FACTORS AFFECTING THE CHOICE OF TANGIBLE FIXED ASSET ACCOUNTING METHODS: THEORETICAL APPROACH

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Abstract
The research is designed to identify factors that determine the management decisions to choose one or the other tangible fixed asset accounting method. The article offers a systematic analysis of factors determining the choice of tangible fixed asset accounting methods that is based on research by Lithuanian and foreign scientists and hypotheses of the positive accounting theory. The research produced a theoretical result: it identified groups of factors that determine the choice of tangible fixed asset accounting methods including a flow chart of the factor and accounting method interaction, which can be used to develop a profit increasing or profit decreasing accounting policy. The factors are broken down into factors of the internal and external environment. Financial and human factors are attributable to the internal environment factors, while economic and technological factors are regarded as factors of the external environment. It was found that the financial leverage and the firm value maximization are the key factors in the financial factor group as they affect the management determination to opt for profit increasing tangible fixed asset accounting methods, while technological factors have an effect on profit decreasing tangible fixed asset accounting policy choice. Economic (the national economic situation and factors of the political process, such as the size of the company, its profitability, and the industry branch it belongs to) and human factors provide an opportunity to use both: profit increasing or profit decreasing tangible fixed asset accounting methods. The research results will contribute to a most correct choice of the tangible fixed asset accounting methods by the company management, appropriate management decisions, and achievement of the objectives.

Keywords: accounting policy, tangible fixed asset accounting methods, factors, profit increasing, profit decreasing, and performance results.

Introduction
Relevance of the topic. To survive and expand in the changing business environment, it is vital to analyse the resources that can be used to produce products, goods or services and to satisfy the users' needs. In business organisations, most of such resources account for tangible fixed assets (hereinafter referred to as TFA), which, according to J. Mackevicius (2008), are highly important in the assessment of the financial position and performance results of an organisation and which affect the operations of the organisation in the future periods (Mykolaitiene et al, 2010). Changes in such assets can have a material effect on the long-term performance results and therefore it is essential to have reliable and correct accounting information, which can be obtained if a relevant TFA accounting methodology is chosen. The TFA accounting methodology constitutes an integral part of the corporate accounting policy. The chief executive of a business entity is responsible for the establishment of an accounting policy that is in line with the business environment and consequently it is
important to find out what factors determine the management decision to opt for certain TFA accounting methods.

Scientific problem and level of its investigation. The numbers of research works dedicated to the specific features and problems of establishing the corporate accounting policy are quite extensive. The results of research conducted by Lithuanian and foreign authors (Watts, Zimmerman, 1990; Rudzioniene, 2004; Iatridis, Joseph, 2005; Ashtami, Tower, 2006; Jatkunaite, Martirosianiene, Stonciuviene, 2006; Shaheen, 2012, etc.) revealed that two potential alternatives of the accounting policy are analysed in the context of the performance results, namely a profit increasing or profit decreasing accounting policy. Some authors analysed factors affecting the choice of one or another accounting method in an organisation: R. Craig and J. Diga (1998) argued that the size of a company is a determining factor in choosing the methods of evaluation and revealing information in financial statements; C. W. Tan et al (2002) designated the company size, profitability and country groups as deciding factors and found that information on frequent-flyer program accounting is more commonly revealed by major global airlines or companies with a lower leverage level; W. E. Ashtami and G. Tower (2006) investigated individual countries and industries in the Asia-Pacific Region and concluded that Indonesian companies mostly use profit decreasing accounting methods, whereas companies that decide on profit increasing accounting techniques are characterised by a lower leverage level, a lower concentration of ownership and better investment opportunities.


The research works explore certain aspects of accounting policy framework development, the authors analyse individual factors, however they fail to offer a systematic approach towards the TFA accounting policy, to disclose the whole of determinants of the TFA accounting method selection or to highlight the TFA accounting techniques that have the greatest impact on the performance results.

Research problem: which factors decide the choice of tangible fixed asset accounting methods and what impact they have on the performance results of business operators.

Research object: factors affecting the choice of tangible fixed asset accounting policies.

Research objective: subsequent to the analysis of scientific literature, to determine factors affecting the choice of tangible fixed asset accounting policies and to theoretically identify their impact on the performance results of business operators.

The following aims are pursued towards the set objective:

to identify factors affecting the choice of tangible fixed asset accounting policies,

to provide a theoretical justification for the impact of tangible fixed asset accounting policies on the performance results.

Research techniques: in pursuance of the defined objective and aims, the research relied on the general research methods. Comparative analysis and synthesis of scientific literature was used to analyse the potential reasons and motives behind choosing tangible
fixed asset accounting policies. The methods of induction, deduction and logical analysis were used to identify the impact of factors determining the choice of tangible fixed asset accounting methods on the performance results. The monographic method was used to reveal the results of the research.

Research results

To analyse the formation of accounting policy in an organisation from the performance result perspective, it is essential to evaluate the accounting environment and the factors affecting the same. In literature, factors affecting the environment of business organisations are categorised as macro and micro or internal and external environment factors. The factors of the external environment include political, economic, social, technological, and legal challenges. According to J. Mackevicius (2010), the factors of the internal environment differ in various organisations and they mostly depend on the company size, the level of its production complexity, the volume of economic operations, the personal qualities of the top manager, etc. The chief executive of a company is responsible for choosing an accounting policy and its implementation in the organisation, and therefore his/her personal qualities and expectations represent a pre-eminent factor in analysing the formation of the corporate accounting policy. The internal and external environment including its inherent factors affects the managerial decisions made by the executives and therefore identification of the factors of such environments that have influence on the choice of TFA accounting methods facilitates substantiation of the motives behind certain decisions of the management. When the TFA accounting policy is framed, the factors of the said environments can be detailed by identifying smaller factor groups that are shown in Fig. 1.

![Factors Affecting the Choice of TFA Accounting Methods](image)

Fig. 1 Groups of factors that determine the choice of accounting methods (made by the authors based on Rudzioniene, 2004; Dzikevicius et al, 2008; Salvietti et al, 2008; Zinkeviciene, 2009; Campello et al, 2010; Datta et al, 2013; Greco et al, 2013; Sereshti et al, 2013)

The factors of the internal environment are particularly important in deciding on TFA accounting methods. The financial indicators of the company can have a material effect on the choice of accounting methods. Another important factor can be firm/business value maximization, which is a common preoccupation of the company management and investors.
A. Dzikevicius et al (2008) argue that information about the business/firm value is essential for the company managers and owners to make certain managerial decisions, it is of interest to governmental and control institutions, credit institutions, insurance companies, suppliers, and investors and also the value of the organisation is highly important when the company or its part is sold, in the processes of a merger, sales or purchase of shares or when financial decisions need to be justified, etc. The value of the company assets, including TFA, affects the value of the organisation and therefore M. G. D. Guidi et al (2008) claim that reflection of true and fair TFA related information in the financial statements leads to firm value maximization in the long term. In its attempt to maximize the firm value, the company is likely to use profit increasing TFA accounting techniques. Here the choice of profit increasing TFA accounting methods can be explained from the efficient positive accounting theory perspective based on the efficient market hypothesis, which states that the market prices of the shares of a specific organisation are linked to its public accounting information (Godfrey et al, 2006). According to D. Zinkeviciene (2009) and K. Rudzioniene (2012b) this approach reveals the objective of an efficient accounting policy choice, which is to maximize the value of the organisation through TFA accounting methods that can best reveal the actual financial position of the company. Results of research conducted by C. Deegan, (2000), J. M. Godfrey, et al. (2006) prove that profit related information based on historical cost (i.e. cost price) accounting has an impact on the share prices and therefore such information is useful for the market.

In the positive accounting theory, the firm value maximization is linked to the arguments of the neoclassical theory of economics based on individualism and the neoclassical maximization hypothesis (Boland, Gordon, 1992). This theory views the firm as a set of contracts and groups of selfish-minded individuals, and consequently all its members, in their own interest, are motivated to maximize the firm value and, as rational individuals, they seek to boost their personal benefit that is directly related to their current pay value. Therefore, the owners and the management opportunity to get an increased pay now is associate with the profit level. Higher profits will mean bigger dividends to the owners, while the achieved performance results may be linked to the management bonus system. That being the case, the choice of profit increasing accounting techniques becomes relevant in developing the TFA accounting policy.

The accounting methods of an organisation are chosen by the top manager and therefore the positive accounting theory views such choices in connection with the principal–agency theory. This theory emphasises the relationship and potential conflicts between the principals/owners and the agents/management (Mathews, Perera, 1999). According to R. G. Schroeder et al. (2001), C. W. Tan et al. (2002), the executives of a firm may obtain information that is not always available to the owners, which implies increased possibilities for the management to select methods to benefit primarily themselves, which do not always reflect the best interest of the shareholders. Activities carried out by an agent/manager are understood as the process of company management and assumption of business risks. The manager is getting paid for this work, and the pay can either be fixed or depend on the performance results. If the top manager of an organisation is one of its owners, such manager will be interested to pursue the most profitable activities and to choose profit increasing TFA accounting methods. However where a company is managed by hired persons, they can demonstrate behaviour that is the opposite of that of the owners' since:

- the owners and managers have different objectives that lead to the conflict of interests;
- the owners and managers can have different understandings of risks and thus certain actions or their outcomes can also be at variance (Zinkeviciene, 2009; Sereshiti, Bijari, 2013).

A bonus system related to the performance results is often used to provide executives with incentives to undertake higher risks. This is explained by the bonus plan hypothesis
analysed in the positive accounting theory. *Ceteris paribus* (with other factors the same), the managers of the companies with bonus plans are more likely to choose accounting procedures that shift reported earnings from future periods to the current period (Watts, Zimmerman, 1990; Milne, 2002; Tzovas, 2006; Zinkeviciene, 2009; Rudzioniene, 2012b). C. Deegan (2000) and A. R. Belkaoui (2004) indicate that the practice of paying the managers bonuses depending on the performance results may lead to manipulations in such results by the management with the aim to increase the size of their bonuses and therefore the choice of relevant TFA and asset depreciation accounting methods or recognition of such asset repair costs could be one of the tools towards variations in the performance results. After analysis of typical bonus systems, P. M. Healy (1985) linked the bonus plan hypothesis to the maximum and minimum profit level and concluded that executives can opt for accounting period profit increasing or profit decreasing (where the profit stands below the minimum level and no bonuses are paid) accounting methods or they can seek even distribution of profit (equal benefits in different accounting periods).

L. Salvietti and N. R. Smith (2008), who analysed the problem of profit maximization at industrial organisations in the context of cost optimisation, came to a conclusion that minimisation of TFA acquisition, installation, deployment, depreciation and repair costs leads to maximisation of the gains. Therefore a rational choice of such cost accounting methods enable to frame profit increasing or profit decreasing accounting policy.

Another factor in the financial factor group is the borrowing requirement. In pursuance of efficient operations, an organisation must secure such operating conditions as the staff qualification (trainings), promotion (advertising) of the company and its products, adequacy of capital goods for production and services, and functionality (manufacturing plants, machinery, computer hardware, etc.), and thus there is often a need to look for external sources of financing. To borrow from credit institutions, it is required to provide information on the TFA owned by the organisation and its value, since the creditors requirements include sufficient assets that can be pledged as a collateral to secure the fulfilment of obligations. It is likely that in the face of borrowing requirements an organisation will opt for profit increasing TFA accounting methods. That can be supported by the leverage hypothesis that is broadly analysed in the positive accounting theory: *ceteris paribus* (with other factors the same), the higher the debt-to-equity ratio, the more likely that the company managers will select accounting procedures that shift reported earnings from future periods to the current period (Watts, Zimmerman, 1990; Milne, 2002; Tzovas, 2006; Zinkeviciene, 2009; Rudzioniene, 2012b). The aspiration to increase the profits of the reporting period will promote to fix the lowest possible minimum TFA value and to capitalise costs related to such property acquisition and repair that would allow to recognise part of the assets as fixed and thus to provide a collateral for credit institutions or insurance companies. The above is also corroborated by the financial leverage hypothesis, which says that the greater is extent to which an organisation fails to discharge its debt obligations, the more it tries to increase its assets or decrease the debts to avoid any penalties provided in the debt contracts and thus to reduce the likelihood of default (Zinkeviciene, 2009). Although this hypothesis has been supported by a number of foreign research (Inoue, Thomas, 1996; Shaheen, 2012; Matemilola et al, 2013), the studies conducted by D. Zinkeviciene and K. Rudzioniene (2005) in Lithuanian enterprises failed to confirm the financial leverage hypothesis, and that was related to the unfavourable taxation system.

Another group of the internal environment factors affecting the choice of TFA accounting policies includes human factors. One of the factors in this group is the needs of the accounting information users. K. Rudzioniene (2004) analysed the impact of the said factor on the accounting policy in Lithuanian companies and determined that there is a weak statistically significant relationship between the company indicators that are of interest to the
information users and the choice of accounting methods and consequently the author concluded that enterprises mostly respect the needs of administrative authorities and money lenders.

According to the stakeholder theory, each organisation represents not only its own interests but also those of other stakeholders and therefore data reflected in its financial statements must satisfy the information users' needs to be provided with true and fair information on the assets, equity, liabilities, income and expenditure, cash flow, etc. of the organisation (BAS 1, 2014). The data of the financial standing and performance results of an organisation are important for the employees, customers, and suppliers of the company, banks, tax authorities, investors, and other users of the accounting information. Such accounting information users are otherwise termed by K. Rudzioniene (2012a) and J. S. Harrison, J. E. Coombs (2012) as primary, as they directly participate in the company management when certain decisions are made or they are instrumental in successful operations of the organisation. R. E. Freeman et al (2010), T. Lutzkendorf et al (2011), and K. Rudzioniene (2012a) argue that stakeholders have an impact on the performance of an organisation or, alternatively, the activities pursued by the company determine their own well-being. Therefore, there is interrelation between the selection of TFA accounting methods and the satisfaction of the stakeholders' needs. For instance, to maintain its attractiveness among potential investors, an organisation is likely to pursue the profit increasing TFA accounting policy and to use profit increasing TFA accounting methods. On the other hand, to minimize the profit tax costs, an organisation is likely to pursue the profit decreasing accounting policy, i.e. to use profit decreasing TFA accounting methods. The latter information is essential to various tax authorities. In their research, R. M. Bowen, L. DuCharme and D. Shores (1995) discovered that different information needs among various information users exercise a determining influence in choosing a certain accounting method and therefore, in the light of a conflict of interest, organisations incline towards the profit increasing accounting methods, where the stock and depreciation methods are particularly significant.

The executives of a company, who are among the key users of the accounting information, evaluate the corporate financial statement information and the obtained performance results in the context of their own expectations. The choice of alternative profit increasing or profit decreasing TFA accounting methods can be linked to the management expectations as they often decide which information is going to be revealed in the financial statements. The choice of profit decreasing TFA accounting methods is linked to the urge of the executives of an organisation to pay a lower income tax to the state budget in an accounting period and the conservative approach of the management towards the profit risk. Otherwise, the management of a company tend to reflect higher profit in the financial statements (profit increasing TFA accounting methods) to win favour among creditors and investors. It is self-evident that a high profit ratio does not necessarily means that the organisation is stable, liquid and capable of discharging their liabilities on time. BAS 1 prescribes that information in the financial statements is retrospective, i.e. it describes previous periods. Thus the financial statements fail to provide all information required by the accounting information users to make certain decisions.

Talking of the group of economic and technological factors attributable to the external environment, the economic situation in a country can be attributed to the economic group factors affecting the choice of TFA accounting methods. Its impact manifests itself at the periods of economic boom and recession that are not short-term and usually last several or even umpteen number of years, the impact whereof is mostly suffered by small and medium enterprises or those that are new in the market.

M. Campello et al (2010) analysed the reasons for the constraint/slowdown of the operations of the companies in the USA, European, and Asian regions and found that due to
the declining national economy, increased unemployment rates, etc. organisations were forced to reduce their production or service volumes, which meant that the capacities of different manufacturing plants were not fully used, although the depreciation had to be calculated. Lower performance results led to wilful savings measures and therefore during an economic decline companies were likely to have adopted profit decreasing TFA accounting methods.

In the instance where an organisation takes into consideration the economic situation in the country and the trends in its field of business and decides to change the TFA accounting policy, it is vital to check whether or not the changes in the TFA value materially distort the indicators of the corporate financial standing and performance results. Too frequent and unjustified changes in the accounting policy are contrary to the principle of stability, which must be respected by an organisation in order to compare information of different periods.

The factor of the political process, which is termed as political visibility in the positive accounting theory, is attributable to the external economic factors. C. Deegan (2000) synthesised the results of research conducted by R. L. Watts and J. L. Zimmerman in 1978 and J. Gagnon in 1967 and concluded that the political visibility of a company is attributable to its size and profitability. R. Craig and J. Diga (1998), W. Tan et al (2002) argue that the size of an organisation affects the choice of an accounting method. Larger enterprises with higher profits enjoy better political visibility and incur more political costs. To reduce potential unfavourable political attention and related additional costs, companies should use accounting methods that enable to reduce the profit of the accounting period. That means that entities should opt for profit decreasing TFA accounting methods.

According to D. Zinkeviciene (2009), W. E. Ashtami and G. Tower (2006), the political visibility of a company is also revealed through its participation in a politically active branch of industry and therefore organisations operating in politically sensitive industries will tend to rely on the profit decreasing accounting policy. The results of research conducted by S. Datta et al (2013) disclosed that entities in different branches of industry are exposed to different competitive pressure to reveal their accounting information. The authors argue that lack of competitive environment (e.g., oligopolistic markets) reduces the need for profit manipulations. Whereas organisations in politically sensitive industries that depend on decisions by specific institutions and the impact of other external factors will be using profit decreasing accounting methods.

In the context of the choice of TFA accounting methods, a factor in the group of technologies – rapidly changing technologies – is much discussed in the research area. Companies engaged in different activities may demonstrate different approaches to assets and their use as well as to modern and rapidly changing technologies. Such perspective leads to a certain practice of the TFA accounting policy. For example, a computer or some other computer hardware can be carried at a revalued amount or Sum-of-the-years-digits or Declining balance depreciation methods can be used with regard of such type of property not because the company is trying to reflect a reduced result but due to the fact that computer technologies are considered to be constantly changing and improving. The organisation will seek to write-off such TFA items as soon as possible and to purchase new ones that are more powerful and can perform more functions.

M. Greco, L. Cricelli and M. Grimaldi (2013) analysed the impact of tangible and intangible fixed assets on the competitive advantage and investments in the enterprise and found that information and telecommunication technologies represent the key factor of the competitive advantage and investments in the organisation. The said TFA objects should be upgraded/replaced as often as possible and the market offers all the necessary conditions. Provision of technically advanced technological equipment and an efficient use of their working time and capacities lead to better performance results of business operators. Thus to keep up with advancing technologies, a company is likely to assign a higher minimum TFA
value and a shorter estimated useful life for this TFA object group or to use Sum-of-the-years-digits or Declining balance TFA depreciation methods.

In conclusion, company managers take into account the analysed factors of the external and internal environment and make managerial decisions and choose TFA accounting methods in line of their expectations, which serve the basis for producing TFA related information that is included in the financial statements. The relations between the TFA accounting methods and the internal and external environment in developing profit increasing or profit decreasing accounting policy are shown in Figure 2.

![Factors Affecting the Choice of TFA](image)

**Fig. 2 Relations between TFA accounting methods, factors affecting their choice and profit**

Figure 2 reveals that factors of the financial group contribute to the management's choice of profit increasing TFA accounting policy. That can be achieved by using the TFA accounting methods under the first alternative, i.e. by recording TFA at acquisition cost, fixing the lowest possible minimum TFA value, and using a linear or production depreciation method, etc. Such methods allow to include amounts related to changes in the TFA value in the cost of such assets and thus to reflect lower expenses in the accounting period, which results in higher profit of the company.

The factor in the group of technologies – rapidly changing technologies – results in the management decision to pursue the profit decreasing TFA accounting policy. In this process,
the TFA accounting methods of the second alternative are used, including the TFA revaluation model, the highest possible minimum TFA value, Sum-of-the-years-digits or Declining balance depreciation methods, etc. Such methods allow to develop accounting information, where changes related to the TFA value are registered as costs of the reporting period and consequently the result of the operations of the company are reduced. Economic and human factors are attributable to the choice of TFA accounting methods that would facilitate both profit increasing and profit decreasing TFA accounting policy.

The development of profit increasing or profit decreasing TFA accounting policy is more speculative as practically companies may pursue a mixed TFA accounting policy, i.e. with respect of its needs, objectives, specific features of its operations, etc., an organisation can concomitantly use both profit increasing and profit decreasing accounting methods. Therefore it can be maintained that a single uniform TFA accounting policy does not and cannot exist, as the impact of prevailing factors in different business entities also differs.

**Conclusion**

The research analysed the choice of tangible fixed asset accounting methods from the perspective of the performance results. In this context, two alternative accounting policies were defined, namely profit increasing and profit decreasing accounting policies. Based on the results of earlier scientific research and the hypotheses of the positive accounting theory, systematic analysis was performed and factor classification was produced. The classification of factors affecting the choice of TFA accounting methods takes into consideration the environment of business organisations. Here the factors are classified into those of internal and external environment. Financial and human factors are attributable to internal environment factors, while economic and technological factors are regarded as factors of the external environment.

In the group of financial factors, the most important ones are the financial leverage, which is based on the leverage hypothesis, and the firm value maximization linked to the efficient market and management incentive hypotheses. The factors of the national economic situation and political process can be attributed economic factors. The factors of political process can be linked to the size and profitability of an organisation and the industry it belongs to. Furthermore, technological and human factors play an important role in developing the TFA accounting policy. They are related to the needs of accounting information users and the management expectations.

The produced flow diagram of interrelations between the accounting methods and the factors affecting their choice leads to a conclusion that financial factors affect the management decision to opt for profit increasing TFA accounting methods. Technological factors impact the choice of profit reducing TFA accounting policy, while the influence of human and economic factors allow to favour both profit increasing and profit decreasing TFA accounting methods and consequently a mixed TFA accounting policy can be put into practice.

The research results will contribute to a most correct choice of the tangible fixed asset accounting methods by the company management, appropriate management decisions, and achievement of the set objectives.

**References:**
