing the most popular data collection points for qualitative data (Statista, 2021)

### 5.1.3 Academic Context of CAQDAS

The six papers analyzed are listed in the table below:

Paper title	Author	Year	Done in collaboration with/ with a focus on a particular CAQDAS?
From guided-instruction to facilitation of learning: the development of Five-level QDA as a CAQDAS pedagogy that explicates the practices of expert users	Christina Silver & Nicholas H. Woolf	2015	No
Integrating ATLAS.ti Into An Undergraduate Qualitative Research Course: Evaluating Students' Experience	Neringa Kalpokaite & Ivana Radivojevic	2016	Yes – Atlas.ti

A dual instructional model for computer-assisted qualitative data analysis software integrating faculty member and specialized instructor: Implementation, reflections, and recommendations	Judith Leitch & Julianne Oktay	2015	Yes – Nvivo
Multidisciplinary graduate training in social research methodology and computer-assisted qualitative data analysis: a hands-on/hands-off course design	Claude Julie Bourque & Sylvain Bourdon	2016	Yes – Nvivo
Graduate students' modes of engagement in computer-assisted qualitative data analysis	Amir Michalovich	2021	No
"I wish I knew what I know now": Exploring Psychology Undergraduate Students' Experiences When Learning About Qualitative Research and CAQDAS	Neringa Kalpokaite & Ivana Radivojevic	2020	Yes – Atlas.ti

*Table 1: Papers selected for analysis of instruction of academic methods courses using a CAQDAS. It is also noted whether the paper was in collaboration with a specific CAQDAS.*

The oldest paper of the selection, Silver & Woof's Five-level QDA as a CAQDAS pedagogy (2015) states that despite CAQDAS existence since the 1980s, there is yet to be a standardized platform neutral usage practice of a research instruction (Silver & Woolf, 2015). The result of this paper is a detailed and guided approach on how to introduce a CAQDAS to students in an instructional academic capacity. All papers address the disconnect between the application of methodology and the actual usage of the CAQDAS, this often being a motivation of the research itself.

CAQDAS is attested to be used across many disciplines, these papers specifically are within social sciences (e.g. social work, humanities) and health sciences (e.g. psychology). Michalovich states that despite the pervasiveness of CAQDAS in research using QDA methodologies, there is still a gap in formal training in universities (2020). There is a common sentiment that there is no intuitiveness of using a CAQDAS. Leitch & Oktay (2015) offer an approach of a dual instructional model where an instructor of qualitative research leads a QDA course in conjunction with a trainer from a CAQDAS. Bourque & Bourdon (2016) suggest a multidisciplinary hands-on/hands-off course where the theory is introduced in lecture form and is further enhanced by lab exercises and eventually a research project where students build an entire research project in a CAQDAS (in this case, Nvivo).

Another commonality across the papers is the stress of importance of offering qualitative methods class supported by a technology medium, specifically a CAQDAS. Kalpokaite & Radivojevic (2016, 2020) conclude that exposure to CAQDAS should be done as early as possible in undergraduate programs. They assert that younger students have increasing potential of adapting to technologies and that using the software in "lower stakes" settings (e.g. literature reviews) could acquaint

students with potential research careers earlier in their academic life. The other papers focus specifically on instruction at a graduate level (masters and PhD). Bourque & Bourdon (2016) note in their challenges that students in undergraduate programs have limited insight into research methodologies and do not fully grasp theoretical basics. This happens later in academic graduate programs but as Michalovich (2020) purports, this should be done in introductory guided training programs with heavy focus on the methodological foundation of the research, as opposed to the CAQDAS guiding the analysis and the research.

These papers indicate the necessity of academic programs to integrate qualitative methods into their curriculum. As CAQDAS is a fundamental tool in the QDA research landscape, it is forecasted that more programs will be offering such courses and there will be more demand for CAQDAS in a university context. *QDAcity* was created in an academic context as well as being a lightweight web application which suggests this environment is one of significance.

## 5.2 Competitive Analysis Results

### 5.2.1 Features Comparison

Atlas.ti, MAXQDA and Nvivo offer an extensive list of comparable features (see Appendix A). Listed below are the highlights of the features:

- Data types for import

All three competitors have diverse options for data types that can be imported and analyzed. The standard set of document types are Microsoft Word (doc, docx), Comma-separated values (csv), PDF files (pdf), Libre office (odt) and RTF files (rtf). More advanced options are import of excel files, video and audio files. These options relate to recorded interviews or focus-groups as well as survey formats. With the advent of social media, Twitter imports are also possible with all competitors. There are additional import options, such as Atlas.ti offering geographical information to be imported from street map data or satellite map data.

- Coding and automation of coding

The functionalities of coding are related to coding theory (in-vivo coding) and coding organization. Atlas.ti and MAXQDA offer the ability to open code as well as coding using the last code, which aids researchers during their active coding of documents. The possibility of merging and grouping codes offered by all competitors aids in the organization of the codes. Technical automation supports the researcher who is manually coding. All competitors have the possibility of searching text for words and expressions and auto coding the findings. Sentiment analysis is also a key offering to understand the speaker's attitude. Speaker recognition for focus group or interviews is another useful feature by all competitors.

- Memos

Memos are a quintessential tool of QDA and therefore a feature of CAQDAS that supports a researcher in their thought process. All competitors offer the user the ability to create memos for every document as well as link them across a project. Atlas.ti and MAXQDA allow the user to group

the memos, which can support researcher with collaborating on building theories. As seen in section 5.3.3, one respondent shared they conduct qualitative data research with “paper and pen, post-its and memory.” Memos are a digital form of paper and post it approach towards thought tracking as well as offering other researchers or peers more transparency.

- Analysis and reports generation

The analysis functionalities of a CAQDAS include code analysis as well as query building. The analysis tools offer statistical exploration of the coding such as code co-occurrence and cross-tabulation of codes by documents. The researcher should have the ability to query across the documents using boolean operations, which is offered by the competitors. Atlas.ti and Nvivo allow the user to also save queries for reuse in other projects.

Reports are a valuable feature to enable the sharing of the analysis of coding. All competitors enable the user to retrieve the reports of coded data segments in Microsoft Excel, Microsoft Word and PDF.

- Export functions

Similar to report generation, the competitors offer possibilities to export the analysis of codes and full project in various formats. Atlas.ti, MAXQDA and Nvivo provide full project exports to XML as well as QDPX to enable import into other CAQDAS platforms. Further statistical analysis can be done by exporting in formats that can be uploaded into complementary statistical programs, such as SPSS or SAS.

- Survey integration

While survey analysis is in nature a statistical endeavor (see section 5.3), most surveys that focus on gaining insight from the respondents offer free text spaces where the respondents can provide their reflections in their own words. In market research, for example, target groups often have ample space to share opinions or understandings. This is a use-case well suited for a CAQDAS, and therefore all competitors offer direct plug-ins with popular survey platforms (e.g. SurveyMonkey, or Qualtrics). Atlas.ti offers a survey import wizard where surveys exported from their platform can be later imported intelligently into the CAQDAS.

- Wiki/Training resources

Lastly, as Atlas.ti, MAXQDA and Nvivo have had many versions since they were first released, they all have extensive documentation for usage. Atlas.ti and MAXQDA have open wikis as well as blogs where collaborating researchers can share articles of the specific analysis they did and their methodology with the respective CAQDAS. Nvivo also has an open and detailed wiki to search functionalities across various versions.

Furthermore, all competitors have a broad range of training sessions and workshops with certified professionals as part of their product offerings. MAXQDA also offers free video tutorials on Youtube to introduce new features as well as usage walkthroughs for older versions. As seen in section 5.1.3, collaboration with methodology researchers can offer users of the software with valuable skill sets to utilize the CAQDAS appropriately for their needs while also providing feedback to the vendor on potential new use-cases.

## 5.2.2 Online Collaboration Comparison

The three competitors were designed as on-prem solutions and remain so. Their web collaboration tools exist as supplemental add-ons to their on-prem software packages. These web collaboration offerings are also limited. Nvivo does not enable real-time collaboration – rather version management that locks documents that are in use and can notify other researchers when the document is unlocked. MAXQDA does allow simultaneous coding, however their TeamCloud (web collaboration add-on) has a maximum of 5 users – 1 administrator and 4 collaborators. TeamCloud offers the ability to work offline which means users must upload and download files to be able to work. Atlas.ti has a web version (also supplemental to the on-prem purchase to have full usability) which facilitates collaboration in real time. There is no maximum of users within a project of Atlas.ti's collaborative cloud group. Nvivo has a limited offering of cloud collaboration – similar to MAXQDA, a maximum of 5 collaborators can work on a project with a basic pack and further roles must be added by contacting the sales department. Furthermore, as the cloud collaboration feature is only possible as an add-on to an existing enterprise license, it is not possible for users in the same project to have different operating systems. Therefore, a user who works on a Mac license cannot collaborate with the same project as a user who has a Windows license. There are further collaboration offers available from Nvivo, however this is only possible with the installation of a server within the organization's network.

## 5.2.3 Pricing

	ATLAS.ti	MaxQDA	Nvivo
Pricing available on website?	Yes (some types restricted)	Yes (some types restricted)	Yes (some types restricted)
Volume pricing discount?	Yes	Yes	Yes
<b>License Type</b>			
Educational Pricing (Course license)	Yes	Yes	Yes
Not-for profit/Government	Yes	Yes	Yes
Commercial Licenses	Yes	Yes	Yes
Campus/Enterprise License	Yes – yearly license fee (based on size of institution)	Yes	Yes
<b>Subscription vs. One-time purchase</b>	<p><u>Lease</u>: You pay annually and are always automatically up to date with the latest ATLAS.ti version. Subscriptions renew annually or every 3 years.</p> <p>Perpetual licenses are phased out in Atlas.ti 22. Institutions who previously owned perpetual licenses are now switched to minimum 3 year renewing subscriptions.</p>	<p><u>Subscription</u>: Always includes the latest version. Subscriptions last one year and renew automatically unless cancelled with 2 months notice.</p> <p>TeamCloud (i.e. web collaboration) only available with subscription license.</p> <p><u>Perpetual</u>: This one-time purchase MAXQDA license has an unlimited duration and never expires. Can be upgraded to new versions with a discount.</p>	Fixed licensing times for enterprise users (12-36 months)
<b>Price tiers (approximately calculated)</b>	Pricing varies based on number of users and length of license subscription	Pricing varies based on the feature tier package (Standard, Plus or Analytics Pro)	Choice of Windows license or Mac license

Educational	Subscription (per year per user): <b>240 Euro - 490 Euro</b> Up to 10 users	Subscription (per year per user): <b>170 Euro - 210 Euro</b> Perpetual (per user): <b>530 Euro - 630 Euro</b> No limit on users	Perpetual access (Academic organization license per user): <b>650 USD - 850 USD</b>
Not-for profit/Government	Subscription (per year per user): <b>350 Euro - 750 Euro</b>	Subscription (per year per user): <b>230 Euro - 280 Euro</b> Perpetual (per user): <b>680 Euro - 850 Euro</b>	N/A
Commercial Licenses	Subscription (per year per user): <b>450 Euro - 1200 Euro</b>	Subscription (per year per user): <b>300 Euro - 380 Euro</b> Perpetual (per user): <b>920 Euro - 1150 Euro</b>	Perpetual access (Non-academic organization license per user): <b>960 USD - 1250 USD</b>
Campus License	Price only on demand. Paid annually for unlimited users of the educational institution (students and employees.) Campus licenses valid for either 3 or 5 year leases.	Price only on demand for individual offers for an entire institution or company.	For any use case with 10+ users, price available only via the sales team.

*Table 2: Pricing tiers, subscription information and pricing figures for Atlas.ti, MAXQDA and Nvivo*

All three competitors offer license purchasing from their online websites, however their larger enterprise pricing is managed by a sales team. Similar to many other software offerings, pricing tiers are value dependent on the type of industry. Educational clients receive the best deal; for example, MAXQDA offers course instruction licenses for free. In section 5.1.3 there is shown to be opportunity for CAQDAS providers to collaborate with researchers and instructors of methods courses.

Campus licenses are only available by contacting a sales representative as it would serve unlimited users for an entire organization (i.e. an educational institution), however all other prices can be found on the website. Depending on the industry tier as well as the feature tier, an annual subscription license for one user across all three competitors is between 170 Euro to 1200 Euro.

All three competitors also offer volume pricing discounts, where the cost per (1) license will be lesser with every additional license purchased. This benefits the vendor as more revenue is received at once while the purchaser of the software receives a discount. As seen in section 5.3.5, research groups are estimated between 2 to 20. The discounting of additional licenses can therefore be optimized between 5 and 20 licenses.

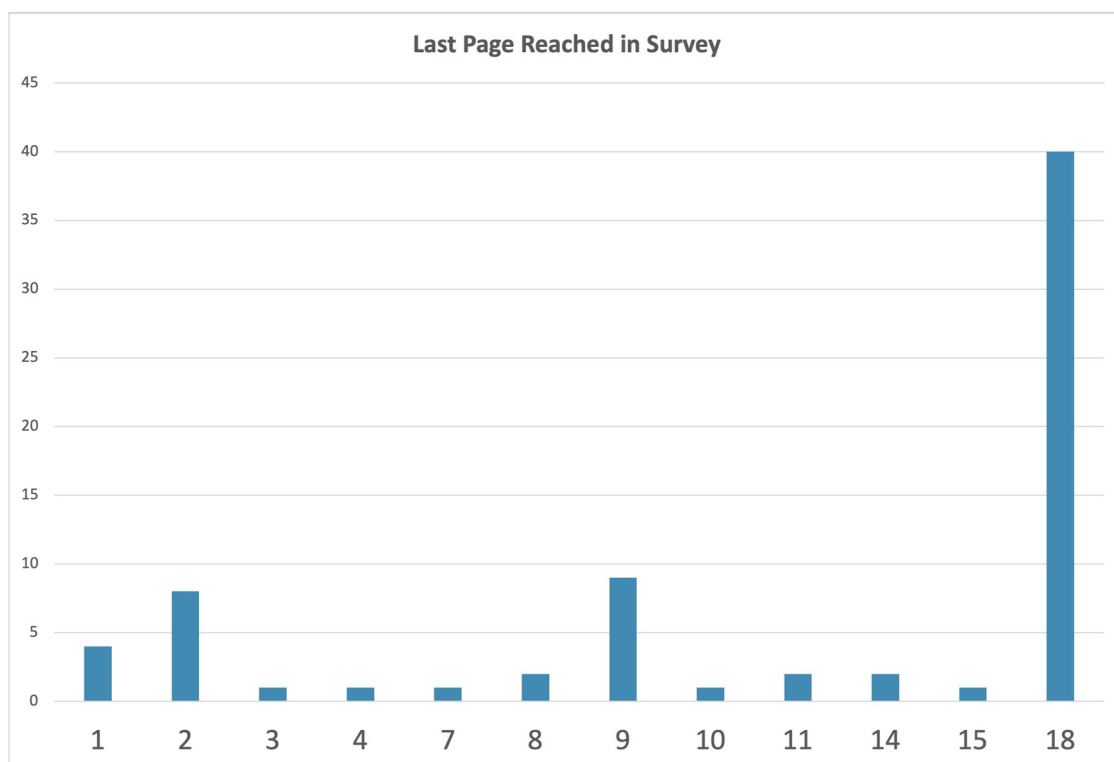


## 5.3 Survey Results

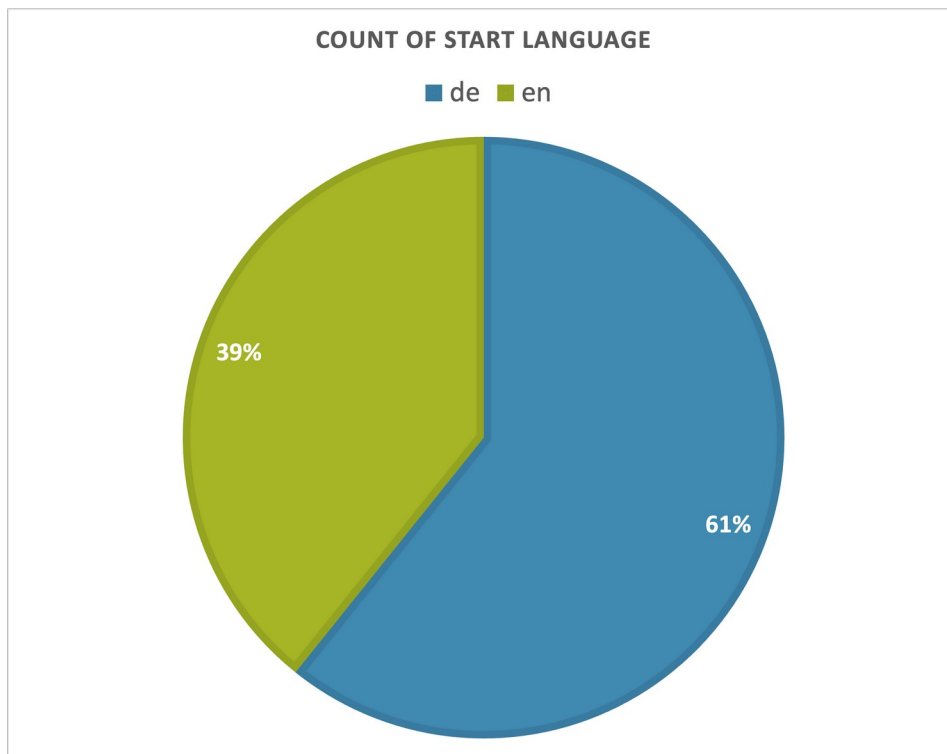
The following sections are an in-depth exploration of the different groups of questions respondents were asked.

### 5.3.1 Survey Analysis

Of the 84 respondents, most advanced up to the last page of the survey. However, as all questions were optional and the respondent had the option of skipping questions, the full response percentage was around 50% of all respondents.



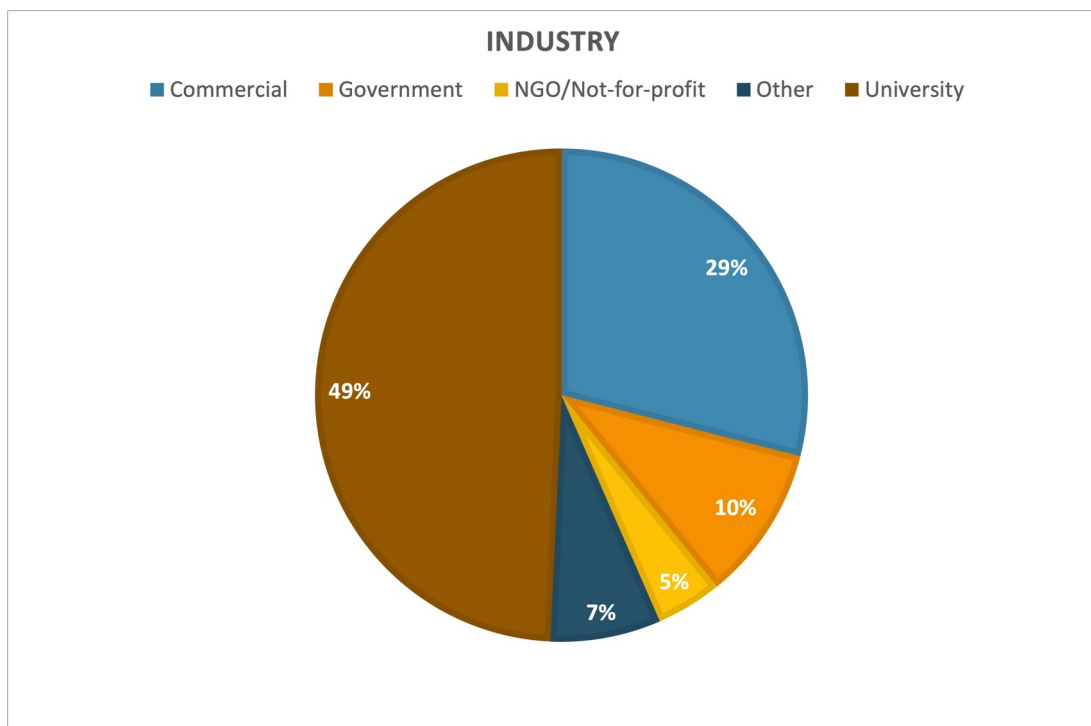
*Figure 5.3.1.1: Bar chart showing the distribution of respondents' last page reached in survey*



*Figure 5.3.1.2: Pie chart representing the percentage of respondents who took the English version of the survey vs the German version of the survey*

The survey was offered in both English and German as a majority of contacts were based in Germany (e.g. German universities or companies located within Germany.)

### 5.3.2 Demographic Breakdown



*Figure 5.3.2.1: Pie chart depicting the industry breakdown of the respondents*

Demographic information was asked of the survey respondents, specifically what industry they worked in. The largest group of respondents came from an academic context, while the next largest group were researchers in a commercial setting. As this was a multiple choice question, there was an option “Other” where the respondent felt the pre-determined options did not suit their case.

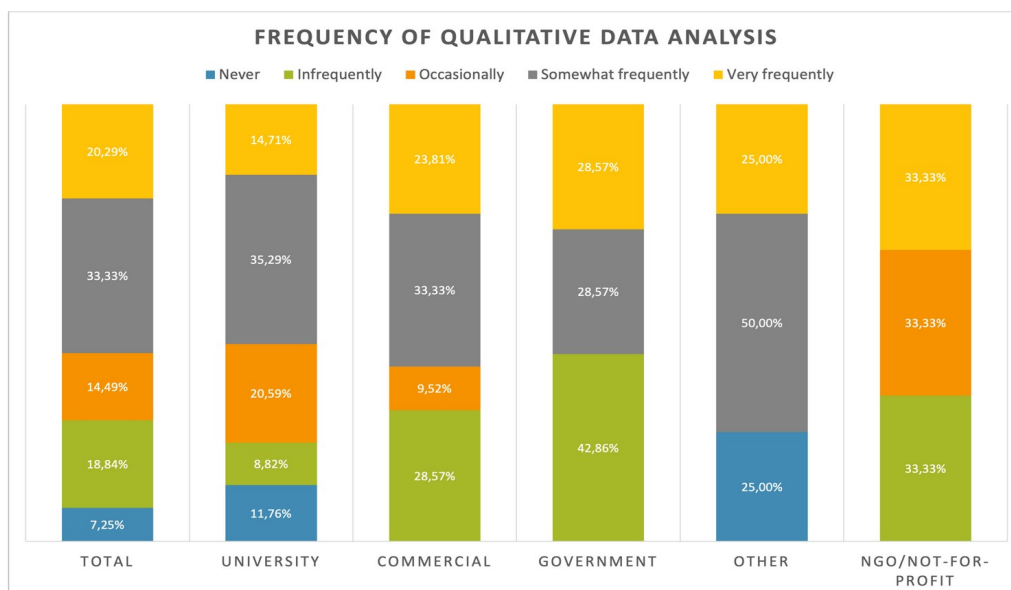
Other:	Reassign
Dienstleistung (Marktforschung)	COMMERCIAL
Dienstleistungsgewerbe	COMMERCIAL
Marktforschung	COMMERCIAL

*Table 3: Re-assignment of "Other" industry to Commercial*

“Dienstleistung” and “Marktforschung” were entered additionally by respondents in the “Other” field due to a varying comprehension of what was specifically meant by the industry listings. The assumption therefore is that any answer “Other” that included “Dienstleistung” or “Marktforschung” would be re-assigned and included in “Commercial” statistics. In regards to the conditional questions later in the survey, all those respondents who had non- “University” industries were shown the same questions (see section 5.3.7).

### 5.3.3 Qualitative Data Analysis

This section of questions is about the frequency the respondent analyzed qualitative data and the tools they use to do so. The question regarding tools was only offered if the respondent actually did qualitative data analysis as part of their research (i.e. not “Never”).



*Figure 5.3.3.1: Bar chart depicting the respondent's frequency percentage (from Never to Very Frequently) of qualitative data analysis broken down by industry*

The majority of respondents did analyze qualitative data so there was a possibility of collecting further information on the types of tools utilized.

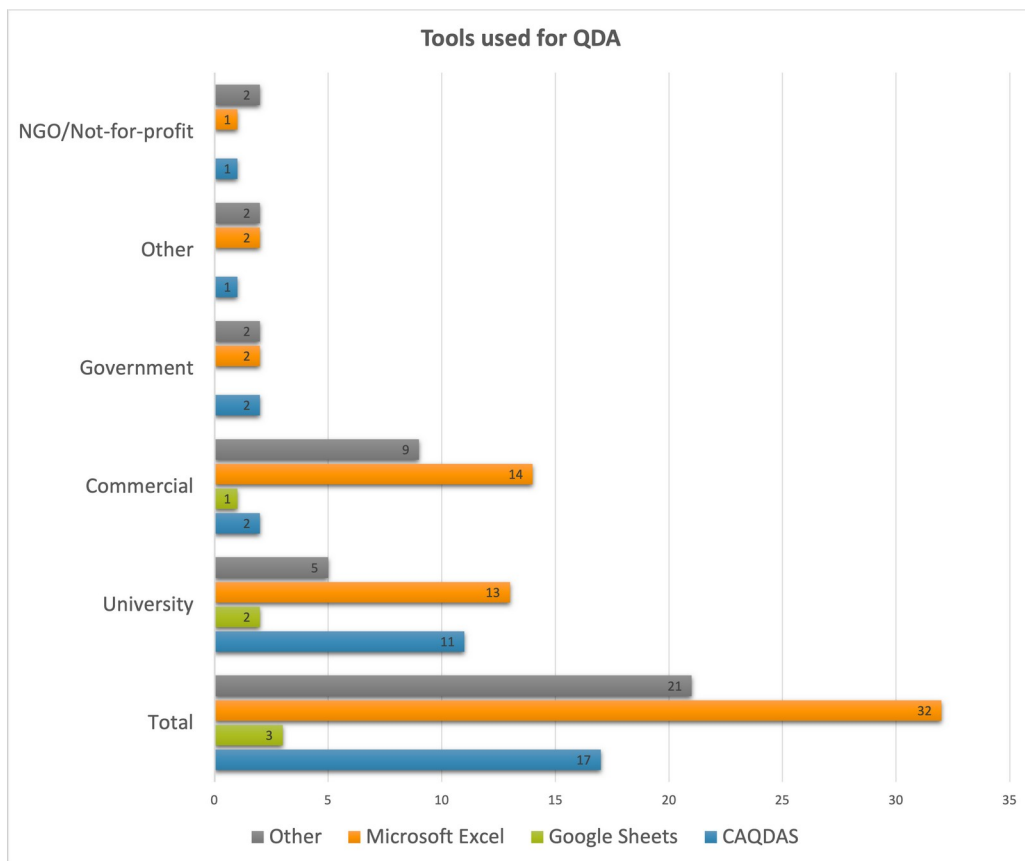


Figure 5.3.3.2: Bar chart representing tools respondents use to do qualitative data analysis

The question regarding tools was a multiple choice question that allowed the respondent to select more than one option. Many respondents, specifically those coming from University and Commercial industries mainly use Excel as their tool of analysis. If they were using a CAQDAS for analysis, the specific software was also requested.

CAQDAS	Count
MAXQDA	9
Atlas.ti	3
Nvivo	1
Caplena	1
QCAMap	1

Table 4: CAQDAS already utilized by respondents

MAXQDA was the most popular of the CAQDAS, however there were also other competitors in use by the respondents.

Of the other softwares provided, statistical software was mentioned as being used for QDA. In the survey, CAQDAS functionalities should have been better defined to differentiate from tools that do statistical analysis (e.g. R, Stata, Python, SPSS). While CAQDAS often includes statistical analysis functionalities, the coding abilities and organization of themes are not equivalent with what a statistical tool or program is designed for.

Other	Count
R	5
Stata	4
SPSS	4
MS Word	3
Python	2
Manuell	1
Datenbanken/SQL	1
Quantum	1
Protokolle/Transkripte (Protocols/Transcripts)	1
EViews	1
Paper and pen, Post-its and memory	1
SQL	1
Confermit	1
Eigene Anwendungen (Own Application)	1
GESS	1
Pandas	1
Numpy	1

*Table 5: Other methods of analyzing qualitative data given by respondents*

#### **5.3.4 Van Westendorp Pricing**

To determine an optimal price point, the question on price was based on the Van Westendorp Price Sensitivity model. This model is based on four ratings of the price of a product (Sadwick, 2021).

- Too low, that the quality of the product is questioned
- A bargain, i.e. a very reasonable price for the product's worth
- Expensive, however the product would still be purchased
- Too expensive, that the product is not considered for purchase

This model is well known in market research when determining the *optimal price point* of a product. It is also recommended specifically when pricing products in a B2B setting.

In this survey, pre-determined price points were offered in lieu of the traditional free text field. The “product” in question was an annual CAQDAS license for one user. The below figure shows the intersection of the *too expensive* and *reasonable* lines with the inversely plotted *expensive* and *too expensive* lines.

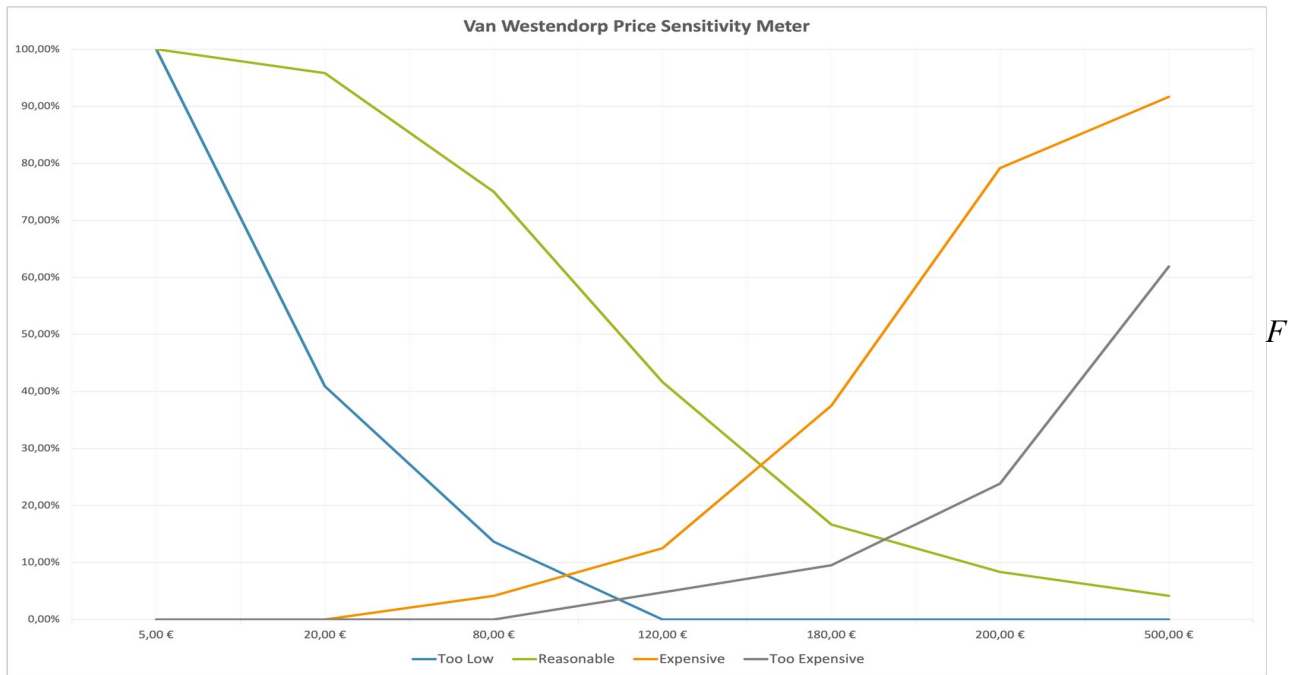


figure 5.3.4.1: Plot of Van Westendorp price sensitivity plot. The lines for “Too low” and “Reasonable” are plotted on their distribution of respondents’ ratings while “Expensive” and “Too expensive” are inversely plotted.

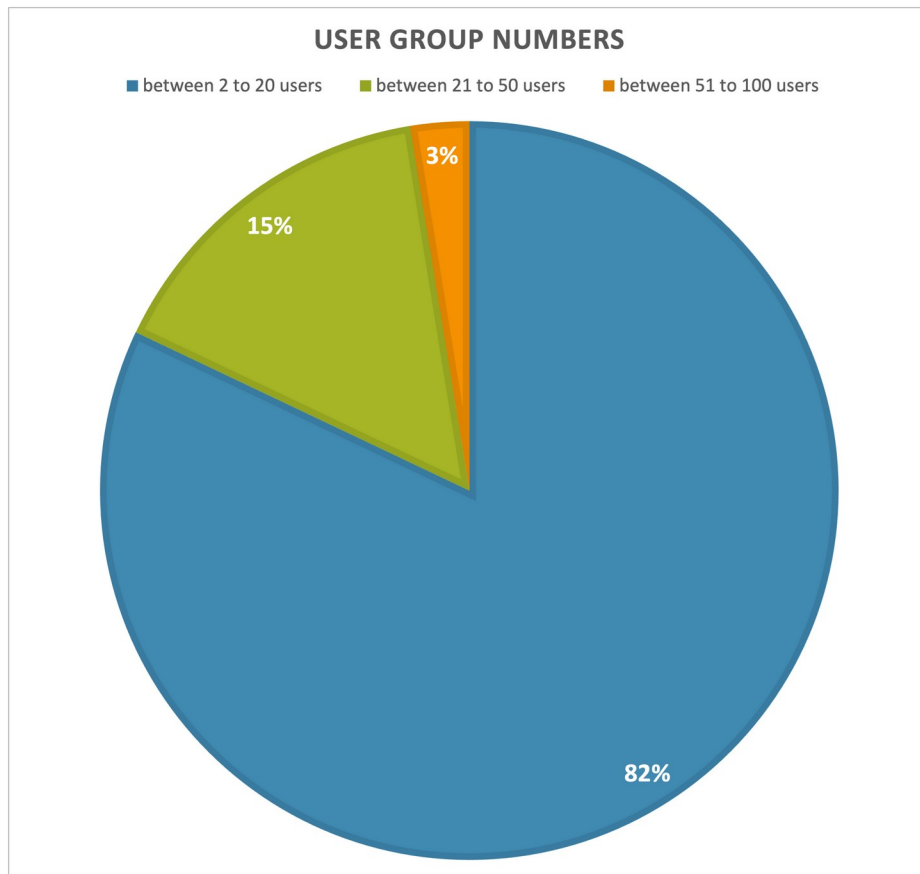
The *optimal price point* is where the lines of *too low* and *too expensive* intersect. Therefore, the *optimal price point* in the case of this plot is approximately 110 euro per yearly license. The other intersection points provide the range of acceptable pricing. Where *too low* and *expensive* lines intersect is the *point of marginal inexpensiveness* – any lower than this price and users would consider the product to be too “cheap”. Where the lines *reasonable* and *too expensive* intersect lies the *point of marginal expensiveness* where users will not be willing to pay more past this point (Sadwick, 2021).

This range between the *point of marginal inexpensiveness* and the *point of marginal expensiveness* estimated to be between 90 Euro and 190 Euro.

QDAcity should aim the pricing offer between 90 Euro to 190 Euro, with the optimal price point at 110 Euro. This offers a range that could be tiered based on industry and premium offers.

### 5.3.5 User Counts and Pricing Models

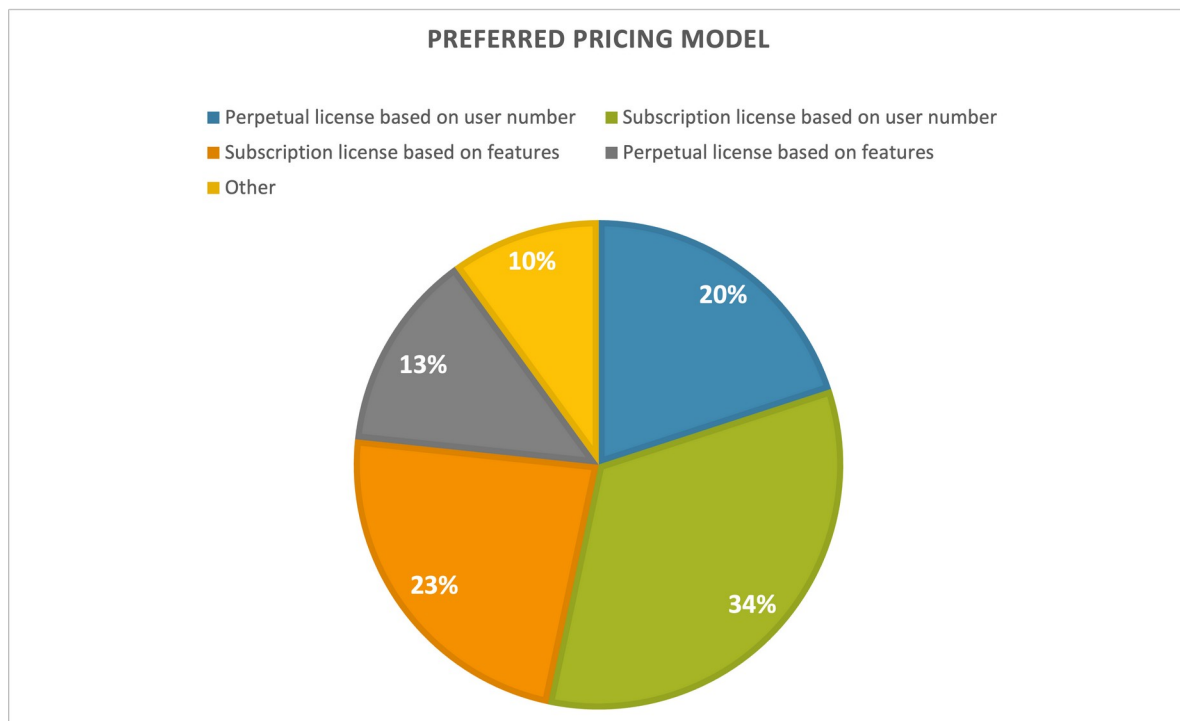
This group of questions was to better understand the collaboration contexts in which researchers are working as well as their preference towards a pricing model.



*Figure 5.3.5.1: Pie chart depicting the percentage of how many users fit the respondent's use case*

It was hypothesized in section 2 that most user groups would have more than 20 users. As shown by respondents, this was not true as 82% responded their research use case was between 2 and 20 users.

This is helpful for forecasting the user collaboration size for *QDAcity* as well as user management possibilities.



*Figure 5.3.5.2: Pie chart depicting the percentage of respondent's preferred pricing model*

Respondents were also asked a general question about their preferred pricing model of a software product. While these pricing models are not all mutually exclusive (e.g. a subscription model can be based on user numbers as well as feature tiers), it can give an indication of the type of payment plans preferred (subscription vs. perpetual) and the basis of cost (users vs. features).

Most respondents prefer a subscription based license as well as the license to be based on the number of users within the license.

### 5.3.6 University Specific Questions

Respondents who were from a University context were asked to define their role.

Role	Count
Professor supervising research projects	5
PHD student working on a research project	14
University administration	1
University library	0
Teaching a research course using CAQDAS	3
Other	7

*Table 6: Roles of respondents who work in a university context*

Of those who answered “Other” the other roles defined were Post-Doc and Research Assistant in a third party project (“Wissenschaftliche/r Mitarbeiter/in in einem Drittmittelprojekt”).



As there were only three respondents who teach research courses via a CAQDAS, their ratings of the below questions were not significant to be considered:

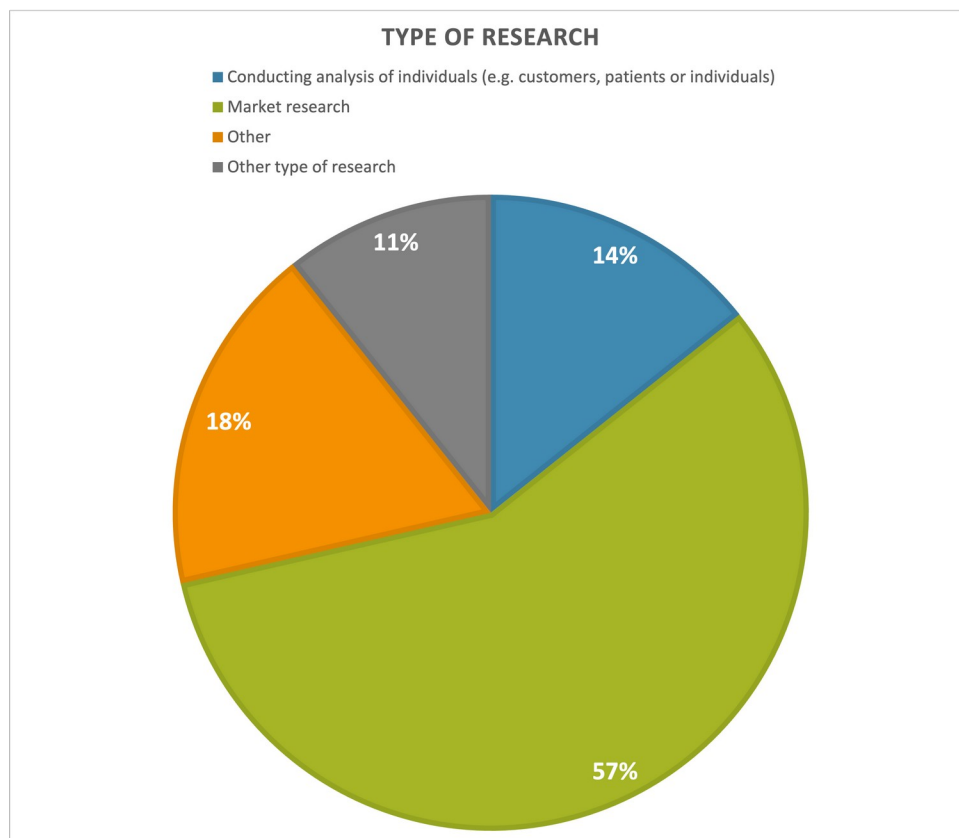
- Rate your interest in having an option to run practical exercises within the CAQDAS
- Rate your interest in having automated evaluation of practical exercises?

From the few responses, there was “slightly interested” and “neutral” interest.

Unfortunately, no instructor provided their contact information for a follow up interview. This could be a subject for further research – interviews or focus groups with instructors of methods courses on their needs. This is also a justification to conducting the trend analysis of academic literature in section 5.1.3 – to better understand the needs of instructors of QDA classes.

### 5.3.7 Other Industry Questions

All respondents who were not from the University context were asked about their specific type of research.



*Figure 5.3.7.1: Pie chart representing the percentage of types of research done by respondents who are in Commercial, Not-for-profit, Government and Other industry contexts*

Most respondents conducted market research within their industry. There was also those who conducted analysis of individuals (e.g patient interviews within a health care context).

The other research done by respondents is shown in the table below:

Other research
Clinical studies
Business surveys
Technische Auswertungen (Technical evaluations)
Unternehmensbefragung (Company survey)
Interne Auswertung von Kundenbewertungen und Gesprächsnotizen (Internal evaluation of customer ratings and conversation notes)

Table 7: Other types of research conducted by non-university respondents

### 5.3.8 Features Ranking

Respondents were asked to rank seven features from “Not Important” to “Extremely important”.

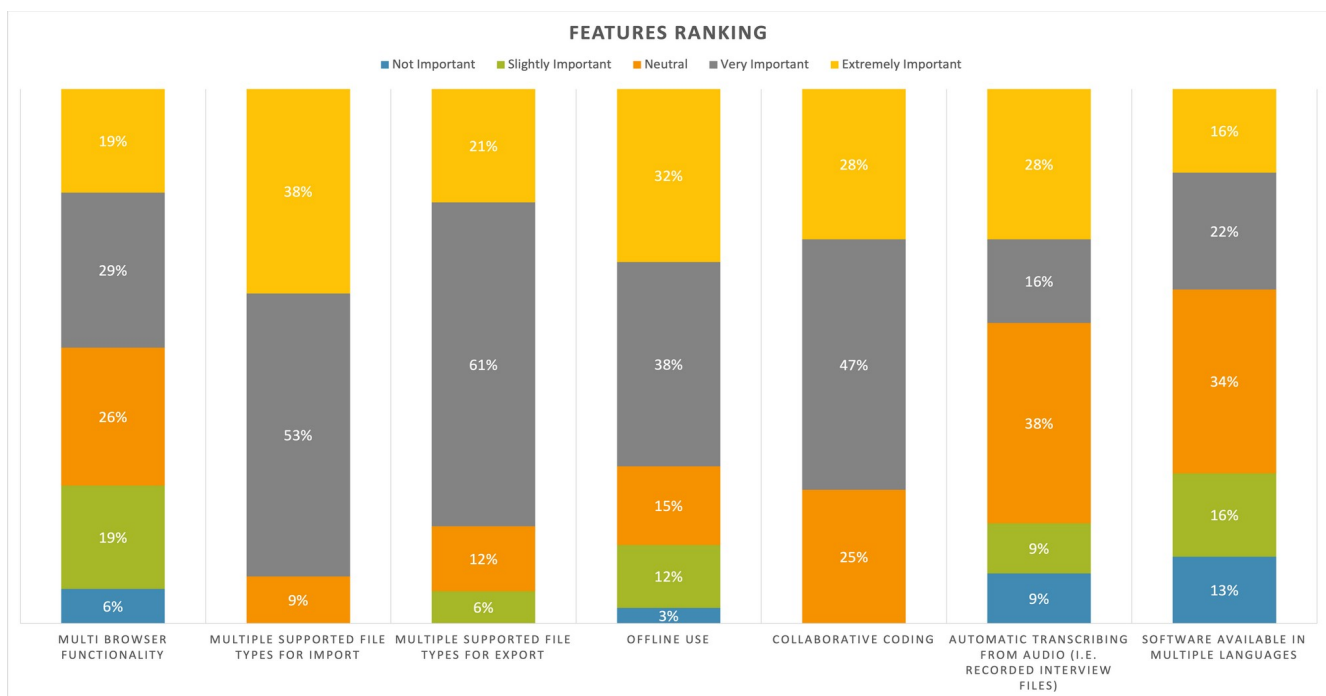


Figure 5.3.8.1: Multi-tiered bar chart depicting the percentage of respondents ranking software features from Not Important to Extremely Important

**Multi browser functionality:** most people were indifferent towards having cross-web browser functionality. This could be due to the fact that a CAQDAS is usually installed on a local machine and utilizing the software via a web browser could be still a foreign concept.

**Multiple supported file types for important:** most CAQDAS providers offer a diverse range of file types that can be imported to the software for coding and such this was of high importance to respondents.

**Multiple supported file types for export:** similar to the import data types feature, there is commonly offered multiple export options (e.g. reports or export structures) for the analyzed data. Most respondents said this was of high importance.

**Offline use:** as stated previously, CAQDAS often are installed on a computer and used remotely and the concept of a web based software is relatively recent. This could be why 60% of respondents ranked this as very important or extremely important.

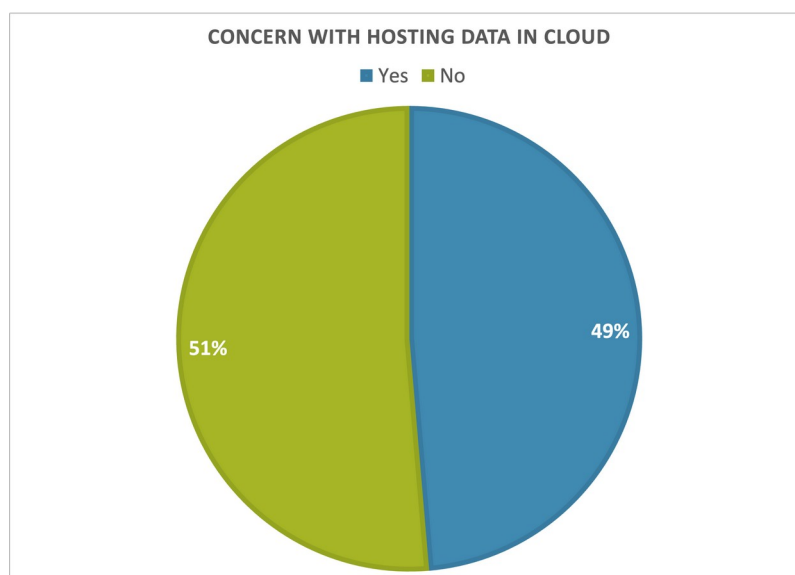
**Collaborative coding:** collaborative coding is defined as the ability to have multiple researchers code the same document, however this was not specifically defined as simultaneous collaborative coding in the survey. Over 70% of respondents said this was very important or extremely important.

**Automatic transcribing from audio:** interviews are a common form of qualitative data that are analyzed within a CAQDAS, and therefore a feature such as automatic transcribing is an expected feature. However, most respondents were indifferent towards this feature, mostly saying it was not important to neutral importance.

**Software available in multiple languages:** while the ability of offering the software in various languages is not necessarily a feature, as it is a marketable quality of the competitors this was also asked to the respondents. Most of the respondents (63%) found having the software UI available in multiple languages of low to neutral importance.

### 5.3.9 Hosting Concerns

As *QDAcity* is offered only as a web application (versus the traditional on-premise installation), respondents were asked if they had concerns with their data being stored on the cloud.



*Figure 5.3.9.1: Pie chart representing the percentage of respondents and their respective concerns of hosting their data in the cloud*

Fifty-one percent of the respondents said they did not have any concerns with their data being hosted in the cloud. The 49% of users who did have concerns were asked what their specific con-

cerns were. As seen in Figure 5.3.9.2, most users were concerned about their data privacy, or sensitive data being hosted outside their organization.

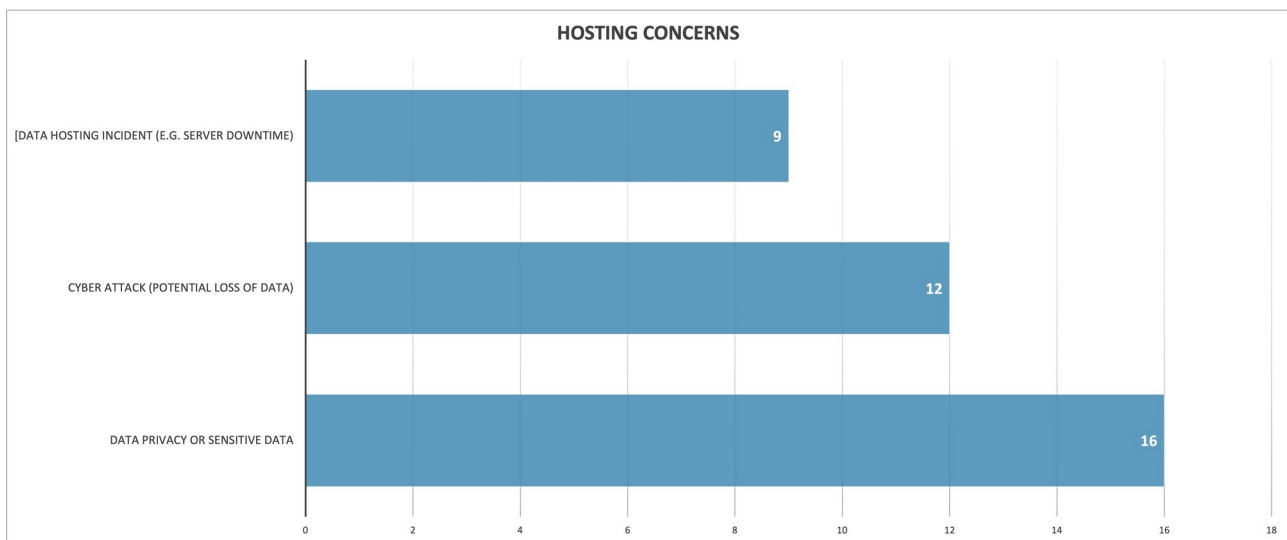


Figure 5.3.9.2: Bar chart depicting the specific concerns of respondents about their data hosted in the cloud.

### 5.3.10 Vendor Support Expectations

As discussed in Section 3, selling B2B software requires the vendor to plan for the support facing the client. Respondents were asked to rate the importance of having 24/7 vendor support for every technical issue that may arise when using the software.

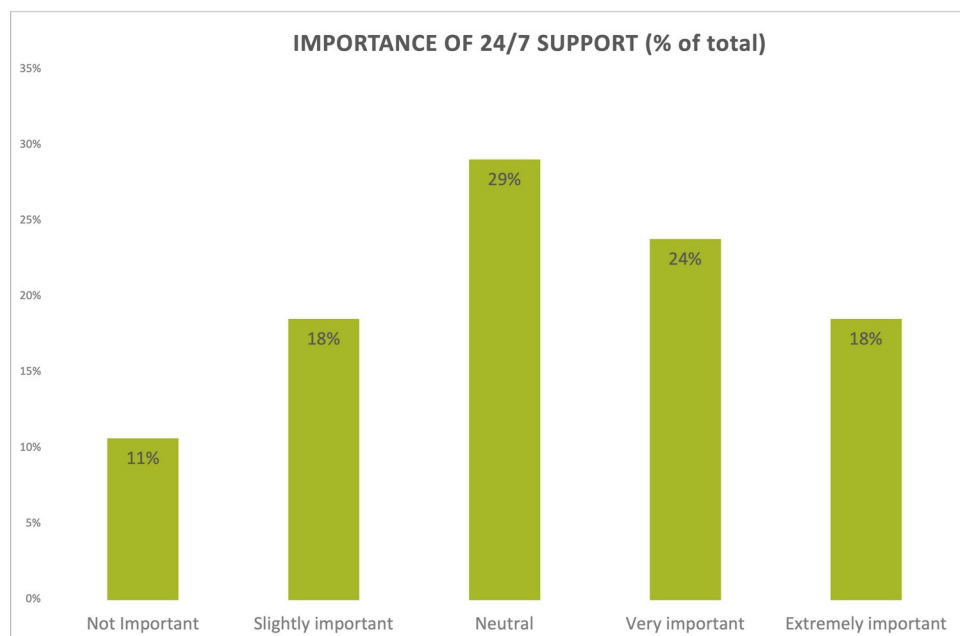
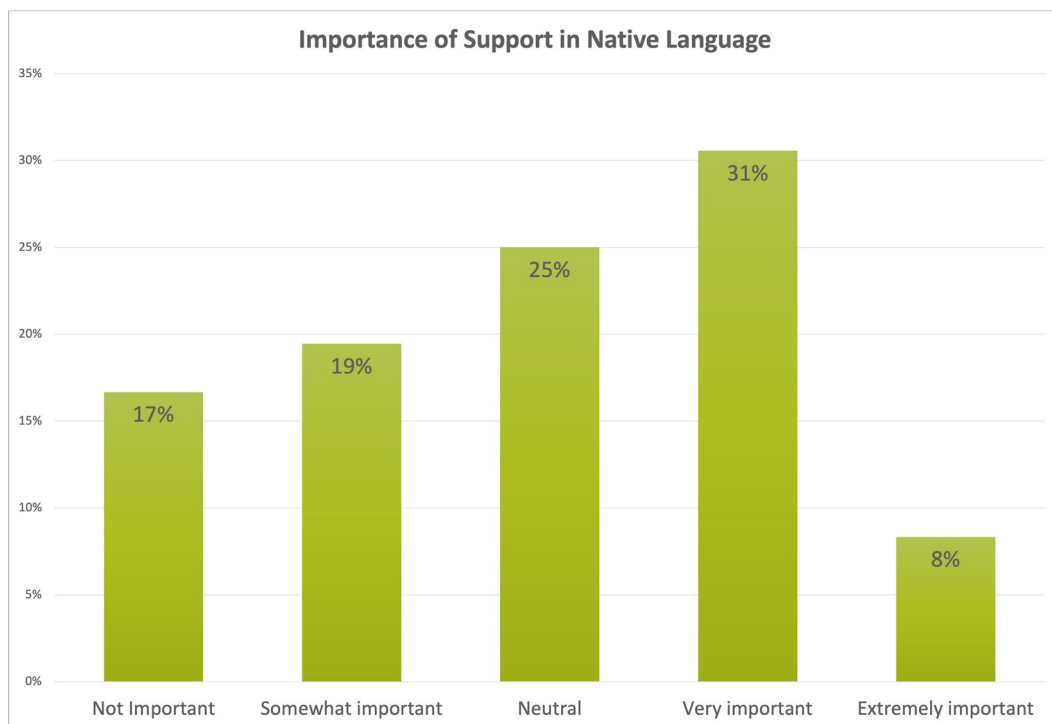


Figure 5.3.10.1: Bar chart of percentage of respondents and their rating of the importance of 24/7 support for all technical issues

While 29% of respondents rated this of neutral importance, 42% answered 24/7 vendor support for issues was either very important or extremely important.

Lastly, as respondents were sourced from multiple countries within Europe and North America, they were asked to rate the importance of having vendor support in their native language.



*Figure 5.3.10.2: Bar chart representing the percentage of respondents and their rating of the importance of having vendor support in their native language*

While 39% of respondents said it was very or extremely important to offer technical support in their native language, 69% rated this being not important to neutral importance.

Within this section, it is surmised that when marketing *QDAcity* to potential clients, the technical support expectations should be set, with more focus on the availability of vendor support for critical issues compared to non-critical issues. In building service level agreements (SLAs) with potential clients, the language of support can be standardized from a *QDAcity* side rather than expending further costs.

## 6 Limitations

The limitations of this thesis can be grouped into two categories: market and competitors and limitations of the survey.

### 6.1 Market Analysis and Competitors

As most full market research reports are behind paywalls (e.g Verified Market Research report estimated to be \$3,950) (Verified Market Research, 2021), the market size and trend was taken from the one pagers that are publicized online. Due to this limitation, the market size was compared against other markets that QDAcity exists within, where more market data is available – B2B Enterprise software and Market Research.

As for the Competitive Analysis (Atlas.ti, MAXQDA and Nvivo), there are indeed more competitors within the market – Dedoose and webQDA are two could based examples. Further from this thesis there could be a more extensive competitive analysis with every player within the market or only those who have a pure web hosting model.

### 6.2 Survey

There were many restrictions and therefore, learnings from the survey construction and the target group. Firstly, due to the broad nature of understanding expected from the respondents, the length of the survey proved some difficulty in collecting complete and full responses. As the survey was estimated to take 10-15 minutes, all questions were marked optional so that the respondent would have the ability to navigate through the whole survey.

Furthermore, as the target group was researchers from diverse research backgrounds and unfamiliar contacts, there was a low conversion rate from number of contacts to actual respondents. Keeping with this challenge as well as time constraints, there was no pilot of the survey done with researchers in the target group. However, as part of recruiting respondents, multiple survey exchange networks were joined, and there were many other surveys reviewed. This provided valuable insight into preferable survey structure for end users. The learning here is to make trusted contacts within the target group to review the survey and provide valuable feedback before distributing to a wider audience.

Another important point of consequence is a significant portion of survey respondents were recruited directly by a personal acquaintance. These respondents were in a network of commercial (industry) market researchers. Nevertheless, over half the respondents were acquired from the cold-emailing of university contacts to provide a fair representation.

## 7 Conclusion

### 7.1 Hypotheses Assessment

Hypothesis	Related Section	Proven (Yes/No)
The market for B2B CAQDAS is large enough for QDAcity.	5.1.1	Yes
The market for B2B CAQDAS usage has an increasing trend.	5.1.2	Yes
There are other established players in the CAQDAS market.	5.1 and 5.2	Yes
QDAcity has significant differentiating features from the other players.	5.2	Yes
QDAcity is missing key baseline features as seen in other major players.	5.2	Yes
B2B Customers will be purchasing for many (>20) users.	5.3.5	No*
B2B Customers are interested in purchasing licenses on a subscription base per number of users.	5.3.5	Yes**
It is critical to have multi-browser utilization of the application.	5.3.8	No*
It is critical to support multiple file types for import.	5.3.8	Yes
It is critical to support multiple file types for export.	5.3.8	Yes
It is important to be able to utilize the application offline.	5.3.8	Yes
Collaborative coding is important to researchers in group contexts.	5.3.8	Yes
It is important to be able to transcribe audio.	5.3.8	No*
Instructors of a research course using CAQDAS would like to offer practical exercises at scale.	5.3.6	No*
Instructors of a research course using CAQDAS are interested in automated evaluation.	5.3.6	No*
QDA tools are being used for market research.	5.3.7	Yes
B2B Customers are concerned about their data being hosted in the cloud.	5.3.9	Yes
B2B Customers are sensitive to data privacy when utilizing a cloud-based CAQDAS.	5.3.9	Yes
24/7 support for all issues is required by organizations using QDAcity.	5.3.10	Yes**
Departments require UI and support in their native language	5.3.10	No*

*Table 8: Assessment of hypotheses*

\* Hypothesis was not proven and further clarification is provided.

\*\* Hypothesis was proven however further clarification is provided.

- As seen in the user group section of the survey results, the respondents of the survey mostly work in groups of 2-20 in their use case.
- While the highest percentage of respondents (34%) preferred a subscription based model determined on user count, it was not a majority of respondents. The next most preferred pricing model was subscription license based on features (23%). Therefore, it can be concluded that users prefer a subscription model of licensing as opposed to perpetual.
- The majority of respondents rated the ability to use the software in multiple web browsers to be either of neutral or none importance. This could be due to the fact that many softwares used within organizations are locally installed on people's machines and web based applications are relatively new. This question could have also been rephrased to specifically mention features of web-based applications.
- Only 38% of respondents rated the ability to transcribe audio to be of importance. As seen in section 5.3.3, there is still a gap between people who do QDA as part of their research and people that use CAQDAS. This could explain that while audio transcription can facilitate researchers by further digitalizing their audio media (e.g. interviews recordings, speeches, etc.), the value is not understood as they are not currently utilizing CAQDAS as a tool in their analysis.
- As stated in section 5.3.6 there was not a significant amount of respondents that instructed research courses with a CAQDAS ( $n < 5$ ). In section 5.1.3, different proposed pedagogies in the literature were reviewed that supports this hypothesis, however with the insignificant number of respondents it cannot be proved.
- Similar to the above clarification, the insignificant number of respondents that instruct research courses via a CAQDAS prevented the proving of the hypothesis of instructors interest in automated evaluation of exercises.
- While most respondents expressed high interest in having 24/7 support for all technical issues that arise with the software, this could have been better outlined by offering different support models, as this is an expensive support model for vendors to maintain. Forums, FAQs and ticketing platforms are other options for technical support platforms that are more cost effective for vendors, while still being helpful for the clients using the software.
- Most respondents rated the option of having technical support in their native language to be of lower importance. As the survey was offered in both German and English it could be assumed the respondents were native speakers of either language and therefore, if the support is offered in either of these languages it would be sufficient.



## 7.2 Key Findings and Recommendations

From the hypothesis assessment as well as the results found in section 5, there are key findings to outline.

- Market outlook

As seen in section 5.1.1 and 5.1.2, there is a significant market for *QDAcity* within the CAQDAS market. With market capitalization greater than \$1 billion as well as a significant increase of the market in the next 5 years, there is space for a new player. As qualitative methods of analysis become more digitalized (e.g. online interviews, online focus groups), this increases the need for technological support in analyzing the findings.

Furthermore, as seen in section 5.3.3, there is a gap in how researchers are indeed analyzing their qualitative data. The Microsoft office suite was popular for analysis, which indicates much QDA is done manually. This gap provides *QDAcity* more potential customers, not only in a university setting but also in commercial market research companies.

- Collaborative features

*QDAcity* is built as a web application which provides a stronger architecture for real-time collaboration. In section 5.2.2, it is seen that the key competitors lack this scalability for full collaboration across all users as well as projects. Furthermore, the web hosting aspect of *QDAcity* offers a seamless integration with collaborative features without having to purchase and install extra modules.

It is recommended that further collaboration features, such as memos, memo linking and bulletin boards are also developed. This aids research teams in organizing their work within the CAQDAS tool itself.

- Academic background

*QDAcity* is already being utilized in an academic context, such as the medium in a research course as well as a tool for the academic researchers within the chair it was developed. With more qualitative data methods courses arising in universities, this is a leveraging point for *QDAcity* as a trusted medium of instruction.

The recommendation, as seen with the academic papers in section 5.1.3, is to partner with more researchers so that the name of *QDAcity* is propagated as a reliable CAQDAS in an academic opinion.. This can be achieved by having *QDAcity* as the medium in which newer pedagogies of qualitative data analysis instruction is built or where qualitative methods are at the core of a research initiative and *QDAcity* is the noted CAQDAS.

- Functional features and instructional resources

The features comparison in section 5.2.1 provides a hearty overview of all features that are common across all competitors. There are data types for import that *QDAcity* should also include (social media imports, geographical data), as well as the formats of data it can export projects into. The ability to export into various file types is important for users as it provides further analysis capabilities on the already analyzed data of interest.

Another key finding is that survey integration into *QDAcity* would be a marketable feature. As many surveys often include feedback areas as open text boxes, there are opportunities to better ana-

lyze this data within a CAQDAS. While MAXQDA and Nvivo offer direct plug-ins with some of the most popular survey platforms, another way to achieve this is by building a query wizard (similar to Atlas.ti) where data in a survey type format is chosen on import and is more user-friendly in assessing the fields that will be analyzed within the CAQDAS.

Lastly, as all three competitors offer extensive instructional guides, this is a recommendation for *QDAcity* to also build up a knowledge base. As noted in the academic papers in section 5.1.3, CAQDAS is often seen as unintuitive, especially by people who do not have high technical adoption capacity. While there is a development to embed helper guides within *QDAcity*, a detailed wiki or YouTube tutorials could also support users in utilizing the software correctly and effectively.

In conclusion, there is a feasible market entry for *QDAcity* into a B2B CAQDAS market. While specific features would have to be further improved to maintain better competition with existing players, *QDAcity* brings differentiating features. Guided by users's responses of prices as well as the pricing offerings of major competitors, competitive pricing can also be achieved when entering into the market.

## Appendix A Competitive Analysis Features

	Atlas.ti	MAXQDA	Nvivo
<b>General</b>			
Cloud version?	Yes*	Yes* (max 5 collaborators)	Yes*
Webinars offered?	Yes	Yes	Yes
<b>SUPPORTED DATA TYPES</b>			
Text formats	txt, rtf, doc, docx, odt	docx, odt, rtf, txt	doc, docx, csv, txt
Editing and writing text	Yes	Yes	Yes
PDF	Yes	Yes	Yes
Images	Yes	Yes	Yes
Audio	Yes	Yes	Yes
Video	Yes	Yes	Yes
Geo	Yes	No	No
Survey data	Yes	Yes	Yes
Twitter import	Yes	Yes	Yes
Import data from reference managers	Yes	No	No
Audio-/Video transcripts in sync with media	Yes	Yes	Yes
Evernote	Yes	No	Yes
Full Unicode support	Yes	Yes	No
Text search	Yes	Yes	Yes
Word frequency counts	Yes	Yes	Yes
Word clouds	Yes	Yes	No
<b>CODING</b>			
Free codes (generate codes without coding)	Yes	Yes	No
Code with last used code(s)	Yes	Yes	No
Open coding (coding while you read the data)	Yes	Yes	Yes
In-vivo coding	Yes	Yes	Yes
Quick coding	Yes	Yes	Yes
Merging codes	Yes	Yes	Yes
Grouping codes	Yes	Yes	Yes
Splitting codes	Yes	Yes	No
Aggregate coding	No	No	Yes
<b>AUTOMATIC CODING</b>			
Searching a text for words or expressions and auto coding results	Yes	Yes	Yes
Suggesting synonyms when searching text	Yes	No	Yes
Recognizing speakers / text units in focus groups or other structural data and auto coding results	Yes	Yes	Yes
Named Entity Recognition (NER)	Yes	No	No
Sentiment Analysis	Yes	Yes	Yes
<b>TEAMWORK</b>			
User management	Yes	Yes*	Yes
Real-time team collaboration	Yes	Yes*	No
Inter-coder agreement analysis	Yes	Yes*	Yes
<b>COMMENTS AND MEMOS</b>			

Comments for every entity in your project	Yes	Yes	Yes
Creating, writing, grouping memos	Yes	Yes	Yes**
Converting memo into document for further analysis	Yes		Yes
Linking memos	Yes	Yes	Yes
<b>ANALYSIS</b>			
Querying coded data using boolean operators (AND, OR, XOR, NOT) in combination with document filters	Yes	Yes	Yes
Queries can be saved for later inspection or re-use	Yes	No	Yes
Within and across case analysis	Yes	Yes	Yes
Code co-occurrence analysis	Yes	Yes	Yes
Code-document table (cross-tabulation of codes by documents)	Yes	Yes	Yes
Sankey Diagrams	Yes	No	No
<b>NETWORKS AND LINKING</b>			
Linking entities, creating networks, visualizing relationships in the data	Yes	Yes	Yes
Create hyperlinks between quotations/Interactive Quote Matrix	Yes	Yes	Yes
<b>REPORTS</b>			
Reports of code lists and coded data segments in Excel format	Yes	Yes	Yes
Reports in Word or PDF format	Yes	Yes	Yes
Print coded documents as you see it on the screen	Texts documents	No	Yes
Data Archiving	No	Yes	No
Adjacency Matrix	No	Yes	No
<b>PROJECT IMPORT &amp; EXPORT</b>			
XML project export	Yes (only on Mac)	Yes	Yes
Export in QDPX format for use in other CAQDAS	Yes	Yes	Yes
Import from SPSS or Excel	Yes	Yes	Yes
Export to statistical software (SPSS, SAS, R, etc.)	Yes	Yes	Yes
<b>GENERAL</b>			
Side-by-side display of documents	Yes	Yes	No
Undo / Redo	Yes	Yes	Yes
Supported Survey plug-ins	No specific survey but improve Survey import wizard	SurveyMonkey	SurveyMonkey, Qualtrics

\*only available with add on cloud collaboration (additional upgrade to on-prem license)

\*\* grouping memos not possible

## Appendix B Survey Questions

Question	Question Group	Question type
What best describes your industry?	General Information	List (radio)
How often do you analyse qualitative data?	General Information	List (radio)
With which tool do you analyse qualitative data?	General Information	Multiple choice
Which CAQDAS product do you use?	General Information	Short free text
Select all of the following that applies to your current role:	University	Multiple choice
Rate your interest in having an option to run practical exercises within the CAQDAS:	Teaching via CAQDAS Usecase	Array
Rate your interest in having automated evaluation of practical exercises?	Teaching via CAQDAS Usecase	Array
If you are willing to be contacted for an interview regarding your teaching via CAQDAS, please enter your e-mail address:	Teaching via CAQDAS Usecase	Short free text
Select which of the following best describes the context in which you do analysis:	Industry Questions	List (radio)
How important are the below features to have in a cloud based CAQDAS?	Features	Array
Are there any features not listed in the last question that you see to be a critical? If yes, please provide:	Features	Short free text
Do you have concerns about your CAQDAS hosted in the cloud?	Hosting Concerns	Yes/No
Select all concerns that apply:	Hosting Concerns	Multiple choice
How many users in your group conduct analysis?	Licenses and Pricing	List (radio)
For each price option below, rate if you find it to be too low, reasonably priced, expensive or too expensive (these prices are in Euro per user annually):	Licenses and Pricing	Array
Select the pricing model that would apply best to your use case:	Licenses and Pricing	List (radio)
How important is it to have 24/7 support for all issues that are faced with the software (i.e. a hotline for all issues versus ticketing based on severity of issue)?	Support	Array
How important is it to have support offered in your organization's native language (where the native language is other than English or German)?	Support	Array

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