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Integrated Application of the Target Costing and Life Cycle Costing in Contemporary Business Environment

Abstract:

Contemporary business environment is characterized by frequent changes in business conditions. Technological innovations and changes in customers' perception affect on the continuous improvement in quality, availability and functionality of the product. According to this, product life cycle is significantly reduced over time, so business entities are trying to deal with these changes. Due to this, business entities have to produce new products in very short time, but at the acceptable level of quality with minimum costs in order to maintain the required level of the product profitability. In order to achieve these objectives, business entities implement target costing and life cycle costing as management accounting methods. The main goal of this study is to present the potential model of integrated application of the target costing and life cycle costing. In this model target costing is focused on the products' design phase in which all costs during the whole life cycle of a product are estimated. Using this model, business entities are able to maintain more quality cost management in order to achieve required profitability. This model enables the dynamic evaluation of the products' profitability due to the fact it refers to the whole life cycle of the product.

Keywords:

target costing, life cycle costing, product profitability

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Introduction

Companies are faced with a competitive business environment characterized by frequently and rapidly changes that are the result of internationalization, concentration, restructuring, technological innovation processes and global financial market crisis. In those circumstances, on the one hand market expansion caused increasing the number of customers and products, while on the other hand technological innovation has reduced product life cycle. Furthermore, technological innovation leads to changes in customers' perception of different products regarding to quality, availability and functionality of the product. So, the product innovation is one of the keys to a company's survival, competitiveness and success.

Severe competition forces companies to become more responsible and adjustable in order to satisfy customers' needs, and in doing so to retain or increase its effectiveness, efficiency and profitability on the required level. Changes in business environment have forced companies to manage their costs according to business competition and customer needs, while in such a rigorous business conditions it is difficult for companies to maintain satisfactory return on profits.

In order to adapt to these circumstances, companies should adjust their management models on the way they achieve customer satisfaction and respecting cost constraints. That means the switch from the logic of cost measurement to the cost management, by integrated application the target costing and life cycle costing. The objective of this paper is to give an integrated model of the application of the advanced, relevant cost management concepts concerning to modern business conditions. So, the main goal of this study is to present the potential model of integrated application of the target costing and life cycle costing as strategic management accounting methods.

The research goal is investigated through the review of comprehensive secondary literature sources. Applied methodology is focused on fundamental scientific research methods which include the induction and deduction methods, and the compilation and comparison methods. Whereas the research is only theoretical, the statistic methods are not used in order to achieve the research goal.

The paper is organised as follows. Firstly is presented a review of the literature on target costing which include the review of the fundamental features of target costing and the review of the research results about the reasons and scope of its application. The next section includes literature review on life cycle costing. Subsequent section presents the potential model of integrated application of the target costing and life cycle costing, followed by a conclusion of the study.

Target costing

Fundamental characteristics of target costing and its application

The aim of target costing is to examine all possible ideas and solutions for cost reduction when designing new product. Target costing is a cost management technique that is used during the development of the new product while in this phase target costing has the greatest potential for managing a product's cost. Furthermore, target costing is a key cost management concept since the costs are calculated before they occur and it is allowed the occurrence of only those costs that the customers are ready to pay and which are competitive on the market [1].

Target costing is a cost management tool for reducing the cost of the product with the help of

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cross-functional teams (management, design, research and development, marketing and accounting) [1; 2]. This professionals included in cross-functional team (target costing project team) are engaged in the process of planning, designing, manufacturing and commercialization of a specific product. The aim is to produce a product with an adequate quality and value for customers, to satisfy the customers' demand in a short period; production costs should be at the level of allowable costs and to achieve required level of product profitability. In accordance with this, target costing is based on the idea that a product's quality, functionality and costs are mainly determined during the design stage of the product life cycle, and that little can be done in order to improve these elements once product design has been set.

Cost management in conditions of target costing application begins with sales price and required profit that market and customers can accept, and after to define the allowable costs of product. First of all, target costing include marketing research to identify customer expectations of a products' functionality, quality and sales price.

Identification of the target sales price is the starting point in the target costing process. The target sales price is set realistically in companies that are using target costing and the process of setting the target sales price is conducted very thoroughly [3]. Initial starting point for establishing the target sales price represents the price level of existing products or the price level of competitors' offerings [4]. Besides the perceived value to customers and the price level of competitor products, Kato [4] points out additional few key factors that have to be considered when setting the target sales price: the product concept, the characteristics of the anticipated consumers, the product life cycle, the expected sales quantity and competitors' strategies.

Once the sales price is set, the manufacturer must deduct their profit margins and determine the products' costs. Usual measure of the profitability is based on return on sales or profit margin [3]. In defining the required product profitability, the products' profit margin should be set large enough to ensure that company earns required profit. Finally, the difference between a products' market sales price and desired profitability represents the products' target cost.

After a products' target cost is defined, a cross-functional team is commissioned to design and to develop the product to meet all customers' expectations within the constraints of the products' allowable cost. Target costing focuses primarily on direct costs, but it also can be used to reduce indirect costs [3].

Target costing uses a variety of techniques and methodologies to manage product design and cost: Kaizen Costing, Time Based Management, Just in Time, Total Quality Management and Value Engineering concepts [1]. One of the primary techniques, Value Engineering, is utilized to identify the primary and secondary functions of a product [5]. In next step, the cross-functional team uses this information for the purpose of identification innovative means of maintaining and providing a function at reduced costs. In doing so, the analysis include comparative analyses of competitors products functionality, quality, costs, design and product innovations. Cost analysis of each function is used to take the value customers assign to each function and to allocate a products target cost to each function and component. Those functions that do not affect on the customers value are significant area for decreasing the products' costs. For example, the costs of a function may be reduced by finding alternative means for its implementation, while the cost of a

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component may be reduced either by using less expensive material and/or using fewer parts [5]. The cost of each product's function is defined from the estimated cost of the components that provide the function.

The cross-functional team task is to redesign a product until either its estimated costs is less than or equal to its target cost. Target cost is set for a new product which is in the phase of development, so the team for product development is motivated to attain the target cost before product is launched on the market. Target cost is based on the product's functionality, not on the proposed designed solution [6]. The cost of the product is considered to be an important strategic factor that should be decided by management, not the designers [7]. In circumstances where products' estimated costs exceed its target cost, the product is not developed further. Cooper and Slagmulder [3] indicate the cardinal rule of target costing which requires that only those products whose estimated costs is less than or equal to their target cost should be produced. Once a product enters production, a program of continuous improvement is used to reduce costs further and improve product quality [3].

Finally, target costing can best be described as a systematic process of cost management and profit planning, and the six key principles of target costing are [8]:

1) Price-led costing;
2) Focus on customers;
3) Focus on design;
4) Cross-functional involvement;
5) Value-chain involvement;
6) A life-cycle orientation.

On the basis of the above and according to Everaert [9], eight characteristics of target costing are as follows:

1) The target sales price is set during product planning, in a market-oriented way;
2) The target profit margin is determined during product planning, based on the strategic profit plan;
3) The target cost is set before new product development really starts based on either the subtraction or the addition method;
4) The target cost is subdivided into target costs for functions, subassemblies, cost items, designers or suppliers;
5) Target costing requires cross-functional co-operation;
6) Detailed cost information is provided to support cost reduction;
7) The cost level of the future product (drifting cost) is compared with its target cost at different points during new product development;
8) Establishing the general rule that "the target cost can never be exceeded".

Those characteristics of target costing indicated that target costing is a management tool for cost management and profit planning that is focused on customers and design of product according to customers' needs, price led and cross-functional.

Literature review on the use of target costing

Target costing has been widely adopted in Japan since it was first introduced at Toyota in the middle of the 1960s [10]. In the US and in Europe the target costing occurs at the beginning of the 1980s [1]. However, a literature review on the target costing reveals that target costing is very often associated with Japanese firms and most of the empirical research has mainly been performed by Japanese researches for the Japanese firms and context [4]. A number of case studies have been undertaken in leading Japanese manufacturers, such as Toyota, Nissan, Daihatsu, Sony, Olympus and other.

The most significant reasons cited for using target costing include cost reduction, improving product quality, achieving timely introduction of

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new products and improving communication [11; 12; 13].

Firms with the shared characteristics of intensive competition, extensive supply chains and long product development cycles best benefit from the target costing [8]. Dekker and Smidt [11] found that assembly firms in a competitive, unpredictable environment are more likely to use target costing. Hibbets et al. [14] found that firms with a strategy of product differentiation and strong competition were more likely to use target costing.

Research show that target costing is being used worldwide. Tani et al. [13] find 60,6% of Japanese manufacturing firms listed on the Tokyo Stock Exchange have adopted the target costing. Rattray et al. [15] investigated the application in the New Zealand' manufacturing firms and the results showed moderate use target costing (38,71%). A comparative study of the adoption and implementation of target costing in the UK, Australia and New Zealand indicates that the extent of adoption of target costing in all three countries is relatively low; 17,7% on average in the three countries [16]. Dekker and Smidt [11] conducted a detailed study of target costing in Dutch firms and revealed an adoption rate of 59,4% for listed manufacturing companies. Ansari et al. [17] point out that target costing is being increasingly adopted by a number of leading firms worldwide, in particular in East Asia (India and Malaysia).

Finally, target costing is mainly used in manufacturing companies and it becomes more appropriate when products are differentiated, characterized by high quality and with short life cycle.

Life cycle costing

Characteristics of life cycle costing

There are plenty definitions of life cycle costing but the basis is the same, life cycle of a product refers to the time from the initial idea for a product to the period in which service and support to customers is ended and during that whole period all the costs must be included.

Life cycle cost includes all dollars paid for a product during its useful life which means that it includes all dollar costs associated with the acquisition, use, maintenance, and disposal of a product. There are two basic components of life cycle cost: product life and product cost, and cost is divided into initial costs which includes all costs associated with the purchase of the product and operating costs such as energy, maintenance and service [18].

Life cycle model assumes that the life of a product starts when the idea for a product is born. After that, product is created and launched on the market and it experiences an upward path, reaches maturity and after a while it begins to show signs of exhaustion and age. Since the calculation of life cycle costs applies to a whole life cycle of a product it ensures a long term perspective, in such a way allowing a more comprehensive overview of product cost and profitability. In order to receive a comprehensive analysis of production costs and profitability, managers now look at costs both at the beginning of the process (before production) and at the end of the process (after production), they are not just focused on production costs [19].

Product life cycle costing is a methodology which is used for determining costs of product during its life cycle and its main purpose is to determine, analyze, forecast and manage all costs which occurs in that period [20].

Life cycle of a product is a period in which the product is developing, producing, designing, distributing, selling, consuming and exits from the market. During that period, costs which are committed are representing the life cycle costs,

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and in order for a product to be profitable, the total costs during its life cycle must be covered. Therefore, information about all the revenues and costs during the life cycle of a product in every phase must be known. All the costs are significant to assess profitability of a product, no matter if they were committed before producing the product, during the production or after producing the product [1].

Life cycle costing estimates and accumulates all the costs during the product life cycle in order to determine if the profits earned during the manufacturing phase will cover all the costs incurred, no matter if they are incurred before or after the manufacturing stage [21].

This method has been used first time in 1960 by the Department of Defence of the United States [20; 1]. After that, it starts to apply in other industries [1]. In that same year there is another concept, the LCCA (Life Cycle Costs Analysis), which is first applied by the government agencies as an instrument for improving the effectiveness of using the equipment. LCCA is mostly applied in early phases of a product life cycle in assessing the costs in the beginning since these costs are basis for assessment of total costs. Since 1980 there is Life Cycle Management which is management tool and helps management in decision making. Since 1990 there is accent on including environmental costs in life cycle concept connected with the sustainable development concept [1]. With life cycle costing, all the costs during the life cycle of a product are identified. It helps management to understand the cost consequences of developing and making a product and to identify in which areas costs could be reduced so that reduction effort is likely to be the most effective [21].

Phases of the product life cycle

According to different authors, phases in a product or service life cycle are divided in different ways, but the most common division is in four phases: introduction, growth, maturity and decline. There are four phases in the product life cycle which are: introduction, growth, maturity and decline [22; 23; 24]. Phases of the product life cycle are: the phase of introducing the product to the market, the growth phase, the phase of product maturity and the phase of product obsolescence [19]. Product life cycle is divided in three periods: the period of product development, the market period and the post-market period [1]. Product life cycle phases are: the planning and design stage, the manufacturing stage and the service and abandonment stage [21].

There are two different views of the product life cycle; one is sales life cycle which includes the time while the product is on the market (from the introducing the product to the market until the product exit from the market) and the other one is cost life cycle which provides information about all cost during the whole product life cycle [25].

The concept of cost life cycle includes all the costs associated with the research and development of a product, costs of designing and manufacturing the product, marketing and distribution costs of a product and customer service costs [25; 26]. When observing product life cycle in this view, life cycle of a product can be divided in three periods: the period of product development, the market period and the post-market period. The period of product development refers to the period from the initial idea for a product until the product is ready for placement to the market. After that period, starts market period which presents the period while the product is on the market (sales life cycle of a product). The post-market period consist of activities in the guarantee periods, return of the product,

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possibilities of recycling the product and other customer service activities [1].

When considering sales life cycle, product goes threw four phases: introduction, growth, maturity and decline. Below are these phases and characteristics of each of them with accent on costs occurred in each phase:

1) Introduction: in this phase accent is on high costs. There is greater spending of materials, and time to produce the product is longer. Marketing costs are also high since the large investment is needed to promote the product on the market [19]. It has been shown that most of the manufacturing cost of a product is already committed in production design, once a design is complete [27]. Promotion costs are high in order to present the product, encourage testing the product and to distribute it [24].

2) Growth: in this phase production is well established and cost per product is falling [19]. Promotion costs are on the same level or higher in order to maintain the market position and cost per product is falling due to the learning curve of manufacturer [24].

3) Maturity: company seeks the ways how to modify the product by adding new contents in the different areas (placement, promotion, distribution) to preserve the position of a product [19]. Advertising and promotional activities are more intensive and companies are investing in research and development in order to improve performance of a product and develop new product lines [24].

4) Decline: since the sales if falling, companies should try to reduce prices in order to remain profitable with the existing costs [19].

All the costs during the product life cycle must be identified for each phase separately in order to manage them and in that way produce a profitable product and achieve desired objectives.

Model of integrated application of target costing and life cycle costing

The need for integrating target costing and life-cycle costing

Target costing and life-cycle costing are two modern cost management methods designed in order to apply in contemporary business environment. Globalization process, technology development, changes in consumers' preferences, shortening product life cycle, consumers' re quests for more quality and more functional products are the most important characteristics of contemporary business environment which have significantly changed the way the companies operate. In order to secure the required level of profitability and rate of return for owners, management need more quality, accurate and timely based information from accounting function for business decision process. The most important information is those referred to costs and product profitability. In modern business environment management have a very little influence on market prices, so, in order to maintain and raise profitability, management is often more oriented on cost reduction rather than on revenue increase. Furthermore, management need information regarding the product profitability in order to make decisions about the development a new product, redesigning the current product or withdrawal a product from market. When evaluating product profitability, all costs associated with the product must be taken into account, not just production (or manufacturing) costs. Therefore, in modern business environment, traditional cost management methods (such as job order costing and process costing) are not appropriate since they evaluate product profitability only on the basis of production costs. Traditional cost

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management methods are useful for evaluation of product profitability in certain accounting period (annually), while modern cost management methods (life-cycle costing) evaluate product profitability through its whole life cycle considering all costs associated with a product through his life time from research and development to the withdrawal from market. Modern managerial (management) accounting literature recognizes several costing methods focused on the whole product life cycle. The most important methods are target costing and life-cycle costing [25]. These two methods enable a comprehensive analysis of product costs and profitability through the whole product life cycle [25]. Target costing emphasizes the role of product design in reducing costs in the manufacturing (production) and downstream phases of the product life cycle [25]. Life-cycle costing tracks and accumulates all costs attributable to the each product through its whole life cycle [28] enabling a complete evaluation of product profitability through its life cycle. These two methods should be integrated in order to provide quality and appropriate information base for decisions regarding the development of a new product, redesigning the current product, withdrawal the product from market and also for pricing policy. So in the sequel of this part of the paper, the model of integrated application of target costing and life-cycle costing is presented.

The implementation of model of integrated application of target costing and life-cycle costing

Target costing and life-cycle costing are modern cost management methods which are mutually linked and their integrated application can provide management of a company with quality, accurate and timely information regarding product profitability. The model of integrated application of target costing and life-cycle costing is based on the analysis of relevant secondary sources and its main purpose is to provide management with information regarding the product costs and product profitability in order to make a decision about the introduction a new product and redesign or withdraw the current product. The decision is based on the relationship between target cost of a product and life cycle cost of a product. The model is general, descriptive, focused on production companies (although it can be applied by service companies), referring to a single product (or type of product) and is suitable for companies which cannot influence on market prices. The main prerequisites of model application are (1) the appliance of activity based costing (ABC) which traces and predicts costs for all activities within the entire company and (2) the appliance of standard costing which is necessary for life cycle costing. ABC is necessary, because this method enables the determination and prediction of product costs according to activities in particular phase of a product's life time. Standard costing is important because it is a tool for cost prediction. In the model, target costing is used in the design phase of a product, due to the fact that approximately 80% of product costs are determined in that phase [25; 29]. Life-cycle costing is used to trace or predict product costs in every phase of its life time. Target costing is used to define the maximum allowable cost for a new product or redesign current product, while life-cycle costing is used to determine or predict the cost of a product taking into account all phases of its life time. If the target cost is above life-cycle cost, the product is worth making or redesigning and if the target cost is below life cycle cost, the product is not worth making or redesigning and should be withdrawn from the market [29]

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Relationship between target cost (tc) and life-cycle cost (lcc)	Decision
tc > lcc	Product is worth making or redesigning.
tc < lcc	Product is not worth making or redesigning. Product should be withdrawn from the market.

Table 1.: Decisions about making, redesigning or withdrawing the product from the market on the basis of target cost and life-cycle cost

Target cost is determining on the basis of market price and required profit or mark-up per product i.e. [30]:

Target cost (tc) =
Anticipated market price (mp) - Desired profit (p) (1)

This target cost include all cost associated with the product (manufacturing or production cost and other costs such as selling, administrative and customer service costs). Therefore, target cost can be divided on its main components:

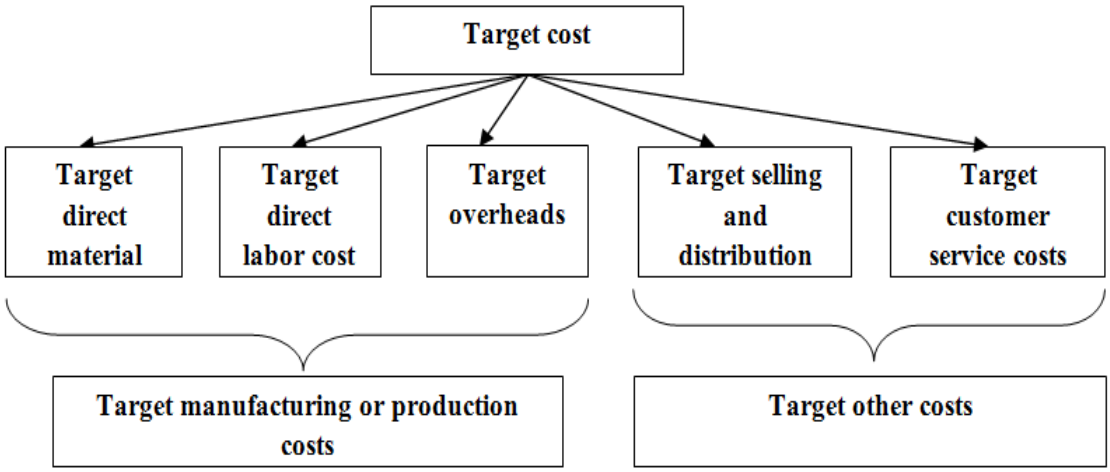

Figure 1.: Components of target cost

With ABC target overheads and target other costs can be divided according to identified activities within the production and nonproduction part of a company. This is especially important when target cost is below life-cycle cost and management of a company has decided to reduce life-cycle cost to the level of target cost.

Life cycle cost is a cumulative actual or standard cost from each phase of a products' life time. The concept of actual cost is used when management makes a decision about redesign or withdrawal of a product and the concept of standard cost is applied when management makes a decision about the introduction a new product to the market. For the purpose of the determination of life cycle cost, the product life time is divided into five following phases: (1) research and development, (2) design, (3) manufacturing or production, (4) marketing and distribution and (5) customer service [25]. In each case, ABC is needed for the determination of product costs in each phase of its life time. Since target costing is oriented on a design phase and life cycle costing refers to all products' life time phases, the model for integrated application of these two cost management methods can be presented as follows:

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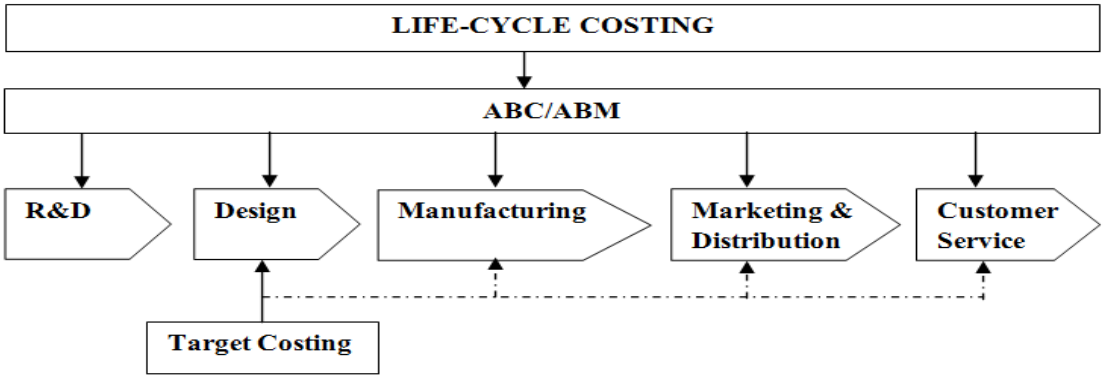

Figure 3.: Model of integrated application of target costing and life cycle costing

Target costing is focused primarily on design and in this activity the majority of other costs are determined and therefore locked in [28]. Once the product is designed, it is hard to change its basic features and reduce costs. Due to that, target costing has the strong influence on all costs in subsequent phases of a product's life time. Life cycle costing combined with ABC is focused on all activities associated with a product during its life. Target costing determines the target cost of a product which includes the target material cost, target labor cost, target indirect manufacturing cost (overheads), target sale and distribution cost. Target indirect manufacturing and nonmanufacturing costs can be determine according to activities and in such determination ABC has the key role. The comparison of actual or standard activity cost (determined by ABC) and target activity cost indicate whether the cost of activity is within the targeted level. ABC can be used in life-cycle costing as well. Since life-cycle costing considers all cost associated with products within the whole product life, this method requires the identification of all activities associated with product through its life and tracing cost according to identified product activities within the product life. ABC is a useful tool for identification of product activities and for tracing costs associated with certain product activity. Therefore ABC enables the more qualitative implementation of life-cycle costing.

The presented model can be used in order to make a decision about the implementation of a new product into the market and to redesign or withdrawal the current product. As long as the target cost of a product is above its actual or standard life cycle cost, the product is worth making or redesigning. In other case, product is not worth making or redesigning and should be withdrawn from the market.

Conclusion

Target costing and life cycle costing are two modern cost management methods which should be integrated and combined in order to provide management with quality, accurate and timely information regarding the costs and evaluation of product profitability. Target costing determines the target cost of a product based on anticipated market prices. Life cycle costing is focused on all costs associated with a product during the whole product life. The model presented in the paper shows the integrated application of target costing and life cycle costing. Model is suitable for companies which cannot influence on market prices of its products, but must adjust to current market prices and other market conditions. Target costing is method used in the design phase of a product's life time in order to determine the

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maximum allowable cost of a product. This phase is especially sensitive, because in this phase the majority of product's cost are determined and locked in. On the other hand, life cycle costing refers to all product's life time phases in order to determine the product's life cycle cost. Life cycle costing efficiently applied together with standard costing and activity based costing. The model of integrated application of target costing and life cycle costing should enable the more quality and accurate evaluation of product profitability and should also help management to make a decision about the implementation of a new product into the market, redesigning or withdrawal the current product from the market.

References

[1] Gulin, D. et al. (2011). Upravljačko računovodstvo, Hrvatska zajednica računovođa i financijskih djelatnika, ISBN: 978-953-277-056-8, Zagreb

[2] Sakurai, M. (1989). Target costing and how to use it. Journal of Cost Management, Vol. 3, No. 2, pp. 39-50, ISSN: 0899-5141

[3] Cooper, R. & Slagmulder, R. (1997). Target Costing and Value Engineering, Productivity Press, ISBN: 1563271729, Portland, Oregon

[4] Kato, Y. (1993). Target costing support systems: lessons from leading Japanese companies. Management Accounting Research, Vol. 4, No. 4, pp. 33-47, ISSN: 1044-5005

[5] Kee, R. (2010). The sufficiency of target costing for evaluating production-related decisions. International Journal of Production Economics, Vol. 126, No. 2, pp. 204-211, ISSN: 0925-5273

[6] Pennanen, A.; Ballard, G. & Haahtela, Y. (2011). Target costing and designing to targets in construction. Journal of Financial Management of Property and Construction, Vol. 16, No. 1, pp. 52-63, ISSN: 1366-4387

[7] Tanaka, T. (1993). Target costing at Toyota. Journal of Cost Management, Spring, pp. 4-11, ISSN: 0899-5141

[8] Swenson, D.; Ansari, S.; Bell, J. & Kim, I. (2003). Best practices in target costing. Management Accounting Quarterly, Vol. 4, No. 2, pp. 12-17, Available from: http://www.imanet.org/PDFs/Public/MAQ/2003_Q1/2003MAQ_winter_bestpractices.pdf Accessed: 2014-19-12

[9] Everaert, P.; Loosveld, S.; Van Acker, T.; Schollier, M. & Sarens, G. (2006). Characteristics of target costing: theoretical and field study perspectives. Qualitative Research in Accounting & Management, Vol. 3, No. 3, pp. 236-263, ISSN: 1176-6093

[10] McMann, P. J. & Nanni, A. J. (1995). Means versus ends: a review of the literature on Japanese management accounting. Management Accounting Research, Vol. 6, No. 4, pp. 313-346, ISSN: 1044-5005

[11] Dekker, H. & Smidt, P. (2003). A survey of the adoption and use of target costing in Dutch firms. International Journal of Production Economics, Vol. 84, No. 3, pp. 293-305, ISSN: 0925-5273

[12] Ellram, L. (2000). Purchasing and Supply Management's Participation in the Target Costing Process. Journal of Supply Chain Management, Vol. 36, No. 1, pp. 39-51, ISSN: 1745-4935

[13] Tani, T.; Okano, H.; Shimizu, N.; Iwabuchi, Y.; Fukuda, J. & Cooray, S. (1994). Target cost management in Japanese companies: current state of the art. Management Accounting Research, Vol. 5, No. 1, pp. 67-81, ISSN: 1044-5005

[14] Hibbets, A.; Albright, T. & Funk, W. (2003). The competitive environment and strategy of target costing implementers: evidence from the field. Journal of Managerial Issues, Vol. 15, No. 1, pp. 65-81, ISSN: 1045-3695

[15] Rattray, C. J.; Lord, B. V. & Shanahan, Y. P. (2007). Target costing in New Zealand

manufacturing firms. Pacific Accounting Review, Vol. 19, No. 1, pp. 68-83, ISSN: 0114-0582
[16] Yazdifar, H. & Askarany, D. (2012). A comparative study of the adoption and implementation of target costing in the UK, Australia and New Zealand. International Journal of Production Economics, Vol. 135, No. 1, pp. 382-392, ISSN: 0925-5273
[17] Ansari, S. L.; Bell, J. F. & Okano, H. (2007). A review of literature of target costing and cost management, In: Handbook of Management Accounting Research, Chapman, C. S.; Hopwood, A. G. & Shields, M. D. (Eds.), Vol. 2, Elseiver, Oxford, pp. 507-530, ISBN: 978-0-08-044754-4
[18] Hutton, R. B. & Wilkie, W. L. (1980). Life Cycle Cost: A New Form of Consumer Information. Journal of Consumer Research, Vol. 6, No. 4, pp. 349-360, ISSN: 0093-5301
[19] Ilić, B.; Milićević, V. & Cvetković, N. (2010). Strategic cost management and the product life cycle concept. Megatrend Review, Vol. 7, No. 1, pp. 193-207, ISSN: 1820-3159
[20] Bengü, H. & Kara, E. (2010). Product Life Cycle Costing Methodology. Banking and Finance Letters, Vol. 2, No. 3, pp. 325-333, ISSN: 1308-6588
[21] Drury, C. (2012). Management and Cost Accounting, Cengage Learning, ISBN: 978-1-4080-4180-2, United Kingdom
[22] de Kluyver, C. A. (1977). Innovation and Industrial Product Life Cycles. California Management Review, Vol. 20, No. 1, pp. 21-33, ISSN: 0008-1256
[23] Anderson, C. R. & Zeithaml, C. P. (1984). Stage of the Product Life Cycle, Business Strategy, and Business Performance. Academy of Management Journal, Vol. 27, No. 1, pp. 5-24, ISSN: 0001-4273
[24] Kotler, P. & Keller, K. L. (2008). Upravljanje marketingom, Mate d.o.o., ISBN: 0-13-145757-8, Zagreb
[25] Blocher, E. J.; Chen, K. H. & Cokins, G.; Lin, T. W. (2005). Cost Management - A Strategic Emphasis, McGraw Hill - Irwin, ISBN: 0072818360, New York
[26] Perčević, H. & Hladika, M. (2013). Application of the Modern Methods of Cost Management in Manufacturing Companies, Proceeding of XXVII International Scientific Conference microCAD 2013, Dobroka, M. (Ed.), pp 1-6, ISBN: 978-963-358-018-9, Miskolc, Hungary, March 2013, University of Miskolc, Miskolc
[27] Booth, R. (1994). Life-cycle costing. Management Accounting, Vol. 72, No. 6, pp. 10, ISSN: 00251682
[28] Horngren, C. T.; Datar, M. S.& Foster, G. (2003). Cost Accounting - A Managerial Emphasis, Prentice Hall, ISBN: 013179356X, New Jersey
[29] Garret, K. (2014). Target Costing and Lifecycle costing, Available from: http://www.accaglobal.com/uk/en/student/acca-qual-student-journey/qual-resource/acca-qualification/f5/technical-articles/target-lifestyle.html Accessed: 2014-12-18
[30] Perčević, H. & Hladika, M. (2013). Movement from Traditional to Modern Cost Accounting Methods in Manufacturing Companies, Proceedings of III International Conference on Luca Pacioli in Accounting History, III Balkans and Middle East Countries Conference on Accounting and Accounting History Vol. II, Guvemli, B. (Ed.), pp. 1239-1254, ISBN: 978-605-85912-1-9, Istanbul, Turkey, June 2013, Public Oversight, Accounting and Auditing Standards Authority, Ankara