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# BENCHMARKING AS A MEASURE OF COMPETITIVENESS IN NORTH MACEDONIA

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***Abstract:*** *Benchmarking is crucial in positioning companies on the market and achieving high financial results. Nowadays, processes, products, services and globally all segments of a business are subject to constant changes. Hence, keeping up with the activities and changes of competitors is of paramount importance. This work explores the benchmarking concept and its importance in keeping up with competition. Given the lack in existing literature, this paper contributes with an unswerving comprehension of benchmarking practices in North Macedonia, while providing foundation and directions for professionals. By using random sampling, we collect survey data from managers in North Macedonia and explore the openness to learning, implementation of changes and realistic goal setting of the subject entities. We conclude that most of the companies that took part in this research use benchmarking. Our empirical findings indicate that competitive benchmarking as well as realistic goal setting by identifying performance gaps are largely adopted practices in the Macedonian entities. We also establish that benchmarking is not a prerequisite for learning in the surveyed organizations. Nonetheless, the proportion of adopters is expected to increase as managers become more familiar with the concept of benchmarking and the benefits it can bring if applied correctly and consistently.*

***Keywords:*** *benchmarking, learning organizations, competitiveness, market positioning*

**JEL Classification:** M0, M1, O12

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# 1 Introduction

In today's highly competitive society, keeping up with the competition is a major challenge. All decisions made by managers in most cases are aimed at increasing the value of the company. One of the tools that aids companies in their market position is benchmarking. Through benchmarking companies become more competent and constantly improve their activities and processes. Benchmarking creates learning organizations, because they follow the best practices of the industry in which they work and find new ways to improve and advance themselves, or even go beyond competition (Shetty, 1993). Hence, organizations should refrain from copying and should model processes to fit their own organization's capacity.

Benchmarking can also play a key role in companies' finances and how companies compare with each other to increase profits.

Plenty of research has been done on this topic and the predominant conclusion is that the proper implementation of benchmarking can be beneficial for companies. Yet, a few researchers are of the opinion that the application of benchmarking needs to be considered carefully. It should not boil down to merely following the best in the industry as it may lead to imitating alien approaches without prior adjustments to fit one's own principles and environment, leading to a failure in the process. Therefore, in this paper we will try to present the benchmarking concept closely and we will do research on Macedonian companies and their application of benchmarking. The benchmarking concept, if applied correctly, can have a positive impact on the performance of companies in all aspects.

According to Talluri and Sarkis (2001) there is no generally accepted definition for benchmarking, i.e. the term has not been well defined yet. So, Krishnamoorthy and D'Lima (2014) say that benchmarking refers to understanding through comparative study and applying knowledge in upgrading processes, products and services. Benchmarking can be applied to any area in which we want to compare or improve by learning from others (Stapenhurst, 2009). With the help of benchmarking we discover our strengths and weaknesses and get directions on what to do next.

Boxwell (1994) points out that benchmarking is considered to be a method for improvement by making assessments and learning lessons from comparisons

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between companies. The research conducted by Griffith University and Meade (1994) suggests that benchmarking practice will not only provide comparative information on the past and present achievements of similar organizations. It will also provide information for improving practices, services and processes, and learning from the best. Accelerating the rate of progress and improvement will provide a focus not only on what has been achieved but also on how to achieve it. It will enable the adaptation of best practices and not just their acceptance, and yield results by setting precise goals.

The philosophy of benchmarking is the ability to recognize our shortcomings, to recognize that someone is better than us in some regard and to learn how to implement changes (APQC, 1996). Benchmarking is the first and foremost tool for improvement and is a way of moving away from the traditional (Bhutta and Huq, 1999). Hence, numerous companies take benchmarking as an important business model to improve organizational competitiveness (Fawcett, 2010). Sekhar (2010) posists that benchmarking is a great learning opportunity for those involved in the process as it stimulates their creativity. It affects the opportunities for quality change in organizations and the results of those changes become obvious. Companies face a constant pressure to be faster, better and have lower prices compared to competition so with the help of benchmarking they can foster innovation (Anand and Kodali, 2008).

Benchmarking has been a popular topic for the last two decades and its importance in the development of critical areas of business is undeniable. It can be said that it is like a management tool to achieve goals by learning best practices and understanding the processes by which they are achieved. Yet again, some researchers find that benchmarking is a waste of time. Sometimes this claim is made because the difference between a particular entity and the best in the industry is so great that they would regret initiating benchmarking in the first place (Stapenhurst, 2009).

Having in mind the aforementioned dissonance in research opinions, the subject of this research will be the benchmarking concept and its importance for market positioning and upkeep of organizational performance. With this article we seek to present the importance of applying the benchmarking concept and the benefits for the companies that follow the process. This will be achieved by collecting and analyzing data from existing literature as well as from Macedonian companies from different branches. We will examine how companies evaluate the factors that indicate the importance of benchmarking and whether companies practice financial benchmarking. To date, no research has been done regarding benchmarking in Macedonian companies which is a considerable gap to be filled.

The remainder of the paper is organized as follows. Following the Introduction in which the problem-meaning of the study is presented, we proceed with a literature overview where we provide a brief history of the concept, activities and steps for successful implementation of benchmarking, and the role of learning organizations. The third section defines our hypotheses and methodology, whereas section four focuses on descriptive presentation and analysis of the collected survey data. The last section wraps up the work by providing a brief discussion of findings, conclusion and recommendations.

## 2 Review of literature

A lot of research has been done on the benchmarking concept so that we can find many studies that are focused on this topic. Even though the research approach differs from one author to another, they settle that a distinguishable market positioning and competitive advantage necessitate application of the benchmarking concept.

### 2.1 A brief history of benchmarking

The concept of benchmarking first appeared in Japan. After World War II, Japan's industry was in dire straits as a number of factories were destroyed. The Japanese were eager to reconstruct the economy. They detected an opportunity for revival by visiting America and studying the processes of American companies in order to gather ideas that could be implemented in Japan. America did not see Japan as a threat, so they welcomed the Japanese inquisitiveness. So, with the industrial revival of the Japanese society, it became clear that progress could only happen if they started to make and apply change faster than others. It was necessary to be aware of the competition, the where's and how's in order to lead the game (Stapenhurst, 2009). The revival of the Japanese industry ignited close-downs of many businesses in the west.

According to Bhutta and Huq (1999), the official benchmarking process started with the company Xerox in 1972. Benchmarking certainly existed before

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Xerox, but nothing was officially defined and presented. Instead of succumbing to hardship, Xerox found a way to survive and to become known for starting a novel practice, i.e. benchmarking. They analyzed American companies and understood why their business could fail and came to the realization that they must react immediately. Xerox's plan was first to find the best in the field they wanted to ameliorate and then study the other company's approach. With that, the Xerox company officially laid the foundations of benchmarking.

Soon after that Kodak started applying benchmarking. When comparing the two companies, they have a different number of implementation steps, but they follow four core steps that can be further expanded and modified. And these steps are: plan, do, check and act.

## 2.2 Benchmarking steps

According to Pulat (1994) benchmarking is a circle in which the main stages are: plan, do, check and act. In the "planning" phase, the focus is on the initial decisions such as the decision on which organizational segments and processes should be exposed to benchmarking, which benchmarking type to follow and which company/companies will be our example. In the "do" phase we delve deeper into the process and embark on collecting and documenting the business practices of the company we follow is already beginning. The "check" phase refers to checking the data of the company that conducts the benchmarking process and the company that serves as an example and pinpointing the similarities and the differences. Finally, the "act" phase refers to initiating projects and eliminating differences by applying similar practices.

As per Bhutta and Huq (1999) the benchmarking process can take from 4 to 33 steps, but regardless of the number of steps, the goal is always the same - constant improvement and staying in line or ahead of the competition. Their literature review indicates that five steps are the same for all models:

- Step 1: Plan. Corporate leadership teams usually decide what will be subject to benchmarking, and some companies even have separate benchmarking teams. The organizational "critical success factors" indicate which processes or sectors will be encompassed by benchmarking. The organization aligns their benchmarking with the overall strategic plan.

- Step 2: Forming a Benchmarking Team. Team members should be provided with appropriate benchmarking training. The team makes a plan that consists of assigning roles and responsibilities to team members, projects and a realistic date for completing the tasks. It usually takes four to six months to complete the study. Once the team structure is formed, the process of defining the subject to benchmarking follows.
- Step 3: Identify Benchmarking Partners. The team identifies potential benchmarking partners as well as the companies that are recognized by the community as the best in a particular process. The selected entities are often competitors, but sometimes they may be part of the same industry without being direct competitors. Representative companies may be invited to participate in the study and agree on what information will be shared. Some companies will not want to participate, so it is important to outline the benefits. In general, sharing a benchmarking report provides a strong incentive to participate.
- Step 4: Collect and Analyze Information. This step is crucial to the benchmarking process. Not only is data collected but it is analyzed and converted into information that should be compared to one's own context. According to Camp (1989), data collection should lead to an understanding of performance best practice. Understanding the variations in the processes of different companies enables the improvement and identification of progress strategies.
- Step 5: Adjust and improve. The final step of benchmarking involves adjusting to best practices and implementing specific improvements. Adapting best practices should not be confused with copying best practices. Best practices from other companies need to be adapted to organizational culture, technology and human resources. Planning the next steps and setting goals are appropriate for this phase. Some changes will require a short period of time and few resources while others will be long term and necessitate substantial resource use.

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## 2.3 Activities for successful implementation of benchmarking

Benchmarking can be applied to any segment of an organization. This means that we can practice benchmarking in areas where we need to improve, learn and progress to the next level.

In order to implement benchmarking, organizational culture needs to be tackled first (Brah, Ong & Rao, 2000). According to Camp (1995) one of the most critical actions to take is the commitment of top management as well as their active and supportive role throughout the benchmarking process. In order for improvements and changes to be successful, both the leader and the staff must accept the changes, while the competition itself necessitates openness to new ideas and willingness to adapt. Another prerequisite to benchmarking as a process of comparing activities and processes between several stakeholders is to familiarize oneself with one's own processes and workflow in order to facilitate the recognition of learning opportunities (Brah, Ong & Rao, 2000). This can be achieved through improvement programs such as Total Quality Management (TQM) where organizations identify potential areas for improvement through benchmarking.

Finally, successful benchmarking requires a high level of employee involvement and participation as well as teamwork, while taking care of the company Credo (Tepavicharova, 2018). Everyone in the organization needs to understand the goals and benefits of the process and why it is important to the way the organization works. Employees need to be properly trained in the skills they need to be able to carry out the process properly.

Brah, Ong and Rao (2000) explored the benchmarking concept in Singapore. Their research confirms the significance of benchmarking. Their findings also indicate that employee participation and understanding is a key factor for successful benchmarking. As for companies that plan to embark on benchmarking, the findings indicate that they need to thoroughly study the benchmarking process in order to avoid unnecessary implementation hurdles. Benchmarking is a very useful process, which arose from the need for market survival when society was in crisis due to wars. Hence, in order to spur efficiency and competitive advantage several pitfalls should be avoided, ranging from poor alignment of benchmarking tools with company strategy, over-reliance on past evaluations and data, disregarding client satisfaction, and inadquate baseline used for comparison purposes often stemming from superficial selection of benchmarking partner entities (Tepavicharova, 2018).

### 2.4 Benchmarking and learning organizations

The existing literature offers different benchmarking classifications. According to Anand and Kodali (2008), benchmarking can be classified as internal and external, and all other classifications such as strategic, functional, and process benchmarking should be subsets of these two primary categories.

As previous research has indicated, benchmarking should not be just a copy of someone's work but the process itself should be beneficial to the organization and its knowledge acquisition. If the example of other organizations is followed and their work is merely copied, success is not guaranteed (Tepavicharova, 2018).

Those companies that do not use benchmarking may become overly optimistic about their position in relation to competitors. Knowing exactly their position will make it easier for them to make improvements. So the more we learn about our organization and understand our position, the easier we understand our internal and external needs. Realistic companies increase the ability to identify areas in which they need improvement and change and become companies with a competitive spirit.

In addition to understanding a company's market position relative to its competitors, benchmarking may be related to broader concepts of organizational learning, specifically "learning organization" (Tepavicharova, 2018; Senge, 2006). It is very important for organizations to apply the concept of learning because today's environment is inconstant and dynamic.

Predisposition to organizational learning indicates the abilities that can be identified and used within the organization to advance learning. In the literature it is described as organizational awareness of a portfolio of learning opportunities. The key for an organization is how it will adapt and how it will use the knowledge on its environment (Roth et al., 1994).

Voss, Åhlström and Blackmon (1997) also proved the positive relationship between benchmarking and "learning organizations". Their research indicates that learning organizations rely on benchmarking more than others. And, from that point of view, they point out that benchmarking is a great way to learn from the outside world. These authors detect an association between learning, benchmarking, understanding and performance. That is, learning-oriented organizations use the benchmarking concept more, performance is enhanced

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by benchmarking because challenging goals are set, the company recognizes its strengths and weaknesses better through benchmarking.

According to Goh and Richards (1997) learning organizations have the following characteristics:

- Clear mission and vision - the extent to which employees have a clear vision and mission of the organization and understand how they can contribute to their achievement and success.
- Leadership - the role of leaders in the organization in helping employees learn, challenge current practices, experiment and implement changes.
- Experimentation - the degree of freedom that employees have to look for new ways of doing and the freedom to take risks.
- Knowledge transfer - learning systems through which employees will be able to learn from each other, from past failures and from other organizations.
- Teamwork and group problem solving - problem solving through teamwork and creating new and innovative ideas.

In addition to learning from our competition and the external environment, learning within the organization itself is an important practice. According to Hyland and Beckett (2002), it is becoming increasingly apparent that organizations need internal learning to remain competitive. Successful organizational learning and knowledge management require internal processes to support and seek a vision that values learning and meaning. As per Kouzmin et al. (1999), comparative knowledge and information are the basic strategic resources of our era, so to access them through electronic networks is vital for overcoming obstacles and competitors. According to them, benchmarking changes that are a consequence of learning can facilitate learning and understanding for the introduction of organizational change. With the help of benchmarking, organizations are constantly improving in order to enlarge their business influence and to make better use of the technology available to them.

Benchmarking provides a good learning opportunity for those involved in the process and serves to stimulate their creativity. It can help organizations build self-confidence and motivate them to find new ways to surmount difficulties. Elmuti and Kathawala (1997) posit that internal benchmarking and the transfer of best practices is one of the best manifestations of knowledge management, the process of identifying and utilizing knowledge to help the company compete. Knowledge-sharing is also evidence of organizational learning, analyzing, and evolving based on past experience. With the learning process itself, managers will be able to leave their comfort zone, start applying new practices and thus improve management.

Nowadays, more and more consumers demand quality products and services. Therefore, the benchmarking process as a tool for learning and improvement should not be used only to achieve an occasional result, but to permanently improve processes and practices, increase profits and achieve long-term objectives.

# 3 Hypotheses and methodology

## 3.1 Research objectives and hypotheses

The main research goal is to determine the importance of the benchmarking concept to companies in North Macedonia, the degree of its implementation and whether they use the process of learning new things and improving processes and practices. We also seek to explore whether companies practice financial benchmarking for higher profits and to ultimately determine the importance of benchmarking factors. In order to achieve the goals of the study, the following hypotheses have been formulated:

**Hypothesis 1**

*H0: There is no significant association between the use of benchmarking and identification of performance gaps.*
*H1: There is a significant association between the use of benchmarking and identifying of performance gaps.*

Benchmarking identifies best practices that lead to superior performance. Oftentimes, working the way we are used to we do not have a clear picture of what we do wrong. But if we use benchmarking and compare the performance of our company with the performance of the company that we consider to be

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more successful than us and whose model we want to follow, we will detect our shortcomings and weaknesses (Sekhar, 2010). Benchmarking first presents the performance levels of our company and the company we are comparing, then identifies the difference in the performance of the two companies, in order to be able to present what is the most suitable path to succeed (Stapenhurst, 2009). According to Ajelabi and Tang (2010) benchmarking is not only a process of comparing performances, but also a process that reveals how those performances are achieved. Hence, the initial step towards performance comparison starts with an in-depth understanding of one‘s own metrics and processes thus setting the basis for external benchmarking (Bhattacharya and David, 2018).

**Hypothesis 2**

*H0: Benchmarking and process improvement are not significantly correlated.*
*H1: Benchmarking and process improvement are significantly correlated.*

The research of Ajelabi and Tang (2010) indicates that the process of improvement is divided into two parts: learning by working and learning before working. With the help of benchmarking, companies will be able to identify their strengths and weaknesses and will adapt to market needs, demands and conditions. In order to satisfy consumers in terms of quality and price for the products and services offered, organizations strive to set new goals and standards and improve the way they work to achieve their goal of making profits by satisfying consumers (Kozak, 2004). Ergo, benchmarking can promote process efficiency (Sekhar, 2010; Namu, 2006). Nowadays, technology is constantly changing through the process of globalization. Changes progress at a fast, even abrupt, pace. Therefore, businesses that strive to succeed need to adapt to new ways of working, producing and offering services.

**Hypothesis 3**

*H0: There is no significant correlation between benchmarking and understanding one’s competitive market positioning.*
*H1: There is a significant correlation between benchmarking and understanding one’s competitive market positioning.*

According to Elmuti and Kathawala (1997), a direct comparison against competitors for the purpose of determining the differences means that competitive benchmarking is performed. This type of benchmarking is used by companies that belong to the same industry, i.e. the same sector, that have similar or identical products, services or processes. Through this type of benchmarking, apart from the fact that the company can mitigate drawbacks if any are detected, it will be able to better define its position in the market compared to the competitors (Chakhmachyan & Zholzhanova, 2022; Khadzhynova & Khadzhynova, 2021). We need to know our market position so that we can form a good strategy and goals that will help achieve our strategic objectives. The market position is important because it can guide our operating activities for the purpose of attracting and retaining our customer base. In a nutshell, by knowing our position we will know where our focus should be and in which direction we need improvement. Not many things can change simultaneously, but we will know which areas are most critical and where to start (Stapenhurst, 2009).

**Hypothesis 4**

*H0: There is no link between benchmarking and organizations' learning orientation.*
*H1: There is a link between benchmarking and organizations' learning orientation.*

According to Voss, Ålhlström, and Blackmon (1997), in order to understand what practices are necessary to meet and exceed global standards, many organizations are beginning to apply benchmarking as a knowledge tool. Through benchmarking, organizations can learn in different ways. The learning process through benchmarking can consist of creating awareness about benchmarking, training employees on benchmarking projects, providing assistance in various areas of benchmarking, exploring data internally and externally, studying activities and much more (Zairi, 1996). Through the benchmarking process we learn more about our own organization from the example of others. More so, it is a continuous process that we need to apply constantly as it triggers change, going beyond measuring effectiveness (Tepavicharova, 2018; Gitonga, 2005).

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**Hypothesis 5**

*H0: There is no significant association between benchmarking and setting realistic goals.*
*H1: There is a significant association between benchmarking and setting realistic goals.*

According to Lankford (2002), goals are set as a result of interactions between stakeholders, taking into account objectives, policies, and performance. Often managers can set goals without being aware that they cannot be achieved. Moreover, some managers go for unambitious goals even though the improvements should be focused on best practices. All the goals of an organization lead to the realization of its mission and vision, and ultimately to the realization of profit. Businesses exist in order to meet the needs of their customers and produce earnings. To achieve this, organizations need to apply financial benchmarking to set realistic goals that are achievable and can grow value. Benchmarking has been associated with realistic goal-setting and improved productivity (National Manufacturing Council, 1993). Therefore, the advantage offered by financial benchmarking and the data we have at our disposal should be employed for profit maximization.

**Hypothesis 6**

*H0: Financial benchmarking and organizational financial performance are not significantly correlated.*
*H1: Financial benchmarking and organizational financial performance are significantly correlated.*

When benchmarking is mentioned, it is usually related to the exterior and making comparisons of external nature, but the internal benchmarking should not be neglected, especially the internal financial benchmarking. For this type of financial benchmarking, companies need to use their financial statements, calculate financial indicators and compare that data on to determine whether they are doing better or worse (Zhang, Koh & Ling, 2020). Losses can best be identified by comparing financial statements, and they can also be used to identify segments in which savings and higher profits can be made. According to Hasanaj and Kuqi (2019), financial analysis will provide information that will enable financial managers and analysts to make thorough and thoughtful decisions about their businesses. At the same time, external financial benchmarking is just as important as internal financial benchmarking. We often fail to detect problems in our operations and hence the need to compare our financial statements with the reports of our competitors or those who are the best in the industry. The financial statements bear the effects of past management decisions, which can serve as an example for us to make more profit (Helfert, 2001). According to Asllanaj (2008), the purpose of analyzing financial statements is to provide information on financial changes which are an important source for making managerial decisions. If we are unable to initiate changes on our own, comparisons against others and their financial result can have a positive impact on our profits when implemented properly. Analyzing enables us to determine the current financial state of affairs as well as the expected future trends for the organization (Hasanaj and Kuqi, 2019).

### 3.2 Methodology and data collection

In order to administer the field research, we formulated a questionnaire. The targeted respondents were managers of Macedonian companies in the manufacturing, service and trade sectors. Descriptive analysis was used to explain the data collected whereas the hypotheses were tested using Pearson's chi-square test.

The questionnaire was designed specifically to show the characteristics of the respondents and whether they use benchmarking in their organizations. The questionnaire consists of two parts whereby the first section addressed the respondents and the sector classification of their company. The second section addressed the use of benchmarking and its role in maximizing profits, improving performance, processes and practices, and creating learning organizations.

The questionnaire was tested a priori by two managers and, following their confirmation, it was delivered to the management of randomly selected entities from all three sectors accessed through the Central Registry of the Republic of North Macedonia. Managers were specifically targeted as they are in charge of initiating and running the benchmarking process.

The data collection phase was rolled out in December 2021. The questionnaire was distributed by hand, but also by mail in order to address and ensure a larger respondent group. The questionnaire was delivered to 80 randomly selected enterprises (one survey per entity) using the database of the Central Registry

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of the Republic of North Macedonia. 40 answers were collected, which leads to a response rate of 50%.

# 4 Research results

## 4.1 Descriptive analysis

The descriptive analysis of the data is shown in Table 1.

**Table 1:** Descriptive statistics of the categorical variables

| **Categorical variable** | | **n** | **%** | **Total n** |
|---|---|---|---|---|
| Sector distribution | Manufacturing | 12 | 30.0 | |
| | Services | 12 | 30.0 | |
| | Merchandising | 16 | 40.0 | 40.0 |
| Participant experience | 1-5 years | 12 | 30.0 | |
| | 5-10 years | 14 | 35.0 | |
| | > 10 years | 14 | 35.0 | 40.0 |
| Participant education | High school | 15 | 37.5 | |
| | Graduate | 19 | 47.5 | |
| | Master | 6 | 15.0 | 40.0 |
| Participant age | < 30 years | 16 | 40.0 | |
| | 30-40 | 12 | 30.0 | |
| | 40-50 | 3 | 7.5 | |
| | 50-60 | 8 | 20.0 | |
| | > 60 years | 1 | 2.5 | 40.0 |
| Benchmarking application | Yes | 27 | 67.5 | |
| | Undefned | 10 | 25.0 | |
| | No | 3 | 7.5 | 40.0 |
| Financial benchmarking | Yes | 19 | 47.5 | |
| | Undefined | 15 | 37.5 | |
| | No | 6 | 15.0 | 40.0 |
| Identifying performance gaps via benchmarking | Yes | 23 | 57.5 | |
| | Maybe | 17 | 42.5 | |
| | No | 0 | 0.0 | 40.0 |

| | | | | |
|---|---|---|---|---|
| Identifying market positioning via benchmarking | Yes<br>Maybe<br>No | 21<br>18<br>1 | 52.5<br>45.0<br>2.5 | 40.0 |

**Source:** Own calculation

Given the balanced sector distribution of the respondent pool (30 percent in manufacturing and services, 40 percent in merchandising), we can infer that benchmarking is accepted by the company majority (67.5 percent and 47.5 percent for financial benchmarking techniques). More so, our respondents have indicated that benchmarking has been useful for identifying performance gaps (57.5 percent), as well as for market positioning purposes (52.5 percent).

Table 2 provides descriptive statistics of the ordinal variables in our research.

**Table 2:** Descriptive statistics of the ordinal variables

| | **Min** | **Max** | **Mean** | **SD** | **Total n** |
|---|---|---|---|---|---|
| Learning from others allows you to improve processes | 3 | 5 | 4.65 | 0.66 | 40 |
| Company oriented towards acquiring new knowledge | 2 | 5 | 4.22 | 0.92 | 40 |
| Company sets realistic goals? | 2 | 5 | 4.13 | 0.97 | 40 |
| Financial benchmarking helps determine revenue and savings potential | 2 | 5 | 4.22 | 0.91 | 40 |
| Alignment of business vision and goals is important for success | 3 | 5 | 4.70 | 0.56 | 40 |
| Successful introduction of changes requires the support of top management | 3 | 5 | 4.53 | 0.64 | 40 |
| The ability to implement changes is important for success | 3 | 5 | 4.80 | 0.46 | 40 |

**Source:** Own calculation

Company's ability to implement changes is assessed as essential for success given the mean of 4.80 and the low standard deviation (SD = 0.46). The alignment of business vision and goals is also assessed as important for success

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(mean of 4.70), while realistic goal setting bears the lowest rating (mean of 4.13), indicating an area worth investigating and necessitating executive attention. This observation is further amplified by the standard deviation in the responses obtained seeing that the answers deviate the most from the mean value on this position.

Before proceeding with the hypotheses testing, we performed reliability checks of our Likert scale questionnaire using Cronbach alpha. Given the score of .809 we can state that the internal consistency is acceptable.

### 4.2 Research findings

We will now proceed with the presentation of the main research results. The main goal of the research is to find out if companies apply benchmarking. If they do, we seek to explore how benchmarking affects their operating performance and how financial benchmarking helps them set realistic goals and achieve savings. The hypotheses were tested using Chi-square (X2) test of independence.

Hypothesis 1 seeks to establish whether there is an association between the use of benchmarking and the identification of performance gaps. The test is presented in Table 3.

**Table 3:** Testing of Hypothesis 1

| | **Value** | **df** | **Asymp.Sig. (2-sided)** |
|---|---|---|---|
| Pearson Chi-Square | 14.356[a] | 2 | <.001 |
| Likelihood Ratio | 15.936 | 2 | <.001 |
| Linear-by-Linear Association | 13.258 | 1 | <.001 |
| N of Valid Cases | 40 | | |
| a.3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.28 | | | |

**Source:** Own calculation

Given that $\chi(2) = 14.356$, $p < 0.001$, we can conclude that there is a statistically significant association between the use of benchmarking and company ability to identify performance gaps.

Hypothesis 2 tests the correlation benchmarking and process improvement.

**Table 4:** Testing of Hypothesis 2

| | Value | df | Asymp.Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 9.136[a] | 4 | 0.058 |
| Likelihood Ratio | 8.606 | 4 | 0.072 |
| Linear-by-Linear Association | 8.006 | 1 | 0.005 |
| N of Valid Cases | 40 | | |
| a.7 cells (77.8%) have expected count less than 5. The minimum expected count is 0.30 | | | |

**Source:** Own calculation

Table 4 shows that $\chi(4) = 9.136$, $p = 0.058$, so we can conclude that there is no statistically significant association between the use of benchmarking and process improvement. Nonetheless, given that the p value is rather close to 0.05, it can be inferred that the relationship between these two variables is notable and that learning from others helps improve one's own processes.

Hypothesis 3 tests the correlation between benchmarking and understanding one's own market positioning versus competitors. The results are depicted in Table 5.

**Table 5:** Testing of Hypothesis 3

| | Value | df | Asymp.Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 22.741[a] | 4 | < 0.001 |
| Likelihood Ratio | 28.081 | 4 | < 0.001 |
| Linear-by-Linear Association | 16.875 | 1 | < 0.001 |
| N of Valid Cases | 40 | | |
| a.6 cells (66.7%) have expected count less than 5. The minimum expected count is 0.08 | | | |

**Source:** Own calculation

We can see that $\chi(4) = 22.741$, $p < 0.001$, which leads to the conclusion that there is a statistically significant relationship between the use of benchmarking and identifying company market positioning vis-à-vis competitors.

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Hypothesis 4 tests the relationship between benchmarking and the learning orientation of organizations. The results are shown in Table 6.

**Table 6:** Testing of Hypothesis 4

| | Value | df | Asymp.Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 8.953[a] | 6 | 0.198 |
| Likelihood Ratio | 8.693 | 6 | 0.192 |
| Linear-by-Linear Association | 4.379 | 1 | 0.036 |
| N of Valid Cases | 40 | | |
| a.9 cells (75.0%) have expected count less than 5. The minimum expected count is 0.15. | | | |

**Source:** Own calculation

Given that χ(6) = 8.953, p = 0.198, we can infer that there is no statistically significant association between the use of benchmarking and the learning orientation of organizations. That is, the willingness to acquire new knowledge is not correlated with the use of benchmarking tools.

Hypothesis 5 explores the correlation between benchmarking and the setting of realistic goals. Table 7 depicts the outcome.

**Table 7:** Testing of Hypothesis 5

| | Value | df | Asymp.Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 12.587[a] | 6 | 0.050 |
| Likelihood Ratio | 11.547 | 6 | 0.073 |
| Linear-by-Linear Association | 2.097 | 1 | 0.148 |
| N of Valid Cases | 40 | | |
| a.10 cells (83.3%) have expected count less than 5. The minimum expected count is 0.30. | | | |

**Source:** Own calculation

The association between the use of benchmarking and realistic goal setting is statistically significant whereby χ(6) = 12.587, p = 0.050. That is, companies using benchmarking go for more realistic goals. The cross tabulation of the two variables indicates that 15 out 40 companies use benchmarking and set realistic company targets.

Hypothesis 6 looks into the correlation between financial benchmarking and organizational financial performance. Table 8 presents the test results.

**Table 8:** Testing of Hypothesis 6

| | Value | df | Asymp.Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 10.775[a] | 6 | 0.096 |
| Likelihood Ratio | 11.342 | 6 | 0.078 |
| Linear-by-Linear Association | 6.242 | 1 | 0.012 |
| N of Valid Cases | 40 | | |
| a.9 cells (75.0%) have expected count less than 5. The minimum expected count is 0.15. | | | |

**Source:** Own calculation

As $\chi(6) = 10.775$, $p = 0.096$, we can infer that financial benchmarking is not significantly correlated with financial performance. That is, organizations do not necessarily rely on financial benchmarking upon determining their revenue and savings potential.

Lastly, the questionnaire contained an open-ended question where the surveyed managers were encouraged to provide their opinion about benchmarking. The respondents who apply benchmarking have a positive opinion about the process and the benefits, whereas all others point out that they are satisfied with the current work approach. Implementers believe that with the help of benchmarking they improve and keep up with the competition, achieve better planning and management, and follow the trends. They believe that benchmarking helps them improve their overall performance. Nonetheless, some managers perceive no need to apply benchmarking. Overall, Macedonian executives need to get better acquainted with the benchmarking process because it can be noticed that benchmarking is implemented in some segments, but it is not distinguished as a special tool or term in company practice.

## 5 Conclusions

Given the detercted dissonnace as to the usefulness of benchmarking in existing literature, as well as the lack of related research in Macedonian companies, our research aim was to explore the benchmarking concept and its importance in

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keeping up with competition. We focused on exploring benchmarking practices in North Macedonia, while seeking to devise directions for practitioners. We started by presenting the problem and the significance of the study. We then looked into the factors that drive the importance of benchmarking, as well as the ability of organizations to acquire knowledge and become "learning organizations" through the use of these tools. The main findings from the literature review are that benchmarking is important for organizations and if they apply it correctly they can reduce spending, improve processes, save time and keep up with the competition. That is, benchmarking is a tool that every business should apply in order to thrive in today's dynamic environment.

Numerous studies prove that managers use benchmarking to identify shortcomings in their operations and to improve processes. Comparison is needed to establish aspects in need of improvement (Ajelabi and Tang, 2010). By assessing the opinion of Macedonian managers, we can deduct that many can identify shortcomings in their work, but not how to improve their performance.

Furthermore, to understand one's own market position and find segments in need of improvement, entities need to analyze how they are positioned on the market vis-à-vis competitors (Stapenhurst, 2009). According to Chakhmachyan and Zholzhanova (2022), Khadzhynova and Khadzhynova (2021), and Elmuti and Kathawala (1997), if a direct comparison is made with the competition to see the differences, then competitive benchmarking is done, which becomes more and more important if businesses strive for long-term success. Our field research is in line with these authors given the testing of the market positioning hypothesis.

Voss, Åhlström and Blackmon (1997) argue that in order to understand what practices are necessary to reach global standards, many organizations start by applying benchmarking as a way of acquiring knowledge. Nonetheless, our study provided slightly different results as it did not establish a correlation between learning and benchmarking. That is, benchmarking is not necessarily a prerequisite for learning.

By setting realistic goals through comparisons and market research we become more aware of the environment, so the goals are set more realistically and mistakes are prevented. Benchmarking has been associated with realistic goal-setting (Lybrand & Confederation of British Industry. National Manufacturing

Council), which is also confirmed with our research results. Financial benchmarking guides organizations in setting realistic goals both in terms of the potential for revenue realization and in terms of cost reduction. Financial analysis provides information that enables financial managers and analysts to make considerate business decisions and to improve financial performance (Hasanaj & Kuqi, 2019). However, our research did not establish a significant correlation between financial benchmarking and financial performance of organizations. This can be explained by the fact that the financial benchmarking process is extensive, time-consuming, requires the formation of special teams and is not yet embedded in numerous companies.

Our results indicate that numerous companies are familiar with the benchmarking concept and that they apply these tools in some areas of their operations. But there are also companies that do not apply benchmarking. A key factor why managers do not use this concept would be a lack of knowledge regarding the benefits of using benchmarking in any field. Accordingly, it is recommended that executives familiarize themselves well with the benchmarking process, because if they do not know the process and its benefits well, they will not be able to convey it to their employees down the organizational structure. There should be a clear mission and vision, that is, employees should understand how they can contribute to the organizational goals (Goh & Richards, 1997). If benchmarking is applied correctly, it will have a positive impact on revenues, costs control, productivity increase, and time saving. Moreover, market research helps establish the current positioning of an organization. Benchmarking should be a continuous process that helps surpass the threshold reached by the competition, not just reach it (Shetty, 1993). Hence, organizations should refrain from copying and should model processes to fit their own organization's capacity.

Before generalizing the insights from our research, it should be noted that it has certain limitations. Firstly, the number of participants is limited, and studies with small number of participants may not be accurate. Secondly, there is a possibility that the questionnaire was not answered by the right person, that is, by a manager given the predominantly online distribution of the surveys. Lastly, if the questionnaire was not answered by the right respondents, the questions can be misinterpreted, which leads to bias in the answers.

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