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## ONLINE ACCOUNTING SOFTWARE FOR THE BUSINESS

**Abstract.** Small to medium size enterprises are young and constantly changing their sphere of activities depending on fluctuations of the market. Accounting information systems (AIS) play a key role in providing the financial information for decision making within the enterprises. Advances in accounting information technology over the last several years have moved towards the *online accounting*. The online accounting system is web based and resides on a web server and anybody in the enterprise can access that accounting system with a simple browser.

In the research we investigated the newest trends in AIS models for small to medium enterprises. Scientific works analysis of accounting software showed that their models were analyzed by foreign and Lithuanian scientists. However it is a lack of scientific papers on the newest trends in Lithuania. So that as methodology of this research was scientific works and comments of a number of reviewers. Many of them were sourced from the internet. Our survey of the newest trends in AIS models indicates advantages and dangers of AIS application within the business processes.

Investigation of accounting software for Lithuanian small and medium enterprises was a part of the research. We have summarized only main accounting systems opportunities.

**Keywords:** small to medium enterprises, accounting information systems, web-based software, cloud computing.

### 1. INTRODUCTION

Small to medium size enterprises are young and constantly changing their sphere of activities depending on fluctuations of the market. The complicated and continuously changing environment of accounting creates the need for more accurate accounting information.

Enterprise accountants have confronted lots of questions that need proper and unambiguous answers. A necessity to receive proper information has arisen; therefore, accounting information has to be filtered before presenting it to higher administrative bodies in order to adopt a strategically decision. Accounting is becoming more and more expensive according to the increase of administrative communication. Consequently, expense of offered service is increasing too. Accounting as well as the whole administrative system is created to get informa-

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tion as soon as possible with minimum expense. That is why accounting must be organized rationally, because in other case it can be unsuitable due to large expense.

Lots of enterprises use information system technologies not only for accountability but also for other business purposes.

Because of the accounting information systems play a significant role in providing the financial information for decision making within the enterprises **the aim of the research** is to investigate the newest trends in AIS models for small to medium enterprises, and to determine the advantages and dangers for their application within the business processes.

To achieve this aim, the following **objectives** have been dealt with: to investigate the newest trends in AIS models for small to medium enterprises; to analyze the current state of Lithuania in this sector of business.

**The methodology of the investigation.** Investigation was carried out using systematic literature review of accounting information systems faced by small to middle business. The comments of a number of reviewers of web-based accounting information systems were reviewed and analyzed. These were sourced from internet based forums.

## 2. MODELS OF AIS FOR SMALL TO MEDIUM SIZED BUSINESS

### 2.1. Small to medium sized business characteristics

Small to medium sized enterprises (SMEs) play significant role in Lithuania economy. The definition of the concept of small and medium-sized business is provided by the Law of the Republic of Lithuania (Table 1). By the definition SMB entity shall be a micro, small or medium-sized enterprise (Ministry, 2011, p. 1).

Table 1. Concept of SMEs

	Staff headcount	Financial indicators meet at least one of these requirements	
		Annual income, million LTL	Book value of assets, million LTL
Medium-sized enterprise	Fewer than 250	138	93
Small enterprise	Fewer than 50	24	17
Micro enterprise	Fewer than 10	7	5

Source: [http://www.ukmin.lt/en/small\\_medium/](http://www.ukmin.lt/en/small_medium/).

Companies in Lithuania are predominantly small and medium-sized. According to the data of the Statistics Department there were more than 66,500 small and medium size enterprises operating in the country on the 1<sup>st</sup> January, 2011. In 1998 companies that employed up to 50 people made 98 per cent of all enterprises in the country. The number of companies totaled 162,427 at that time, with just 37 employing over 1000 people. 99.4 percent of Lithuania's enterprises have less than 250 employees now (Baltic, 2011, p. 1).

As a rule, small and medium-size enterprises in Lithuania are young and constantly changing their sphere of activities depending on fluctuations of the market. Even the enterprises with limited resources must administer records and organize financial management properly, so demand for implementation of the programs of computer records is still growing.

Most often such companies have created their own programs, but they do not always administer records precisely or present detailed information, which corresponds to the requirements of constantly changing laws.

This problem can be resolved by AIS which plays a key role in providing the properly financial information. The accounting information system records events and transactions, and produces information for the evaluation of the overall success of a business entity.

The next section presents investigation AIS models for small to medium enterprises.

## 2.2. Types of accounting information systems

An accounting information system (AIS) provides financial information about a business. This information helps managers plan and control operations and provides reports to outside parties such as stockholders, creditors and government agencies.

Parts of an accounting information system might include financial reporting, cost accounting, management accounting and enterprise resource planning (ERP). Well-designed AIS gives a business a consistent way to view and analyze financial information and has three basic functions (Wiley, 2010, p. 1).

The functions are:

1. **Collect and store data.** AIS collect and store data about business activities and transactions. The system must capture transaction data on source documents, record transaction data in journals, and post data from journals to ledgers that sort the data by account type.

2. **Provide Information.** AIS provide information useful for making decisions. This information usually involves reports in the form of financial statements and managerial reports.

**3. Provide Controls.** AIS incorporate controls to ensure the accurate recording and processing of data. The system must make certain that the information that comes out of the system is reliable and keep business assets safe.

Some accounting information systems also produce forecasts of future conditions such as projected financial statements and financial budgets. So firm's financial performance is measured against such forecasts by other analytical accounting reports.

Different internal users (employees and levels of management) and external users (stockholders, creditors, investors, etc.) use AIS in many accounting fields. Tax Accounting uses AIS to file tax returns. Managerial Accountants create budgets for the future quarters of the company. Auditors use accounting information systems as well when they are auditing companies. AIS are vital to the operations of a business and can be used for small businesses as well as large corporations.

Nowadays a growing number of accounting information systems for small to middle businesses takes place. There are significant numbers of articles on accounting information systems. Many authors have their own definitions of the concepts. In our research we differentiate the accounting information system by three properties (Table 2): how and at which cost the AIS can be acquired and where installed.

Table 2. Types of the analyzed accounting systems

How acquired	Where installed	By cost
Purchased	Stand alone	Commercial
Rented	Web-based	Open source, cost free

Source: created by the authors.

There are a range of definitions of what constitutes “stand alone”, “web-based”, “cost free”, “open-source”, “commercial”, “purchased” and “rented” accounting software (Wikipedia1, Wikipedia2, Wikipedia3, Wikipedia4). All of the definitions and descriptions we compare and link with a web-based information system.

**Stand alone** accounting software is a software application that does not come bundled within another software application, and does not require another software package to run. Stand alone software is software installed on personal computer, vs. online software which runs via Internet browser. Stand alone software need for organizations to buy and install software on their computers (Wikipedia1, 2011).

Stand alone accounting software can be two types. First type is named “canned software”, which is written by software development companies and is

sold on the open market to a broad range of users with similar requirements. Second type is defined as “turnkey systems” what are a combination of software and hardware sold as a package. The vendor installs the entire system and user needs only to “turn the key”.

**Web-based** computing was created to eliminate the need for enterprises to buy and install software on their computer. The computing method allows people to login and access their information from any computer or site. Regardless of his or her location, the software delivers information to the person logged in.

**Free and open-source** accounting software is software that is liberally licensed to grant the right of users to use, study, change, and improve its design. Free software is generally available without charge.

**Commercial** accounting software, or less commonly, pay ware, is computer software that is produced for sale or that serves commercial purposes.

In terms of how organizations obtain accounting software we differentiate the three ways to acquire accounting software:

1. Purchasing prewritten accounting system and install as stand alone accounting software on their computers;
2. Hiring an outside company from accounting service providers (outsourcing);
3. Developing software in-house.

In this research we are focusing on second type of acquiring accounting software. The concept of hiring or outsourcing information systems services is now the top concept. The concept is closely linked with web- based accounting system term.

In the next section we present more about the hiring type of accounting information systems acquisition. We distinguish advantages and disadvantages of this approach.

### 2.3. Hiring AIS from accounting service providers

The Internet has given companies a new way to acquire software: application service providers (ASPs) host web-based software on their computers and deliver the software to their clients over the Internet. This way means outsourcing (Wikipedia2, 2011): it is hiring an outside company to handle organization’s data processing activities.

Outsourcing (by Nesbit, T. (2009) that is used not just for the acquisition of information systems, but for the ongoing hosting and provision of information systems by external parties is related with three different terms. The terms are:

- application service provider (ASP);
- software-as-a-service (SaaS);
- cloud computing (CC).

**Application service provider** is an organization that hosts software applications within its own facilities. Customers rent the use of the application and access it over the Internet or via a private line connection (Wikipedia3, 2011).

**Software-as-a-service** is rented rather than purchased. Instead of buying software and paying for periodic upgrades, SaaS is subscription based, and all upgrades are provided during the term of the subscription. When the subscription period expires, the software is no longer valid. SaaS can be implemented with local applications that expire after a certain time (Wikipedia4, 2011).

The software-as-a-service is highly related with concept of “cloud computing”. The term “cloud computing” is the latest trend in the information system world. Instead of dealing with servers and locally stored software and files, the place where software files reside are in the cloud. Cloud computing is a unique service and is installed somewhere in the world. Cloud computing was created to eliminate the need for people to buy and install software on their computer. The service allows people to login and access their information from any computer or site. In this model, the applications are maintained in the service provider's datacenter, and every time users launch their browsers and log on, they get the latest version.

Cloud services are currently one of the hottest topics in the information technology world. It's no wonder – Gartner projects this sector's revenues will exceed dollars 150 billion by 2013 (Taylor, 2010, p. 3).

#### **2.4. Benefits of the cloud computing for SMBs**

Small and medium sized businesses (SMBs) have been the most aggressive segment to adopt cloud services. They typically have less-complex IT needs and less IT support than larger enterprises. Small and medium sized businesses are often happy to hand over the delivery and operation of IT to third parties, freeing SMBs to focus on running their businesses (Taylor, 2010, p. 1).

Figure 1 presents percentages of the cloud computing technology usage in different industrial sectors. By the survey (that has been completed in 2009 by Gartner analysts) can see that cloud computing is being used more in the areas of finance and business when compared to other sectors (by Bittman, 2009, p. 1).

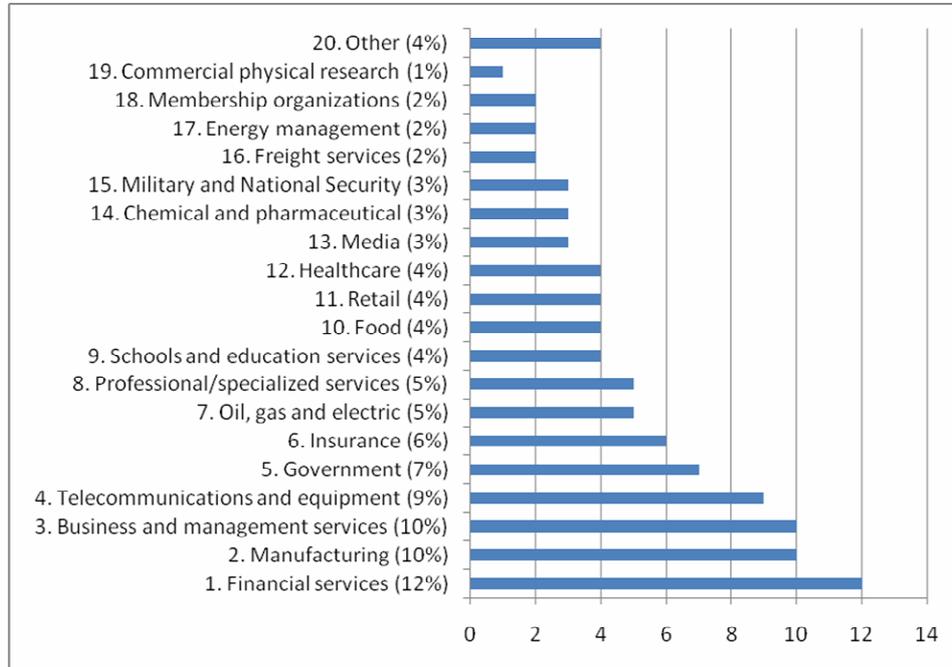


Fig. 1. Percentages of cloud computing using in different industrial sectors  
 Source: created by the paper authors using the reference (Bittman, 2009).

Small to middle businesses can get a lot of advantages with cloud computing. We summarized only main advantages in Table 3 (by Beckham, 2010, p. 2-6; White, 2010, p. 1; Hoffman, 2011, p. 1).

Table 3. Advantages of cloud computing to SMBs business

Advantages	Characteristics
1	2
Reduced costs	Cloud computing reduces hardware and software, networking management and overall IT expenses. Enterprises pay a monthly subscription fee for only the exact number of users who need the application.
Eliminate complex software installations	Web browser is that's all need to access accounting tools in the cloud. In addition, providers upgrade their applications more frequently than most small companies can afford to.
Sharing secure information	By securely sharing information with others clouds tend to be more secure than the traditional business models. Clouds offer real-time backup which results in less data loss.
Respond to business changes quickly	Adding software or increasing server functions in the cloud is very simple. Companies can quickly access more resources if they need to expand business and can do it quickly.

Table 3 (cont.)

1	2
Automatic updates	There is no need for IT to worry about paying for your future updates in terms of software and hardware.
Remote Access	Employees, partners and clients can access, and update information wherever they are, rather than having to run back the office.
Try before buy	Many business applications, such as ERP (enterprise resource planning), are available in the cloud, and providers frequently offer free trials and extensive demos. This allows see if the application is right for company.

Source: created by the authors using the references (Beckham, 2010; White, 2010; Hoffman, 2011).

Cloud computing has its risks and disadvantages, however. Table 4 presents the characteristics (by Beckham, 2010, p. 2-6; White, 2010, p. 1; Hoffman, 2011, p. 1).

Table 4. Disadvantages of cloud computing to business

Disadvantages	Characteristics
Data security	Cloud computing can also bring substantial risks in the privacy and confidentiality areas. The main concentration in accounting is managing money. Cloud computing would not be an ideal for AIS because some of the most important information, such as bank accounts, are less secure.
Reliability	If the internet is down then the accountant can not access his or her information directly. In the accounting profession, accountants want to have access to their information at any or every given time.
Control loss	Company loses control over the software application and become dependent on the provider to maintain, update and manage it.
Dependency	Company becomes dependent on a cloud-based software application.

Source: created by the authors using the references (Beckham, 2010, p. 2-6; White, 2010; Hoffman, 2011, p. 1).

### 3. Results of the investigation of Lithuania accounting systems for SMBs

Cloud computing become a part of companies' IT environment. Although computing cloud is not very visible in Lithuanian IT skies, but market leaders are ready to provide it.

“The potential of such publicly accessible cloud computing services is greater in the SME segment: these enterprises are more eager to outsource their IT and use leasing services”, Linas Ruksenas, Head of the Services for SMEs at Baltic Data Center, said (BDC, 2010, p. 2).

In Lithuania, companies have already started extensive use of services such as web hosting, which are ordered and activated online.

Let's see situation in Lithuania of accounting software for small to middle business.

There is a sufficient amount of various specialized software systems, and software for bookkeeping inclusive, in Lithuanian software market. A part of it has been prepared by the specialists from Lithuania; the other part has been brought from abroad and adapted to Lithuanian consumers (translated into Lithuanian). Not all of the programs created in Lithuania are well concerted. Some foreign programs are not fully translated into Lithuanian; therefore, a consumer must know English or German languages. Not all the dealers have a permission to make changes in above mentioned programs, and each change (accepted by Lithuanian government or State Inspection) having influence on accountability takes lots of time. The price of foreign programs is much higher than of a program created at home.

In Table 5 we have presented the most used accounting systems for small to middle market. We have summarized only main accounting software in Lithuania (Business, 2011; Rivile, 2011; Agnum, 2011; Stekas, 2011; Pragma, 2011; Butenta, 2011; Profit-Web® SQL, 2011; Skaita, 2011; Skala, 2011; Finvalda, 2011; Microsoft, 2011; DB Apskaita, 2011; PauLita, 2011; Contour Enterprise, 2011; SQL-Ledger, 2011; Apskaita, 2011; Apskaita 1.1, 2011; Tiny, 2011).

Table 5. Accounting systems for small to middle sized business

Manufacture	Software package	Structure	License
1	2	3	4
UAB "Rivilė"	Rivilė Solo	Stand alone	Proprietary
UAB "Rivilė"	Rivilė GAMA	Web-based	Proprietary
UAB "Protas ir logika"	AGNUM	Stand alone	Proprietary
UAB "Protas ir logika"	eLit	Stand alone	Proprietary
UAB "Proringas"	Pragma	Stand alone	Proprietary
UAB "Stekas"	Stekas	Stand alone	Proprietary
UAB "EDRANA"	Profit-Web® SQL	Web-based	Proprietary
UAB "EDRANA"	PROFIT-W® SQL	Stand alone	Proprietary
UAB "Būtenta"	Būtent	Stand alone	Proprietary
UAB "Būtenta"	B-NET Solutions	Web-based	Proprietary
UAB "Prototechnika"	EuroSkaita	Stand alone	Proprietary
UAB "Prototechnika"	WEBSkaita solution	Web-based	Proprietary
UAB "Scala Lietuva"	Scala	Stand alone	Proprietary
UAB "Scala Lietuva"	iScala	Web-based	Proprietary

Table 5 (cont.)

1	2	3	4
UAB "Finansų valdymo sistemos"	FINVALDA	Stand alone	Proprietary
UAB "Finansų valdymo sistemos"	Fin_Web_Service	Web-based	Proprietary
Microsoft	„Microsoft Dynamics™ NAV"	Stand alone	Proprietary
UAB "DB Topas"	DB Apskaita	Stand alone	Proprietary
ĮĮ "Paulita"	PauLita	Stand alone	Proprietary
UAB "Contour Lab"	Contour Enterprise	Stand alone	Not cost
UAB "AUNET"	Apskaita5	Stand alone	Not cost
Sandas	Tiny ERP	Stand alone	Not cost
DWS Systems Inc.	SQL Ledger	Web-based	Not cost
UAB "Informacinės konsultacijos"	Apskaita 1.1	Stand alone	Not cost

Source: created by the authors using the references (Business, 2011; Rivile, 2011; Agnum, 2011; Stekas, 2011; Pragma, 2011; Butenta, 2011; Profit-Web@ SQL, 2011; Skaita, 2011; Skala, 2011; Finvalda, 2011; Microsoft, 2011; DB Apskaita, 2011; PauLita, 2011; Contour Enterprise, 2011; SQL-Ledger, 2011; Apskaita, 2011; Apskaita 1.1, 2011; Tiny, 2011).

By the analysis we conclude that in Lithuania accounting systems on the market currently dominated by commercial (proprietary) products. There is not so many open source and cost free solutions, especially for small and medium-sized businesses.

#### 4. SUMMARY AND CONCLUSIONS

Scientific overview of accounting information systems showed that their models have been analyzed by foreign and Lithuanian papers. However it is lack of scientific papers of the cloud computing technology appliance for Lithuania SMBs. So that as methodology of this research was overview and comments of a number of public papers. Many of them were sourced from internet.

Author's investigation on the newest trends in accounting information system models for small to medium enterprises indicates advantages and dangers of the models application within the business processes.

Analysis of accounting software on Lithuania market has shown that a sufficient amount of software to conduct accountability is being offered in Lithuania. A part of them has been prepared by the specialists from Lithuania; the other part has been adapted to Lithuanian consumers (translated into Lithuanian). Not all of the programs created in Lithuania are well concerted.

By the survey of AIS we can conclude that in Lithuania accounting systems on the market currently dominated by commercial products. There is not so

many open source and cost free solutions, especially for small and medium-sized businesses.

Although the computing cloud is not very visible in Lithuanian IT skies, market leaders are ready to provide it. In Lithuania, companies have already started extensive use of services such as web hosting, which are ordered and activated online.

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