

UNIVERSITY OF LJUBLJANA
SCHOOL OF ECONOMICS AND BUSINESS

MASTER THESIS

**ADOPTION OF CLOUD ACCOUNTING SOFTWARE BY SMALL AND
MEDIUM-SIZED COMPANIES IN CROATIA**

Ljubljana, March 2022

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INTRODUCTION

Cloud computing as a new technology is becoming more popular day by day. Whole industries want to digitalize their business and processes which is greatly done by utilizing cloud services.

Cloud computing is the provision of computing services throughout the Internet in order to deliver economies of scale, flexible resources, and in the end enable faster innovation and implementation (Microsoft Azure, n.d.d). As industries and companies differ from one another, not all cloud computing services are for everyone. The main idea is that the service can be adapted to the needs of the user. Firstly, clouds differ in their deployments: they can be deployed on a public, private or hybrid cloud (Microsoft Azure, n.d.b). Afterwards it is important to understand what the main categories of cloud services are: Infrastructure as a Service (IaaS), Platform as a Service (Paas), Serverless computing, and Software as a Service (SaaS) (Microsoft Azure, n.d.d). It is crucial to understand the similarities and differences in these categories in order to choose the right path for the company and how to best serve its needs by choosing the category that fits best.

Having their data stored in a cloud database is more secure than having it on a local server or computer. The reason behind the fact is that data is saved across multiple servers and all of them would need to be destroyed in order for data to be lost and that is a highly unlikely to happen (Singh, 2020). However, there are still threats that include hacker attacks on the system. Cloud service providers must take care of the problems and update security solutions regularly.

The biggest cloud service providers in 2020 are Amazon Web Services and Microsoft Azure. However, Google, Oracle, Alibaba Cloud and IBM are in the race and improving their services regularly (Chand, 2020). Also, one company can choose to use multiple providers depending on the need that has to be taken care of.

It is important to understand to which degree are companies aware of the cloud computing technology. In addition, it is beneficial to see what the perceived threats and opportunities are in the eyes of potential users of such a service. One of the services that rose from the technology is cloud accounting software. It allows users to fasten the administrative processes and access to data in the company by shifting data from local servers to a cloud.

The purpose of this Master thesis is to find useful information that will contribute to better understanding of the current state of adoption and utilization of cloud accounting services by small and medium companies in Croatia. The findings would be beneficial to providers of such a service in a way that they will know their customer base and develop a business strategy accordingly. Furthermore, by analysing cloud accounting software providers in Croatia the knowledge about potential competition will provide information on how to best position themselves on the market.

The goals of the Master thesis are:

- To understand the degree to which companies in Croatia are familiar with cloud accounting services
- To comprehend what are the perceived threats and benefits by potential users of such a service
- To research ways in which adoption and utilization of cloud accounting in Croatia can be both increased and improved
- To gather the information about providers of cloud accounting services in Croatia and analyse them by their revenues and functionalities that they offer to customers

The subject of the thesis is cloud accounting software and the degree to which it is used in Croatia by small and medium companies. Cloud accounting is a relatively new field of business in Croatia and not much research has been done on the topic.

Cloud accounting software is a type of cloud service called SaaS (Software as a Service). It is hosted on remote servers to which the data is being sent to, processed, and in the end returned to the user (FreshBooks, 2020). The applications are accessed through Internet and can be used from wherever, provided that there is internet connection and a device that supports the application. Moreover, processed data can be seen by users whether they are in the office on their work computer or not. For example, an accountant can work on the application from her home computer if she cannot come to the office. It improves efficiency and allows employees to work remotely.

An interesting research in this field has been done by doc.dr.sc. Igor Pihir regarding accounting services and digital transformation in Croatia. He developed 4 business models: Model A is an “AS-IS” model that shows the current process of providing accounting services (Pihir, 2019). Models B, C, and D are possible “TO-BE” models depending on the amount of digitization (Pihir, 2019). The conclusion is that in Croatia, most accounting services use Model A that offers the least digitization (Pihir, 2019). The focus of the research was on accounting services providers and this Master thesis would be focused on companies that use those services and companies that are providing cloud accounting software. A questionnaire was created in order to collect primary data from companies in Croatia about their usage of cloud accounting software. The questionnaire was aimed at identifying the perceived benefits and threats that come with the usage of cloud accounting software, and possible reasons that would increase or decrease willingness to adopt. There were, in total, 76 valid questionnaires. Moreover, regarding cloud accounting software providers, secondary data was collected about them in terms of their revenues, marketing, and functionalities of the software.

The first part of this master thesis focuses on the theoretical part about cloud computing. General information about cloud computing is presented through main characteristics, delivery models, deployment methods, advantages, and disadvantages. Moreover, a brief

history of cloud accounting is explained. In the end, the leaders among cloud computing providers and their products are mentioned.

The second part of this master thesis focuses on the theoretical part about cloud accounting. It consists of general information about cloud accounting, benefits and threats that occur from using cloud accounting software, the development of cloud accounting, and cloud accounting software providers in Croatia.

The third part consists of research methodology in which research design is explained and research questions are stated. The fourth part consists of the interpretation of questionnaire results in a form of graphs with textual explanation.

The fifth part is the discussion in which result are interpreted in more detail and compared to existing literature. Moreover, the limitations of the research are depicted as well as possibilities for further research.

1 CLOUD COMPUTING

The first chapter of this thesis consists of general information about cloud computing that include delivery models, deployment methods and its historical development. Its main advantages and disadvantages are listed and described. In addition, the most important providers of such services in the world are mentioned together with industries that utilize cloud computing the most. The aim of this chapter is to get a better understanding of cloud computing technology and its uses.

1.1 General information about cloud computing

Cloud computing is the delivery of different computing services through the Internet such as servers, databases, storage, software, networking, analytics, and intelligence (Frankenfield, 2021). It allows data to be stored on remote databases and to be accessed from any location provided the device that is being used to access it has internet connection (Frankenfield, 2021). It allows end users to store data in data centres and thus allowing them to purchase less expensive devices to run the applications and manage their data (Yoo, 2011).

Five fundamental characteristics of cloud computing:

1) On-demand self-service – end users can utilize resources only when needed and do not have to pay for it when they are not using it. If a customer decides to purchase additional resources, it is done automatically through the Internet, no human has to configure the changes (Maurer & Hinck, 2020).

2) Rapid elasticity – end users can quickly increase or decrease the amount of resources they want to use through the Internet (Maurer & Hinck, 2020). The change happens automatically without additional costs for the provider (Arutyunov, 2012).

3) Measured service – the service that cloud providers offer can be measured by their pricing and utilized volume of occupied resources (Maurer & Hinck, 2020). The data can further be used for future predictions (Arutyunov, 2012).

4) Broad network access – end users can access their data from everywhere. That is why special attention has to be put on security and capacity of networks that are used for access (Maurer & Hinck, 2020).

5) Resource pooling – every customer shares the same infrastructure that cloud provider offers. It saves money for the provider, as well as it allows resource capacity to be transferred to numerous customers at the same time based on their needs (Maurer & Hinck, 2020).

1.1.1 Delivery models for cloud computing

There are three main types of cloud services: Software-as-a-service (SaaS), Infrastructure-as-a-service (IaaS), and Platform-as-a-service (Paas).

Software as a Service is an approach that uses subscriptions with pay-as-you-go or on-demand models as basis for delivering the software applications to customers on the Internet (Frankenfield, 2021). Cloud providers are responsible for running and managing the product, and offer maintenance (software upgrades and security problems) and infrastructure management (Amazon Web Services, n.d.b) as well as the design of the product. The end users connect to the application through their electronic devices that are connected to the Internet (Microsoft Azure, n.d.d). Usually, a web browser is used to access those applications (Yoo, 2011). Examples of such applications are: Gmail, Google Docs, Salesforce, Microsoft Office 365.

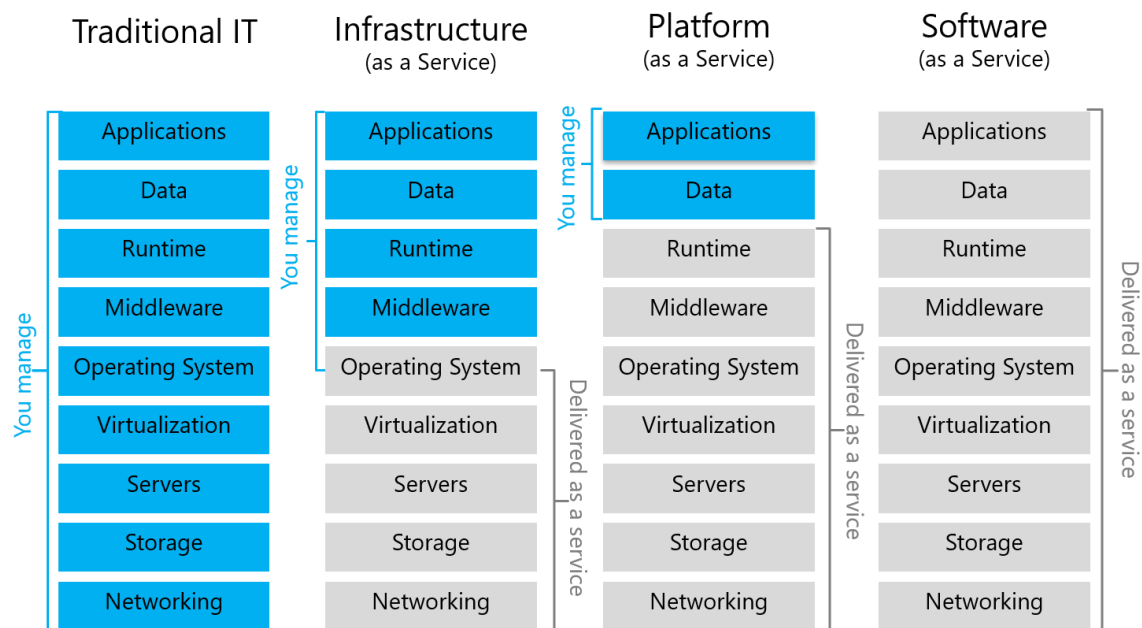
Infrastructure as a Service is an approach that consists of renting IT infrastructure to customers on a pay-as-you-go or on-demand basis (Microsoft Azure, n.d.d). Examples of such infrastructure are servers, operating systems, data storage, networks, virtual machines (Amazon Web Services, n.d.b). Examples: Amazon Elastic Compute Cloud (EC2), Rackspace, IBM Computing on Demand). It allows the highest degree of management control and flexibility of IT resources (Mathew, 2021).

Platform as a Service is an approach that offers the supply of an environment for developing, testing, delivering, and managing software application through an on-demand environment (Microsoft Azure, n.d.d). In essence it is a platform for building software that offers resources needed in the development of the application so that developers do not need to worry about the underlying infrastructure (Frankenfield, 2021). In this model, end users can

determine the design of the application, but the physical infrastructure is managed by a third-party provider (Yoo, 2011). Examples are: Microsoft Azure, Google App Engine.

The three delivery models differ on the number of elements that are either managed by the customer or the provider delivers them as a service. In Figure 1, a graphical representation of the differences is shown. The elements it contains are: applications, data, runtime, middleware, operating system, virtualization, servers, storage, and networking. It can be seen that in Traditional IT every element is managed by the customer (Chou, 2018). In Infrastructure as a Service, the applications, data, runtime, and middleware are managed by the customer while virtualization, servers, storage, and networking are delivered as a service by the providers (Chou, 2018). Operating system can be managed both by the customer and the provider. In Platform as a Service, only applications and data are managed by the customer, and the rest of elements are delivered as a service by the provider (Chou, 2018). Regarding Software as a Service, every element is delivered as a serviced by the provider, and the customer does not manage any of them (Chou 2018).

Figure 1: Delivery Models for Cloud Computing



Source: Chou (2018).

Additional delivery model mentioned by Microsoft:

Serverless computing offers the creation of application functionality without having to relocate time to managing the infrastructure required in the process (Microsoft Azure, n.d.e). The cloud provider deals with server management, general setup, and capacity planning and is using resources only when needed (triggered by a specific action) (Microsoft Azure, n.d.e).

1.1.2 Cloud deployment methods

There are four cloud deployment methods that can be used: public cloud, private cloud, community cloud, and hybrid cloud (Microsoft Azure, n.d.b). In Figure 2 a graphical representation of the four methods can be seen together with its main advantages.

Public clouds are owned and managed by a third-party providers which offer their computing resources through the Internet (Gupta, Seetharaman & Raj, 2013). The whole IT infrastructure, both hardware and software, is owned by the provider (Microsoft Azure, n.d.b). The customers use their accounts to manage services. All customers use the same infrastructure according to their needs (Microsoft Azure, n.d.b). Some of the advantages of using it are: lower costs, no maintenance, near-unlimited scalability, and high reliability (Microsoft Azure, n.d.b). Public clouds can be owned and managed by academic, commercial, and government organization or a combination of all of them (Arutyunov, 2012). The usage of public clouds is usually recommended for collaborative projects and software development (Felter, 2021). The product that has been tested in a public cloud can later be moved to a private one if needed (Felter, 2021).

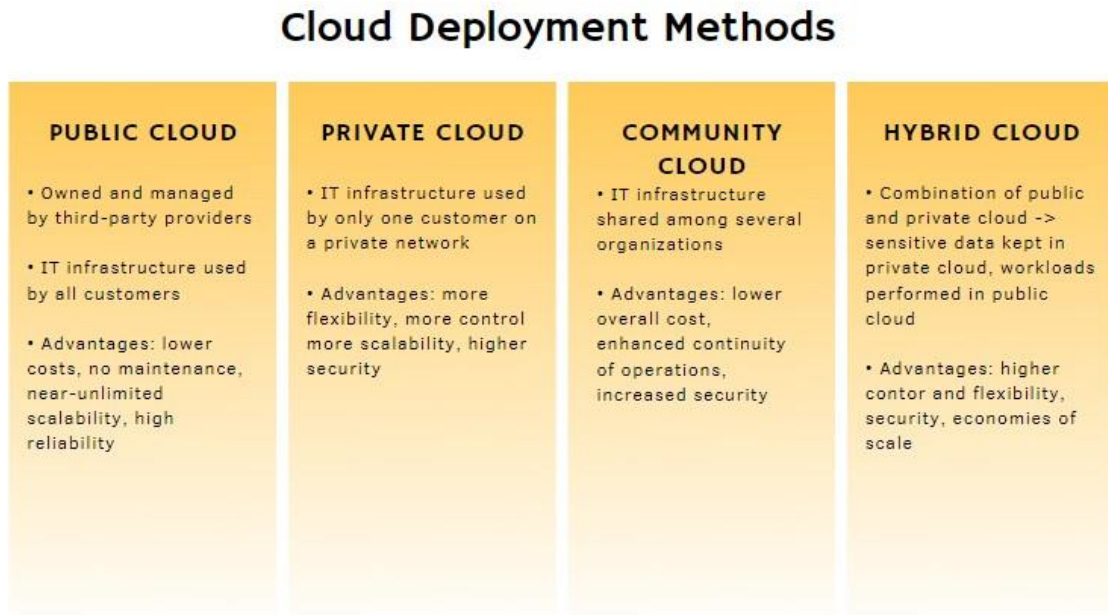
Private clouds are resources used entirely by one organization and services and infrastructure are maintained on a private network (Microsoft Azure, n.d.b). It can be installed locally on the premises of the organization or in a cloud that is hosted by third-party providers (Microsoft Azure, n.d.b). By using private clouds organizations can tailor their resourced based on their specific IT requirements and maintain higher security (Microsoft Azure, n.d.b). Some of the advantages of using it are: more flexibility, more control, higher security and more scalability (Microsoft Azure, n.d.b). Private clouds can be owned and managed by the organization or by a third-party provider (Arutyunov, 2012). Its use is recommended for companies and organizations that have tight regulatory requirements (Felter, 2021).

Community cloud is a private cloud in a broader sense. It is considered to have its cloud infrastructure shared among several companies or organizations that share common interests such as security, performance, and compliance (Felter, 2021). It can be supported and managed by third-party providers or by those organizations (Winkler, 2011). The main characteristic of this deployment method is that the community of organizations uses a shared data centre. The advantages of using it are: lower overall cost, enhanced continuity of operations, increased security (Winkler, 2011).

Hybrid cloud is a combination of public and private cloud which is characterized by using technology that enables data and applications to be shared among them (Microsoft Azure, n.d.b). It offers greater flexibility, more deployment options, security, compliance, and economies of scale (Microsoft Azure, n.d.b). Sensitive data is kept in a private cloud, and certain workloads are performed in a public cloud when needed (most often when there are unexpected increases in demand) (Microsoft Azure, n.d.b). Some of the advantaged of using it are: control, flexibility, cost-effectiveness, ease of use (Microsoft Azure, n.d.b). The hybrid

cloud model becomes more popular as customers realize that different categories of data call for different degree of security (Maurer & Hinck, 2020). This deployment method is recommended to businesses that need to harmonize the need for big data analytics together with strict regulations regarding data privacy (Felter, 2021).

Figure 2: Cloud Deployment Methods



Source: Own work.

1.2 Advantages of cloud computing

The advantages of cloud computing are vast. Several resources from prominent providers of cloud computing such as Amazon Web Services, Microsoft Azure, and Salesforce have been reviewed. The most commonly mentioned advantages have been summed up and explained in the following list:

Agility – higher speed of the processing changes in utilized resources brings higher agility for the customer (Mathew, 2021).

Elasticity – as the demand for resources grows or declines, the capacity of resources used can easily be adapted to those changes (Amazon Web Services, n.d.b).

Cost savings – exchanging huge capital expenses for variable expenses by not having to invest in private infrastructure such as data centres and servers before knowing the capacity that will be needed when using them (Mathew, 2021). Payment is done only when resources are being used and only for the volumes that have been used (Mathew, 2021). Moreover, since there is not needed to buy private infrastructure, the costs of maintaining and managing it are also non-existent (Microsoft Azure, n.d.d).

Economies of scale – provider of cloud computing can achieve great economies of scale by providing services and products to numerous customers over the Internet, thus lowering their prices (Mathew, 2021).

Global scale – elasticity of resources from multiple geographic regions (Microsoft Azure n.d.d)

Speed – buying new resources, increasing, or decreasing the capacity of resources used, is done automatically and with that accelerates the whole process (Mathew, 2021). Deployments of the applications can be done from multiple locations in no time (Mathew, 2021).

Performance – higher performance comes from reduced network latency since the cloud computing services are run on multiple datacentres that are constantly upgraded by the provider (Microsoft Azure, n.d.d).

Productivity – the productivity of the IT department rises as they do not have to worry about infrastructure and its maintenance and management costs (Microsoft Azure, n.d.d).

Reliability – since data is being kept at multiple datacentres owned by the provider it makes data backup, business continuity, and disaster recovery much easier and requires less money investment (Microsoft Azure, n.d.d).

Security – providers of the service offer technologies, policies, and controls than ensure the security of the infrastructure, private data and applications (Microsoft Azure, n.d.d). One of the main tasks of the providers is to keep the customers data secure to both internal and external threats. Because of the possibility of internal data theft, it is a lot more secure to keep sensitive data offsite. High security is brought by the encryption of data that is being transmitted over the Internet or stored in datacentres (Salesforce, n.d.).

Loss prevention is a part of security that is also highlighted when using a cloud to store data. When storing data on a local server, the risk of losing that data if the server malfunctions is enormous. However, by having data in a cloud, that data remains in the cloud even if something happens to the local infrastructure such as devices that are used to input, read, update, or delete the data in the cloud, and can be accessed by using another device (Salesforce, n.d.).

Capacity – no need to worry about required capacity of the infrastructure beforehand. Capacity can be increased or decreased based on the current needs of the business (Mathew, 2021).

Mobility/Easy access to data – with cloud computing, businesses can access their data by using any smart devices that is connected to the internet. It increases performance and employee satisfaction (Salesforce, n.d.).

Insight – by having all business data in a cloud, that data can easily be analysed by integrated cloud analytics solutions, and useful information for future business decisions can be obtained (Salesforce, n.d.). By drawing conclusions from analysed data, overall performance and efficiency of the business can be improved.

Increased Collaboration – the efficiency of collaboration among employees that use cloud services is much higher (Salesforce, n.d.). All the documents are in a cloud and easily accessible to anyone that need to see them from any location. It creates a one entry point system in which there is no need to record the same information multiple times. Once the information is recorded in one place in the system it travels to all the places it needs to be found in.

Sustainability – keeping all the data in a cloud is more environmentally friendly. Paper waste is reduced significantly, energy efficiency is improved, and commuter-related emissions are reduced since data can be accessed from any location (Salesforce, n.d.).

1.3 Disadvantages of cloud computing

The disadvantages of cloud computing are not numerous as its advantages. Several resources from scientific papers regarding cloud computing have been reviewed. The most commonly mentioned disadvantages have been summed up and explained in the following list:

Dependability on internet connection – having internet connection is the main prerequisite for using cloud computing. If there is no internet connection there is no way to access data that is in a cloud (Lavinski, 2019).

Dependability on service providers – the cloud infrastructure is managed and owned by cloud service providers which leaves the customer with minimal control. If the service is unavailable for a certain period, there is nothing the customer can do to make it available. They must wait for the provider to resolve the issue (Larkin, 2020).

Privacy and security threats – cloud service providers are responsible for safeguarding the data that is in their cloud and ensuring its safety. Moreover, clients have to implement several practices to minimize privacy and security risks such as multi-factor authentication and encryption wherever they can (Larkin, 2020).

Vendor lock-in – it is still not that effortless to switch between vendors of cloud services. The difficulties of changing vendors can cause additional costs, data loss, and security and privacy vulnerabilities. It is also a very time-consuming process. (Larkin, 2020).

1.4 Development of cloud computing

The founder of the concept of cloud computing is John McCarthy who created a theory that calculations can be done by using public utilities (Arutyunov, 2012). He claimed that computing time should be shared among a group of consumers with “time-sharing” (ECPI University, 2020). It would lower the significant expenses that smaller companies would have to endure to cover the costs of purchasing their own mainframe computers (ECPI University, 2020).

In the mid-1960s, a computer scientist J.C.R. Licklider created an idea of an interconnected system of computers (ECPI University, 2020). Moreover, he gave an expansion to the idea by claiming that everyone will be connected and be able to access programs and data regardless of their location (ECPI University, 2020).

The idea contributed to the creation of an internet predecessor called ARPANET (Advanced Research Projects Agency Network) by Bob Taylor and Larry Roberts in 1969 (ECPI University, 2020). It enabled digital sources to be shared between computers that were not situated in the same location (ECPI University, 2020).

The factors that contributed to an increased interest in and usage of cloud computing are (Arutyunov, 2012):

- a) Decrease in cost of storing data which resulted in an increase in the volume of stored data.
- b) Development of programming enabled more efficient usage of resources such as multiprocessor systems and more flexible distribution of those resources.
- c) An increase in the volume of data exchange through the Internet brought an increase in the speed of the exchange, as well as lower costs of Internet traffic.

The mentioned factors also contributed to the higher availability of cloud technologies (Arutyunov, 2012).

The main difference between public and private clouds is that public clouds are more competitive and present a more extensive range of quality services with more flexible pricing than traditional public utilities (Yoo, 2011).

The sole concept of cloud computing services predates the Internet. An example that explains it is the IBM’s mainframe computers produced in the 1950s and 1960s which allowed computing to be organized around the core of the computers (Maurer & Hinck, 2020). Only big industry and government leaders could afford using it. Access to the resources that those computers provided was arranged in a way that numerous users can utilize resources from one computer by a “time-share” model (Maurer & Hinck, 2020). It means that each user purchased to right to utilize the resource over specific periods of time (Investopedia, n.d.). The popularity of IBM’s mainframe computers lasted until the 1980s when stronger and

faster desktop computers that could perform regular every day work were created (Maurer & Hinck, 2020). It meant moving from centralized to decentralized computing with every individual being able to have a desktop computer.

However, in 2000s the direction of computing moved back to become centralized again by increased utilization of data centres (Maurer & Hinck, 2020). This change was possible because of the development of technological hardware such as chips and network equipment, together with the vast rise of the Internet in 1990s (Maurer & Hinck, 2020). Also, the growth of the need to communicate and share data between numerous individuals and organizations made cloud computing attractive to both businesses and end customers (Maurer & Hinck, 2020). The development in bandwidth, the quantity of data that can be transferred through the internet in a certain amount of time (Verizon Fios, n.d.), allowed the usage of cloud computing.

Amazon, Google, Microsoft started to offer computing and storage as services to end customers in the late 2000s (Maurer & Hinck, 2020). It allowed them to take advantage of economies of scale in offering cloud computing as a service at prices that granted companies the power to digitalize their business without enormous internal costs (Maurer & Hinck, 2020).

The company that had major impact on how cloud computing is used today is Amazon. In 2003, Amazon developed their own solution to solve internal problems of scaling and managing backend computing resources for their market of selling goods online (Maurer & Hinck, 2020). The solution included web services for storage of an enormous amount of data that can be scaled as it grows (Maurer & Hinck, 2020). They quickly realized that they could sell the solution as a service to other companies that have similar problems and thus lowering the cost of storing the data on local servers which was costly (Maurer & Hinck, 2020). By 2006, Amazon offered two such services, Simple Storage Service and Elastic Compute Cloud, which supplied cloud storage and computing resources to businesses and can be classified as Infrastructure as a Service (Maurer & Hinck, 2020).

Soon, others followed. In 2008, Google developed App Engine which was a type of Platform as a Service that presented developers with an environment for creating and deploying new products (Maurer & Hinck, 2020). In 2009, IBM first came out with a private cloud service that offered storage services to businesses, and in 2011, they brought their public cloud service to the market (Maurer & Hinck, 2020). Microsoft announced they are developing their own cloud service in 2008, and by 2010 they launched it under the name Microsoft Azure (Maurer & Hinck, 2020).

In the same period that those companies started to invest and develop their cloud services, the governments interest also grew. In 2011, a cloud strategy was published by the U.S. government CIO (Maurer & Hinck, 2020).

1.5 Cloud service providers

The leaders of cloud computing providers are Amazon, Microsoft, and Google as it can be seen in Figure 3 which is a graph provided by Gartner Inc. through Amazon Web Services webpage. However, they are not the only providers on the market. Companies such as Alibaba, Oracle, IBM and, Tencent are climbing up the ladder and moving from being niche players to becoming leaders.

Figure 3: Magic Quadrant for Cloud Infrastructure and Platform Services



Source: Amazon Web Services. (n.d.a).

1.5.1 Amazon Web Services

Amazon offers cloud computing services through their Amazon Web Services. It offers products and services such as data storage, computing power, renting of virtual servers, analytics, developer tools, networking, security, Internet of Things, and enterprise applications (Mathew, 2021).

They have the highest position among the leaders in the industry and perform great in most use cases, especially in using hybrid cloud and solving edge cases (Bala et al., 2020).

Amazon Web Services started offering IT infrastructure through web services to businesses in 2006 (Mathew, 2021). Today, it provides services in the cloud in 190 countries in the world and has data centres in five continents (Mathew, 2021). They offer more than 175 different services with on-demand pay-as-you-go pricing which enables everyone from small business and public sector to large enterprises to use their services without extensive costs (Mathew, 2021).

The AWS Cloud Infrastructure consists of AWS Regions and Availability Zones (Mathew, 2021). Every AWS Region is built to be isolated from other AWS Regions to maintain stability and fault tolerance (Mathew, 2021). Availability Zones within a region are also isolated, however they are interconnected with low-latency links within a region (Mathew, 2021).

The Amazon Web Service Cloud Platform groups multiple types of services offered. Those groups of services are: AWS Management Console, AWS Command Line Interface, Software Development Kits, Analytics, Application Integration, AR and VR, AWS Cost Management, Blockchain, Business Applications, Compute Services, Customer Engagement, Database, Desktop and App Streaming, Developer Tools, Game Tech, Internet of Things, Machine Learning, Management and Governance, Media Services, Migration and Transfer, Mobile Services, Networking and Content Delivery, Robotics, Satellite, Security, Identity, and Compliance, and Storage (Mathew, 2021). The service by which they differ from other vendors is VMware Cloud that allows companies to connect their traditional (on-premises) data centres to the public cloud by using virtualization technology (Maguire, 2021).

1.5.2 Microsoft Azure

Microsoft offers cloud computing services through their Azure Services Platform. It is a scalable platform for hosting Web applications (Arutyunov, 2012). Windows Azure was first presented in 2008 by Microsoft's former Chief Software Architect (Msv, 2020). It was renamed to Microsoft Azure and came to be generally available to the public in 2010 (Msv, 2020). Their biggest advantage is the household name that is Microsoft. Their operating system and applications have been in use by companies for a long time before cloud computing came on the market (Maguire, 2021).

The Microsoft Azure Platform offers more than 200 different types of products and services. Those groups of products and services are: AI + Machine Learning, Analytics, Blockchain, Compute, Containers, Databases, DevOps, Developer Tools, Hybrid + Multicloud, Identity, Integration, Internet of Things, Management and Governance, Media, Migration, Mixed reality, Mobile, Networking, Security, Storage, Web, and Windows Virtual Desktop

(Microsoft Azure, n.d.c). Azure is a great hybrid cloud, and its key advantage is in SaaS (Software as a Service). An example of their SaaS product is Office 365 (Maguire, 2021).

1.5.3 Google Cloud

Google offers cloud computing services through their Google App Engine. Google first announced a preview of their app in 2008. In 2011, the product had been made and official fully supported product by Google (Paul, 2018). It is a service that offers the hosting of web applications and websites on their servers (Arutyunov, 2012). It is available in more than 200 countries (Google Cloud, n.d.a).

Google Cloud groups of products: AI and Machine Learning, API Management, Compute, Containers, Data Analytics, Databases, Developer Tools, Healthcare and Life Sciences, Hybrid and Multi-cloud, Internet of Things, Management Tools, Media and Gaming, Migration, Networking, Operations, Security and Identity, Serverless Computing, and Storage (Google Cloud, n.d.c). Its strength lies in their powerful IaaS (Infrastructure as a Service) that consists of deep technical capabilities, supremacy in the search market, and supreme data analytics (Maguire, 2021).

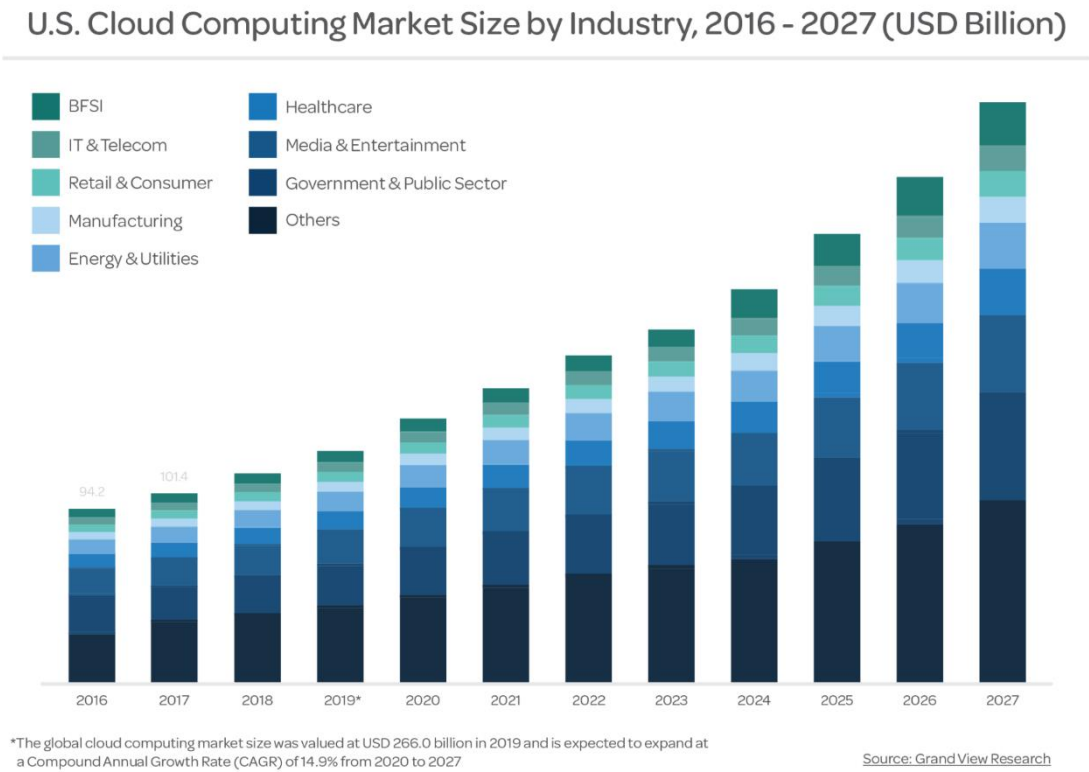
1.6 Industries that utilize cloud computing

On their website Microsoft Azure states that they offer different industry solutions. Their solutions are used in Healthcare, Financial services, Government, Retail, Manufacturing, Energy, and Media and entertainment (Microsoft Azure, n.d.a).

Moreover, Google states that they offer services that can be combined to serve different industries based on their needs. Those industries are: Retail, Consumer packaged goods, Manufacturing, Automotive, Supply chain and logistics, Energy, Healthcare and life sciences, COVID-19 solutions for the healthcare industry, Media and entertainment, Gaming, Telecommunications, COVID-19 industry solutions, Small and medium businesses (Google Cloud, n.d.b). It can also be used in financial industry with services such as different financial and capital markets services (Google Cloud, n.d.b). As for the government and public sector solutions are divided in: Government, State and local government, Federal government, Education, and Education technology services (Google Cloud, n.d.b).

In Figure 4, the graphical representation of the U.S. Cloud Computing Market Size by Industry in USD Billion is depicted. It shows a range from 2016, with the year 2019 being the last with actual data, and projects to the year 2027. Media & Entertainment and Governments & Public Sector are the two industries that have the largest market size every year.

Figure 4: U.S. Cloud Computing Market Size by Industry, 2016-2027 (USD Billion)



Source: Maguire (2021).

2 CLOUD ACCOUNTING

This chapter focuses on general information about cloud accounting, and the benefits and threats that come with using it. Also, providers of cloud accounting software in Croatia are analysed in terms of their revenues, software functionalities and marketing tools. The aim of the chapter is to better understand what cloud accounting is and what it offers.

2.1 General information about cloud accounting

The advances in the world of cloud computing have led to changes in the industry of accounting. It is only natural, with new technology available on the market and with more and more segments of the business process moving towards cloud computing, that the provision of accounting services does the same. Cloud accounting allows for further innovation and advances in the accounting process which opens new doors to both accountants who offer the services and organizations that utilize it. It is especially interesting for small and medium enterprises since they can save a lot of money by moving to a cloud by relieving them of the majority of administration costs since data has to be entered only once in the cloud to be seen from anywhere at any moment in time provided there is an Internet connection.

(Moudud-UI-Huq, Asaduzzaman, & Biswas, 2020). Moreover, it is easier for them to adapt to change since they have less-complex IT needs in comparison to large enterprises (Moudud-UI-Huq et al., 2020).

The idea of "cloud accounting" was first introduced in 2011 by Ping and Xuefeng. They defined it as the application of cloud computing technology to create a virtual accounting system (Khanom, 2017). The first cloud accounting software system was NetSuite which was introduced in 1998 (Islam, 2016). Several distinguished cloud accounting software in the world are: QuickBook, Xero, and Freshbooks.

2.1.1 Benefits of using cloud accounting software

There is a vast number of benefits arising from using cloud accounting software. Some of the main benefits are):

Data security – data is distributed among several cloud servers in the world. It means that all data is never at one place. Also, it is protected by multiple levels of encryption and cloud service providers are constantly working on improving data security. Cloud service providers in general offer much higher levels of security than when a company has data stored locally (Moudud-UI-Huq et al., 2020).

Increased productivity and accuracy – data has to be entered only once in order to be visible in multiple parts of the application. It saves time for both accountants and managers of the company. Accountants can focus on more demanding tasks and problems that entering the same data over and over. Managers do not have to call their accountants for every bit of financial information since they can find it in the application with just a few clicks.

Time saving – by reducing the number of repetitive tasks that need to be done by accountants a lot of time is saved up. An example of such a task is sending messages to partners that have not paid their bills on time (Moudud-UI-Huq et al., 2020). In a cloud accounting software, the messages can be sent automatically at a point in time determined by the accountant.

Cost reductions – no need to invest in or maintain in-house IT infrastructure. The “pay-as-you-go” pricing model changes fixed expenses to variable expenses and allows enterprises to pay for only as much of the services as they used (Moudud-UI-Huq et al., 2020). Moreover, software update charges are non-existent since the customer always has access to the newest version of the solution (Moudud-UI-Huq et al., 2020).

Constant access to data – current financial data about the company can be accessed from anywhere at and point in time provided there is Internet connection (Savić & Janković, 2015).

Faster decision-making process – since data can constantly be accessed by people in the company that have permission, it leads to faster decision making (Moudud-UI-Huq et al.,

2020). Managers no longer have to call their accountants to ask what is the current state of company's finances. They can just look it up in the software.

Less physical documents to deliver to accountants – by having all the data in a cloud there is no longer a need to deliver physical documents to accountants. It allows for faster delivery of real time information. For example, a designated person in the company can upload documents into the cloud application and the accountant can see it right away and start processing it. After a few minutes the manager of the company can see the current financial position of a company without having to call the accountant and as for that information. By not having physical documents there is no need to have huge archives which in turn leads to cost savings.

Ecological benefits – in connection to having fewer physical documents, another benefit arises which is the ecological benefit. Less paper is used which leads to less trees cut down to make the paper. Cloud computing in general considerably reduces energy consumption and carbon emissions because of data centres are consolidated. It allows the reduction of supporting infrastructure of each data centre such as heating, ventilation, power supplies etc. (Mohamed & Pillutla, 2014). It transfers to all cloud solutions including cloud accounting.

Improved adaptability to changes – it allows organizations to respond fast to business environments that change constantly (Moudud-UI-Huq et al., 2020). Since data is almost always available it allows faster decision making thus making the company more adaptable to changes.

Digitalization of business processes – by adopting cloud accounting software company can also digitalize their processes that are not directly connected to accounting without investing in additional solutions. For example, software offers digital archive for documents. Those documents do not necessarily have to be the ones that are important for accounting, however, employees can still upload it in the software and have access to them constantly (Moudud-UI-Huq et al., 2020). This way they do not have to search for the documents in several places (physical archive, local computer storage etc.). It is very convenient for small business since they do not have a lot of capital to invest in digitalization (Moudud-UI-Huq et al., 2020). By using cloud accounting software, they receive a certain level of digitalization for a smaller price.

2.1.2 Threats of using cloud accounting software

The main disadvantages of using cloud accounting software (Moudud-UI-Huq et al., 2020):

Data breaches – as with any online based service there is a threat of data breaches by hackers on the internet (Abdalla & Varol, 2019). This problem must be solved by the provider of the services.

Insider threats – this threat arises from the fact that different employees have access to information about the company from wherever (Moudud-UI-Huq et al., 2020). The permissions have to be determined in advance and regularly checked to ensure there have not been changes made.

Overload in same-time traffic on the application – if not enough database storage has been paid for in advance it can cause problems with loading the app and access to it (Moudud-UI-Huq et al., 2020).

Dependency on internet connection – if there is no internet connection data cannot be entered into the system nor it can be analysed and viewed because it is unavailable (Lavinski, 2019).

Not enough knowledge about the technology by potential users – if customers are not familiar with the new technology it can lead to human errors (Moudud-UI-Huq et al., 2020). Also, it can lead to a problem where customers do not even use the product since they do not know how to use it.

Integration with existing software – most companies use some kind of software to help them run their business. It does not necessarily have to be in a cloud. The problem arises when they want to transfer a part of their business to another software. The existing software might not be compatible with the new one, or it requires a substantial investment of time and money to make them compatible.

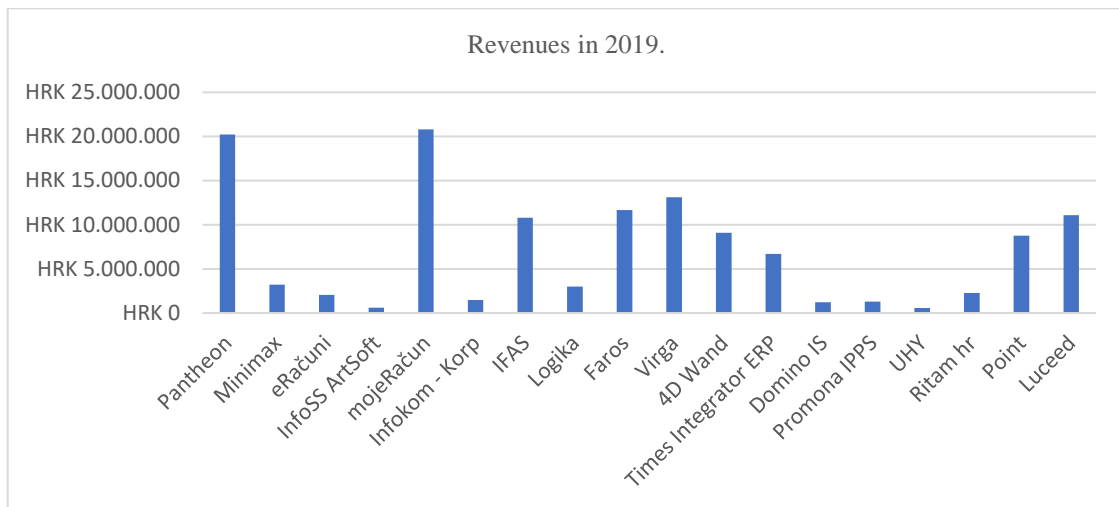
2.2 Providers of cloud accounting software in Croatia

There are numerous providers of cloud accounting software in Croatia. By doing market research for the purposes of this thesis, I selected 20 of such providers to be analysed in more detail. The process of selecting which providers to study in more detail started from a thorough internet research to find out which providers have the best organic results on Google regarding the topic, whose ads come up the most during research, and then finally which have websites with sufficient information on them from which usable information can be gathered. Those providers are: Pantheon, Minimax, eRačuni, InfoSS ArtSoft, Moj-eRačun, Infokomk - Korp, IFAS, Logika, Faros, Virga, 4D Wand, Times Integrator ERP, Domino IS, Promona IPPS, UHY, Ritam hr, Point, and Luceed.

Financial data has been obtained from Digitalna Komora for the years 2018 and 2019. Non-financial data has been gathered through multiple online channels such as providers websites, Facebook groups, news websites, and forums.

Firstly, the providers of cloud accounting software in Croatia have been analysed by their revenues.

Figure 5: Revenues of cloud accounting software providers in 2019

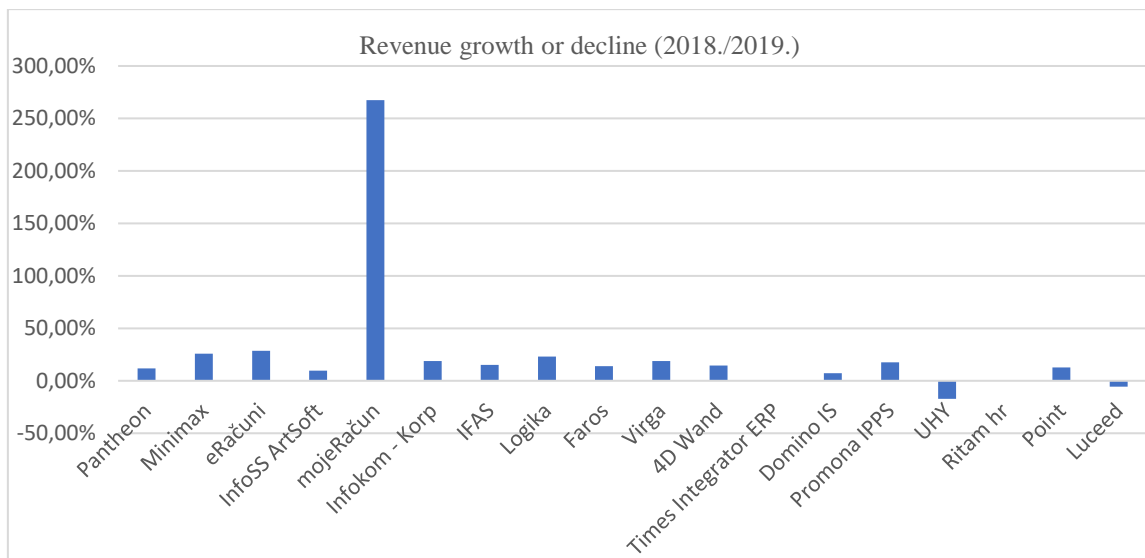


Source: Adapted from Digitalna komora (n.d.).

In Figure 5 it can be seen that Pantheon, Moj e-Račun, and Virga are the top three companies by their revenues in 2019.

Secondly, the providers have been analysed by their revenue growth or decline by comparing revenues from 2018 to revenue from 2019.

Figure 6: Revenue growth or decline of cloud accounting software providers in 2019 compared to 2018

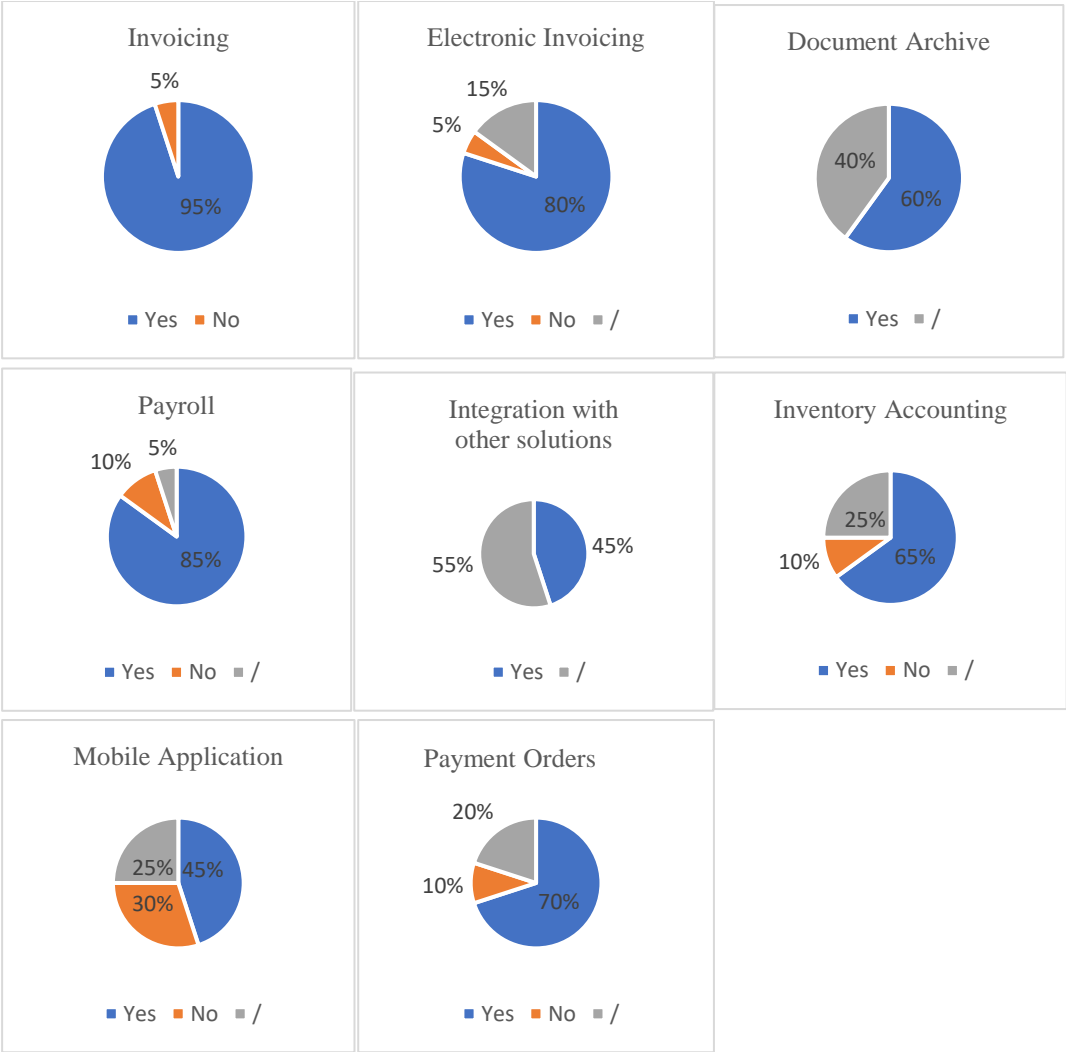


Source: Adapted from Digitalna komora (n.d.).

In the graph Moj e-Račun has by far the highest growth in revenue with Minimax and eRačuni following, while UHY and Luceed have a small decline in their revenues.

Main functionalities of different cloud accounting solutions have been analysed. Some of the 20 mentioned providers clearly state on their web page that they have (Yes) or do not have (No) a certain functionality, while some did not state anything (/). The results are represented in Figure 7 in a pie chart below.

Figure 7: Functionalities of different cloud accounting solutions



Source: Own work.

The data in Figure 7 shows that the majority of providers offer invoicing (95%) as a part of their product. In addition, payroll (85%), electronic invoicing (80%) and payment orders (70%) are also offered by most companies. On the other hand, mobile application is the functionality for which most providers state that they do not offer it (30%).

Four providers have been studied in more detail in the following parts of this chapter. They are Pantheon, Minimax, eRačuni and Moj-eRačun. The reasons for selecting those four providers are that Pantheon and Moj-eRačun have had the highest revenues in 2019 while Minimax, eRačuni, and Moj-eRačun have had the highest revenue growth from year 2018

to year 2019. Therefore, they have been studied on the basis of what they offer to potential customers, the marketing tools that they use, and what are the solutions that they are offering.

2.2.1 Pantheon

Pantheon offers cloud accounting services through their new product Pantheon Web through which clients can see that data that has been processed by accountants. They have already established themselves on the market with their numerous local solutions that can be used by small, medium, and large companies as well as accounting firms. The new application can be used on desktop computers, tables and mobile phones which is new for their products since they were only available for desktop computers in the past.

2.2.1.1 Description of the solution

Pantheon offers five different solutions depending in the size of the company, the industry it is operating in, and the functionalities it needs. The solutions are Small Business, Enterprise, Accounting, Manufacture, and Retail (Pantheon, 2019b). They are also developing Pantheon Web Light as a cloud business program. Each of the solutions is explained in the following parts. The different solutions are depicted graphically in Figure 8.

Figure 8: Pantheon Solutions



Source: Pantheon (2019).

Pantheon Small Business is a solution for small companies which offers low initial expenses, quick start of working with the program, connection with Pantheon accountant, complete insight in the state of their business, more time to increase productivity, and a solution that is adaptable to the need of the user (Pantheon, 2019c). They offer two packages of Small Business which are Pantheon LX and Pantheon LT. The packages differ by the functionalities that are included in it where Pantheon LX has three functionalities less than Pantheon LT and therefore it is also cheaper (Pantheon, 2019c).

Pantheon Enterprise is a solution for medium companies (Pantheon, 2019a). They state on their web page that their business-information system improves the business activities of the company in several fields such as that the correct data is accessible at any moment, business analytics is available to allow easier planning for the future, and the head of accounting has a solution to rely on (Pantheon, 2019a). Similar to Pantheon Small Business, Pantheon

Enterprise has two packages that differ by functionalities that are included which are Pantheon SE and Pantheon ME (Pantheon, 2019a).

Pantheon Accounting is a solution focused on accounting firms whose client base grows (Pantheon, 2019d). On their web page they explain how their solution facilitates accounting procedures. It allows for a unified insight into all clients and with that offers greater control (Pantheon, 2019d). Through the solution management of accounts payable and receivables is easier since everything is in one place (Pantheon, 2019d). Accounting entries are faster since there are predefined entries rules that minimize errors (Pantheon, 2019d). Different reports can be made and downloaded with a few clicks (Pantheon, 2019d). By using Pantheon Hosting, the client and the accountant can work on the same database and make the transfer of documents faster (Pantheon, 2019d). There is only one package for accounting firms called Pantheon ME (Pantheon, 2019d).

Pantheon Manufacture is a solution aimed at companies that have a need for production and warehouse management (Pantheon, 2020). They state how their solution can improve results in such companies on their web page. It helps with enabling faster and simpler working processes, more precise planning and determining deadlines (Pantheon, 2020). Managing business units with the solution is unified, it helps with productivity of each unit, and allows for reliable decision-making (Pantheon, 2020). It also includes two packages which are Pantheon MF and Pantheon MT (Pantheon, 2020). Pantheon MT refers to Manufacture Terminal which is especially focused on managing business units (Pantheon, 2020).

Pantheon Retail is designed for retail business that use cash registers and need to use software on those devices (Pantheon, 2021). It is intended for all business that offer services to end customers such as florists, hair salons, and medical practices (Pantheon, 2021). They emphasize on their web page that the solution is easy to use and intuitive (Pantheon, 2021). For example, it has 3D view of the objects such as restaurants to help employees manage traffic (Pantheon, 2021). There are two packages in Pantheon Retail which are Pantheon RT and Pantheon RE (Pantheon, 2021).

Pantheon Web Light is a simple solution for invoicing, eBusiness, warehousing, travel warrants, working time records and business overview (Pantheon, 2022). It is intended for small companies and accountants that use Pantheon solutions. The advantages for businesses are: (1) Uploading documentation to a cloud so it does not have to be delivered to the accountant physically; (2) Companies can enter data for travel warrants and working time records and it transfers to the salary module; (2) Financial data is available to companies without having to ask the accountants for it; (3) OCR of uploaded documents (Pantheon, 2022). They state on their website that it works on all devices and screen sizes (Pantheon, 2022).

2.2.1.2 Marketing tools used by Pantheon

Pantheon uses several marketing tools to promote their solution and services on the market. Marketing tools that Pantheon uses are:

- Special section on their webpage called “Media about us” where they have links that lead to positive mentions of the company in the media.
- Customer experiences and reviews of the webpage.
- A special user site where they offer news about accounting, user manuals, video tutorials, a forum where questions are asked and answered, and general information needed for business (exchange rate, average pay, interest rates etc.).
- They organise a conference “Day for Pantheon accountants”
- Social media presence: They are active on Facebook, LinkedIn, and YouTube.

2.2.2 Minimax

Minimax offers their product solely on cloud premisses. Their focus is on companies of all sizes, accounting firms, non-profit organizations, and trades (Minimax, 2022a). The product can be used on desktop computers, tablets, and mobile phones. They offer a free 30-day trial during which all functionalities of the software can be used in order to see if it has everything that an organization needs before purchasing it (Minimax, 2022a). The activation of the trial is very simple, and it can be done in a few minutes. When a person googles “računovodstvo u oblaku” the first organic result is Minimax.

2.2.2.1 Description of the solution

Minimax divides their offer into two categories. The first offer focuses on companies, and the second on accounting firms. The offer for companies is further divided into four groups: Invoicing, Micro business, Mini business, and Maksi business (Minimax, 2022b). The packages differ by functionalities and prices with Invoicing having the least functionalities and Maksi business the most (Minimax, 2022b). The offer for accounting firms is divided into two additional groups: Mini accounting and Maksi accounting (Minimax, 2022c). They also differ by functionalities and prices (Minimax, 2022c). Four aspects are included in all offers. Those aspects are free customer support, all legal changes, all upgrades and novelties, and a high security level (Minimax, 2022c). The solution allows for companies to connect with their accountant through cloud, constant data access, a free mobile application, and connection with POS cash registers (Minimax, 2022c).

2.2.2.2 Marketing tools used by Minimax

Minimax uses several marketing tools to promote their solution and services on the market. Marketing tools that they use:

- On their website they offer a pay check calculator, e-manuals, webinar videos, customer experiences.
- A special user site with detailed instructions on how to use all of the functionalities of the software with video instructions for mail functionalities.
- An active blog where they post news about accounting that they then connect to their product.
- Social media presence: An active Facebook group where users can discuss problems that they have with the software and help each other. They have created a mascot called Max Minimax with which people can connect and the use it as a mediator between Minimax and clients. They are also active on LinkedIn and YouTube.

2.2.3 eRačuni

eRačuni offer their product in a cloud and it can be accessed by accountant and managers. They target markets are small, medium, and large companies, trades and accounting firms. The smallest package is free of charge, and it includes access to one user only. Further pricing depends on the number of users.

2.2.3.1 *Description of the solution*

eRačuni have a solution that is divided into three different packages called FREE, BASIC, and PREMIUM (E-računi, n.d.c). They differ by prices and functionalities. All packages include functionalities that are invoicing, travel warrants, treasury, and bank data (E-računi, n.d.c). Moreover, they all include daily archiving of data, e-mail support, programme updates, and rental of servers in secure areas (E-računi, n.d.a).

The smallest package is called FREE, and it is intended for keeping business records (E-računi, n.d.b). It includes functionalities such as invoicing and e-invoicing, fiscal cash register, travel warrants, and sending documents directly through the programme via e-mail (E-računi, n.d.b). It is free as long as there is only one user inside the company and invoicing is limited to 70 invoices per month (E-računi, n.d.b).

The package BASIC is aimed at companies of all sizes (E-računi, n.d.d). It supports service and manufacture industries, and both wholesale and retail businesses (E-računi, n.d.d). The price rises by additional users inside the company (E-računi, n.d.d). The modules that are included in the package are invoicing (and e-invoicing), inventory management, VAT calculation, travel warrants, cash register, bank, and main ledger (E-računi, n.d.d).

The PREMIUM package consists of all modules need for independent bookkeeping. It is intended for companies that operate in service and manufacture industries, and the ones that have in-house accounting (E-računi, n.d.e). It is especially adapted to accounting firms that can give free access to data that is in the programme to their clients (E-računi, n.d.e). The

pricing depends on how many companies for which business books are kept in the programme, and on the number of users (E-računi, n.d.e). The modules that are included in the package are travel warrants, cash register, invoicing (and e-invoicing), bank, payroll, main ledger, balances, VAT calculation, and inventory (E-računi, n.d.e).

2.2.3.2 *Marketing tools used by eRačuni*

eRačuni uses several marketing tools to promote their solution and services on the market. Marketing tools that they use:

- An active blog where they offer information about changes in the law and accounting practices.
- Social media presence: An active Facebook group where they post news, encourage discussion among users, and give information about how to use the product. They also have a YouTube channel.

2.2.4 Moj e-Račun

Moj e-Račun has one main functionality with which they have established themselves on the market and that is electronic invoicing through a cloud. Everyone can use it, from trades to large firms, non-profit organizations, and accounting firms (Moj-eRačun, n.d.b). They developed new functionalities such as Document Management System and document archive. They still do not offer the vast majority of functionalities that other cloud accounting software have, but they are the first choice for many for electronic invoicing, and many other providers collaborate with them and integrate their solution in their product.

2.2.4.1 *Description of the solution*

Moj-eRačun divides their solution into several services. The main services that they offer in their solution are: moj-eRačun, eDocuments, moj-eArhiv, moj-DMS, moj-BI, and PlatiMe (Moj-eRačun, n.d.b).

The service of moj-eRačun is focused in creating electronic invoices and their exchange among clients (Moj-eRačun, n.d.b). It allows sending the invoice with one click, safe exchange, fast archiving, and minimizes expenses of delivering the invoice to partners (Moj-eRačun, n.d.b). The electronic invoices are certified by application certificate and a time stamp in accordance with the laws in Croatia and with EU norms (Moj-eRačun, n.d.b). They also offer integrations with more than 340 accounting software in Croatia (Moj-eRačun, n.d.b).

The service of eDocuments consists of creating and sending different documents through the programme. Those documents are: payment reminders, approvals, warehouse receipts,

statements of reasons for charging, statements for rejecting electronic invoices, order forms, delivery notes, and a list of unpaid invoices (Moj-eRačun, n.d.a). Each of the documents is explained in more detail in the following list:

- Payment reminders are called “eOpomena” and allow the user to send reminders to their partners (Moj-eRačun, n.d.a). It includes automatic creation of return receipts with which users can easily confirm that the reminder has been received (Moj-eRačun, n.d.a). Sending of payment reminders is charged additionally per reminder (Moj-eRačun, n.d.a).
- Approvals are called “eOdobrenje” and it allows the user to send electronic approvals to recipients who then have to confirm the generated approval and sign the generated statement regarding pre-tax posting (Moj-eRačun, n.d.a).
- Warehouse receipts are called “ePrimka” and it allows the user to send it to and receive confirmation of receipt (Moj-eRačun, n.d.a). It also allows a direct input of items into accounting software (Moj-eRačun, n.d.a).
- Statements of reason for charging is called “eTerećenje” and it generates the statement when needed (Moj-eRačun, n.d.a). It includes the exact date and time when it has been downloaded (Moj-eRačun, n.d.a).
- Statements for rejecting electronic invoices are called “eOdgovor” and it generates a statement in which the reason for rejecting is written. Users have insight into exact date and time when the statement has been downloaded by the recipient.
- Order forms are called “eNarudžbenica” and it represents an official offer for buying goods or services that contains information about the type, quantity, and price of products which the supplier will deliver to the buyer (Moj-eRačun, n.d.a).
- Delivery notes are called “eOtpremnica” and it is used when shipping of goods from warehouses is done. It can be sent digitally and cannot be damaged or lost (Moj-eRačun, n.d.a).
- List of unpaid invoices is called “eIOS” is created automatically and can be sent to the recipient digitally (Moj-eRačun, n.d.a). It improves their legal security and allows faster processing.

2.2.4.2 *Marketing tools used by Moj-eRačun*

Moj-eRačun uses several marketing tools to promote their solution and services on the market. Marketing tools that they use:

- An active blog in which they post about digitalization.
- They engage with the community by participating in projects and conferences.
- Social Media presence: An active Facebook group in which they post interesting articles and engage users in communication. They also use LinkedIn, YouTube, and Instagram to connect with their customers.

3 RESEARCH METHODOLOGY

This chapter focuses on research methodology and consist of research questions, research sample and research design. In the section research questions all the research questions are listed and it is explained how they are connected to the purpose and goals of the thesis. In the research sample segment, the sample is explained regarding how it was chosen and the definition of small and medium companies in Croatia is explained. In the part of research design the questions in the questionnaire are explained regarding their structure.

3.1 Research questions

The thesis consists of seven research questions. They are listed below with explanations how they are connected to the purpose and goals of the thesis.

1. Are companies aware of the existence of cloud computing and cloud accounting solutions on the market?
 - The first research question is connected to the goal of this thesis which is to find out how familiar SMEs in Croatia are with cloud computing and cloud accounting solutions that are offered on the market. It also serves to the purpose of the thesis which is to better understand current adopting on such services on the market by showing if potential customers are aware of its existence.
2. Are companies using cloud computing and cloud accounting solutions that are on the market?
 - The second research question serves the same purpose as the first one by showing whether or not SMEs in Croatia are even using the solutions. Furthermore, it provides information about which solutions they are using if they are using some which is one of the goals of the thesis.
3. What are the perceived benefits of using cloud accounting software for business purposes among small and medium enterprises in Croatia?
 - The third research question gives answers to the goal of the thesis which is to comprehend what the perceived benefits of using such solutions are among SMEs in Croatia. If perceived benefits are understood the adoption is can be improved in the future by maximizing them.
4. What are the perceived threats of using cloud accounting software for business purposes among small and medium enterprises in Croatia?
 - The fourth research question provides answers to the goal of the thesis for comprehending which are the perceived threats connected to using such solutions among SMEs in Croatia. If perceived threats are understood the adoption is can be improved in the future by minimizing them.
5. What are the possible reasons that would increase the willingness to adopt the usage of cloud accounting software among small and medium enterprises in Croatia?

- The fifth research question connects to the goal of the thesis which is to research the ways in which willingness to adopt can be increased. By comprehending what are the reasons that increase it, the overall adoption can be improved by providing those solutions to the customers.
6. What are the possible reasons that would decrease the willingness to adopt the usage of cloud accounting software among small and medium enterprises in Croatia?
 - The sixth research question connects to the goal of the thesis which is to research the ways in which willingness to adopt is decreased. By comprehending what are the reasons that decrease it, the overall adoption can be improved by tacking the negative aspects of the solution and informing the customers what has been done.
 7. What is the intention to use cloud accounting software among small and medium enterprises in Croatia?
 - The seventh research question helps with understanding what is the current state of adoption by distinguishing among customers that use it, plan to use it, do not use it, and the ones that are using it but are planning to stop using it.

3.2 Research sample

The questionnaire was sent to email addresses of small and medium enterprises in Croatia. The definition of small and medium companies comes from the following Croatian law – “Zakon o poticanju razvoja malog gospodarstva” (Law of Encouraging the Development of Small Businesses). It states that SMEs are the companies that have less than 250 employees, their revenues are less than 50.000.000,00 euros for the past year, and the value of their assets do not exceed 43.000.000,00 euros. Moreover, the companies are further divided into three groups. Micro subjects are the ones that have less than 10 employees, their revenues are less than 2.000.000,00 euros for the past year, and the value of their assets is not greater than 2.000.000,00 euros. Small subjects have 10-49 employees, their revenues are less than 10.000.000,00 euros for the past year, and the value of their assets is not greater than 10.000.000,00 euros. Medium subjects have 50-249 employees annually, their revenues are less than 50.000.000,00 euros for the past year, and the value of their assets is not greater than 43.000.000,00 euros (Zakon o poticanju malog gospodarstva, NN 29/02, 63/07, 53/12, 56/13, 121/16).

The questionnaire was sent to e-mail addresses of 122 clients in the company I work in who are in line with the definition of small and medium companies in Croatia. It was also sent to 533 newly established small and medium companies in Croatia. The newly established companies were picked with the assumption that they would be more inclined to answer the questionnaire. Their e-mail addresses are all available on the webpages of “Sudski registar” which is a public data base that contains data and documents from businesses in Croatia (Zakon o sudskom registru, NN 1/95, 57/96, 1/98, 30/99, 45/99, 54/05, 40/07, 91/10, 90/11, 148/13, 93/14, 110/15, 40/19). It is the official registry of the Ministry of Justice and Public Administration in Croatia. The questionnaire was sent through Freshsales as bulk mails from

15th to 22nd of July 2021. Freshsales is customer relationship management solution that is cloud-based, and it has the functionality of sending e-mail to multiple addresses all at once (Freshdesk, n.d.). Altogether, the questionnaire was sent to 655 e-mail addresses over the course of 7 days. Out of all the e-mail that were sent, 213 respondents entered the survey, 119 entered the first page, 79 started responding, 76 partially completed the questionnaire, and 66 completed it to the end.

3.3 Research design

The main purpose of this quantitative research is to gain useful information that will contribute to better understanding of the current state of adoption of cloud accounting services by small and medium companies in Croatia. The technique used for gathering primary data is a questionnaire which can be found in Appendix 2. The questionnaire focused on detecting the perceived benefits and threats that come with the usage of the software, and possible reasons that would increase or decrease willingness to adopt it.

The questionnaire was constructed on the basis of previously conducted research on same and similar topics. It was created with 1KA tool, an open-source application which provides services for online surveys (1KA | Spletne Ankete, n.d.).

It consists of 25 questions in total. The questions were separated in seven groups:

- General information about the company – These questions were created to get more information about the companies such as what their national classification of economic activity is, where are the headquarters of the company, and what is the size of the company by the number of employees. The questions were closed-ended. This group of questions is connected to all the research questions in a way that they give insight on what kind of companies answered the questionnaire.
- Current practices regarding accounting – whether the companies outsource their accounting or is it kept-in-house, what software do they use to fulfil their accounting needs, and how do they communicate, share data, and documents with their accountants. The questions were both closed-ended and open-ended. These questions were posed to find out what the degree of digitalization in the communication processes of the respondents is.
- Familiarity with cloud computing and cloud accounting solutions – are they aware of the existence of such solutions and do they use them. If they use such solutions, what are they. The questions were both closed-ended and open-ended. These questions were created to get the answer to the first and second research question.
- Perceived benefits and threats of using cloud - accounting software – the questions were created as five-point Likert scale were a level of agreement with the offered benefit or threat had to be picked. The fourth group of questions focuses on getting the answers to the third and fourth research questions.

- Willingness to adopt cloud accounting software – the first question from this group was a closed-ended question where the intention of using it had to be chosen from 5 different choices. Moreover, two additional questions were five-point Likert scales where the respondent had to determine their level of agreement with proposed reasons that would increase or decrease their willingness to adopt cloud accounting software. The fifth group of questions was created to obtain answers to the fifth, sixth, and seventh research question.
- Functionalities of cloud accounting software – respondents were asked to pick one or more functionalities that they would like to use. The question was multiple choice and open-ended.
- Socio-demographic questions – respondents are group, gender, and level of education. The seventh group of questions was created to get a better information about the demographics of the respondents.

In the questionnaire the questions were structured so that quantitative and qualitative primary data can be gathered from answers.

4 RESULTS

In this chapter, the result of the questionnaire administered for the purposes of this thesis are shown. In total, there were 76 valid questionnaires from which 66 were completed and 10 were partially completed. The number of questions in the questionnaire was 25, from which 3 were demographic questions.

4.1 Demographic questions and results

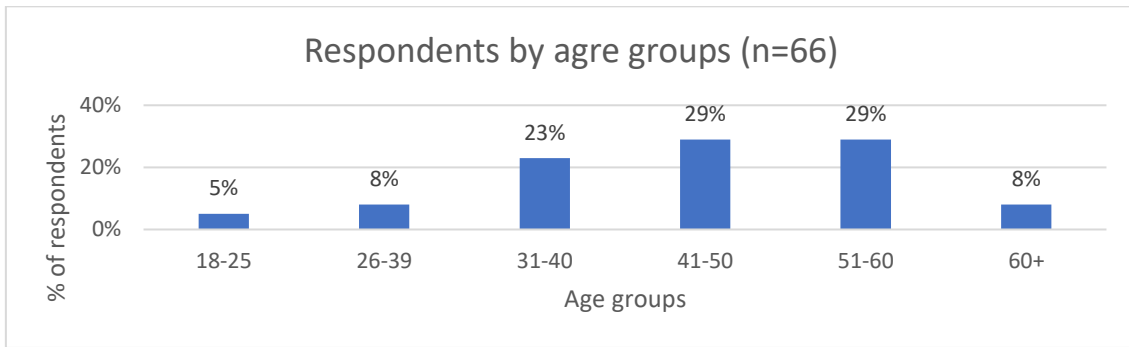
In the questionnaire there were 3 demographic questions posed to the respondents regarding their age group, gender, and level of education.

The percentage of respondents by:

- age groups: 18-25 (5%), 26-30 (8%), 31-40 (23%), 41-50 (29%), 51-60 (29%), and 60+ (8%).
- gender: female (47%), male (52%), and other (2%).
- level of education: high-school degree (12%), attended college but did not obtain a degree (11%), bachelor's degree (24%), master's degree (42%), postgraduate degree (9%), and doctoral degree (2%).

Figure 8 graphically represents respondents by age groups. It can be seen that the majority of respondents fall into two age groups: 41-50 years (29%) and 51-60 years (29%).

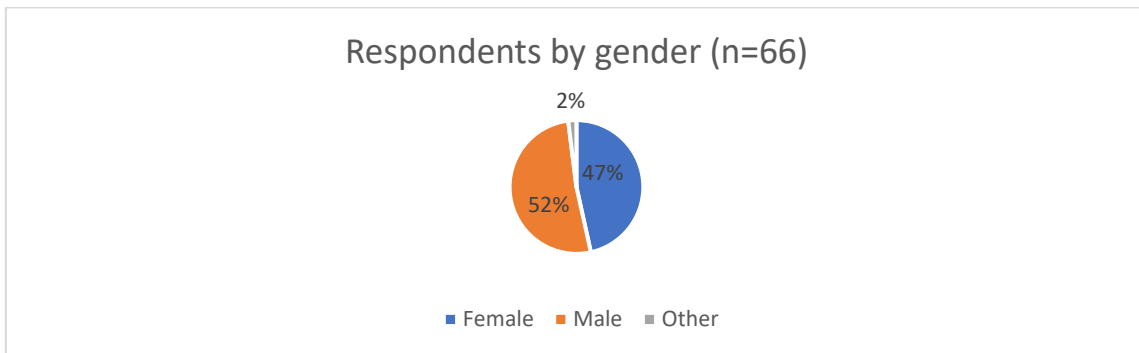
Figure 9: Respondents by age groups



Source: Own work.

In Figure 9, respondents by gender are depicted graphically. It can be seen that male (52%) and female (47%) genders are almost equally represented.

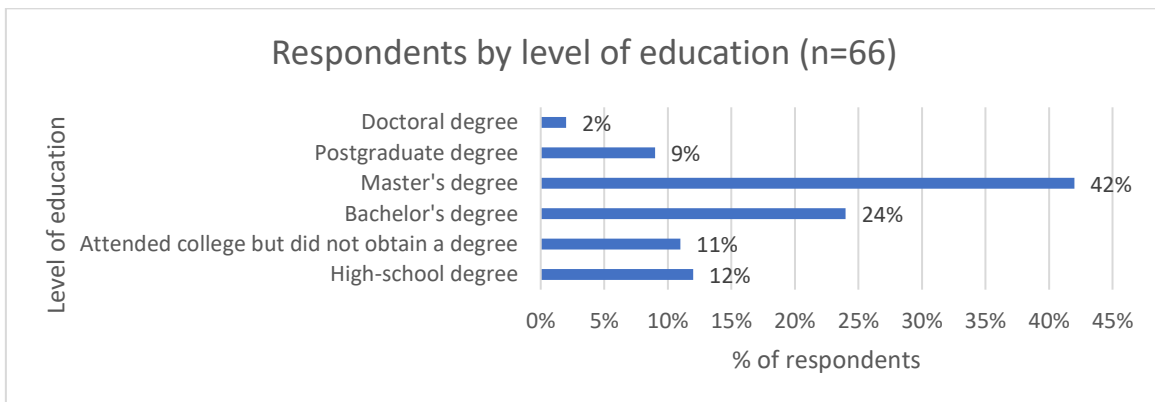
Figure 10: Respondents by gender



Source: Own work.

The division of respondents by their level of education is in Figure 10. The vast majority of respondents have finished their Bachelor's (24%) and Master's (42%) degrees.

Figure 11: Respondents by level of education



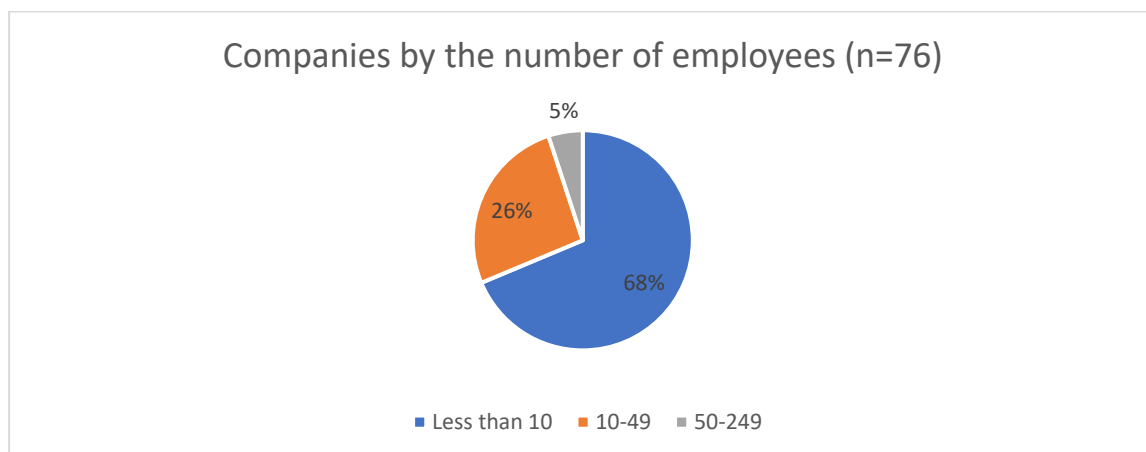
Source: Own work.

4.2 General information about the companies and results

In addition to demographic questions, respondents were asked to give general information about the company they work in. Firstly, the respondents were asked to state their job title at the company. The majority, 55%, were owners, 20% were CEOs, 9% were administrative assistants, 7% were head of accounting departments, and 9% chose “Other” as their answer.

Out of 76 answers, 68% of companies have less than 10 employees. 26% of them have 10-49 employees, and 5% have 50-249 employees. In Figure 11, the size of companies by the number of employees from which the results were obtained are shown. The majority of companies that have responded to the questionnaire have less than 10 employees (68%). I consider that small companies are more likely to use cloud solutions since they do not have much choice in the matter, and it allows them to digitalize their business quickly and with less expenses. Because of this reason it is actually beneficial to have so many respondents from small companies.

Figure 12: Companies by the number of employees



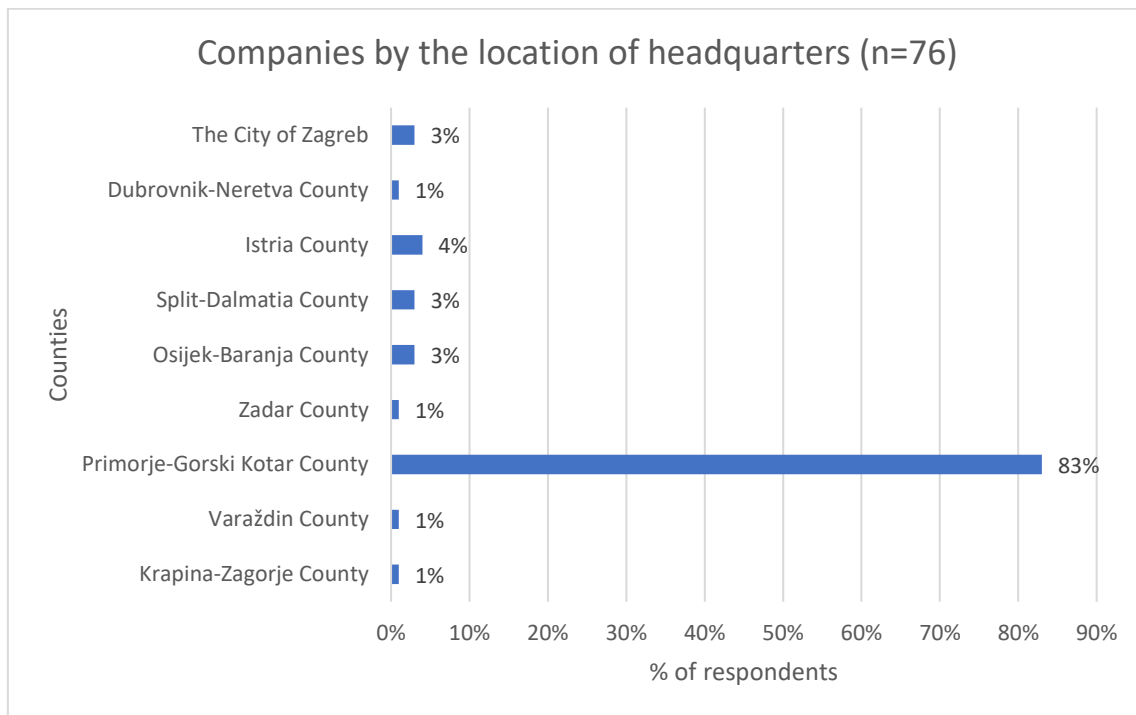
Source: Own work.

The population data for the year 2019 is found in “Izvešće o malim i srednjim poduzećima u Hrvatskoj – 2020.” (Report on small and medium companies in Croatia – 2021.) written by employees of CEPOR (SMEs and Entrepreneurship Policy Center) published in December of 2020. In 2019 there were a total of 135.890 micro, small and medium companies in Croatia which was 99,7% of all companies in Croatia. When observing the companies by the number of employees the results were the following: 39,83% of companies had less than 10 employees, 34,72% had 10-49 employees, and 25,46% had 50-249 employees (Alpeza et al, 2020).

Furthermore, a question was asked about the location of headquarters of the company. Most of the companies that have responded have their headquarters in Primorje-Gorski Kotar County (83%). In Figure 12 it can be seen that the responses came from companies from

nine different counties: The City of Zagreb (3), Dubrovnik-Neretva County (1%), Istria County (4%), Split-Dalmatia County (3), Osijek-Baranja County (3%), Zadar County (1%), Primorje-Gorski Kotar County (83%), Varaždin County (1%), and Krapina-Zagorje County (1%). I consider that it is not a problem that the respondents are mostly from Primorje-Gorski Kotar County since there is no reason that respondents from other counties would have extremely different answers. Small companies behave similarly in all counties since their resources are limited.

Figure 13: Companies by the location of headquarters

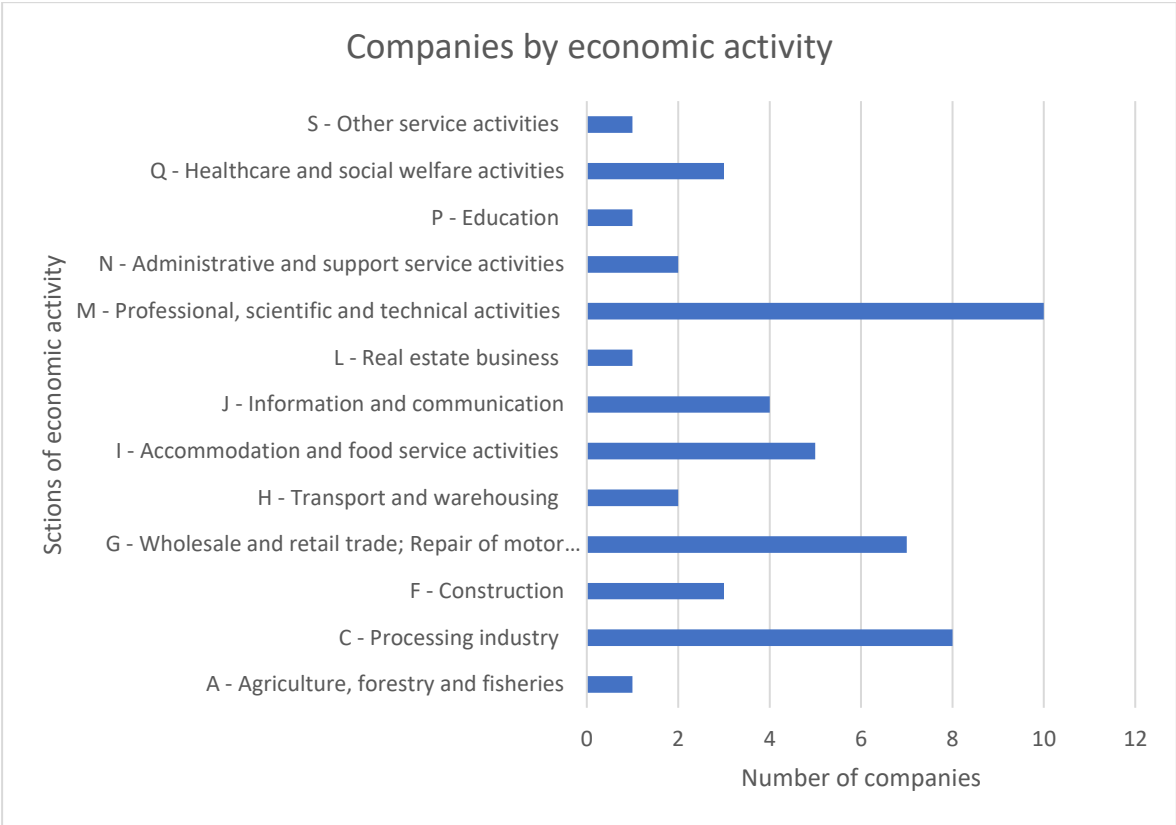


Source: Own work.

In addition, the responded were asked to choose the primary National classification of economic activity of the company. There are 615 different economic activities arranged on basis of Article 4 paragraph 2 of the of the National Classification of Activities Act (Official Gazette 98/94) by the Government of the Republic of Croatia (Odluka o Nacionalnoj klasifikaciji djelatnosti 2007. – NKD 2007. NN 58/2007.). To this question, 74 respondents picked they primary economic activity. There were 48 different economic activities chosen that fall under 13 different sections out of 23 sections of NKD in total which are: A – Agriculture, forestry and fisheries (1); C – Processing industry (8); F – Construction (3); G – Wholesale and retail trade; Repair of motor vehicles and motorcycles (7); H – Transport and warehousing (2); I - Accommodation and food service activities (5); J – Information and communication (4); L – Real estate business (1); M – Professional, scientific and technical activities (10); N - Administrative and support service activities (2); P – Education (1); Q – Healthcare and social welfare activities (3); and S – Other service activities (1). The data shows that the highest number of respondents come from companies which primary activity

falls under Professional, scientific and technical section (1). In Figure 14, a graphical representation of companies by their economic activity is shown. The majority of respondents come from Professional, scientific and technical economic activity (10), as well as from the Processing industry (8). I consider that it is not a problem that only companies from 13 sections of economic activity answered to the questionnaire since there is no reason that companies from other 10 sections would have answered differently.

Figure 14: Companies by economic activity



Source: Own work.

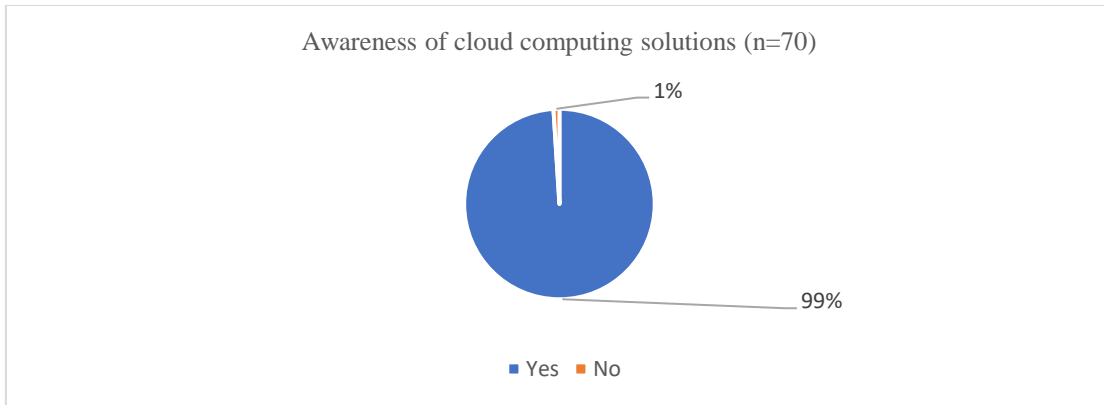
In the following sections, the research questions and their corresponding responses are textually explained in more detail with the results also presented in graphs and tables.

4.3 Research question 1: Are companies aware of the existence of cloud computing and cloud accounting solutions on the market?

The first research question focuses on awareness of cloud computing and cloud accounting solutions on the market among small and medium companies in Croatia. Two questions in the questionnaire were asked to find out if people are aware of the solutions. The first one was "Are you aware of the existence of the cloud computing solutions on the market?". The number of valid answers was 70, from which 99% answered that they are aware, and 1% that they are not aware of cloud computing solutions. The second question was "Are you

aware of the existence of the cloud accounting software on the market?". The number of valid answers was 69, from which 90% answered that they are aware, and 10% that they are not aware of cloud accounting software on the market. Figure 5 and Figure 6 are graphical representations of those results in a form of a pie chart.

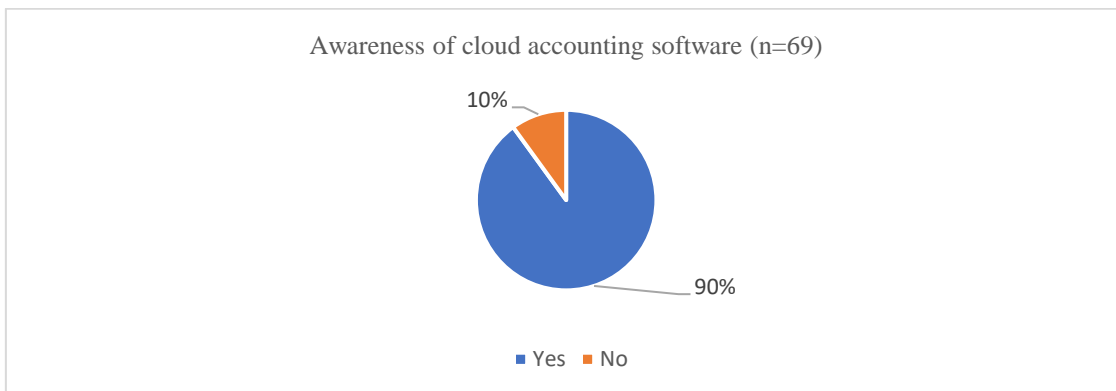
Figure 15: Awareness of cloud computing solutions on the market



Source: Own work.

It can be concluded that the vast majority of respondents (99%) are aware of cloud computing solutions on the market.

Figure 16: Awareness of cloud accounting software on the market



Source: Own work.

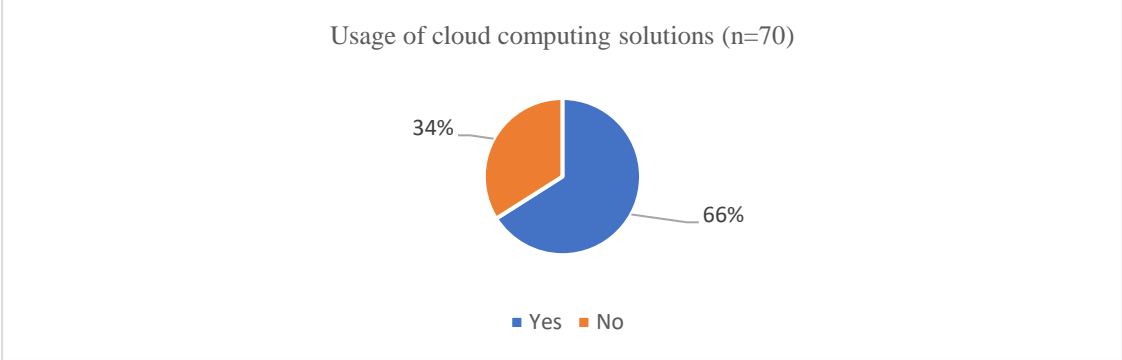
It can be concluded that most companies (90%) are aware of the existence of cloud accounting software on the market.

4.4 Research question 2: Are companies using cloud computing and cloud accounting solutions that are on the market?

The second research question focuses on usage of cloud computing and cloud accounting solutions on the market. Two questions in the questionnaire were asked to find out if people

are using such solutions. The first one was "Are you using cloud computing solutions that are on the market?". The number of valid answers was 70, from which 66% answered that they are using it, and 34% that they are not using cloud computing solutions. The second question was "Are you using cloud accounting software that are on the market?". The number of valid answers was 70, from which 33% answered that they are using, and 67% that they are not using cloud accounting software. Figure 7 and Figure 8 are graphical representations of those results in a form of a pie chart.

Figure 17: Usage of cloud computing solutions on the market

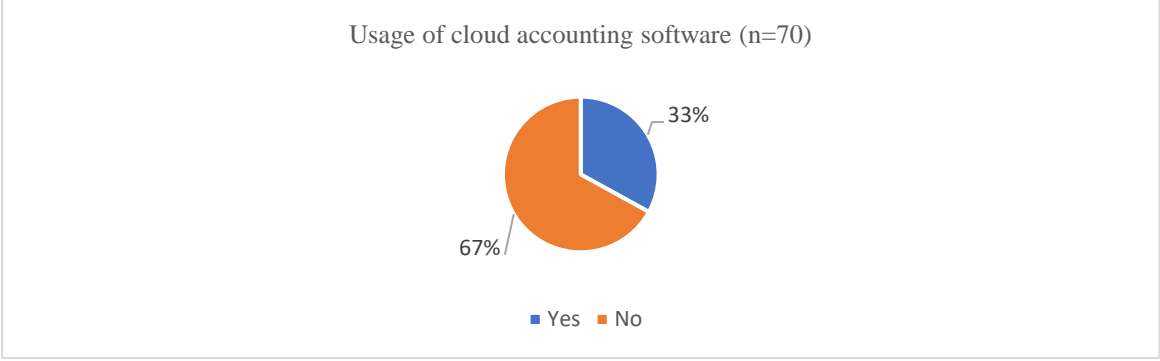


Source: Own work.

In contrast to the question regarding their awareness of cloud computing solution, where 99% of respondents are aware, only two thirds of respondent are using such solutions.

If the respondents answered that they were using cloud computing solutions, they were offered with an open-ended question where they asked to write down which solutions are they using. The four most common answers were: Google Drive (18 answers), Gmail (16 answers), Dropbox (15 answers), and OneDrive (14 answers). The first two answers are solutions that are provided by Google, and the last one by Microsoft. Both companies are the leaders in the cloud computing market when it comes to provision of services.

Figure 18: Usage of cloud accounting software on the market



Source: Own work.

The data shows that the majority of people use cloud computing solutions, however, almost the same majority is not using cloud accounting solutions. Cloud accounting software is still a relatively new approach to accounting and even though companies are aware of its existence, they are still not using it in great numbers. Only one third of respondents confirmed that they are using it.

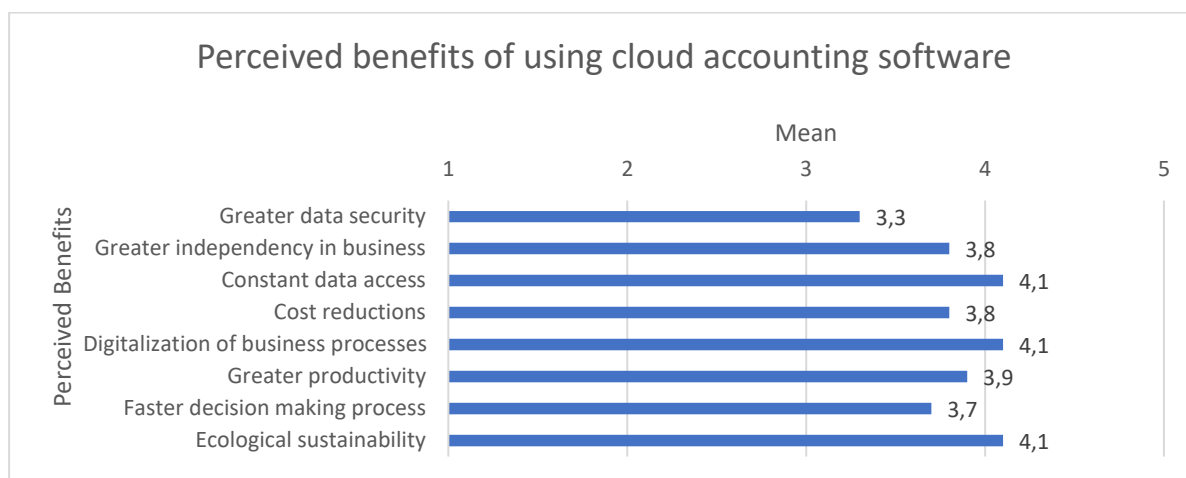
The respondents who answered positively to the question whether they are using cloud accounting solutions were then subsequently asked which are those. They were offered with a list of four cloud accounting software in Croatia (Minimax, Pantheon Web, Moj eRačun, and e-Računi) from which they could pick which of those are they using. If the one that they are not using was not on the list, they could choose the answer “Other” and write down which is the one that they are using in a form of an open-ended answer. The number of respondents to this question was 23 in total. Minimax and Pantheon Web were not chosen by any of the respondents. Moj eRačun was chosen by 26% of respondents, and e-Računi by 65%. The answer “Other” was chosen by 9% of respondents and they wrote down two answers: Parra and Brix (by Micro Process). It can be concluded that the majority of respondents use cloud computing solutions that are on the market (66%). On the other hand, the majority of respondents do not yet use cloud accounting solutions. Only 33% of respondents answered positively to the question whether they use it or not.

4.5 Research question 3: What are the perceived benefits of using cloud accounting software for business purposes among small and medium enterprises in Croatia?

The third question focused on perceived benefits of using cloud accounting software for business purposes by small and medium enterprises in Croatia. Respondents were asked to state their level of agreement with offered benefits. The scale had 5 options regarding their agreement: 1= Strongly Disagree, 2=Disagree, 3=Neither Agree nor Disagree, 4=Agree, 5=Strongly Agree. Moreover, it was possible to pick “No answer”. The main purpose of this question was to find out which are the biggest benefits that companies see in adopting cloud accounting software.

Figure 9 depicts that constant data access, digitalization of business process, and ecological sustainability are perceived as greatest benefits out of eight that were offered since their mean values are the highest.

Figure 19: Perceived benefits of using cloud accounting software for business purposes (mean value)



1= Strongly Disagree 2=Disagree 3=Neither Agree nor Disagree 4=Agree 5=Strongly Agree

Source: Own work.

Table 1 shows the percentages for each level of agreement for each benefit. It can be seen that the answers were concentrated mostly around the level “Agree”, and that not many answers were in the range of “Strongly Disagree” to “Disagree”.

Table 1: Perceived benefits of using cloud accounting software for business purposes (frequency)

Answers (%)	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	N/A	n
Greater data security	3%	12%	46%	26%	13%	0%	69
Greater independency in business	3%	4%	25%	49%	19%	0%	68
Constant data access	3%	4%	16%	33%	43%	0%	69
Cost reductions	3%	3%	31%	41%	22%	1%	68
Digitalization of business processes	3%	3%	13%	48%	33%	0%	69
Greater productivity	3%	3%	28%	35%	32%	0%	69
Faster decision-making process	3%	10%	29%	35%	23%	0%	69
Ecological sustainability	3%	0%	19%	41%	37%	1%	68

Source: Own work.

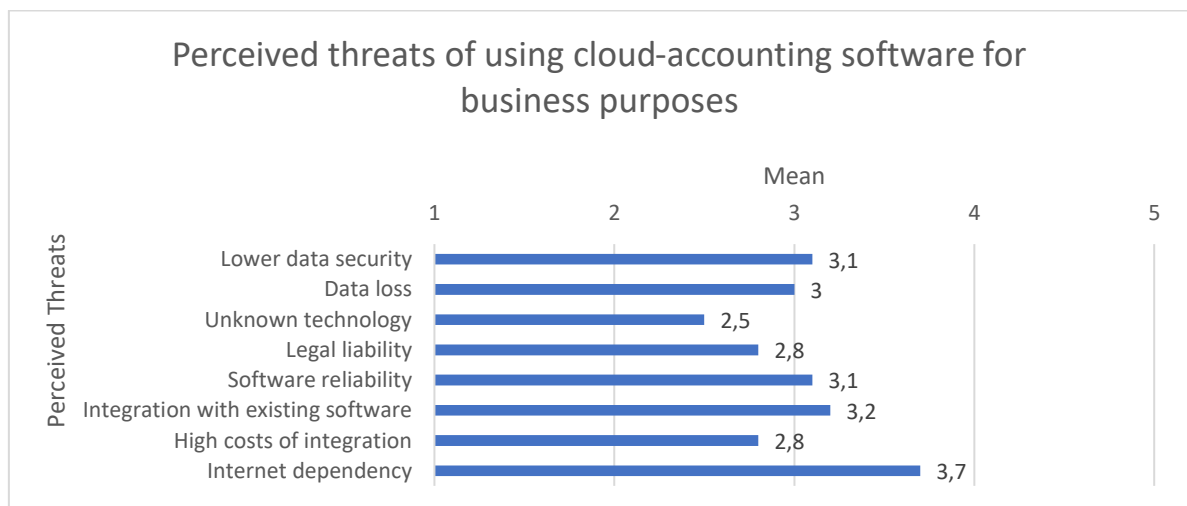
The least important benefit is “Greater data security” as it has the lowest mean answer of 3.3, the lowest “Agree” and “Strongly Agree” percentage, and the highest “Neither Agree nor Disagree” percentage which shows that people are mostly indifferent about that specific benefit. It can be concluded that most people agree that the benefits that were named in the question are in fact benefits that occur from usage of cloud accounting software. The highest perceived benefits are constant data access, digitalization of business process, and ecological sustainability.

4.6 Research question 4: What are the perceived threats of using cloud accounting software for business purposes among small and medium enterprises in Croatia?

The fourth question focused on perceived threats of using cloud accounting software for business purposes by small and medium enterprises in Croatia. Respondents were asked to state their level of agreement with offered threats. The scale had 5 options regarding their agreement: 1= Strongly Disagree, 2=Disagree, 3=Neither Agree nor Disagree, 4=Agree, 5=Strongly Agree. Moreover, it was possible to pick “No answer”. The main purpose of this question was to find out which are the biggest threats that companies see in adopting cloud accounting software.

Figure 10 depicts that internet dependency is the highest perceived threat with a mean of 3.7. Other threats with high mean values that follow are integration with existing software, software reliability and lower data security.

Figure 20: Perceived threats of using cloud accounting software for business purposes (mean value)



1= Strongly Disagree 2=Disagree 3=Neither Agree nor Disagree 4=Agree 5=Strongly Agree

Source: Own work.

Table 2 shows the percentages for each level of agreement for each threat. It can be seen that the answers were concentrated mostly around the level “Neither Agree nor Disagree”. The highest threat is by far internet dependency that has the highest percentage of “Strongly Agree” answers. The least perceived threat is seen in unknown technology which has the highest percentage of “Strongly Disagree” and “Disagree” answers. The other two least perceived threats by their mean value are legal liability and high costs of integration.

Table 2: Perceived threats of using cloud accounting software for business purposes (frequency)

Answers (%)	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	N/A	n
Lower data security	3%	22%	41%	30%	4%	0%	69
Data loss	3%	28%	40%	26%	3%	0%	68
Unknown technology	12%	41%	31%	15%	1%	1%	68
Legal liability	9%	24%	44%	22%	1%	1%	68
Software reliability	4%	23%	39%	29%	4%	0%	69
Integration with existing software	4%	14%	41%	36%	4%	0%	69
High costs of integration	6%	23%	54%	14%	3%	4%	66
Internet dependency	4%	13%	16%	43%	24%	1%	68

Source: Own work.

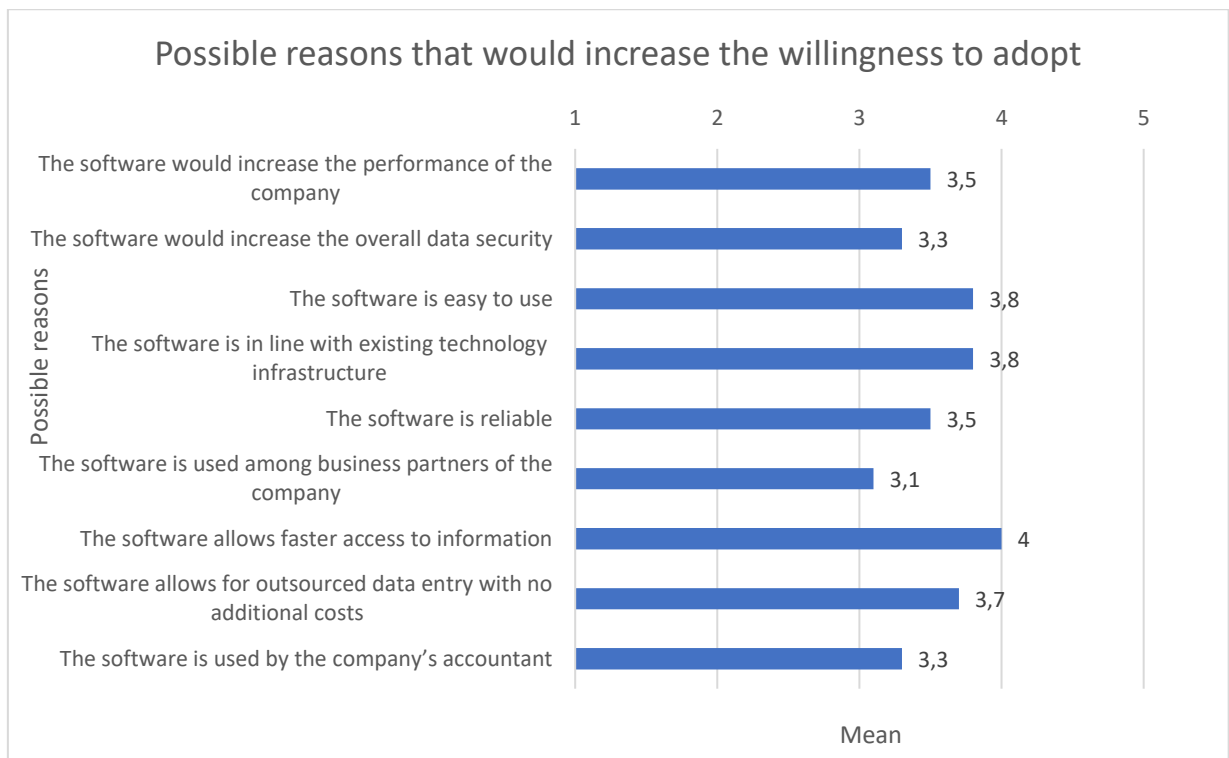
The least perceived threat is “Unknown technology” as it has the lowest mean answer of 2.5, the lowest “Strongly Agree” percentage, and the highest “Strongly Disagree” percentage. It can be concluded that most people agree that the threats that were named in the question are in fact threats that occur from usage of cloud accounting software, however, out of eight offered threats only one is strongly perceived as a threat which is internet dependency.

4.7 Research question 5: What are the possible reasons that would increase the willingness to adopt the usage of cloud accounting software among small and medium enterprises in Croatia?

The fifth research question focuses on the possible reasons that would increase the willingness to adopt the usage of cloud accounting software by small and medium enterprises in Croatia. Respondents were asked to state their level of agreement with offered reasons that might influence their decision. The scale had 5 options regarding their agreement: 1= Strongly Disagree, 2=Disagree, 3=Neither Agree nor Disagree, 4=Agree, 5=Strongly Agree. Moreover, it was possible to pick “No answer”. The main purpose of this question was to find out which are the reasons that might influence companies to adopt cloud accounting software.

Figure 11 depicts that the reason that cloud accounting software allows faster access to information is the highest perceived reason with a mean value of 4. Other reasons that follow are: the software allows for outsourced data entry with no additional costs, the software is easy to use, and the software is in line with existing technology infrastructure. The figure also shows that the reason that the software is used among business partners is the lowest perceived reason with a mean value of 3.1.

Figure 21: Possible reasons that would increase the willingness to adopt cloud accounting software



1= Strongly Disagree 2=Disagree 3=Neither Agree nor Disagree 4=Agree 5=Strongly Agree

Source: Own work.

Table 3 shows the percentages for each level of agreement for each reason. It can be seen that the answers were concentrated mostly around the levels “Neither Agree nor Disagree” and “Agree”. The highest perceived reasons among the ones with the highest mean value, by looking at percentage of “Agree” and “Strongly Agree” answers, are that the software allows faster access to information and that it is in line with existing technology infrastructure. The first one has 57% “Agree” answers, and 24% “Strongly Agree” answers. The second one has 61% “Agree” answers, and 15% “Strongly Agree” answers.

Table 3: Perceived reasons that would increase the willingness to adopt cloud accounting software (frequency)

Answers (%)	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	N/A	n
The software would increase the performance of the company	5%	8%	38%	32%	17%	2%	65
The software would increase the overall data security	2%	15%	46%	26%	11%	2%	65
The software is easy to use	2%	0%	38%	41%	19%	3%	63
The software is in line with existing technology infrastructure	2%	3%	20%	61%	15%	0%	66
The software is reliable	2%	6%	48%	29%	15%	2%	65
The software is used among business partners of the company	5%	14%	58%	16%	7%	12%	65
The software allows faster access to information	2%	2%	15%	57%	24%	2%	65
The software allows for outsourced data entry with no additional costs	2%	11%	22%	45%	20%	2%	64
The software is used by the company’s accountant	10%	10%	40%	25%	15%	9%	60

Source: Own work.

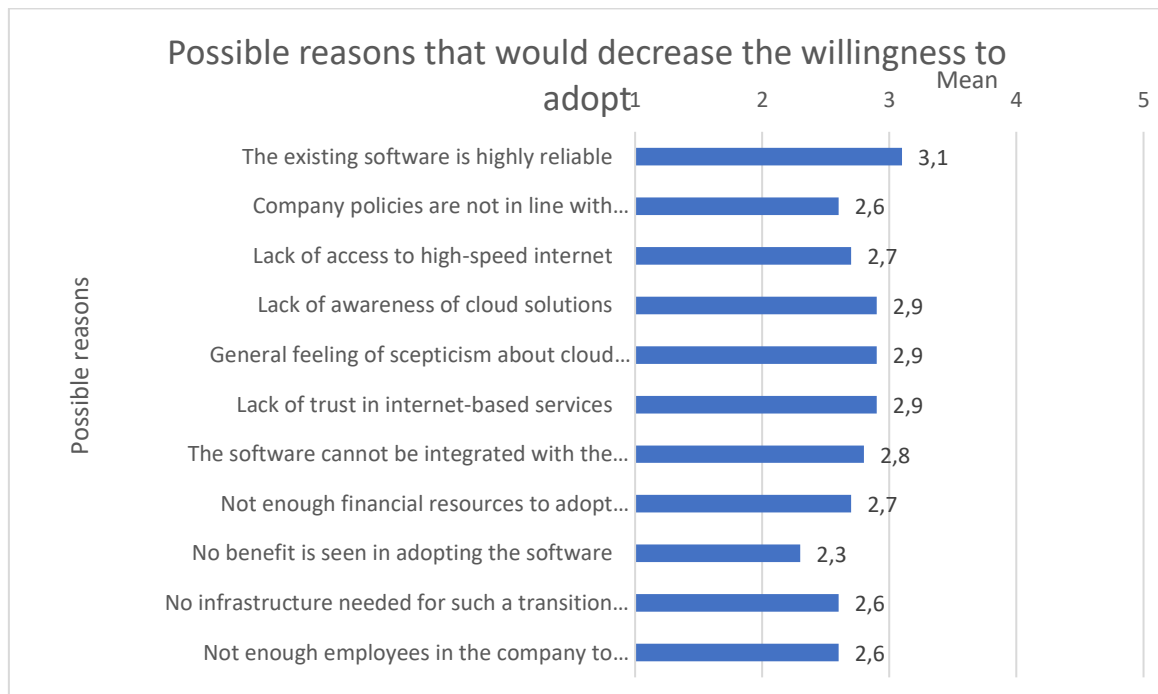
The least perceived reason that would increase the willingness to adopt cloud accounting software is that the software is used among business partners of the company as it has the lowest mean answer of 3.1 and the lowest “Strongly Agree” percentage. It can be concluded that that small and medium companies in Croatia would be more willing to adopt cloud accounting software if the software allows faster access to information, is easy to use, is in line with existing technology infrastructure, and if it allows for outsourced data entry with no additional costs. On the other hand, the fact that their business partners use the same software is not increasing their willingness to adopt as much.

4.8 Research question 6: What are the possible reasons that would decrease the willingness to adopt the usage of cloud accounting software among small and medium enterprises in Croatia?

The sixth research question focuses on the possible reasons that would decrease the willingness to adopt the usage of cloud accounting software by small and medium enterprises in Croatia. Respondents were asked to state their level of agreement with offered reasons that might influence their decision. The scale had 5 options regarding their agreement: 1= Strongly Disagree, 2=Disagree, 3=Neither Agree nor Disagree, 4=Agree, 5=Strongly Agree. Moreover, it was possible to pick “No answer”. The main purpose of this question was to find out which are the reasons that might influence companies not to adopt cloud accounting software.

Figure 12 depicts that the reason that the existing software is highly reliable is the highest perceived reason with a mean value of 3.1. Other reasons that follow are: lack of awareness of cloud solutions, general feeling of scepticism about cloud solutions, and lack of trust in internet based services. The figure also shows that the reason that there is no benefit seen in adopting the software is the lowest perceived reason with a mean value of 2.3.

Figure 22: Possible reasons that would decrease the willingness to adopt cloud accounting software (mean value)



1= Strongly Disagree 2=Disagree 3=Neither Agree nor Disagree 4=Agree 5=Strongly Agree

Source: Own work.

Table 4 shows the percentages for each level of agreement for each reason. It can be seen that the answers were concentrated mostly around the level “Neither Agree nor Disagree”. The highest perceived reasons among the ones with the highest mean value, by looking at percentage of “Agree” and “Strongly Agree” answers, are the lack of awareness of cloud solutions, general feeling of scepticism about cloud solutions, and lack of trust in internet-based services. The first one has 32% “Agree” answers, and 6% “Strongly Agree” answers. The second one has 33% “Agree” answers, and 3% “Strongly Agree” answers. The third one has 32% “Agree” answers, and 6% “Strongly Agree” answers.

Table 4: Perceived reasons that would decrease the willingness to adopt cloud accounting software (frequency)

Answers (%)	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	N/A	n
The existing software is highly reliable	3%	11%	53%	33%	0%	13%	55
Company policies are not in line with adopting the software	12%	30%	43%	13%	2%	6%	60
Lack of access to high-speed internet	11%	37%	24%	26%	2%	2%	62
Lack of awareness of cloud solutions	14%	24%	24%	32%	6%	0%	63
General feeling of scepticism about cloud solutions	9%	31%	23%	33%	3%	0%	64
Lack of trust in internet-based services	14%	26%	22%	32%	6%	2%	63
The software cannot be integrated with the existing system	13%	13%	55%	13%	5%	6%	60
Not enough financial resources to adopt new software	14%	17%	52%	17%	0%	2%	63
No benefit is seen in adopting the software	18%	44%	28%	8%	2%	5%	61
No infrastructure needed for such a transition in the company	19%	20%	44%	14%	3%	0%	64
Not enough employees in the company to handle the transition	19%	27%	32%	17%	5%	2%	63

Source: Own work.

The least perceived reason that would decrease the willingness to adopt cloud accounting software is that no benefit is seen in adopting the as it has the lowest mean answer of 2.3 and the highest combined percentage of “Disagree” and “Strongly Disagree” answers. It can be concluded that small and medium companies in Croatia would be less willing to adopt cloud

accounting software if the existing software that they use is highly reliable, if they lack awareness and are sceptical of cloud solutions, and if they lack trust in internet-based services.

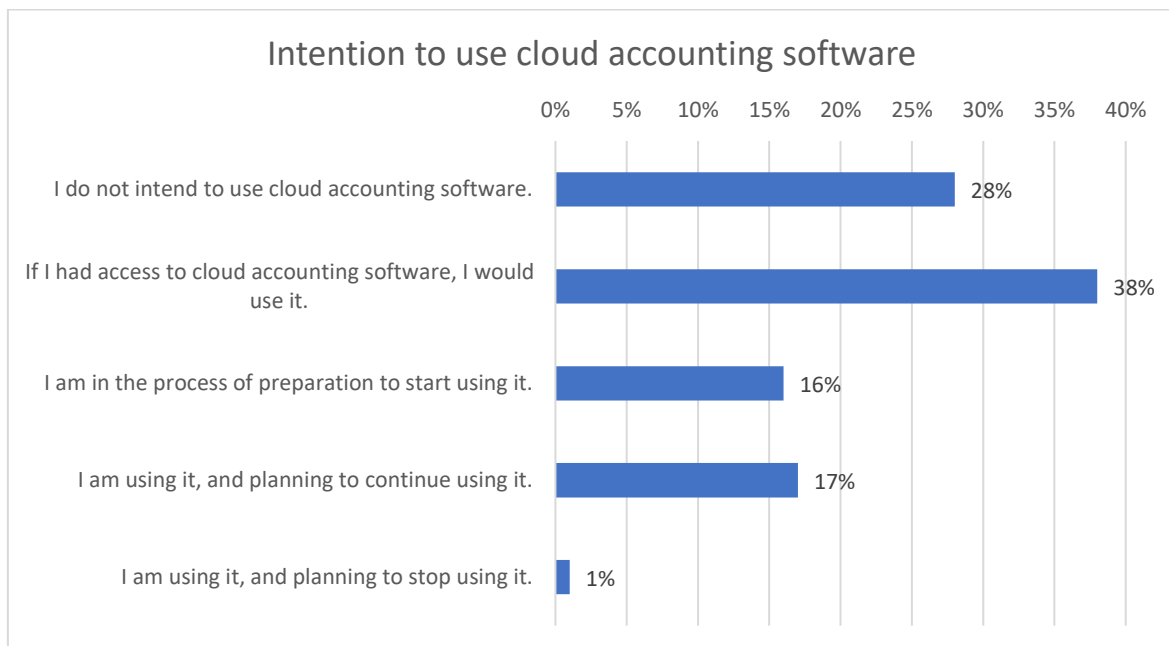
4.9 Research question 7: What is the intention to use cloud accounting software among small and medium enterprises in Croatia?

The seventh research question focuses on the intention to use cloud accounting software. The question in the questionnaire that gave the results for his research question was formed from five sentences that depict different intentions to use. The results are the following:

- a) 28% said that they do not intend to use cloud accounting software
- b) 38% said that if they had access to cloud accounting software that they would use it
- c) 16% said that they are in the process of preparation to start using it
- d) 17% said that they are using it, and planning to continue using it
- e) 1% said that they are using it, and planning to stop using it

Figure 13 shows the answers in a graphical representation from which it is clearly visible that 71% companies are either already using cloud accounting software or that they want to start using it. Only one third of respondents do not have the intention of using it. It can be concluded that small and medium companies in Croatia are using cloud accounting software or intend to use it in the future.

Figure 23: Intention to use cloud accounting software



Source: Own work.

5 DISCUSSION

In this chapter, firstly the summary of key findings is described. Secondly, the results are compared to similar research done in the field. And lastly, the limitations of the research and potential for future research are noted.

5.1 Summary of key findings

The overall results indicate that small and medium companies in Croatia are very familiar with both cloud computing (99%) and cloud accounting (90%) services. However, the majority of them are using cloud computing solutions (66%) but are not using cloud accounting software (33%).

The most highly perceived benefits that come with using cloud accounting software were: (1) Constant data access; (2) Digitalization of business processes; (3) Ecological sustainability, and (4) Greater productivity. On the other hand, the lowest perceived benefits were: (1) Greater data security; (2) Faster decision-making process; (3) Greater independency in business; and (4) Cost reductions. Those benefits are still important, but do not rank as high as the first four.

The most interesting highly perceived benefit that arises from using the software is ecological sustainability. It is very positive that companies see it as a benefit and want to contribute to a better future by utilizing less paper in the future. Furthermore, since small and medium companies usually do not have the money to undertake the digitalization of their processes, the high results for the benefit of digitalization of business processes by using only cloud accounting software correspond to it. It is interesting to see that companies are aware of it as a benefit so highly. By observing the highest benefits, providers can focus their offers around them and try to make the product more appealing to customers if they can offer the perceived benefits.

The most highly perceived threats that come with using cloud accounting software were: (1) Internet dependency; (2) Integration with existing software; (3) Lower data security; and (4) Software reliability. In addition, the lowest perceived threats were: (1) Unknown technology; (2) Legal liability; (3) High cost of integration; and (4) Data loss. Internet dependency as the highest perceived threat is logical since data cannot be access if there is no internet and no work can be done when there is not access to data. Another important threat is the integration with existing software. This result complements the result that the reason that the existing software is highly reliable would decrease the willingness to adopt new software. If the existing software is highly reliable, the companies might not want to replace it completely. For that reason, the new software must be compatible with the old one. Providers of cloud accounting software have to find techniques to tackle those threats. Internet availability is the hardest one to manage since it is in the hand of internet providers, and not software

providers. However, the threat of integration with existing software can be tackled by producing a software that is highly customizable and easily combined with others.

The highest possible reasons that would increase the willingness to adopt cloud accounting software were: (1) The software allows faster access to information; (2) The software is easy to use; (3) The software is in line with existing technology infrastructure; (4) The software allows for outsourced data entry with no additional costs. In today's world where everything moves fast and change happens on daily basis, companies want to know how they stand financially at every point in time in order to make faster decisions. The fact that the software allows faster access to information is the highest reason for increasing the willingness to adopt is in line with the fast-moving reality. The second highest possible reason is that the software is easy to use. If it is easy to use, the process of adopting it is shorter since employees can learn how to use it much faster which in turn leads to cost savings. Lastly, the reason that the software is in line with existing technology infrastructure is so high since it brings lower expenses of introducing it. Companies do not have to invest in new infrastructure in raise costs. Cloud accounting providers should focus on making their products user-friendly and compatible with other solutions that exist on the market.

The highest possible reasons that would decrease the willingness to adopt cloud accounting software were: (1) The existing software is highly reliable; (2) Lack of awareness of cloud solutions; (3) General feeling of scepticism about cloud solutions; (4) Lack of trust in internet-based services. The highest possible reason that would decrease the willingness to adopt is that the existing software is highly reliable. If something works, why change it. People in general do not like change, especially if they are satisfied with their current situation. Other reasons are in line with the first one and they arise from lack of information about new technology that is rising on the market. This can be resolved by educating customers of the benefits that arise by utilizing cloud solutions and explaining what value added they are receiving by converting to it. Providers of such services should focus of better marketing strategies to make such technology more familiar to potential customers.

In relation to demographic questions, the most interesting results are the balance between female and male respondents. There were 47% of female respondents, 52% male, and 2% other. In 2020, the percentage of female entrepreneurship in the total number of companies in Croatia was only 31,7% (Fina, 2021). That is why I am very satisfied to have gotten so many answers from female entrepreneurs.

5.2 Comparison with literature

It is very interesting to see that cost reduction is not among the highest benefits, as well as that the high costs of integration is not among highest threats. Those results are in line with the results from similar research done by Gupta, Seetharaman, and Raj in 2013 regarding the usage and adoption of cloud computing by small and medium businesses in the Asia-Pacific. They concluded that cost reduction and cost savings are not among most important factors

to adopt cloud solutions. However, in this thesis, the possible reason that the introduction of cloud accounting software would allow for outsourced data entry with no additional costs is among the highest priorities. Moreover, they state that “Ease of use and convenience” together with “Security and privacy” are the most important factors for companies to adopt cloud solutions. In this thesis, the results also indicate that the fact that the software is easy to use would incline customers to adopt it. Also, threats such as lower data security and software reliability are among the highest perceived ones. Companies are still sceptical about cloud solutions. It implies that they need to be made aware of the safety protocols that are done by the provider and they also need to be explained in a way that everyone can understand where data is kept and how it is secured.

Regarding the benefit of ecological sustainability, in their paper written in 2014, Mohamed and Pillutla refer to cloud computing as a green platform and offer several energy efficiency factors of cloud computing that can be implemented. Since the results of this thesis show that customers believe ecological sustainability is a very important benefit the propositions from the paper can be used to research that aspect of cloud accounting in more detail.

Another comparable research in the field has been published by Savić and Janković in 2015 that did a survey among top managers in Bosnia and Hercegovina regarding possibilities and problems of implementing cloud technology in accounting. They posed a similar question regarding the awareness of cloud accounting software on the market. The results they obtained for 32 respondents were that 37% of them are familiar, 16% are partly familiar, and 47% are not familiar with such software. In contrast, my results show that 90% of respondents are familiar with it, and 10% are not. To have more depth in my analysis, I could have added a response “Partly familiar”. Since their research has been done in 2015, and mine in 2021 it can be expected that in 6 years people have become more familiar with cloud accounting technology.

5.3 Limitations of research and potential for future research

This research has several potential limitations. The first one is that the generalization of the results is limited since the sample is small in regard to the total number of small and medium companies in Croatia. The sample of this research was 76 respondents, and the total number of SMEs in Croatia was 135.890 in 2019. Moreover, the sample selection could have been more systematic. The survey was sent to many e-mail addresses obtained from public sources in order to obtain as many answers as possible. A lot of them did not even open the e-mail, and a large part that did, did not open the survey. Another possible limitation is the length of the survey. It had 25 questions and required approximately 10 minutes to go through. Several respondents started answering and subsequently gave up after a few minutes. If it had been shorter, I could have received more answers. Moreover, the majority of companies that responded to the questionnaire have their headquarter is in Primorje-

Gorski Kotar County. Since Croatia has a total of 21 counties the results cannot be generalized to all counties.

Further research potential is firstly in repeating the questionnaire with a better and larger sample so that the results can create a more generalized picture. The results can also be used in developing each part of the questionnaire in more detail. For example, to do a survey on why the benefit of ecological sustainability is so important and which aspects of it are more or less attractive to customers. It can be done with each benefit and threat that is considered interesting.

6 CONCLUSION

This Master thesis had its main purpose of gaining information about the current state of adoption of cloud accounting software by small and medium companies in Croatia. Based on the results gained from quantitative analysis of the questionnaire that was distributed among such companies it can be concluded that 33% of respondents have already adopted the usage of such software, and 90% of respondents are aware of its existence. Moreover, the results indicate that the majority of others that are not yet using it are willing to start using it in the future.

In order to examine which reasons would increase the willingness to adopt cloud accounting software among small and medium companies in Croatia, the respondents were asked to state their level of agreement with nine different reasons. The results demonstrate that the reason that the software allows faster access to information is the one that they agree with the most. Moreover, the reason that the software is easy to use is very important as well as the reason that the new software is compatible with the existing technology infrastructure,

On the other hand, to determine which reasons would decrease the willingness to adopt cloud accounting software among small and medium companies in Croatia, the respondents were asked to state their level of agreement with eleven different reasons. The results show that the reason that the existing software is highly reliable is the one that would most negatively impact the willingness to adopt it. Other reasons that decrease the willingness to adopt such software are lack of awareness of cloud solutions, general feeling of scepticism about cloud solutions, and lack of trust in internet-based services.

In addition, to detect which are the highest perceived benefits of using cloud accounting software among small and medium companies in Croatia, respondents were offered a set of eight benefits and asked to state their level of agreement with them. Three benefits got the highest results: constant data access, digitalization of business process, and ecological sustainability. Identifying constant data access as one of the greatest benefits is in line with the fact that the reason that the software allows faster access to information would increase the willingness to adopt the new software.

Besides detecting the benefits, the highest perceived threats of using cloud accounting software among small and medium companies in Croatia were identified. Respondents were offered a set of eight threats and asked to state their level of agreement with them. By far the highest perceived threat is internet dependency which is difficult to control by providers of cloud accounting software. Another important threat is the integration with existing software which can be more easily solved by providers.

In conclusion, the adoption of cloud accounting software by small and medium companies in Croatia is increasing. One third of companies are already using it, and others are aware of its existence and are willing to start using it in the future. Its usage brings a lot of long-term benefits to the business sector, as well as to society as a whole with ecological sustainability. The perceived threats can be dealt with by introducing the new technology and its benefits to potential customers on a large scale. When it becomes common and familiar, more companies will want to use it.

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APPENDICES

Appendix 1: Povzetek (Summary in Slovene language)

Računalništvo v oblaku je sodobna tehnologija, ki omogoča uporabo računalniških storitev preko interneta. Tehnologija se lahko uporablja v številnih panogah in področjih, eno od njih pa je računovodstvo. Računovodska programska oprema v oblaku je storitev v oblaku, imenovana SaaS (programska oprema kot storitev), kar pomeni, da gostuje na oddaljenih strežnikih, kamor se podatki pošiljajo, obdelujejo in na koncu vrnejo uporabniku. Namen magistrskega dela je bil poiskati informacije, ki prispevajo k boljšemu razumevanju trenutnega stanja sprejemanja in uporabe računovodskih storitev v oblaku s strani malih in srednjih podjetij na Hrvaškem. Poleg tega so štirje cilji diplomskega dela: razumeti, v kolikšni meri podjetja na Hrvaškem poznajo računovodske storitve v oblaku; razumeti, kakšne so grožnje in koristi potencialnih uporabnikov takšne storitve; raziskati razloge, zaradi katerih je mogoče povečati in izboljšati uvedbo računovodstva v oblaku na Hrvaškem; zbiranje informacij o ponudnikih računovodskih storitev v oblaku na Hrvaškem.

Magistrska naloga je sestavljena iz petih delov. Prvi del se osredotoča na splošne informacije o računalništvu v oblaku in vrhunskih ponudnikih tovrstnih storitev na svetu. Drugi del se osredotoča na splošne informacije o računovodstvu v oblaku in ponudnikih tovrstnih storitev na Hrvaškem. Tretji del je sestavljen iz raziskovalne metodologije s pojasnili, kako se raziskovalna vprašanja povezujejo z namenom in cilji magistrske naloge. Četrti del vključuje interpretacijo rezultatov vprašalnika v obliki grafov, tabel in besedilne razlage. Peti del je razprava, v kateri so rezultati podrobneje razloženi in povezani z obstoječo literaturo. Poleg tega pokaže potencial za nadaljnje raziskave skupaj z omejitvami raziskave.

Glavni del magistrske naloge so rezultati, ki so bili pridobljeni s pomočjo vprašalnika, posredovanega malim in srednjim podjetjem na Hrvaškem po elektronski pošti. Vprašalnik je vseboval skupno 25 vprašanj, ki so bila razdeljena v sedem skupin: splošni podatki o podjetju, trenutne prakse v zvezi z računovodstvom, poznavanje računalništva v oblaku in računovodskih rešitev v oblaku, zaznane prednosti in nevarnosti uporabe računovodske programske opreme v oblaku, pripravljenost sprejeti računovodsko programsko opremo v oblaku, funkcionalnosti računovodske programske opreme v oblaku in socialno-demografska vprašanja.

Rezultati kažejo, da večina anketirancev pozna računalništvo v oblaku (99 %) in programsko opremo za računovodstvo v oblaku (90 %) na trgu. Vendar le 66 % vprašanih uporablja rešitve računalništva v oblaku, 33 % pa jih uporablja računovodske storitve v oblaku. Zelo zaznane prednosti so bile: (1) stalen dostop do podatkov, (2) digitalizacija poslovnih procesov, (3) ekološka trajnost in (4) večja produktivnost. Po drugi strani so bile zelo zaznane nevarnosti: (1) odvisnost od interneta, (2) integracija z obstoječo programsko opremo, (3) nižja varnost podatkov in (4) zanesljivost programske opreme. Glede pripravljenosti za prevzem računovodstva v oblaku so najvišji možni razlogi, ki bi jo povečali: (1) programska oprema omogoča hitrejši dostop do informacij, (2) programska oprema je enostavna za uporabo, (3) programska oprema je v skladu z obstoječo tehnološko infrastrukturo, (4) programska oprema omogoča zunanji vnos podatkov brez dodatnih stroškov. Poleg tega so najpomembnejši možni razlogi, ki bi zmanjšali pripravljenost za sprejetje: (1) obstoječa programska oprema je zelo zanesljiva, (2) pomanjkanje ozaveščenosti o rešitvah v

oblaku, (3) splošni občutek skepticizma glede rešitev v oblaku, (4) pomanjkanje zaupanja v internetne storitve.

Glede na vse rezultate privzemanje računovodske programske opreme v oblaku s strani malih in srednjih podjetij na Hrvaškem narašča. Potencialne koristi je mogoče povečati, nevarnosti pa zmanjšati z izboljšanjem tehnologije, ki jo potencialnim strankam razloži na razumljiv način. Če ga bodo bolje razumeli, ga bodo bolj nagnjeni k uporabi.

Appendix 2: Questionnaire questions

Q1 – What is the primary economic activity of your company (NKD)?

All of the economic activities from the National classification of economic activity (2007) were offered in a drop-down menu.

Q2 – In which county are the headquarters of your company?

Zagrebačka županija
Krapinsko-zagorska županija
Sisačko-moslavačka županija
Karlovačka županija
Varaždinska županija
Koprivničko-križevačka županija
Bjelovarsko-bilogorska županija
Primorsko-goranska županija
Ličko-senjska županija
Virovitičko-podravska županija
Požeško-slavonska županija
Brodsko-posavska županija
Zadarska županija
Osječko-baranjska županija
Šibensko-kninska županija
Vukovarsko-srijemska županija
Splitsko-dalmatinska županija
Istarska županija
Dubrovačko-neretvanska županija
Međimurska županija
Grad Zagreb

Q3 – What is your position at the company?

- Owner
- CEO
- Administrator
- Head of accounting
- Other:

Q4 – What is the size of your company based on the number of employees?

- Fewer than 10
- 10-49
- 50-249

Q5 – Are you outsourcing your accounting or is it kept-in-house?

- Outsourcing
- Kept-in-house
- Both
- By the way I do not need to have any kind of accounting
- I do not want to answer

IF (1) Q5 = [2] (Kept-in-house)

Q6 – If you have in house accounting, which solutions (software) do you use to perform accounting duties?

Multiple answers are possible.

- Synesis
- Minimax
- Pantheon
- e-Računi
- Excel
- Other:

Q7 - If you outsource your accounting, how do you communicate, share data and documents with your accountant? Please state how frequently do you use the following means of communication.

	Never	Rarely	Sometimes	Often	Always	N/A
E-mail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telephone calls	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Messages (including WhatsApp, Viber)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cloud solutions (Google Drive, Dropbox, OneDrive)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8 - How do you communicate, share data and documents with your partners? Please state how frequently do you use the following means of communication?

	Never	Rarely	Sometimes	Often	Always	N/A
E-mail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telephone calls	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Messages (including WhatsApp, Viber)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cloud solutions (Google Drive, Dropbox, OneDrive)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9 - How do you communicate, share data and documents with your bank? Please state how frequently do you use the following means of communication.

	Never	Rarely	Sometimes	Often	Always	N/A
E-mail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Telephone calls	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Messages (including WhatsApp, Viber)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Cloud solutions (Google Drive, Dropbox, OneDrive)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 - The following list consists of five devices. Please state to which degree do you use the following devices for business purposes.

	Never	Rarely	Sometimes	Often	Always	N/A
Smartphone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tablet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Laptop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Desktop computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smart watch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11 - Are you aware of the existence of the cloud computing solutions on the market? Examples: GoogleDrive, Gmail, Dropbox, OneDrive

- Yes
- No

Q12 – Are you using cloud computing solutions?

- Yes
- No

IF (2) Q12 = [1] (Yes)

Q13 – Which solutions are you using?

Q14 - Are you aware of the existence of the cloud accounting software on the market? Examples: Minimax, e-Računi, Moj-eRačun, Pantheon Web

- Yes
- No

Q15 – Are you using cloud-accoouting software?

- Yes
- No

IF (3) Q15 = [1] (Yes)

Q16 – Which software are you using?

- Minimax
- Pantheon Web
- e-Računi
- Moj-eRačun
- Other:

Q17 - Following list comprises of perceived benefits of using cloud-accounting software for business purposes. For example, to collaborate with your accountant and partners. Please state your degree of agreement or disagreement with the offered benefits.

Strongly Disagree	Disagree	Neither nor Disagree	Agree	Agree	Strongly Agree	N/A
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Greater data security	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Greater independency in business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Constant data access	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost reductions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digitalization of business processes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Greater productivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Faster decision-making process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ecological sustainability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q18 - . Following list comprises of perceived threats of using cloud-accounting software for business purposes. For example, to collaborate with your accountant and partners. Please state your degree of agreement or disagreement with the offered threats.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	N/A
Lower data security	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loss of data	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unknown technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Legal liability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Software reliability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integration with existing software	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High costs of integration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet dependency	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q19 - Following list comprises of five sentences that depict the intention to use cloud-accounting software. Please circle the answer that correctly describes your intention to use it.

- I do not intend to use cloud accounting software.
- If I had access to cloud accounting software, I would use it.
- I am in the process of preparation to start using it.
- I am using it, and planning to continue using it.
- I am using it, and planning to stop using it.

Q20 - Following list comprises of possible reasons that would increase the willingness to adopt the usage of cloud-accounting software. Please state your degree of agreement or disagreement with the statements below.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	N/A
The software would increase the performance of the company.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The software would increase the overall data security.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The software is easy to use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The software is in line with existing technology infrastructure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The software is reliable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The software is used among business partners of the company.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The software allows faster access to information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The software allows for outsourced data entry with no additional costs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The software is used by the company's accountant.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q21 - Following list comprises of possible reasons that would decrease the willingness to adopt the usage of cloud-accounting software. Please state your degree of agreement or disagreement with the statements below.

	U potpunosti se ne slažem	Ne slažem se	Niti se slažem niti se ne slažem	Slažem se	U potpunosti se slažem	N/A
The existing software is highly reliable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Company policies are not in line with adopting the software.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of access to high-speed internet.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of awareness of cloud solutions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
General feeling of scepticism about cloud solutions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of trust in internet-based services.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The software cannot be integrated with the existing system.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not enough financial resources to adopt new software.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No benefit is seen in adopting the software.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No infrastructure needed for such a transition in the company.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not enough employees in the company to handle the transition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q22 - What are the functions of cloud-accounting software you would like to use?

Moguće je odabrati više odgovora.

- Financial reporting (Reports that need to be sent to the Tax Administration ex. VAT report)
- Managerial accounting (Non-financial information that can be derived from accounting data. Example: The percentage of invoices that are not paid on time)
- Payroll
- Document Management System

- Long-term assets
- Invoicing
- Electronic invoicing
- Payment orders
- Warehouse management
- Manufacture
- Other:

- All of the above

Q23 – Which category below includes your age?

- Below 18 Years
- 18-25
- 26-30
- 31-40
- 41-50
- 51-60
- 60+
- I do not want to answer

Q24 – What is your gender?

- Female
- Male
- Other:

- I do not want to answer

Q25 - 3. What is the highest level of school you have completed or the highest degree you have received?

- Elementary school and/or a part of high school
- High school degree
- Attended college but did not earn a degree
- Bachelor's degree
- Master's degree
- Graduate degree
- Ph.D.
- I do not want to answer