

APPLICATION OF SELECTED MODERN CALCULATION METHODS IN AN AVIATION COMPANY

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The final thesis describes the modern calculation methods used in an aviation transport companies in the current market conditions. The object and the main objective of this work is insight into the problems of implementation of Activity Based Costing methods, which is based on managing the flow of capital costs and assessing the profitability of different cost structures of company.

Key words: calculation methods, calculation, costs, ABC..

1 INTRODUCTION

Guidelines for implementation calculation method ABC (Activity Based Costing) can be for manager an airline companies interesting and can help them in managing the flow of capital costs and assessing the profitability of different cost structures. ABC method is not new and is also well known for most managers an aviation transport company.

Recently, these managers but find that it still something missing and would need to be any more effective methods, another look at the problem. That process cost management will bring them an excellent opportunity to change their mind, or approach, and look at what is happening in society from a different perspective or different.

2 THEORETICAL BASIS

The concept of calculation in the theory and practice is used in a triple sense, as an indication of three different concepts: 1 *Calculating* is an activity capable of detecting the planned or actual costs, and other components to the calculation of unit prices, and this activity using different methods, which satisfy the conditions of bodies and objectives to be achieved by what amounts to, 2 *calculation* is the result of calculating that expresses the amount of costs or prices of other components under the framework, setting uniform structure, theory and practice uses various types of calculation rule according to the method of composition and purpose for which they serve, 3 *costing system* includes the methodology

and compilation methodology of calculation methods and their use.

We know some criteria for division calculations for the species: 1. Time calculations, 2. Calculations of the structure, 3. Calculation for completeness.

Costing methodologies are different ways to quantify the items attributable to the calculation unit. We know these calculation methods: division calculation, calculation of associated production, differential calculation, cost calculation according to the elementary processes - ABC, incomplete calculation of costs.

Activity Based Costing (process costing) can be defined as advanced calculation methods, which describes the flow of costs in the company based on the processes taking place in it and the activities to be perform.

The basic idea of ABC is to find the actual causal relationships between cost and power consumption and display of these factors in calculating system so that the outputs are as close to reality. In practice, this means quite a different perspective than we used to, where we look at costs in the nature of expense to a variety of methods, most often through accounts transform the division calculation generally shaped cross section.

Application of the ABC method: the strategic management of costs in identifying and assessing the profitability of products and customers, the operating cost management, the internal and external benchmarking in improving quality by TQM in budgeting and planning for improvement and reengineering business processes.

3 APPLICATION OF ABS METHODS IN THE SELECTED AVIATION COMPANY

The aim is to characterize the selected aviation company and the basis of data from annual reports and other documents of the selected company in 2010, applied calculation methods Activity Based Costing by-step implementation.

3.1 Characteristics of the Prague – Ruzyně Airport

Airport Prague-Ruzyně (IATA: PRG, ICAO: LKPR) is an international public civil airport located on the northwest edge of Prague 6, Ruzyně in the city district. It is the largest airport in the Czech Republic and one of the largest in Central and Eastern Europe. Prague airport handled in 2010 than with 11,556,858 passengers. The airport is designed for international and domestic, regular and irregular air operations. Passengers should be available by 50 airlines connecting Prague direct services to 125 destinations worldwide. It also works with 5 regular cargo carriers and dozens of other companies provide The services include airport: *1 Air services*: aircraft ground services, ramp handling, commercial handling of passengers and baggage, general aviation, aircraft handling technical, commercial and technical handling of cargo and mail, security, etc. *2. Non-avionics services*: rental of advertising space, rental of office space, rental of meeting and conference rooms, rent a storage capacity of petroleum products, etc., *3 Outsourced services*: performance aircraft fuel, parking of cars, luggage storage and packaging, catering, business services, car rentals, services, public transport, taxi services, and etc.

Despite the negative impact of climatic effects increased by Prague Airport by economic results in 2010 net profit by 11% to 991 million CZK. Gross profit before tax rose over the year by 4% to 1, 108 billion. The proceeds from the main airport activities in 2010 consisted of air traffic: 3,306,303 thousand CZK business (rent): 2,164,817 thousand CZK and selling goods and services: 5,471,120 thousand CZK.

3.2 Application of the method ABC in Prague - Ruzyně Airport

Based on the information that was Prague-Ruzyně Airport as willing to give, I opted for transparency and better representation of the strategic choice model calculation method Activity Based Costing. Creating ABC model consists of five stages:

- modification of accounting data
- design activities, processes and activities
- valuation of assets, processes and activities
- define cost objects + correction awards activities
- appreciation of cost objects.

It was found that profitability by income from operations is 25% after rounding. Managers of individual sections should be surprised the need to determine whether such a fact.

Overhead rate is calculated from the purchase price of the goods or the cost of providing services. On the basis of the information and documents from the department handling the airport Prague - Ruzyně, we can conclude that at 25%.

1. Modification accounting data

Model calculation method Activity Based Costing is created by main cost accounts, general ledger accounting system. The first work to be done in the framework of the model is to load data from general ledger and the need to modify their model. Given that we have the possibility to obtain data from general ledger airport Prague - Ruzyně, as I use to create the data model of profit and loss account published in the annual report for 2010.

Operational costs are 73.88% of total revenues from operations. The information provided by the company, I can say that the greatest burdens (26.42%) are the wages of employees and board members (airport employed in 2010 with 2,212 employees).

2. Design activities, processes and activities

At this stage defines what activities the company performs. When it is determined that some activities are carried out in duplicate, perhaps several times, some activities are completely useless. This will reveal some of the causes of inefficiency. This is possible but relatively easy to

remove. It consists in the analysis and work done in the form of brainstorming and discussion.

Based on a large number of activities that airport operator engaging, I opted for a simplified ABC model and therefore we choose representatives of these small operations. Such activities, in our case are:

1. selection of suitable suppliers, contracts, negotiating and supply conditions,
2. purchase of goods and materials, creating a register of orders, transportation,
3. receipt of goods / material storage, warehousing, distribution,
4. payroll management, attendance records, calculation / payment of salaries,
5. implementation of aviation and avionics services, use of facilities, transportation,
6. basic repairs, aviation equipment, engineering controls,
7. marketing activities, a survey of suitable suppliers, advertising, promotion,
8. sale of goods and services, billing, record keeping and documentation, information systems,
9. general administration and basic traffic management activities,
10. all other operating activities and activities to ensure years of operation. operations at the airport, security airport.

3. Valuation of assets, processes and activities

This phase consists of creating transformational model, where resources are transformed through the activities defined causes. This is the valuation of assets in the amount of 4,132,869 thousand. CZK, and we have set criteria for assets, such as:

- the consumption of materials, energy, services, and depreciation, we ask: to what action the facility, building, goods or materials used, how long is used, etc.
- in personnel costs, we find: how many people have done this or that activity, if they are doing more activities - the proportion of time in which the activity.

The distribution of the criteria and quantification of activities that the largest share of overhead costs is a key process including activities and activities related to the implementation of

aviation and avionics service and receive goods on consignment and associated handling, distribution and so on.

4. Define cost objects + correction appreciation activities

Cost objects are mainly customers and products. Furthermore, it can also be the suppliers, distribution channels, market segments, combinations thereof and the like. Determination of cost facility will give us an answer on how much our service costs such as extra customer or consuming a product. Cost objects should be defined as precisely as possible and most accurate. Generally speaking, the cost object is the object, which cost us just interested.

At Prague - Ruzyně Airport we will consider the cost of products as objects of the company, therefore the services provided. It is a service that we have split the air service, outsource and non-avionics services.

Correction of appreciation activities by supporting activities

Correction activities in progress in the direction of the merger or subdivision activities to the nature of cost structures. The correction may or may not be.

If necessary to clarify, to adjust the unit costs of activities based on considerations of costs. Usually this is done estimating a percentage of activity in relation to other activity. At this stage it is appropriate to keep these corrections under constant surveillance.

5. Valuation of cost objects

Valuation of cost object is the last task in developing the ABC model. The number of causes, which will require a cost object, eg customer or product passes to cost objects only so much cost, how many causes of cost object consumes. It is appropriate to establish and maintain a database of objects and reasons of cost, broken down by activities, which cause them.

Simply put, we need to find the causes that produce consumed by individual activities. Regarding the selection of key activities such as:

- right supplier and related contracts, ...
- payroll management and related activities such as attendance records, calculation / payment of salaries, ...
- general administration and management activities of the base of operation ..

- all other operating activities and activities to ensure years of operation. operations at the airport,

could not find the cause and therefore does not allocate these costs to cost objects, and any resulting gain should cover these costs.

If case overheads cost on cost object air services, is the most expensive a key activity or the process of this object implement avionics and non service-related activities ... with the purchase and storage of materials and goods, ... and basic equipment repair, maintenance, technical control, and so on. Activities and processes modeled ABC highest overhead cost for building - non-service are the same as the first two in the aviation services and third most expensive activity in this case, other operating activities and operations, and so on. For outsourced services are the most expensive activity which causes a high overhead for this building the same activities as non-airline services. But in this case also includes the selection of suitable suppliers and related activities.

Analyzing the key activities of the airport Prague - Ruzyně Airport, I found that the cost objects are the overhead costs of the model calculation procedure Activity Based Costing such share:

- air services - 2,510,982 th. CZK
- non-avionics service - 761 703 th. CZK
- outsourced services - 830 182 th. CZK

and therefore amount of overhead costs declined examination and the summary of activities, processes and activities of the airport of 4,132,271 thousand. CZK value of a given model ABC - 4,102,867 thousand. CZK. This is a decrease in the amount of 1.21%, representing about 30 000 thousand. CZK. The reason that these differences arise as rising overhead costs and their distribution wrong.

4 PROPOSAL TO IMPROVE THE ABC METHOD IN AN AVIATION TRANSPORT COMPANY

The aim was to solve the problem of why managers do not use at the airport Prague - Ruzyně the ABC model, but pointed out that the ABC

model suitable for the airport management costs, as it is easy to create and implement.

The strategic model, which was implemented earlier held principles, rather inaccurately, as ever, and therefore outputs depend on the quality of input information. If the quality of the information needed to create high idol, then they have nothing to prevent the track to this interesting method for the solution to the operational level of management costs.

Based on all information provided by the airport to the ABC model creation, after consultation with the lead managers of the company, after their terms, the implementation of the model ABC to the airport as well as the analysis above and the implementation of this model proposes to achieve the best Results of method to ensure that:

- is compiled by a small team to design and implement
- are made constantly consulted with key managers in the firm to obtain reasonable and generally acceptable outcomes
- the ABC system as simple as possible, thereby limiting the number of activities and number of causes of consumption.

Therefore, for process management and successful implementation of ABC method are these procedures are necessary, but that does not mean automatically that the traditional calculation is necessary to forget. Only the future will show which direction of development, but to the future and better cost management is already evident.

5 CONCLUSION

The method of Activity Based Costing is a tool that supports the process of controlling and managing the processes taking place in a company. Its advantage is that it can detect the real cause of the costs of individual activities and also provides reliable information on these activities.

Due to the implementation of the Activity Based Costing method transferred in the selected aviation company, particularly the Prague Airport - Ruzyně will be held a few facts that should be at the airport immediately followed. This is mainly a compilation of an adequate but not great team of employees, which will develop and solve design

and implement methods for all levels of society. Another thing for you not to forget the company's management in implementing the method is unstable to provide detailed, accurate acceptable and what information the project team. In any case, not forgotten that, despite a wealth of information and activities must remain a process costing system simple, because to be accurate and provides the desired result.

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RESUME

Obsahom diplomovej práce je charakterizovať vybrané kalkulačné metódy používané podnikmi

v súčasných trhových podmienkach. Práca je hlavne zameraná na implementáciu vybranej modernej kalkulačnej metódy ABC (Activity Based Costing) vo vybranom podniku leteckej dopravy. Je rozdelená na 4 časti, ktoré sa touto témou zaoberajú na teoretickej, metodologickej, analyticko – aplikačnej a návrhovej úrovni. Teoretická časť práce je venovaná charakteristike kalkulačných metód, opisuje kalkulačný systém podniku a charakterizuje metódu ABC ako aj spôsob jej implementácie. Druhá časť práce bližšie popisuje cieľ práce, metodiku a jednotlivé metódy skúmania použité pri písaní práce. Tretia časť je venovaná analýze vybraného podniku leteckej dopravy a implementácií modelu ABC do tohto podniku. Štvrtá a zároveň posledná časť zhodnocuje výstupy predošlej kapitoly a interpretuje zistené výsledky. Zároveň uvádza konkrétne návrhy na zlepšenie aplikácie metódy ABC vo vybranom podniku leteckej dopravy.

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