

Accounting in small and medium-sized equine businesses in Germany

Bachelor Thesis Report

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Abstract

The objective of this research was to investigate to which extent small and medium-sized equine businesses in Germany conduct financial analysis, budgeting and cost accounting and whether there are differences between primary and secondary companies. Beyond that, the reasons for using or not using certain methods were identified. An appropriate accounting system is crucial for the long-term success of a business, regardless the size. However, especially entrepreneurs of small yards do not seem to have a clear overview and understanding of the company's financial situation and performance.

With the help of an online-survey a data set of 42 records of companies with their individual accounting systems has been collected.

The results show that 83% of all sample companies do further analyse their annual statements and less than 50% conduct cost accounting. Regarding budgeting 50% of the primary companies do not prepare any kind of budget, whereas 37% of the secondary companies use all three budgets types.

The reasons for applying certain methods are controlling and evaluation of success and performance and decision making. The majority of the companies named a lack of time and knowledge as reasons for not conducting financial analysis.

The study indicates that especially primary companies have deficits with regards to cost accounting and budgeting. This could lead to various economic problems such as high liabilities, liquidity problems or offering unprofitable services. However, the amount of companies conducting financial analysis is unexpectedly high, especially when considering that 83% of all companies are micro businesses.

Introduction

This research has been conducted because there is an indication that many entrepreneurs of equine businesses do not seem to have a clear overview and understanding of their economic situation and financial performance. Consequently, they suffer from the risk of becoming insolvent and might even partly lose their private assets in case the business fails.

The objective of this thesis research is to investigate how owners of small and medium-sized equine businesses (SMEs) in Germany manage the financial aspects of their business, so to which extent the instruments of financial analysis, budgeting and cost accounting are applied. Additionally, the research aims to analyse the reasons why entrepreneurs use or do not use certain methods of financial analysis and managerial accounting. Also to find out which problems result from the actual way of accounting conducted in the surveyed companies is an objective of this research.

The following research questions have been set up in order to meet the objectives:

Main questions:

1. To which extent do equine businesses in Germany conduct cost accounting?
2. How do entrepreneurs analyse the outcomes of the mandatory annual financial statements?

Sub-questions:

1. Are there differences in the extent and design of financial and managerial accounting between primary businesses and secondary/tertiary businesses?
2. What are the relations between the way of financial management and the company size and type?
3. Which methods of cost accounting and financial analysis do they use?
4. What are the reasons for using or not using certain tools of financial analysis and cost accounting?

In order to be able to answer the research questions data have been collected about equine businesses in Germany. The method was to use an online survey and to invite randomly sampled entrepreneurs to participate in the survey.

Literature review

Accounting systems process the data of economic transactions into information useful for managers. It is a set of accounting methods and procedures established to collect, categorize, summarize, analyse and present accurate and timely financial data for management decisions. They provide the information found in the financial statements. Managers use this information to administer and coordinate business activities.

Individual managers need different types of information. All this information is stored in a data warehouse. Enterprise Resource Planning systems (ERP) such as SAP R3 contain single databases that collect data and feed it into applications that support each business activity (Horngren *et al.*, 2006).

It is distinguished between financial accounting and managerial or management accounting. Financial accounting provides information for external parties such as investors, banks, suppliers and tax authorities. The information is presented in form of the annual financial statements which have to be drawn based on reporting standards determined by law in the German Commercial Code (HGB). The extent of the annual statement depends on the size and the legal form of the company; the size is measured based on annual revenues, number of employees and balance sheet total (see also Annex 4). The standard elements are the balance sheet and the profit and loss account or income statement; additionally, notes to the financial statements and a management report might have to be drawn. Furthermore, the annual statements must be certified by external, independent auditors. Financial accounting is past-oriented and focuses on reporting economic events and activities.

Management accounting measures, analyses and reports information that helps managers to make decisions in order to fulfil the company's goals. So, it focuses on internal reporting for managers of the company and is an integral part of the management process (Hilton, 2007). In contrast to financial accounting, management accounting is not statutory and thus also does not have to follow any rules other than general accepted management accounting principles. The focus is future-oriented because managers use it to choose, communicate and implement a strategy and to coordinate production planning and marketing decisions (Horngren *et al.*, 2006).

This research focuses on three main areas of accounting which are financial analysis, budgeting and cost accounting.

Financial analysis

Financial statement analysis is the systematic use of accounting data in order to investigate the financial situation of the firm and evaluate its performance (Kinserdal, 1998). The balance sheet and profit and loss account are dissected and afterwards the information is summarized and interpreted with the help of ratios (Langenbeck, 2003).

There are two different kinds of financial analyses: internal and external. The external analysis is done by people from outside the company who are interested in the performance and financial situation of the company because they e.g. think about investing own capital. The internal analysis is used by the management team in order to summarize information and

support the decision making process. It is more meaningful because more information is available than only the annual statements that have to be published as of a particular company size (Langenbeck, 2003).

The core instruments used to control the financial performance are similar in small and larger companies; in large companies the accounting system is simply more complex. Management controls the financial performance by taking operative decisions, e.g. how many units are produced and how to price them (Higgins, 2007).

Financial analysis is important for a company because only the annual statements mostly do not provide sufficient information for decision making and planning. The reason is that those figures do not say much unless they are put in a broader perspective like a historical analysis or a comparison of figures with other companies (benchmarking) (Alexander *et al.*, 2005). So, the data needs to be further analysed in order to be able to evaluate the company's performance.

The most common technique of financial analysis is the ratio analysis (Alexander *et al.*, 2005). Different accounting ratios are being calculated on bases of the annual statements. A ratio is a measure of the relationship between two figures.

Ratios are very helpful when assessing the performance of a company because when comparing absolute figures of two years the problem arises that those two years might not be directly comparable. By comparing two ratios rather than absolute figures the problem of comparability is reduced (Melville, 2008).

However, most ratios become much more meaningful when used as a basis for comparison. The main types of comparisons are time comparison, budget comparison, comparison to other companies and comparison to industry standards. The time comparison is also called trend analysis because the ratios of a given accounting period are compared with the results from previous accounting periods, what shows developments or trends. With the budget comparison or plan-actual-comparison the ratios are compared to budgets.

Ratios can be categorized in different groups: profitability ratios, efficiency ratios, liquidity ratios and leverage ratios.

The group of profitability ratios contains the return on equity ratio (ROE), which is the most popular ratio, the gross profit and net profit margin and the return on assets ratio. Those ratios show how efficiently a business is managed, so whether it made an acceptable level of profit.

Efficiency or activity ratios indicate how efficiently the assets and resources are being used and managed. They include for example the average inventory turnover ratio, asset turnover, inventory holding period and the accounts receivable turnover ratio.

Liquidity ratios, which are the current and the quick ratio, are a measure of the ability of the business to meet its obligations, i.e. to pay its debts on time (Melville, 2008).

The debt-to-equity ratio and the times interests earned ratio are the most important ratios in the group of leverage or solvency ratios. Their purpose is to give creditors a measure of the chance that the company will repay their invested money and information about the ability of the company to meet the interest payments of its debts (Beierlein *et al.*, 2003).

Budgeting

In the strategic planning process in a company, financial forecasting or budgeting is a key aspect (Higgins, 2007). The most widely used technique of forecasting is to draw pro forma statements. A budget or pro forma statement is a plan of action for a specific period (usually one year). It is based on figures from the past and on sales, costs and productivity estimates developed in the marketing plan. Thus, a detailed, written analysis of markets and production is required to develop reliable budgets. Budgets are not only used for internal planning but also necessary for applying for funding from a bank or they are used by investors in order to assess the future success of the company (Beierlein *et al.*, 2003).

The purpose is to estimate the company's future need for external funding. This is the second step in the planning process after having developed a marketing plan. The third step is to check the forecasts and decide whether the required funding is too high, e.g. because the bank is not willing to give out such a high loan. If yes, the plans have to be changed. This is the point where operating plans and financial plans merge and often collide in order to create a coherent strategy (Higgins, 2007).

One benefit of budgeting is that it forces managers to think a plan through and challenge the figures and decisions. They keep focused on the financial implications of their strategic decisions (Beierlein *et al.*, 2003). Another benefit is it provides a way to measure business performance by means of a plan-actual comparison.

Pro forma statements visualize the impact of capital employed, new strategies and prospective risks in a condensed form. Thus, managers are able to make adaptations on time if negative developments occur. Pro forma statements strongly contribute to the planning process because they provide a tool to evaluate alternative plans in terms of quantifying costs and benefits of each plan and indicating which plans are financially feasible and which are not.

Budgets can be done very detailed or rather rough. However, it should be comprehensive; not only an operating budget but also a pro forma balance sheet and financial plan. All three planning tools are integrated and serve the protection of the company goals in terms of profitability and liquidity.

The operating budget is the projected income statement, so a prediction of what the profit-and-loss account will look like at the end of the forecast period. Key factors are here of course the projected revenues and the developments in the different costs and the profit in the end. When additionally preparing a pro forma balance sheet, also important trends in liabilities and assets can be visualized.

The most comprehensive way of forecasting is to add the third part, namely the financial plan. It includes liquidity planning, so a cash flow budget, and required funding planning.

Cost accounting

Cost accounting is part of management accounting and "measures, analyses and reports information relating to the costs of acquiring or using resources in an organization" (Horngren *et al.*, 2006). The main goals of cost accounting are the calculation of costs of outputs (e.g. products) and the evaluation of success and profitability. It is also distinguished between period-oriented cost accounting and unit-oriented calculation.

Furthermore, there are two different cost accounting systems: full-cost accounting or absorption costing and direct costing. The methods of full-cost accounting are e.g. product

costing and cost-centre accounting (described below). Here all costs are allocated to the cost object but a downside of this system is that the overhead costs are allocated a bit at random because they actually incur for several different cost objects. Those methods are also not suitable for short-term decisions such as the calculation of lower price limits and optimal production programs.

In direct costing in contrast only parts of the costs (mostly variable costs) are allocated to the cost objects. Additionally, gross margins or contribution margins are calculated (revenues minus variable costs) what can be done for different products or departments and thus the success of those can be compared and monitored. In the simple form the gross margin is calculated for simple products and all fixed costs are considered as period costs and subtracted in total from the total contribution margin in order to receive the net income.

In the more complex form called multi-level fixed cost absorption the fixed costs flow into the calculation step by step according to their accountability, instead of being subtracting in total at the end like in the simple form. Specifically it looks like this: revenues minus variable costs results into "gross margin 1". Here first only those fixed costs are subtracted that refer to the product, e.g. patent fees or special tools only needed to produce this specific product. From "gross margin 2" the fixed costs for the department (e.g. salary for department manager) and in the last step the fixed costs for the whole company, so the rest such as the salary of the gate keeper, are subtracted and result into the net income.

Compared to full-cost accounting direct costing has the advantage that strengths and weaknesses of the company can be identified relatively simple because the calculation clearly shows which services or products have the highest gross margin and which perhaps even have a negative gross margin and thus might better be stopped (Friedl *et al.*, 2010). Additionally, flexible decisions are enabled which make the company more panic-proof.

In the following the different methods of cost accounting are explained.

Cost type accounting is the basis for all further cost accounting methods. Its function is to record the costs according to their **amount and type**. The different costs types are material costs, labour costs, service costs, public charges and imputed costs. Cost type accounting also includes the calculation and valuation of the consumption of material.

The benefit of cost type accounting is that in the first step all costs are known and here already the entrepreneur can see what are the highest costs and also gets information about his consumption behaviour of material.

The next step is the cost centre accounting in order to allocate the costs and to determine **where** the costs incurred. Afterwards, the product costing defines what for the costs incurred.

Cost-centre accounting is a method for assigning overhead costs to products. The purpose is to determine **where** (in which functional areas) and in which **amount** the **overhead costs** incurred. Overhead costs are indirect costs and cannot directly be assigned to a cost object or product, e.g. rent, time-bound salaries such as in administration departments. When leaving out this step in the cost accounting process the costs per unit will be less accurate.

The first step is to calculate the overhead costs of individual activities or cost centres. The different types of overhead costs already have been calculated in cost type accounting. Common cost centres are material, production, administration and distribution. Secondly, the calculated costs are assigned to cost objects such as products or services based on the activities needed to produce each product or service (Horngren *et al.*, 2006).

Another part of cost centre accounting is the internal cost allocation or internal order. This applies when internal services are exchanged. For example: If the computer in the marketing

department breaks down and a specialist from the IT department of this company fixes it, the costs for this service have to be allocated.

With **product costing** it is determined **for what** the cost incurred. So, the total costs of the cost object (= product/service) are calculated per unit. This is done with different methods: process costing and job-order costing.

The purpose is that management can only control or reduce costs, if it knows how much it costs to produce its products or offer services.

Process costing is used for the mass production of one product, e.g. gasoline, electricity or beer. Here the total costs are divided by the produced amount of goods in order to gain the costs per unit (Hilton, 2008).

Job-order costing in contrast is used in companies with a job-shop environment or batch production. Job-shop environment means that individual products are produced in a very low volume or one at a time; for example ship or aircraft manufacturing and custom machines. With batch production a relatively small amount of the same complex product is produced for a limited time and then replaced by a new batch, e.g. printers or cars. The costs for each batch or job are averaged over the units of production of this job in order to obtain an average cost per unit (Hilton, 2008).

The benefit of product costing is that the result of the calculations are the costs per unit and on this basis the sales prices can be calculated what is important for every company and has a large effect on the revenues and the amount of customers.

Period costing or cost unit period accounting has the aim to calculate the **short-term success** of cost objects. The result is the imputed operating income. The German cost accounting system distinguishes between two methods to calculate this operating income: One is production-oriented, and uses all costs while also including changes in inventory. The second one is sales-oriented and only subtracts those costs from the revenues that incurred for producing the sold goods or services (costs of goods sold).

Another common method is the **break-even-analysis**. The break-even-point shows where revenues equal the total costs, so the point where profit is zero. It can either be calculated as the number of units of a product which have to be sold in order to break even or in the amount of revenues that has to be earned. A graph can visualize the loss and profit area. It is important and relatively easy for every company to know this point.

Lower price limits determine what the company at minimum has to earn with a product. They can be used as basis for price negotiations for additional orders.

Upper price ceilings define what at maximum should be paid for raw material or services. So, if the price is too high the production for this product is maybe stopped or the company will think about producing the needed material on its own (Seicht, 2008).

To sum it all up, analysing business figures is important because problems can be spotted earlier rather than when the business is already in trouble. Those problems can be decreasing sales or gross margins, increasing costs, increase in debtors or creditors and growing inventories. Additionally, it helps the entrepreneur to forecast the company's financial future. By actively determine the profit levels required to be successful, the amount of revenues can be calculated that is needed to meet the profit objective and with them also the costs expected

for that level of sales. The entrepreneur also can better control whether he is making sound use of invested money, i.e. good return on his investment.

Relevance for SMEs and equine businesses

In larger companies it is quite common to analyse financial statements and conduct cost accounting, but micro and small businesses are often lacking qualified personnel and thus knowledge. This is also found in a study of Schön (2009): The main reason for hindering an improvement of the accounting system is the lack of personnel (37.6%) and almost 85% of the SMEs have less than five employees in their accounting department. However, also for small companies those analyses are important and some afford less time and knowledge as entrepreneurs might think. For example the financial analysis using annual statements: In most cases the data is already present because the annual statements have to be prepared by law. So, they should be used for further analysis because the documents on their own do not say much. Comparing the figures to previous years is not very difficult but already shows developments that can be helpful information for the entrepreneur with regards to decisions and future performance.

Regardless of the company size managers who possess the skills of financial analysis are able to diagnose problems and weaknesses of the company and foresee the financial consequences of their actions (Higgins, 2007).

Researches point out that the company size has a low effect on the extent of management accounting. However, large companies have employed significantly more often specialized controllers (Becker *et al.*, 2011). A study from Australia found out that a more comprehensive planning in small and medium sized companies (SMEs) leads to a better sales performance (Wijewardena and de Zoysa, 2001).

According to a study of the University of Applied Sciences Dortmund and the company "Diamant Software" most SMEs in Germany do not have a separate controlling department but controlling tasks are integrated in the accounting department (Schön, 2009). However, 81% of the respondents consider the importance of controlling as very high or high. Another result was that 29% of the sample companies conducted a complete direct costing and 27% at least partly use it. One third completely implements planning in areas relevant for costs and success (Schön, 2009).

A good accounting system is also relevant for agricultural and in particular (primary) equine businesses. The reason is that it can help preventing liquidity problems and insolvencies.

Also the equine industry becomes more and more professional but many people in this sector still think quite traditional and conservative. They are also often very knowledgeable concerning horses but lacking know-how about business related topics such as accounting.

Consequently, many entrepreneurs, especially owners of smaller equine yards, seem to have problems to set up and maintain a well-organized accounting system and so they often run their business without a clear overview of their financial situation and the company's economic performance. However, having a clear understanding and overview of the financial situation of the own company is crucial for taking the right strategic decisions and for staying successful in business over long term.

A study showed that approximately eleven per cent of small business owners never analyse their financial documents as part of management processes (Scarborough and Zimmerer, 2005).

Deficits in the financial management and monitoring in a company can lead to various problems. When more or less only spending and earning money out of and into one big bucket until its empty at the end of the month, negative developments such as increasing costs or decreasing revenues might be recognized too late. Another common problem is that many entrepreneurs do not pay themselves a salary; so, the private expenses also uncontrollably flow out of the big bucket. If the reason is that the revenues are too low to finance those additional costs, it means of course stress and uncertainty for the entrepreneur and his family because he never knows whether the money will last until the end of the month to supply his family.

Liquidity problem can also lead to high debts because accounts might have to be overdrawn what is very expensive in terms of interests.

Depending on their legal constitution many small and medium sized equine businesses have another very important reason for keeping a close look at their financial performance: often the entrepreneur is liable with his private assets if the business fails. Also for taking out a loan from a bank, well-organized financial documentation is needed.

Another possible consequence of poor financial administration and missing cost accounting are wrong calculated prices for products or services. If they are too high, it might be hard to find enough customers because competitors in the surrounding are cheaper. If prices are too low, it will be difficult to cover all costs.

Furthermore, sometimes companies offer specific services although they actually have a negative gross margin, i.e. they do not bring in enough revenues to cover the costs incurred. Those costs have to be covered by other products or services of the company and this reduces the net income in the end. However, without conducting direct costing these kind of problems are sometimes not recognized or at least not the extent of the problem.

Without analysing annual statements also unusually high costs or costs that perhaps could be prevented often stay unrecognized what of course also reduces the profit.

Consequently, it seems that deficits in financial management and monitoring could lead to a lower net income compared to companies with an appropriate accounting system.

Methodology

Research design

Desk research has been conducted in order to write the literature review of the research report and to increase the theoretical background knowledge. The primary and secondary data was collected in the library of the University of Mannheim. Also online data bases with research articles and journals such as Business Source Premier have been used.

For the field research, which is the major focus of this study, a questionnaire has been developed. It was distributed by sending out emails, containing a link to an online survey.

This research shows characteristics of a quantitative as well as a qualitative approach. Quantitative research is used in terms of quantifying measurements and investigating the relationships between certain factors. Qualitative research is used in order to gain more in depth understanding of the reasons why the surveyed entrepreneurs run their business in the way they do.

Data collection

In order to get a representative result from the study, the ideal sample size has been calculated by means of an online sample size calculator (Sample size calculator, 2011). 370 responses are needed when aiming for a confidence interval of 95% and calculating with an amount of about 10.000 equine businesses in Germany (FN, 2011).

The data has been collected with the help of an online-survey, which has been designed on the website "voycer.de" (Online survey, 2011). The link to the survey was distributed via emails which have been sent out to 800 equine businesses in whole Germany. The reason for choosing a large sample size was that the response rate was expected to be far below 50%. Due to limited time available, the sample size could not be increased more.

The total amount of valuable cases collected during the period of four weeks was 42. Two of those 42 were collected in semi-structured interview at stables in order to test the questionnaire.

The questionnaire was translated into German. The final questionnaire is attached (see Annex 1). The total number of questions amounts 27 whereas several filters were included, so that never all questions had to be answered. One filter question was for instance "Do you further analyse the results of the annual financial statements?". If the answer was "no", all questions concerning the methods of financial analysis were suppressed and only the question for the reasons for not conducting financial analysis was visible.

The email addresses of the businesses were collected by searching on the internet. The main sources were the online-version of the Yellow Pages, the search engine "Google" and the list of exhibiting companies on the horse fair "Equitana".

In order to accomplish a preferably representative cross section of all equine businesses in Germany, the method of quota sampling has been used. This is an entirely non-random technique which is based on the assumption that the sample will represent the population as the quotas in the sample correlate to the proportions in the population. For example: If 14% of all German equine stables are located in Baden-Württemberg, in the sample also 14% of the primary companies are selected from this federal state.

The reason why quota sampling was used was that no sampling frame, i.e. a list of all equine companies in Germany, was available. So, probability sampling techniques such as simple random or systematic sampling could not been used (Saunders *et al.*, 2007).

The quotas of how many companies to select in each federal state were calculated on the basis of the member statistics of the FN (2010) (see Annex 3). The same amount was also used for secondary companies because it was assumed that in an area, where many stables are located, also many secondary businesses are operating, e.g. feed suppliers and retailers for riding equipment. Due to the fact that one can only enter cities in the Yellow Pages search screen and that the maximum radius is 50km, 4-5 cities were selected in each federal state in order to cover a large geographical area. In the next step the needed amount of entries were randomly selected from the findings of the search. Via following the links to the websites of the companies in the entries, the name of the managing director and the email address has been investigated and entered into an MS Excel spread sheet. The main keywords for the search for stables were “riding stables” and “horse breeding”. While selecting the entries it was attempted to achieve a good mixture of different stables types regarding the services offered and also estimated company sizes.

For the search for secondary companies “Google” and the Equitana exhibitors list were used in an increased extent. The keywords used in Google were e.g. “riding surfaces”, “horse feed” or “walking mills”. With companies found via Google, the federal state first had to be determined with the help of another website where the postal codes could be entered. For the Yellow Pages search the main keyword was “retailer for riding equipment”.

After having collected the email-addresses, invitations with an individual link to the online-survey were sent out to the companies via a tool on the website “Voycer”. The email addresses and corresponding surnames were imported directly from the Excel spread sheet. Then the invitation text was inserted and with clicking the “Send”-Button “Voycer” automatically sent the invitation to all addressees with the right name and an individual link to the online-survey. On this website intermediate results could be viewed and it could also be monitored how many people had already completed or cancelled the questionnaire.

Data processing

The data collected during the field research has been registered with the help of the automatic registration of an online survey website (voycer.de). Later on, the data was exported in the statistics software “SPSS 17” in order to process it. The results were described by using tables, diagrams and different charts. Descriptive as well as inferential statistics have been used for the data analysis. However, inferential statistics could only be used in a limited extent because most variables were nominal.

With the help of an additional variable the sample companies were assigned to the right size group according to the definition of the European Commission (2011). It determines the size of a company by means of the number of employees and the annual turnover or the balance sheet total (see Annex 4). This is the reason why the question regarding the annual revenues was part of the questionnaire.

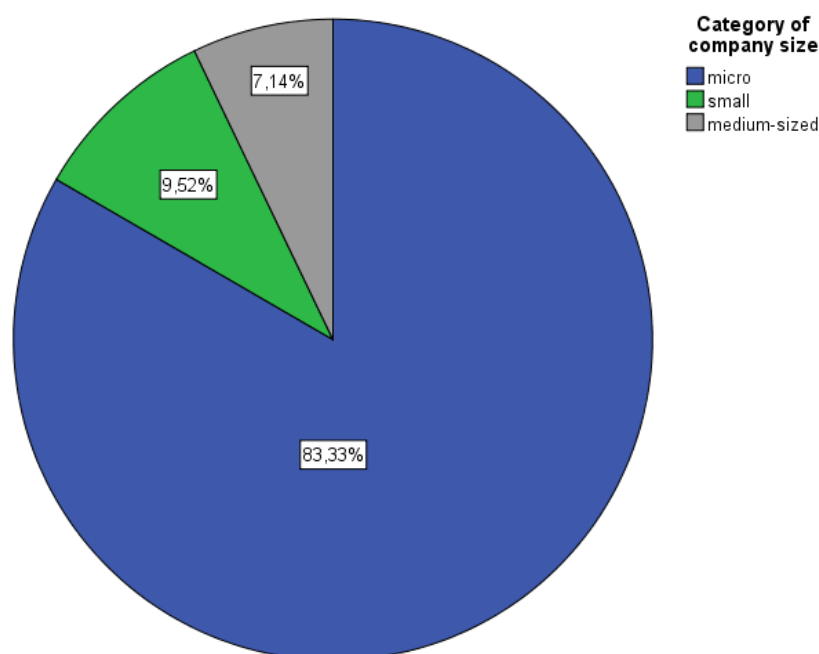
With the help of statistical tests such as the Chi-Square test, relations and differences between observed groups were investigated. However, the results of this test often could not be used because too many cells contained too few cases. Therefore, for example the size categories “small” and “medium-sized” have been merged to one category. Another frequently used tool was the multiple response analysis with the help of custom tables.

Results

Description of the data set

The total amount of valuable cases was 42. In the online survey 75 companies responded of which 35 did not finish the questionnaire. So, the number of all participants including the incomplete ones amounted 77, resulting in 54.5% valuable cases. All in all, 11.4% of the targeted amount of 370 sample companies was reached which equals a confidence level of 48%. The total response rate amounted 5.25% (42 out of 800 companies invited).

Out of all sample companies 54.8% (n=23) are secondary/tertiary companies working indirectly with horses and 45.2% (n=19) are primary businesses/stables. Regarding the size categories 83.3% belong to the group of micro businesses (n=35), four companies are small and three are medium-sized (see graph 1).



Graph 1: Distribution of the sample companies among the three size categories

In the group of primary businesses all companies belong to the category “micro”. The majority of all businesses has a turnover of up to 500,000€ per year (76.2%). In the group of secondary companies 65.2% earn up to 500,000€ (primary 89.1%) and 13% up to two million €. 23.8% of all companies are located in the federal state “North Rhine-Westphalia” (n=10), 21.4% in Lower Saxony and 11.9% in Bavaria.

The legal form “limited liability company” is the most frequently named one (28.6%) followed by “registered merchant” with 27.6%. The most frequently named legal form in secondary companies is limited liability company (47.8%, n=11), followed by registered merchant (43.5%). Within the group of primary companies 52.6% are registered merchants and 21.1% BGB companies.

The average time in businesses amounts 13 years (SD = 10.9) whereas primary business are longer in business (18.1 years) than the secondary ones (8.6 years) (one outlier has been excluded (125 years)).

On average the companies have 8.3 full-time (SD=23.5) and 2.2 (SD=2.4) part-time employees (one very large secondary company was excluded). The primary sample companies have on average fewer full-time employees than secondary companies (primary: 1.9; secondary: 11.2).

When looking at the distribution of company types in the group of secondary companies 30.4% are producers/wholesalers (n=7), 17.4% work in the health care sector and 13% are online-shops. In the group of primary businesses 52.6% ticked “livery” as one of their two main services (n=10), 36.8% named “stud” and “holiday offers” and “riding lessons” had 31.6% each.

Analysis

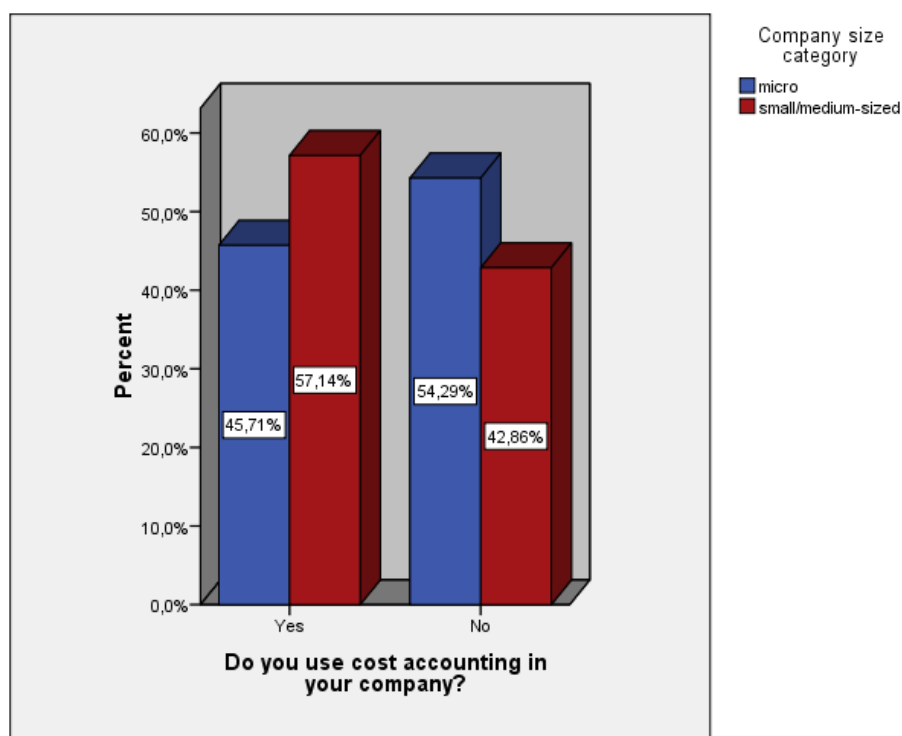
When looking at the whole sample 83.3% do conduct further financial analysis of their annual statements (n=35). However, 52.4% do not conduct cost accounting.

	primary		secondary	
	yes	no	yes	no
financial analysis	84.2%	15.8%	82.6%	17.4%
cost accounting	47.4%	52.6%	47.8%	52.2%

Table 1: Use of financial analysis and cost accounting per sector group

When looking at the two economic sector groups “primary” and “secondary”, the distribution is very similar between those groups. More than three quarters also of the stables do analyse their financial statements (see table 1 and Annex 2). There is no significant difference in conducting cost accounting between the economic sector groups (p=0.98) (see Annex 2).

Regarding the company size it strikes that all small and medium-sized companies conduct financial analysis (micro businesses: 80%). Also in cost accounting more small/medium-sized companies (57.1%) answered “yes” than micro businesses (45.7%) (see graph 2).



Graph 2: Use of cost accounting per size category

Within the different company types of secondary companies the majority of production/wholesale companies does conduct cost accounting (71.4%), whereas 75% of the companies operating in the health care sector do not use cost accounting. 50% of those companies also do not use financial analysis – as comparison: all production/wholesale companies use financial analysis.

Within the group of primary companies, the majority of livery yards (60%) and riding schools (66.7%) do not conduct cost accounting; two thirds of the yards with holiday offers/trail riding (66.7%) and 57.1% of the studs do conduct cost accounting. However, all livery yards and studs do use financial analysis. In the groups of training stables and also in stables with holiday offers one third does not conduct financial analysis (33.3%) (see table 2).

	Financial analysis - yes	Cost accounting - Yes
Livery yard	100%	40%
Riding school	83.3%	33.3%
Holiday offers/trail riding	66.7%	66.7%
Stud	100%	57.1%

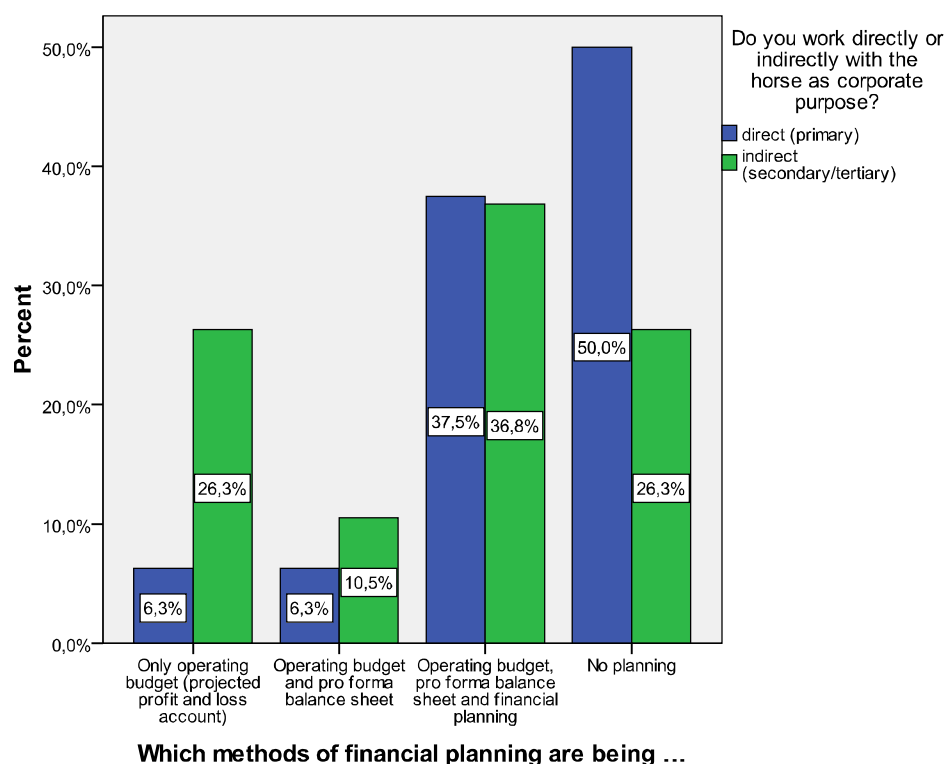
Table 2: Design of accounting of different types of primary companies

85.7% of those companies that do not conduct further financial analysis are registered merchants. With cost accounting there is no difference between the legal forms.

When looking at the documents that have to be prepared 57.1% of the companies not conducting financial analysis only do the cash basis of accounting and no annual financial statements.

Those companies that do not further analyse their documents have on average 0.9 full-time and 1.3 part-time employees and they are in business for 10 years; so below the sample

average (see p. 15). Also the companies that do not use cost accounting are on average five years less in business – namely 13.6 years - than the companies that ticked “yes”.



Graph 3: Use methods of budgeting per sector group

The graph clearly shows that the proportion of businesses not conducting any budgeting at all is higher in the group of primary businesses than with the secondary companies (see graph 3). Also remarkable is the fact that those primary businesses that do use planning, then mostly use all three methods (37.5%), whereas more than one quarter of the secondary companies only draws the operating budget. Out of the small and medium-sized companies no business ticked “no planning” but this was the most frequently given answer in micro businesses (44.3%, n=13).

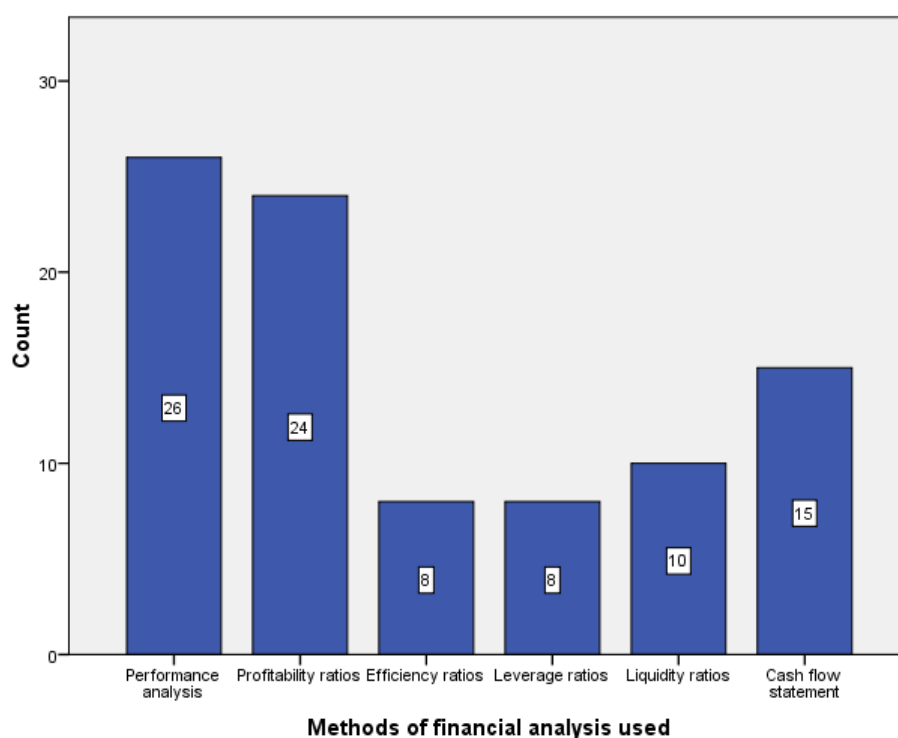
In the group of primary companies 44.4% (n=4) of those primary companies, which actually conduct cost accounting, don't know which cost accounting system they use and 33.3% use full cost accounting. With the secondary companies the most frequently given answer is full cost accounting (45.5%) and 36.4% have no idea (see Annex 2). In the group of small and medium-sized companies 75% use full cost accounting and with the micro companies 43.8% have no idea and only 31.3% use full cost accounting. Direct costing and multi-level fixed cost absorption are only used by 10% each (whole sample).

	Primary	Secondary
Cost type accounting	44.4% (n=4)	9.1% (n=1)
Cost centre accounting with internal cost allocation	11.1% (n=1)	54.5% (n=6)
Product costing	11.1% (n=1)	36.4% (n=4)
Break even analysis	11.1% (n=1)	27.3% (n=3)

Table 3: Differences in the use of methods of cost accounting between sector groups

The multiple response analysis shows that the most frequently used methods of cost accounting are cost-centre accounting with internal cost allocation (35%, n=7) and calculation of price ceiling and lower price limit (30%). In other words: 7 companies ticked cost-centre accounting with internal cost allocation as one of their answers.

When comparing the two economic sector groups it strikes that 44.4% of the primary businesses only use cost-type accounting. In the group of secondary businesses 54.5% (n=6) conduct cost-centre accounting with internal cost allocation; 36.4% use product costing (see table 3).



Graph 4: Distribution of methods of financial analysis used

When looking of the methods of financial analysis, the most frequently used ones are performance analysis (74.3%), profitability ratios (68.6%) and the cash flow statement (42.9%) (see graph 4).

The comparison of the results of the two economic sector groups shows that liquidity ratios and efficiency ratios are more often used in primary than in secondary businesses. However, secondary companies more frequently calculate leverage ratios (see table 4). Small and medium-sized companies use more the cash flow statement and the profitability ratios than micro companies (see Annex 2).

	Primary	Secondary
Performance analysis	68.8% (n=11)	78.9% (n=15)
Efficiency ratios	31.3% (n=5)	15.8% (n=3)
Liquidity ratios	37.5% (n=6)	21.1% (n=4)
Leverage ratios	18.8% (n=3)	26.3% (n=5)

Table 4: Differences in methods of financial analysis used per sector group

The time comparison is used for the evaluation of the data from the financial analysis by 97.2% of all sample companies, that conduct financial analysis (n=35). 41.7% use the budget or plan-actual comparison. In the group of primary companies only one compares its data to industry standards (6.3%); with secondary companies at least 3 do this (15%). The budget comparison is used by all small/medium-sized companies (n=7), but only by 27.6% of the micro businesses.

Among the reasons for conducting further financial analysis “evaluation of the economic situation and performance” was ticked by 94.3% of all companies, which do conduct financial analysis. 62.9% named “decision making”. Secondary companies ticked “lending/credit rating” more often than primary companies (secondary: 21.1% (n=4), primary: 12.5% (n=2)). 85.7% of the small and medium-sized companies named decision making but none of them does it for the purpose of credit rating.

As reasons for not conducting financial analysis only “lack of knowledge” and “lack of time” were named; each answer by 71.4% of the companies, that do not use financial analysis (only size group micro). There is no significant difference between primary and secondary companies (p=0.943).

The most frequently named reason for using the particular cost accounting methods are “controlling of success and economic efficiency” (85%, n=17) and “sales price calculation” (30%). The least important reason is “inventory valuation” with 10%. 36.4% of the secondary companies named “decision making”, whereas this is a reason for only one primary company (see Annex 2). Within the group of micro companies also “based on the advice of an expert” was frequently named (31.3%).

	voluntary	too expensive	not possible due to missing data	software does not provide suitable interpretations
primary	50% (n=5)	50% (n=5)	0	0
secondary	16.7% (n=2)	16.7% (n=2)	33.3% (n=4)	16.7% (n=2)

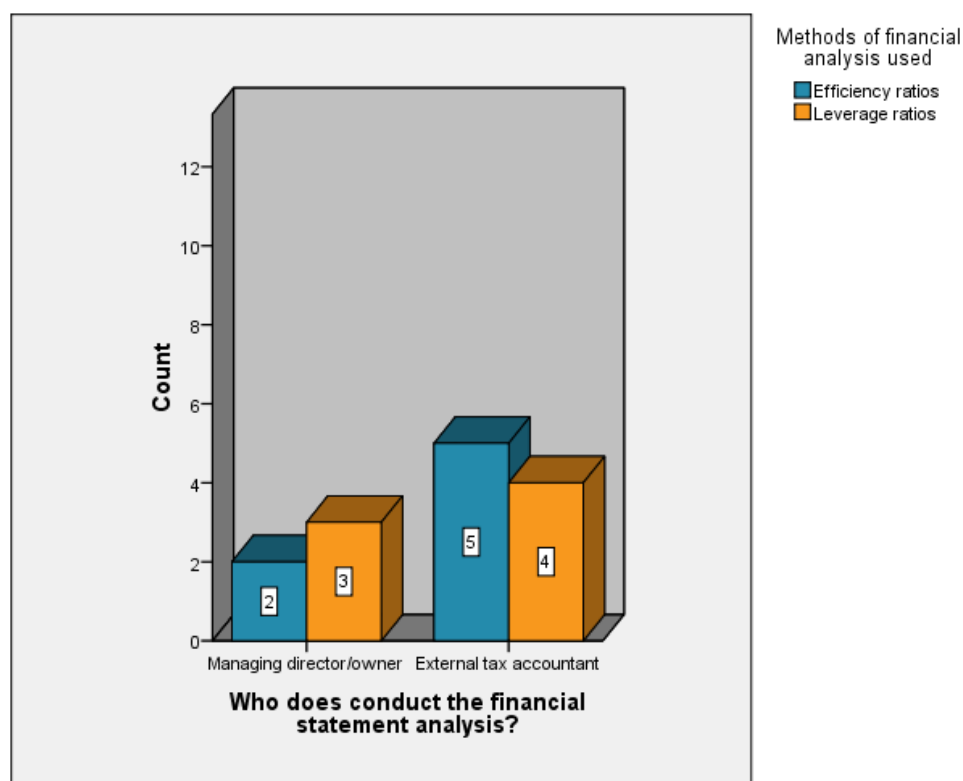
Table 5: Reasons for not conduction cost accounting per economic sector group

When analysing the reasons for not conducting cost accounting, “too expensive” and “voluntary, not statutory” (each 31.8%, n=7) and “lack of time” (22.7%) are the main reasons. The table below shows quite remarkable differences between primary and secondary companies (see table 5). For small and medium-sized companies the main reason is „too expensive“ (66.7%).

	primary		secondary	
bookkeeping	managing director	47.4%	external tax accountant	36.4%
	external tax accountant	31.6%	employed accountant	22.7%
preparing statements	external tax accountant	94.7%	external tax accountant	73.9%
			employed accountant	13.0%
analysing statements	external tax accountant	56.3%	managing director	47.4%
	managing director	43.8%	external tax accountant	31.6%

Table 6: Persons responsible per task and per economic sector group

The table shows that in the group of secondary companies at least 13% have an employed accountant who prepares the annual statements, whereas in primary businesses this tasks is done by external tax accountants (see table 6). The bookkeeping in primary businesses is mostly conducted by the managing director.

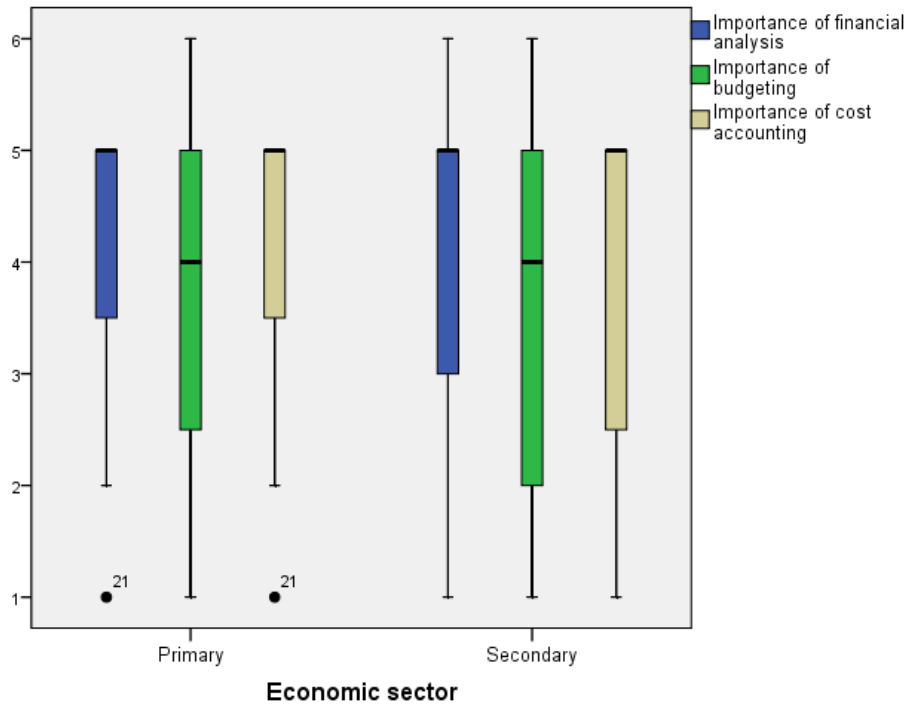


Graph 5: The effect of persons responsible for financial analysis on the methods used

In those companies where an external tax accountant is responsible for the financial analysis efficiency ratios and leverage ratios are more frequently used than in companies where the managing director conducts the financial analysis (see graph 5 and Annex 2).

With regards to the mandatory documents, 42.9% (n=18) of all companies have to prepare a balance sheet and a profit and loss account and 21.4% additionally have to write notes to the financial statements and a management report. Secondary companies ticked “only cash budget” more often than primary companies (secondary: 26.1%, primary: 10.5%) (see Annex 2).

Regarding the rating of importance of the three areas of accounting, most of the respondents considered cost accounting and financial analysis as very important (5) and planning as important (4). This result was the same in both sector groups. However, with the secondary companies there is a wider range for all three questions. Budgeting had the widest range in both groups (see graph 6).



Graph 6: Importance of different accounting topic per sector group

It strikes that most micro business consider planning only as moderately important (3), whereas most small and medium-sized companies find it very important (5).

Discussion

Results of this research show that more than 80% of both primary and secondary companies participating in this study do further analyse their annual financial statements. This is quite surprisingly because especially in the group of primary businesses the percentage was expected to be lower. Conducting financial analysis is important because the figures in annual statements do not say much without ratio analysis and comparisons (Alexander *et al.*, 2005). So, the equine industry seems to be on a good way.

When looking at cost accounting, there is no significant difference between the two economic sector groups. In both groups less than 50% do conduct cost accounting. For the primary sector this number is still unexpectedly high, but also for the secondary sector, when considering that 83% of the sample companies are micro businesses.

Overall, these are positive results that do not support the hypothesis that many equine businesses do not have a sufficient overview of their financial situation.

Researches point out that the company size has a low effect on the extent of management accounting (Becker *et al.*, 2011). In this study slightly more small and medium-sized companies than micro companies conduct cost accounting (57%, micro: 46%). The difference was expected to be greater.

Despite the positive results, the figure for the primary sector needs to be viewed critically because 44% only use cost-type accounting. It is supposed that some of them perhaps did not really know what cost-type accounting or even cost accounting in general was and actually only have for example a second look at the costs on the income statement. So, the question might be misunderstood due to a lack of accounting knowledge. Moreover, 44% of the primary businesses do not know which cost accounting system they use; either because it is conducted by an external tax accountant or because they actually do not use cost accounting in the actual sense at all.

Cost-type accounting is actually the first step and the basis of cost accounting. The real benefits are reached in following methods such as product costing (Friedl *et al.*, 2010). Exactly knowing the amounts and cost types is also already better than nothing.

In the methods of cost accounting a clear difference can be seen between the sector groups. The majority of secondary businesses use cost centre accounting with internal cost allocation and also product costing. Those methods really have a benefit for the company and provide valuable information, for example the costs incurred for producing one unit of a specific product or service (Hilton, 2009). So, those 48% of secondary businesses really seriously seem to conduct cost accounting, while this needs to be questioned with regards to the primary companies.

Additionally, it was expected that the Break-Even-Analysis would be used more frequently because it is a useful methods and relatively easy to apply.

In the study of Schön (2009) 29% of the sample companies conducted a complete direct costing and 27% at least partly used it. In comparison: Only 20% of the whole sample in this research use direct costing or even multi-level fixed cost absorption (10% each).

There are also differences concerning the methods of financial analysis used between primary and secondary companies. Primary companies use more efficiency and liquidity ratios and secondary businesses more leverage ratios. The reason might be that liabilities and debts

seem to play a major role for secondary companies and primary businesses might suffer more from liquidity problems and thus need and want to monitor this closely.

The time comparison is used by almost all companies but less than one third of the micro businesses uses budget comparison – probably because they do not draw budgets (44.8% of the micro businesses ticked “no planning”).

Next to the economic sector also the company type seems to have an effect on the way of financial management. 50% of the secondary companies operating in the health care area do not conduct financial analysis, whereas 71% of the production/wholesale companies even use cost accounting. The reason might be that the health care companies in this sample were mostly one-man operations such as farriers or osteopaths. In the primary sector two thirds of the yards offering holidays do conduct cost accounting. This could mean that this tourism branch of the equine industry might already be a more professionally organized and managed than e.g. livery yards.

This study also showed that those companies which do not analyse their documents have on average a quite low number of employees. This is not surprisingly because for those very small companies it is probably too expensive to conduct extensive analyses and they also often perhaps do not even prepare annual statements and thus are missing data that could be analysed.

Regarding budgeting 50% of the primary businesses do not conducting any planning at all; in secondary businesses only one quarter ticked “no planning”. This result is according to the expectations and supports the hypothesis that many stables do not really “play” with their figures and make financial forecasts to estimate the future performance. However, this is important because it helps focusing on the financial implications of strategic decisions (Beierlein *et al.*, 2003). The difference to the secondary businesses shows that primary businesses are often not that professionally managed as secondary ones.

Researches point out that one third completely implements planning in areas relevant for costs and success (Schön, 2009). In this study even about 37% of primary as well as secondary companies use all three methods of planning.

Relatively few companies do conduct financial analysis for the reason of lending/credit rating but at least more secondary than primary companies. Almost one third of the micro businesses use cost accounting based on the advice of an expert. This is a good development because they obviously asked a consultant, which means that they thought about it. However, secondary companies seem to use it more for decision making.

Differences can be seen in the reasons for not conducting cost accounting between the economic sector groups: Primary businesses only answer “voluntary” and “too expensive”. One third of the secondary businesses names “not possible due to missing data”, what indicates that they actually would like to do it or at least thought about it. Half of the primary businesses also might like to do it but lacking time and/or money. Lack of time and knowledge are also the reasons for not conducting financial analysis – in both sector groups (71.4% each). This is also not surprisingly because it is part of the problem. The research of Schön (2009) points out that 37.6% of the sample companies named the lack of personnel as a reason for weaknesses in the accounting system in general.

Regarding the person responsible for the different areas of accounting it is remarkable that in primary businesses bookkeeping is mostly conducted by the managing director and in

secondary companies by an external tax accountant. The second result is surprisingly because bookkeeping, i.e. the recording of accounting transactions, is relatively simple compared to the analyses and thus it was expected that most companies would have an employed accountant for this task. So, it seems that outsourcing this task becomes more and more common practise in secondary SMEs. However, one would not think that it is outsourced to a tax accountant but to an external service provider for bookkeeping because the tax accountant is over-qualified for this task and probably much more expensive.

Among those companies where an external tax accountant is responsible for the financial analysis, efficiency ratios are more frequently calculated compared to those where the managing director is responsible for it. That's why an external tax accountant has the necessary knowledge for doing it in contrast to many managing directors – especially of small primary businesses.

In most sample companies the annual statements are prepared by an external tax accountant which was expected because many taxation and accounting rules have to be known and applied in the right way. The financial analysis in primary companies is mostly conducted by an external tax accountant (56%) and in secondary businesses by the managing director (47%). This result does in principle not surprise but well that still 44% of the primary business managers analyse the financial statement themselves. This does either disprove the hypothesis of a lack of accounting knowledge among yard owners or they do it themselves in order to save the costs for commissioning an external accountant although they actually do not have a sufficient level of knowledge and thus the result is not optimal.

The result regarding the mandatory documents is very surprisingly because nine companies named that they have to write a management report although actually only large corporations have to do this which are not present in the sample. An explanation could be that some special rules might apply for some of those companies. Another reason could be that they actually do it voluntarily and misunderstood the question. For this theory speaks that also 43% have to prepare annual statements although more than three quarters of all sample companies have a turnover of less than 500,000€ per year and thus are by German law mostly not obligated to prepare annual statements (Hefermehl, 2010).

There is no difference in the rating of importance of the three areas of accounting between the two sector groups. Both consider planning as slightly less important than financial analysis and cost accounting. However, the entrepreneurs (especially of secondary companies) did not agree concerning the topics cost accounting and budgeting what can be seen on the range of answers. Planning is the area with the least agreement because micro businesses only consider it as moderately important. This result shows that in general the awareness of the importance of those analyses is there but it is not possible for some companies to really implement it in the own business management. Schön (2009) supports this in his study: here 81% considered the importance of controlling as very high or high.

Set-up

Due to the very small sample size and a confidence level of 48%, the results of this research are not significant and can only give possible assumptions about the potential situation in equine businesses in Germany. However, it cannot be generalized, i.e. made reliable statements about the situation in the whole population, in this case the equine industry in Germany. So, the contribution of this research to the existing literature is unfortunately limited.

Furthermore, due to the small sample size testing for differences with the Chi-square test was often not possible. So, in those cases it could not even be concluded that there is no significant difference.

One of the reasons for the low response rate of only 5.25% might be that finances are a sensitive topic for many companies and they dare to share information about it. Additionally, there might be a general mistrust towards online surveys and email invitations from unknown senders; maybe regarding computer viruses. This theory is supported by the fact that only few persons cancelled answering the questionnaire; the majority did not even open the link to the survey and read the questions.

Another important reason for non-response is probably that the entrepreneurs did not really have a remarkable benefit from filling it in for their own company. The possibility of receiving the results in the end was obviously not appealing enough.

Consequently, future studies in this field should perhaps be carried out in the name of a large, well-known organization in the equine industry, e.g. the FN, because people would probably trust them more than a student. However, it needs to be taken into account that studies about similar topics also had a low response rate - the study of Becker for example reached 11% and a Swiss study only 4%. Thus, a very large sample size will nevertheless be necessary.

It might also work better with sending out the questionnaires as hardcopies by mail, but this method requires remarkably more money, time and work effort. That's why this was not possible in this study. Obviously there is demand for further research in the equine industry about business related topics because no comparable previously conducted studies could be found.

Limitations for this research were set in terms of the assumption that perhaps only a certain group of entrepreneurs participated, for example those who already think about their accounting system quite a lot and work on improving it. Another problem is that some questions might not always be understood in the right way because there is a lack of financial knowledge especially among yard owners.

This study did not focus on how the different analyses are being carried out in the companies in terms of what kind of software is being used. Also the budgeting and planning aspects could only roughly be addressed in this study.

Conclusion

This study points out that 83% of all SMEs in the sample do conduct financial analysis of the annual statements but less than half of the companies use cost accounting. There is no significant difference between primary and secondary companies. However, in the group of small and medium-sized companies both analyses are more frequently used than in micro businesses.

Also differences between company types have been found. In the primary sector yards offering holidays and studs have a better accounting system than livery yards and riding school. With the secondary companies production and wholesale companies analyse their finances more intensively than health care companies.

Regarding budgeting it strikes that 50% of the primary companies do not conduct any planning, whereas 37% of the secondary companies use all three types of budgets and 26% at least prepare an operating budget.

When looking at the methods of cost accounting used secondary businesses mostly use cost-centre accounting with internal cost allocation (54.5%) and product costing (36.4%); 44.4% of the primary businesses only use cost-type accounting.

The most frequently used methods of financial analysis are performance analysis (74.3%), profitability ratios (68.6%) and cash flow statement (42.9%). The ratios and annual statements are compared to previous years by 97.2% of the sample companies and 41.7% use the plan-actual or budget comparison.

The evaluation of the economic situation and performance was named as a reason for further analysing the annual statements by 94.3% of the companies; 62.9% ticked decision making. With primary and secondary companies the main reasons for not conducting financial analysis are a lack of time and knowledge.

With regards to cost accounting the main reasons for using it are “controlling of success and economic efficiency” (85%) and “sales price calculation” (30%). For secondary companies decision making was also an important reason and many primary companies do it based on the advice of an expert. The reason for not using cost accounting are different between the economic sector groups: primary companies name “voluntary” and “too expensive” (each 50%) and secondary companies additionally ticked “not possible due to missing data” (33.3%).

Recommendations

This research introduces some common and useful methods of financial and managerial accounting. However, it is clear that especially very small equine yards cannot use all of them because the data might not be available or it is just too expensive. So, in the following some of these methods are chosen and named that are relatively easy to conduct and also already allow the entrepreneur to better control and manage the financial issues of his company.

Firstly, it is recommended to calculate liquidity ratios because they help the entrepreneur to monitor whether he is able to pay his debts in time. Also the profitability ratios are useful in order to evaluate whether the business made an acceptable level of profits. Those ratios and also the annual statements should be compared to previous years. In this way trends, especially negative ones, can easily and timely be recognized.

Secondly, with regards to planning an operating budget should be prepared in order to be able to plan investments for the next year and to evaluate the sales level and changes in costs. If possible also a pro forma balance sheet would be helpful to forecast changes in liabilities and accounts receivable.

With cost accounting the problem for small businesses is that it is a quite complex and complicated topic and thus affords specific knowledge. Employing someone with the right qualification and establishing a complete cost accounting system in the company is expensive and time consuming and it has to be evaluated whether the potential benefit is big enough to spend the money. However, it is possible to at least use some methods of cost accounting without much effort: for example the break even analysis. The break-even point can relatively easily be calculated with data from the income statement and tells the entrepreneur how many units of his product he has to sell before he starts making profit. So, it is a first indication of the performance of the company. When calculating this per month, problems can be recognized on time.

Furthermore, direct costing is a very useful method because here the gross margin of each service or product can be calculated and thus strong and weak points can be identified. For direct costing the costs have to be assigned to the incurring service or product, which is not quite simple.

Summary in German

Diese Studie beschäftigt sich mit der Gestaltung des Rechnungswesens in mittelständischen Betrieben der Pferdewirtschaft in Deutschland. Ziel war es herauszufinden, in welchem Umfang Jahresabschlussanalyse, Planungsrechnungen und Kostenrechnung durchgeführt werden. Außerdem wurde nach den Gründen gefragt, warum gerade diese genannten Methoden angewandt wurden bzw. warum bestimmte Analysen nicht verwendet werden.

Der Hintergrund für die Durchführung der Studie ist die Hypothese, dass viele Unternehmer von Pferdebetrieben keinen ausreichenden Überblick über die Finanzen und die wirtschaftliche Lage ihres Betriebes haben. Folglich besteht das Risiko einer Insolvenz und teilweise haften sie sogar mit ihrem Privatvermögen.

Es wurde ein Online-Fragebogen entwickelt und 800 primäre und sekundäre Pferdebetriebe (Ställe, Futtermittelhersteller, Reitsportfachgeschäfte usw.) wurden per Email zur Umfrage teilnahme eingeladen. Da der Stichprobenumfang mit 42 vollständigen Fragebögen gering ist, sind die Ergebnisse nicht signifikant und es können keine zuverlässigen Rückschlüsse auf die Situation in der Pferdeindustrie gezogen werden.

Die Hauptergebnisse sind, dass 83% aller untersuchten Betriebe eine Jahresabschlussanalyse durchführen, allerdings verwenden weniger als die Hälfte die Kostenrechnung. Es gibt keine signifikanten Unterschiede zwischen primären und sekundären Betrieben. 50% der primären Betriebe führen keine Planungsrechnungen durch, wohingegen 37% der sekundären Betriebe alle drei Arten von Planungsrechnungen durchführen (Erfolg-, Bilanz- und Finanzplanung). Bezüglich der Kostenrechnungsinstrumente verwenden 54,5% der Betriebe Kostenstellenrechnung mit interner Leistungsverrechnung und 36,4% Kostenträgerstückrechnung.

Die am häufigsten verwendeten Methoden der Jahresabschlussanalyse sind Ergebnisanalyse (74,3%), Rentabilitätsanalyse (68,6%) und Kapitalflussrechnung (42,9%). Die errechneten Kennzahlen werden von 97,2% der Betriebe mit den Daten aus früheren Geschäftsjahren verglichen und 41,7% verwenden auch den Plan-Ist-Vergleich.

Der Hauptgrund, warum die Betriebe eine Jahresabschlussanalyse durchführen, ist die Beurteilung der wirtschaftlichen Lage und Ertragskraft des Unternehmens (94,3%) und Entscheidungsfindung (62,9%). Als Gründe für das Nicht-Durchführen dieser Analysen wurden Zeitmangel und fehlendes Know-How angegeben. Bei der Kostenrechnung ist der Hauptgrund für die Verwendung die Kontrolle von Erfolg und Wirtschaftlichkeit. Primäre und sekundäre Betriebe geben unterschiedliche Gründe an, warum keine Kostenrechnung angewandt wird: 33,3% der sekundären Betriebe können es nicht machen, weil notwendige Daten fehlen und die Hälfte der primären Firmen will es nicht, weil es freiwillig und zu teuer zu.

Alles in allem hat sich gezeigt, dass die Tendenzen teilweise positiv sind, zum Beispiel in Bezug auf die Jahresabschlussanalyse und die Durchführung von Vorjahresvergleichen. Allerdings, haben die primären Betriebe deutliche Defizite in den Bereichen Planungsrechnungen und Kostenrechnung gegenüber sekundären Unternehmen. Dieses Ergebnis überrascht jedoch nicht, denn vor allem der Aufbau eines Kostenrechnungssystems ist teuer und aufwändig und erfordert spezielles Wissen.

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Annex

Annex 1: Questionnaire

Accounting in small and medium-sized equine businesses in Germany

I am a fourth year student at the University of Applied Sciences “Van Hall Larenstein” in Wageningen, the Netherlands, and I am studying “Equine, leisure and sports”. For my bachelor thesis I am conducting a survey in order to investigate how equine businesses in Germany manage their finances and to what extent financial statement analysis, financial forecasting and cost accounting are used.

Thank you for spending five minutes of your precious time; through this you helped to make the collected data more valuable. The data of this research will of course be handled confidentially and you stay anonymous.

Note: Multiple answers are possible at the corresponding questions (square symbol).

Questions regarding financial accounting and financial analysis

1. As how important do you consider the following areas of accounting?

(1=unimportant, 5=very important)

	1	2	3	4	5	Not applicable
Financial statement analysis						
Financial planning						
Cost accounting						

2. Which documents do you **have to** prepare for your company according to law?

- Only** cash basis of accounting/cash budget
- Balance sheet, profit and loss account
- Balance sheet, profit and loss account **and notes to the financial statements**
- Balance sheet, profit and loss account, notes to the financial statements **and management report**

3. Who does conduct the bookkeeping?

(Record of accounting transactions)

- Employed accountant
- Managing director/owner

- External service provider for bookkeeping
 - External tax accountant
 - Employee with commercial education
 - Employee without commercial education
4. Who does prepare the annual financial statements respectively the cash budget?
- Employed accountant/manager of the accounting department
 - External tax accountant
 - Managing director/owner
 - Other person
5. Do you further analyse the results of the annual financial statements?
(E.g. comparison to previous years)
- Yes
 - No
6. If "no", why not? (multiple answer, but max. 2)
- Lack of knowledge/difficulties with the interpretation of the results
 - Not possible, because no annual financial statements are prepared
 - Lack of time
 - Too expensive
 - The software does not provide any respectively no suitable interpretations
 - Others_____
7. If "yes", which methods of financial statement analysis are being used? (multiple answer)
- Performance analysis (analysis of P+L, depreciation rate, structure and source of revenues)
 - Profitability ratios (return on equity ratio (ROE), gross profit margin, return on assets, etc.)
 - Efficiency/activity ratios (asset turnover, average inventory turnover ratio, accounts receivable turnover ratio, etc.)
 - Leverage/solvency ratios (debt-to-assets, debt-to-equity, times interest earned, etc.)
 - Liquidity ratios (quick and current ratio, working capital, etc.)
 - Cash flow statement
 - Others_____
8. Which comparisons are conducted for the evaluation of the data? (multiple answer)
- Time comparison (comparison to previous periods/years)
 - Comparison to other companies
 - Comparison to industry standards (ratios are compared to average ratios of the industry)
 - Budget comparison/plan-actual comparison
 - Others_____

9. Which methods of financial forecasting are being used?
(financial plan = e.g. liquidity planning and required funding planning)
- Only** operating budget (projected profit and loss account)
 - Operating budget and pro forma balance sheet
 - Operating budget, pro forma balance sheet **and financial plan**
 - No planning
 - Others_____
10. Who does conduct the financial statement analysis?
- Managing director/owner
 - Employed accountant/manager of the accounting department
 - Controller/Chief financial officer (CFO)
 - External tax accountant
 - Other person
11. Why are the above mentioned analyses used? (*multiple answer, but max. 2*)
- Evaluation of the economic situation and performance of the company
 - Decision making
 - Lending/credit rating
 - Others_____

Questions regarding cost accounting

12. Do you use cost accounting in your company?
(Concerns stables: Please tick "no", if you **solely** differentiate costs for tax reasons)
- Yes
 - No
13. If "no", why not? (*multiple answer, but max. 2*)
- Lack of knowledge/difficulties with the interpretation of the results
 - Because it is voluntary, i.e. not statutory
 - Lack of time
 - Not possible due to missing data (no annual statements are being prepared)
 - The software does not provide any respectively no suitable interpretations
 - Too expensive
 - Others_____
14. If "yes", to what extent do you conduct cost accounting? (*multiple answer*)
- Only** cost-type accounting
 - Cost-centre accounting **without** internal cost allocation
 - Cost-centre accounting **with** internal cost allocation
 - Product costing
 - Cost unit period accounting/period costing
 - Break even analysis

- Calculation of price ceiling (maximum purchase price) and lower price limit (minimal sales price)
- No idea (e.g. because it is done by an external company)
- Others_____

15. Which cost accounting system is being used?

- Absorption costing
- Direct costing/variable costing
- Multi-level fixed cost absorption
- No idea
- Others_____

16. Why are the above mentioned methods used? (*multiple answer, but max. 2*)

- Based on the advice of an expert (e.g. consultant)
- Because costs can thereby be reduced
- Controlling of success and economic efficiency
- Decision making
- Inventory valuation
- Sales price calculation
- Other_____

General information about the company

17. In which federal state is your company situated?

- Schleswig Holstein
- Hamburg
- Lower Saxony
- Bremen
- Mecklenburg Western Pomerania
- Brandenburg
- Berlin
- North Rhine-Westphalia
- Saxony
- Saxony-Anhalt
- Thuringia
- Hesse
- Saarland
- Rhineland Palatinate
- Baden-Württemberg
- Bavaria

18. Do you work directly or indirectly with the horse as corporate purpose?

- o Direct work with horses (stable) (primary sector)
- o **Exclusively** indirect relation to horses (e.g. retail for riding equipment) (secondary or tertiary sector)

19. If "direct", what are the main operational focuses of the company? (*multiple answer, but maximum of 2 answers*)

(*Please only tick the most important/top-selling services. You can name additional offers at the next question*)

- Livery
- Riding lessons
- Riding school and livery
- Stud (Breeding, trade and if applicable training)
- Training stable (training and trade/selling)
- Holiday offers and/or trail riding
- Therapeutic horseback riding/hippotherapy
- Training of racing horses
- Others_____

20. Additional services (if applicable): _____

21. Number of horses (if applicable):_____

22. If "indirect", what is the main operational focus of the company?

- o Retailer for riding equipment and/or horse feed with retail store(s) (possibly with an additional online-shop)
- o Online-shop/mail order company without retail store(s)
- o Horse feed production and distribution
- o Riding facilities/yard construction (stable, arena, surfaces, walking mills, pasture etc.)
- o Production and/or wholesale of miscellaneous goods (also if additionally direct marketing, e.g. online)
- o Consultancy (e.g. for business topics or feeding)/event management
- o Health care (e.g. veterinarian, farrier, osteopath)
- o Journalism/literature
- o Service
- o Others, namely_____

23. Number of full-time employees: _____

(*On average in the fiscal year 2010 (Including contributory owners, excluding trainees)*)

24. Number of part-time employees/seasonal workers:_____

(*On average in the fiscal year 2010 (Including contributory owners, excluding trainees)*)

25. How long approximately does the business already exist **in the current form**? _____ years.

26. Legal form:

- Registered merchant
- BGB company/private partnership
- Limited liability company
- General partnership
- Limited partnership
- Limited partnership with a limited liability company as general partner
- Registered association
- Public company/corporation
- Registered cooperative
- Foundation
- Others

27. What was the amount of annual revenues in the fiscal year 2010:

(Information is needed for the size classification)

- Up to 500,000 €
- Up to 2 Mio. €
- Up to 10 Mio. €
- Up to 50 Mio. €
- More than 50 Mio. €

Thank you for your participation!

Annex 2: Additional graphs and tables

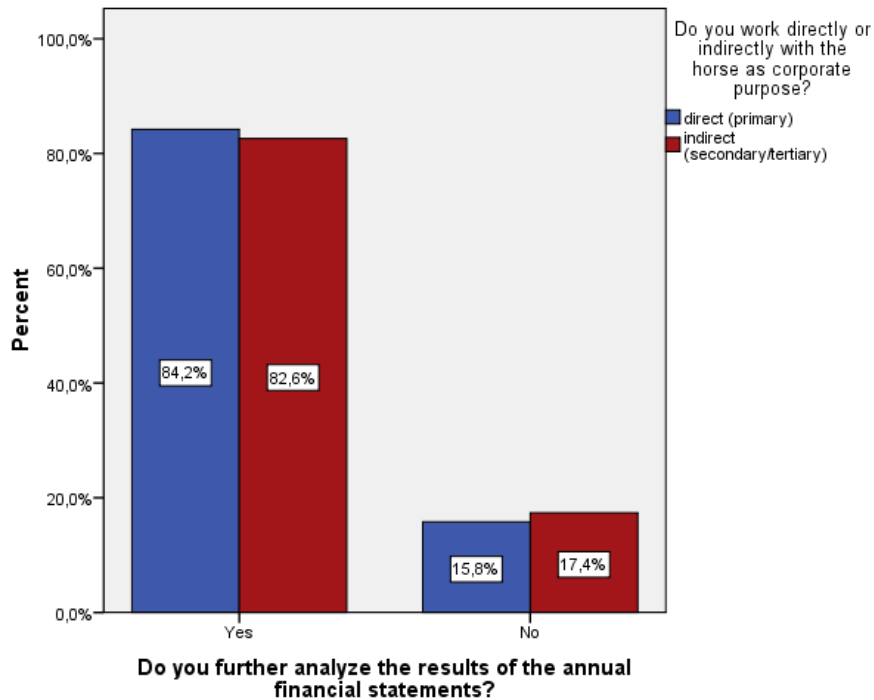
	Do you work directly or indirectly with the horse as corporate purpose?	
	direct (primary)	indirect (secondary/tertiary)
	Count	Count
Do you use cost accounting in your company? Yes	9	11
No	10	12

Pearson Chi-Square Tests

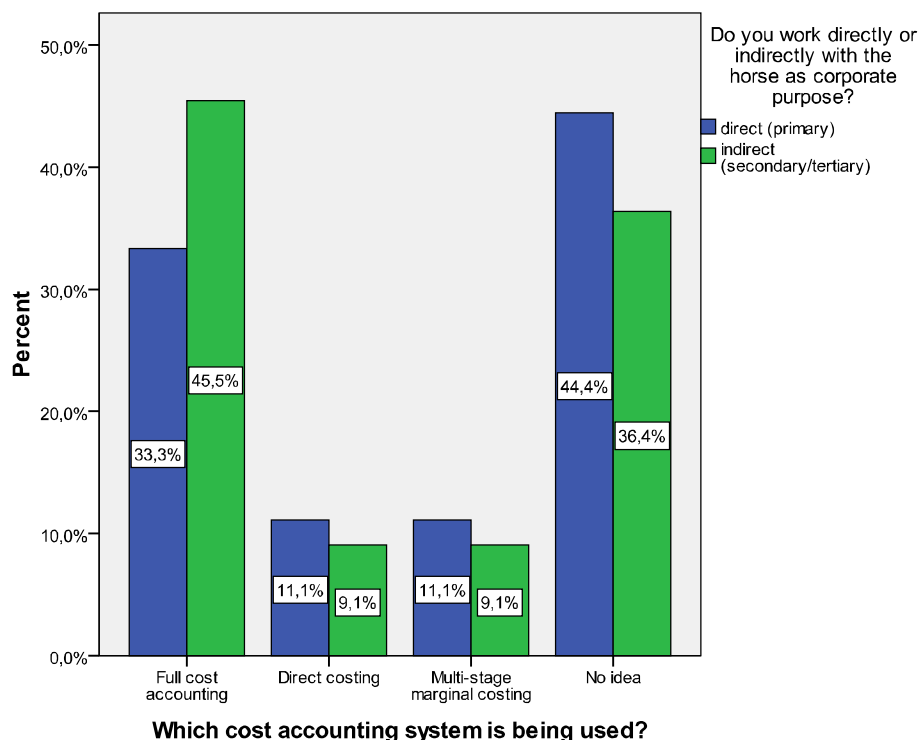
		Do you work directly or indirectly with the horse as corporate purpose?
Do you use cost accounting in your company?	Chi-square	,001
	df	1
	Sig.	,976

Results are based on nonempty rows and columns in each innermost subtable.

Difference in the use of cost accounting between sector groups



Difference in the use of financial analysis between sector groups



Differences in the use of cost accounting systems between sector groups

	Primary	Secondary
Based on the advice of an expert (e.g. consultant)	33.3% (n=3)	18.2% (n=2)
Because costs can thereby be reduced	11.1% (n=1)	18.2% (n=2)
Controlling of success and economic efficiency	88.9% (n=86)	81.8% (n=9)
Decision making	11.1% (n=1)	36.4% (n=4)
Inventory valuation	11.1% (n=1)	9.1% (n=1)
Sales price calculation	33.3% (n=3)	27.3% (n=3)

Reasons for conducting cost accounting per sector group

	managing director	external tax accountant
Efficiency ratios	12.5% (n=2)	33.3% (n=5)
Leverage ratios	18.8% (n=3)	26.7% (n=4)

Persons responsible for financial analysis per method of financial analysis

Which documents do you have to prepare for your company according to law? * Do you work directly or indirectly with the horse as corporate purpose? Crosstabulation

Count

		Do you work directly or indirectly with the horse as corporate purpose?		Total
		direct (primary)	indirect (secondary/tertiary)	
Which documents do you have to prepare for your company according to law?	Only cash basis of accounting/cash budget	2	6	8
	Balance sheet and profit and loss account	10	8	18
	Balance sheet, profit and loss account and notes to the financial statements	4	3	7
	Balance sheet, profit and loss account, notes to the financial statements and management report	3	6	9
Total		19	23	42

Documents prepared per size group

	Company size category			
	micro		small/medium-sized	
	Count	Column N %	Count	Column N %
methods of financial analysis used	20	71,4%	6	85,7%
If "yes", which methods of financial statement analysis are being used?: Performance analysis	17	60,7%	7	100,0%
If "yes", which methods of financial statement analysis are being used?: Profitability ratios	6	21,4%	2	28,6%
If "yes", which methods of financial statement analysis are being used?: Efficiency/activity ratios	6	21,4%	2	28,6%
If "yes", which methods of financial statement analysis are being used?: Leverage/solvency ratios	8	28,6%	2	28,6%
If "yes", which methods of financial statement analysis are being used?: Liquidity ratios	11	39,3%	4	57,1%
If "yes", which methods of financial statement analysis are being used?: Cash flow statement	1	3,6%	0	,0%
If "yes", which methods of financial statement analysis are being used?: Others				

Custom table about the use of the methods of financial analysis per size group

Annex 3: Quotas for sampling

Federal state	Primary equine businesses being member of the FN*	Percentage FN	Number of companies for sample**
Baden-Württemberg	547	14,0%	56
Bavaria	419	10,7%	43
Brandenburg/Berlin	196	5,0%	20
Bremen	9	0,2%	1
Hamburg	30	0,8%	3
Hesse	432	11,0%	44
Mecklenburg Western Pomerania	68	1,7%	7
Lower Saxony	529	13,5%	54
North Rhine-Westphalia	766	19,6%	78
Rhineland Palatinate	240	6,1%	25
Saarland	26	0,7%	3
Saxony	107	2,7%	11
Saxony-Anhalt	27	0,7%	3
Schleswig Holstein	456	11,6%	47
Thuringia	64	1,6%	7
Germany	3.916	100,0%	400

*Source: Jahresbericht 2010

**Same amount per federal state for primary and secondary companies (800 companies in total)

Annex 4: Definition of size categories

SME threshold value according to the EU since 01/01/2005

Company size	Number of employees	and	Turnover €/year	or	Balance sheet total €/year
micro	up to 9		up to 2 million		up to 2 million
small	up to 49		up to 10 million		up to 10 million
medium-sized*	up to 249		up to 50 million		up to 43million

* equal to the SME in total

Source: European Commission