

The Impact of Knowledge Management Processes on Business Processes as the Foundation of a Process-Based Organizational Structure

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Abstract

Within the modern business environment, the role of knowledge is becoming increasingly important, especially with the emergence and development of the knowledge economy, which has replaced the industrial economy. Thus, knowledge becomes a key resource on which a company's operations depend. By applying knowledge as a strategic resource, companies shape an appropriate organizational structure. The main objective of this paper is to determine the impact of knowledge management processes on the performance of business processes as the foundation of a process-oriented organizational structure in medium and large Bosnian-Herzegovinian (hereinafter B&H) companies operating in knowledge-based industries. To achieve this objective, a non-parametric Kruskal–Wallis test and multiple regression analysis were applied. The research results showed that knowledge management processes indeed affect the performance of business processes that form the foundation of a process-based organizational structure. The value of this paper lies in the fact that knowledge is increasingly being applied for practical purposes with the goal of improving business processes and, consequently, overall business performance.

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Introduction

The business environment came into focus in the second half of the 20th century with the emergence of globalization, technology, knowledge economy, hypercompetition, and demands for social responsibility. Changes occurring in the business environment began to have an increasingly strong impact on company operations. Many authors (Sardak & Movchanenko, 2018; Buble, 2006; Wong et al., 2014; Khalid et al., 2018) have confirmed the connection between company performance and the business environment, which is reflected in an interactive understanding of the relationship between the internal and external business environment. Any neglect of the influence of the business environment can have a negative impact on company operations. Companies can adapt more easily to the demands of the modern business environment if they possess an organizational structure that is not bureaucratic, inflexible, and burdened with multiple hierarchical levels of management and leadership. Research results show the prevalence of traditional, inflexible organizational structures in B&H companies (Halilčević, 2018).

To respond to the challenges of the modern business environment, there is an increasing demand for an organic design concept, which involves shaping a modern, flexible organization that can adapt to newly emerging conditions (Kesler & Kates, 2011; Galbraith, 2014).

One such flexible organizational structure is the process-oriented organizational structure, which, as the name suggests, is based on business processes. Business processes represent an organized group of related tasks and activities that enable the transformation of resources into

products/services, thereby creating value for customers.

Since the process-oriented organizational structure places strong emphasis on satisfying customer needs, it is considered one of the most suitable organizational structures capable of effectively responding to the challenges of the modern business environment. The modern business environment is characterized by the emergence and development of the knowledge economy, in which knowledge becomes the key strategic resource, that can be applied in companies through knowledge management processes.

There are studies that have investigated the interrelationship between knowledge management processes and business processes, proving that business processes can take place successfully through knowledge management processes (Paschek et al., (2018); Brajer-Marczak, (2016); Bitkowska, (2020); Tabares et al., (2016); Sobolewska, (2020); Martínez-Martínez et al., (2018); Bitkowska, (2016); Massingham & Holaibi, (2017); Chatterjee et al., (2020); Martín-Navarro et al., (2025); Berniak-Woźny & Szelagowski, (2024); Abuezhayeh et al., (2022)). Within this body of research, studies determining the impact of knowledge management processes on business processes stand out, demonstrating that knowledge management processes indeed affect business processes (Atkočiūnienė et al., (2023); Hegazy & Ghorab, (2014); Malewska et al. (2025)).

The research conducted in this paper is based on previous research and the study of the impact of knowledge management processes on business processes. The main objective of this research is to determine the impact of knowledge management processes on the performance of business processes

in medium-sized and large enterprises in Bosnia and Herzegovina whose activities are knowledge-based.

Cummings and Worley (2008) emphasize that a process-oriented organizational structure is most suitable for implementation within medium-sized or large enterprises operating in highly developed environments where customer demands and market conditions rapidly change. Based on this, medium-sized and large enterprises in Bosnia and Herzegovina whose activities are knowledge-based were selected as the core sample for this research.

To demonstrate the impact of knowledge management processes on business process performance, the non-parametric Kruskal–Wallis test and multiple regression analysis are applied. The significance of the research results lies in the fact that previous studies have focused more on determining the correlation between knowledge management processes and business processes, whereas the impact of knowledge management processes on business processes has been explored to a lesser extent. On the other hand, if it is proven that knowledge management processes have an impact on business process performance, the research results will also have a significant impact on business practice by demonstrating how business processes can be improved, both in enterprises in Bosnia and Herzegovina and beyond. In addition to the introduction, this paper contains a literature review that first describes the connection between the business environment and the process-oriented organizational structure, highlighting the similarities and differences between functional and process-oriented organizational structures, and presents business processes as the foundation of a process-oriented organizational structure characteristic of any

enterprise. Following this, the concept of knowledge management is explained, and knowledge management processes are described.

At the end of this section, previous research investigating the connection between knowledge management processes and business processes are presented.

The research methodology follows the literature review and includes the research subject and hypotheses. Furthermore, this section presents the research sample and the methods used for data collection and analysis. The research results are presented at the end of this section. Following the presentation of the research results, the paper highlights concluding remarks, research limitations, and recommendations for future research.

Literature Review

Business Environment and Process-Oriented Organizational Structure

The business environment has a significant impact on company operations, a fact that became especially evident in the 1960s; an era that marked the beginning of research into the business environment as a crucial factor in enterprise operations and performance within a dynamic market. There is a strong connection between company operations and the business environment, as confirmed by various authors. For instance, Sardak & Movchanenko (2018) define the business environment as a set of situational factors and actors characterized by different segments in which business takes place, forming the foundation for business development. Furthermore, Buble (2006) points out that new opportunities and threats for business are constantly created within the business

environment, making it necessary to systematically monitor business operations and environmental impacts, as to respond in a timely manner and according to the situation. Khalid et al. (2018) confirmed the connection between the business environment and enterprise operations in their study, emphasizing that the business environment should be the starting point for any study of company operations, given that the nature, condition, and circumstances of any business depend on its environment. Historically, it was believed that the internal business environment within an enterprise was the primary influence on its operations. However, a group of authors notes that a new, interactive understanding of the relationship between the internal and external business environment was established in the second half of the 20th century, driven by globalization, technological development, the emergence of the knowledge economy, hypercompetition, and demands for corporate social responsibility (Sundać et al., 2016).

On the other hand, Wong et al (2014) highlighted in their study that the nature of the business and the conditions of the business environment affect the overall performance of a given industry as well as the execution of business processes. To adapt to the modern business environment, enterprises must focus on improving business processes in accordance with the nature of their business and environmental conditions.

Consequently, an enterprise strives to improve business processes that focus on developing new

products and services, as well as new projects that generate added value with an emphasis on customer delivery. All of the above can be achieved through processes that cross the boundaries of traditional functional coordination laterally. While the functional structure or hierarchy is vertical, processes are lateral structures that range from informal and self-organizing processes to formal structuring, eventually formalizing into a process-oriented organizational structure.

The process-oriented organizational structure emerges as a result of addressing the weaknesses of the functional structure by breaking down "functional silos", i.e. the boundaries between functional organizational units (McCormack & Johnson, 2001), which becomes an imperative under conditions of high customer demands and radical advancements in information and communication technology. This structure finds its broadest application precisely in combination with the functional organizational structure, as the most prevalent organizational form. Unlike the functional organizational structure where sub-optimization often occurs due to an excessive focus on functions, the process approach centers on consumers by managing, measuring, and improving all processes within an enterprise. This is primarily achieved through cross-functional teams and employee empowerment (Vukšić, Hernaus & Kovačić, 2008). This group of authors provided a detailed overview of the similarities and differences between functional and process-oriented organizational structures.

Table 1*Similarities and differences between functional and process-oriented organizational structures*

Category	Functional Org. Structure	Process-oriented org. structure
ORGANIZATIONAL FOCUS		
<i>Main focus</i>	Business functions	Business processes
<i>Alignment with organizational goals and mission</i>	Misunderstanding of organization's mission and goals	Focus on organizational mission and goals
<i>Product</i>	Simple, standardized product	Flexible product adaptable to the customer
<i>Employee focus</i>	Employees functionally oriented towards satisfying superiors	Employees process-oriented towards satisfying customers
STRUCTURAL ELEMENTS		
<i>Basic organizational units</i>	Functions	Process teams
<i>Work tasks, jobs</i>	Precisely defined tasks and jobs	Broad and flexible tasks and jobs
<i>Management style</i>	Supervision (centralization)	Mentorship (decentralization)
<i>Key persona</i>	Department director (business functions)	Business process owner
<i>Organizational height</i>	Tall (hierarchy)	Flat
<i>Type of structure</i>	Bureaucratic	Organic
OPERATIONAL PROCESSES		
<i>Workflows</i>	Interrupted	Simplified/connected
<i>(Sub)optimization</i>	Suboptimization of operations due to optimization of individual functions	Process optimization even if it requires suboptimization of some functions
<i>Technology</i>	Specific	Flexible
<i>Responsibility determination</i>	Error subject	Error cause
<i>Purpose of control</i>	Error correction	Variation reduction
<i>Performance measurement</i>	Results	Results and processes
<i>Control implementation</i>	Post-control (after problem occurs)	Preventive control
<i>Resource allocation</i>	Competition	Shared resources
PEOPLE		
<i>Employee skills</i>	Individual and functional specialization	Skill integration (broad competencies)
<i>Reward system</i>	Based on functional contribution	Based on organizational contribution
<i>Flexibility</i>	No flexibility	Flexibility during changes
<i>Approach to people</i>	People management	People development
<i>Responsibility</i>	Narrow	Wide
COMMUNICATION		
<i>Direction</i>	Vertical	Horizontal
<i>Flow</i>	Barriers between departments	Boundaryless organization
<i>Most common form of communication</i>	Superior - subordinate	Supplier - customer
<i>Coordination between functions</i>	Functions do not cooperate	Cross-functional collaboration
<i>Speed</i>	Slow information flow	Fast information flow
<i>Job understanding</i>	Understanding only one's own function	Understanding connections with other functions
<i>Information distribution</i>	Information is not regularly shared between functions	Information of common interest is routinely shared between functions

Continuation of Table 1

Similarities and differences between functional and process-oriented organizational structures

Category	Functional Org. Structure	Process-oriented org. structure
CULTURE		
<i>Change</i>	Maintaining the status quo	Tendency to change
<i>Mindset</i>	Short-term thinking	Long-term thinking, providing support
<i>Culture type</i>	Individual culture	Teamwork

Source: Bosilj Vukšić, et al. (2008)

By comparing the functional organizational structure and the process-oriented organizational structure, it can simply be concluded that the process-oriented organizational structure is more adaptable to the modern business environment. These two organizational forms are analyzed through six categories: organizational focus, structural elements, operational processes, people, communication, and culture.

Based on the above, it can be concluded that through the process approach, the rigid vertical functional division within an organization is improved by a horizontal process-based organization. The shift toward flatter, more horizontal structures is necessary, given the conditions of the modern business environment where great importance is placed on customers. The process-oriented organizational structure is widely applied in organizations because it can serve as a complement to a functional or another type of organizational structure. It is also possible to apply process-oriented organization to all other types of organizational structures, as specific activities, i.e. business processes are carried out in every organization, forming the basis upon which a process-oriented organizational structure can be built.

Business Processes

Business processes form the foundation of a process-oriented organizational structure. A more modern approach to designing organizations within structural frameworks involves business process reengineering. A business process refers to an organized group of related tasks and activities that work together to transform inputs into outputs, creating value for customers (Hammer, 2002).

When identifying key business processes, it is essential to consider the complete process value chain, which begins with the innovation process, specifically, identifying customer needs and demands. In this regard, Porter's value chain can be useful, as it describes all business processes within an enterprise from customer needs analysis to product (or service) delivery. The chain of business processes that creates value for customers varies from enterprise to enterprise. Nevertheless, it is still possible to identify a generic value chain that can be adapted depending on the specifics of certain enterprises' business processes. Kaplan and Norton (1996) emphasize that there is a generic value chain consisting of three key business processes:

- Innovation process,

- Manufacturing process,
- Post-sale services.

The innovation process is based on market research aimed at determining existing and latent customer needs and requirements in order to create products and services that can satisfy those needs. To identify customer needs and requirements, the innovation process begins with identifying and researching new markets and new consumers, along with the possibility of determining the growing and latent needs of existing consumers. Market research, as the first phase of the innovation process, should enable the determination of market size and the characteristics of consumer needs, and provide specific information regarding the possible price of products and/or services. In accordance with the collected information about customer needs and demands, the creation and development of new products and services begins in order to satisfy the identified needs. Therefore, after the first phase of the innovation process, which involves market research, comes the next phase, which relates to the creation and development of new products and/or services to satisfy the identified customer needs. In this phase of the innovation process, the capabilities of existing technology to produce a new product are also examined, and efforts are made to introduce the new product and/or service to the market. In today's business environment, enterprises can achieve a competitive advantage based on the continuous development of innovative products and services, where the research and development process has become a more vital element of a business entity's value chain.

Following the innovation process is the manufacturing process, within which the production and distribution of products and services take place.

The modern business environment, characterized by increasing competition as well as the emergence of the Total Quality Management (TQM) concept, has influenced the shortening of production times. In such a business environment, enterprises that focus on reducing the duration of the production process are more likely to succeed, as this enables them to respond quickly to customer needs and requirements. Many customers highly value enterprises that manage to deliver products to customers within a short period from the moment an order is placed. In that case, the goal of every enterprise is to shorten the timeframe from the moment an order is received to the moment of product delivery, while ensuring reliable delivery within the promised timeframe.

The post-sale service process, as the third business process, includes activities related to providing post-sale services to customers, which encompass warranty periods, repair activities, handling product defects and returns of defective products, as well as payment-related activities. There are many customers for whom this aspect of a product is dominantly important, so an enterprise should pay special attention to these activities to gain a competitive advantage.

Although Porter's value chain is considered an older concept, it is still applied in both literature and practice (Porter, 1985). Thus, literature emphasizes the authors' view that the value chain is still considered useful and that every enterprise should re-examine its value chain, taking into account the opportunities offered by the application of modern information and internet technology. The application of these technologies can enhance the execution of both supporting as well as primary activities, thereby completely transforming an

enterprise's business model.

Knowledge Management

The concept of knowledge management appeared in the 1970s. Mathi (2004) points out that Nicholas Henry was the first to use the term "knowledge management" in 1974 in a manner similar to its current usage. Earlier, in 1964, Peter Drucker coined the term "knowledge worker," and in 1983, he stated that making knowledge work productive is the great management task of this century, just as making manual work productive was the great management task of the last century. Four years later, in 1987, the first book related to knowledge management was published in Europe by Sveiby & Lloyd, while in the United States, the first book was published three years later, in 1990 (Wiig, 1997).

Since then, numerous researchers have attempted to define knowledge management, resulting in a wide range of definitions. Below are some of the most notable ones:

Beckman (1997) considers knowledge management to be a formalized approach to experience, knowledge, and expertise that creates new capabilities, enables superior performance, encourages innovation, and increases customer value.

Sveiby (1997) defines knowledge management as the art of creating value from intangible assets. Davenport and Prusak (1998) confirmed that knowledge is used as a resource to create added

value, considering that knowledge management enables an organization to leverage its intangible assets to create value through improved business performances.

There are also authors who have established that knowledge management involves the application of appropriate processes.

Thus, Rastogi (2000) emphasizes that knowledge management is a systematic and integrative process of coordinating activities in the domain of acquiring, creating, storing, sharing, disseminating, developing, and using knowledge by individuals and groups to achieve major organizational goals.

Alavi and Leidner (2001) define knowledge management as a process involving distinct but interdependent processes for knowledge creation, storage/retrieval, transfer, and application.

Horwitch and Armacost (2002) defined knowledge management as the practice of creating, capturing, transferring, and accessing the right knowledge and information when needed, in order to make better decisions, take action, and deliver results to execute core business strategy.

There is a large number of authors who have conducted research on knowledge management processes. They have proposed various knowledge management processes within the organizational environment. Table 2 presents knowledge management processes according to different authors.

Table 2*Knowledge management processes*

Authors	Year	Knowledge management processes
Nonaka and Takeuchi	1995	Collection, codification and sharing
Davenport and Prusak	1998	Creation, codification, and transfer
Alavi and Leidner	2001	Collection, storage, research/searching, and transfer
Freeze and Robles	2005	Creation, codification, and transfer
Lee et al.	2005	Creation, accumulation, sharing, usage and internalization
Darroch	2005	Acquisition, sharing and responsibility
Park and Kim	2006	Acquisition and usage
Raghu and Vinze	2007	Storage, retrieval, sharing and synthesizing
King et al.	2008	Creation or acquisition; alignment (selection, filtering, purifying) and knowledge optimization for inclusion in various knowledge repositories
Pillania	2008	Creation, spreading and implementation
Sun	2010	Acquiring, creating, applying and sharing
Bahtijarević-Šiber	2014	Acquiring and creating knowledge, storing and preserving knowledge, transferring and sharing knowledge, using and applying knowledge

Source: Author's creation

Based on the presented knowledge management processes, we can identify the core knowledge management processes which intersect across various categories among other authors who have studied knowledge management processes. The core knowledge management processes are:

- Knowledge acquisition,
- Knowledge storage, transfer, and sharing,
- Knowledge application.

Since most authors view knowledge management as a set of processes used to create added value that meets customer needs, it can be concluded that added value cannot be achieved without business processes through which business activities are carried out; activities that are essential for creating that added value. This conclusion prompted the research to determine whether knowledge management processes indeed influence the creation of business processes used to execute strategies, achieve goals, and create added value for customers.

Thus, the knowledge management system begins with the process of knowledge acquisition, which depends on knowledge sources that can be internal (knowledge sources within the organization) and external (knowledge sources outside the organization). To successfully acquire new knowledge, these knowledge sources must continuously interact, with internal knowledge sources being constantly supplemented by acquiring necessary, updated knowledge from external sources. External knowledge sources include customers of the organization's products, services, and works, suppliers, business partners, competitors, and the broader environment. In addition to these, there is another source: the knowledge market, where knowledge can be purchased. New knowledge can be acquired by organizing, combining, and systematizing existing and newly received knowledge from both internal and external sources.

Following the process of knowledge acquisition, it is necessary to store and preserve that knowledge

in a way that allows for the smooth application of knowledge as a strategic resource. The main prerequisite for knowledge storage is knowledge codification, i.e. organizing and formatting knowledge in a unified manner and an understandable language that enables quick and simple access to knowledge for all employees in the organization.

The process of knowledge transfer and sharing involves moving and sharing knowledge from its sources and storage locations to knowledge users. This process is based on direct contact between users who are both recipients and carriers of the required knowledge. In addition to direct contact between individuals (instructor - audience), knowledge can also be transferred via information technology as well as literature containing the required knowledge. Managers play a crucial role in the process of knowledge transfer and sharing, as they must create and continuously develop an infrastructure that encourages and organizes knowledge transfer and sharing.

The processes of storage, transfer, and sharing of knowledge are followed by knowledge application, which represents the primary goal of the knowledge management process, as acquired, stored, and transferred knowledge only makes sense in its practical application. This process is not simple, because one must know how to use knowledge so that its application contributes to creating organizational structures adaptable to the modern business environment. In this case, it is necessary to extract information from knowledge that will have a significant impact on the successful execution of business activities, all with the aim of implementing business processes.

Therefore, knowledge management processes are key factors that determine the successful application of knowledge as a strategic resource used to shape an organizational structure adaptable to the modern business environment.

Overview of Previous Research

There are numerous studies that have examined the relationship between knowledge management and business processes. Presented below are the results of research which confirmed there is a significant connection between knowledge management processes and business processes.

Paschek et al., (2018) emphasize that in the era of digitalization, information has become the primary resource for business. The availability of mass data and cheap information has made knowledge and its utilization an essential activity for companies in the field of knowledge management (KM). They believe that this essential activity forms the foundation of a holistic approach to business process management (BPM), enabling business processes to be managed in the best possible way. The goal of knowledge management is to improve organizational capabilities as the foundation of business processes through better utilization of the organization's individual and collective knowledge resources. Therefore, it is necessary to interconnect business process management (BPM) and knowledge management (KM) to ensure competitiveness in times of rapidly changing baseline conditions and global competition.

Brajer-Marczak (2016) conducted research to determine whether elements of knowledge management improve business processes. She

found that the need to improve business processes currently stems, above all, from shifts in customer expectations and preferences, as well as competitive conditions that are changing faster than ever before. Regardless of the scope of changes taking place in process execution, their improvement requires knowledge resources that can be provided by a knowledge management system. Such integration makes it possible to achieve a synergetic effect by appropriately shaping knowledge resources, which, in turn, can translate into more efficiently implemented processes.

Business process management has a positive impact on knowledge management processes, concluded Bitkowska (2020), who considers that the identification, acquisition, presentation, and documentation of knowledge are not independent tasks, but are implemented within business processes with the goal of improving them. The implementation of knowledge management stimulates employee creativity and supports communication among employees, which significantly contributes to the better execution of business processes. Improved business processes build a process-oriented organization by using best practices and guidelines, thereby minimizing the risk of failure in projects aiming to improve organizational performance and implement knowledge management.

Tabares et al., (2016) propose a way to integrate knowledge management into business process management. Knowledge management is essential as a complement to the implementation of all steps defined in workflows to improve the consistency, coherence, and security of business processes, and subsequently enhance business process performances.

Networked organizations are established to perform specific tasks. Thus, Sobolewska (2020) conducted research finding that a networked organization can be formed by creating network collaboration, which is achieved through an organization's orientation toward both business processes and knowledge management.

Martinez-Martinez et al., (2018) conducted research examining the role of knowledge management as a tool for improving business processes in archaeological museums. The aim of this study was to investigate the importance of knowledge management as a process improvement tool in a context distinct from industrial organizations. An important implication of this paper is the presentation of a methodology for improving museum processes, focusing on reducing errors as well as increasing value for visitors.

Organizations in the modern business environment are placing increasing emphasis on knowledge acquisition, its proper sharing, and its application. Ever since the immense importance of the "knowledge-in-process" approach was recognized, it has become essential to develop systems that support the creation and application of knowledge within business processes. Based on this, Bitkowska (2016) conducted research covering knowledge management and business process management in modern organizations. She concluded that knowledge management in an organization is closely linked to business process management. Identifying, acquiring, presenting, and documenting knowledge are not independent tasks, but core components of economic processes. Therefore, the starting point for managing knowledge resources in an organization is understanding the processes occurring within it. Implementing a knowledge

management process model influences innovation development, stimulates staff creativity, and supports mutual communication, all of which contributes to the improvement of business processes.

Massingham & Moshary, (2017) conducted a study examining how knowledge management can be used to achieve business process improvements by embedding knowledge management within problematic processes. The paper identifies inefficiencies that can occur in workflow and knowledge flow, which are referred to as loss points. A conceptual knowledge management framework is then applied to determine why these loss points exist and how to find solutions. They concluded that knowledge management is embedded into business processes to eliminate loss points, enable the flow of knowledge, and improve workflow efficiency.

Because customer relationship management and artificial intelligence are gaining increasing importance in the modern business environment, Chatterjee et al., (2020) investigated the connection between customer relationship management (CRM) and artificial intelligence (AI) on one hand, and knowledge management (KM) and business processes on the other. The purpose of this paper was to identify the critical success factors for an AI-integrated CRM system aimed at better knowledge management in organizations in order to improve business processes. The study's results showed that top management support is crucial for the successful adoption of an AI-integrated CRM system for better knowledge management and business process improvement.

Martin-Navarro et al., (2025) explored the value of business process management systems (BPMS) for knowledge management from a user perspective.

This study aimed to evaluate the success of using BPMS as a knowledge management system (KMS) by assessing user satisfaction and perceived usefulness. The results confirm that service quality and the quality of information and knowledge significantly impact the use of BPMS as a KMS. This study contributes to new insights by clarifying the impact of service quality on system usage and revealing how this usage affects user satisfaction and the perceived usefulness of BPMS as a KMS. Furthermore, the paper advances theory by reversing the conventional causal order. Specifically, user satisfaction is positioned as a driver rather than a result of perceived usefulness, highlighting that positive user experiences shape perceptions of utility.

A study was also conducted to examine the role of knowledge transfer, knowledge integration, and business process modeling on the efficiency and effectiveness of business processes (Malewska et al., (2025)). The findings indicated that managers should pay attention to the effectiveness of implementing different stages of the knowledge management process, particularly knowledge transfer and integration, as they significantly affect business process efficiency by enabling better resource utilization, faster decision-making, continuous improvement, and adaptation to changing market conditions. Organizations should make greater use of business process modeling to enhance process effectiveness. The proper implementation of knowledge transfer and integration, combined with the use of business process modeling, affects the efficiency of business processes, and consequently, their overall effectiveness.

Berniak-Woźny & Szelągowski (2024) conducted research on business process management (BPM)

and knowledge management (KM) with the goal of identifying dominant themes and development trends within this domain. From a practical business perspective, this study serves as a valuable resource for managers and decision-makers, offering strategic guidelines on integrating BPM and KM within organizational contexts. The thematic research provides practical insights for organizations aiming to optimize the synergy between KM and BPM. Furthermore, this study allows practitioners to understand potential research challenges, limitations, and gaps in integrating business process management and knowledge management. Recognizing the essential interaction between technological advancements, theoretical frameworks, and practical tools becomes imperative for achieving synergy between knowledge and business processes in contemporary organizational settings.

The decision-making process can be improved through the application of knowledge management (KM) and business process management (BPM) activities. Accordingly, Abuezhayeh et al., (2022) conducted a case study within the construction industry in Jordan. A theoretical framework was developed and evaluated through a survey of decision-makers in the construction sector and interviews with experts. The results of this study show that the growing use of knowledge management and business process management, alongside their integration, can provide employees with task-related knowledge within business processes, enhance process performance, promote core competencies, and maximize and optimize business performance. This study provides a tool that enables enhanced decision-making through the application of knowledge and business processes. Most research to date has focused on establishing the mutual connection between business process

management and knowledge management, proving that business processes can run much better if knowledge is embedded into them and used to solve all problems that may arise during process execution. Such improved business processes can also build a successful process-oriented organizational structure. The connection between business process management and knowledge management can create network collaboration, through which a networked organizational structure can also be formed. Business processes can be improved through better knowledge management, which can be achieved by adopting a customer relationship management system integrated with artificial intelligence.

Among the literature exploring the link between business process management and knowledge management, three studies stand out for examining the impact of knowledge management processes on business processes.

Atkočiūnienė et al., (2023) investigated the impact of knowledge management on business processes from value-added creation and sustainability perspectives. The research results confirmed that every knowledge management process (KMP) positively affects individual business processes (BP), with knowledge creation having the most significant impact. The hypothesis that every knowledge management process (KMP) positively influences the value added (VA) created in an organization was partially confirmed, as knowledge sharing and creation had the strongest effect. The study showed that knowledge management processes (KMP) as a whole have a positive effect on business processes (BP), while changing (improving) business processes (BP) increases the value added (VA) created in organizations, with business processes (BP) acting as a mediator in the positive

correlation between knowledge management processes (KMP) and value added (VA). The effectiveness of individual knowledge management processes (KMPs) depends on the size of the organization. As a result, the study confirmed that knowledge management processes (KMP) in organizations cannot be carried out in isolation and must be integrated into business processes (BP) to maximize value added (VA).

In addition to the above, a study was conducted to investigate the impact of knowledge discovery, knowledge acquisition, knowledge sharing, and knowledge application on the effectiveness, efficiency, and innovativeness of business processes, as well as on employee learning, adaptability, and job satisfaction. Based on the reviewed literature and empirical research Hegazy & Ghorab (2014) concluded that knowledge sharing has the greatest impact on business processes and employee benefits. First, supporting knowledge sharing through a corporate portal is positively associated with business process innovation, as well as employee learning and adaptability. Second, supporting knowledge discovery is positively correlated with business process effectiveness, employee learning, adaptability, and job satisfaction, whereas knowledge acquisition is positively associated with business process efficiency, effectiveness, innovation, and employee learning. Finally, support for knowledge application showed the lowest positive correlation with business processes and employee outcomes.

In addition to the aforementioned literature, these three studies served as the foundation for conducting the research in this paper, aimed at determining whether knowledge management processes affect business processes and whether all

knowledge management processes affect business processes equally.

The theoretical contribution of this paper lies in linking two significant fields (knowledge management and business process management) that hold immense importance in the modern business environment. Since knowledge is considered a strategic resource that creates competitive advantage through the application of appropriate knowledge management processes, it is also viewed as the foundation that can serve to improve business processes. By improving business processes, an enterprise can survive in the modern business environment by creating a flexible, process-oriented organizational structure. Knowledge is an abstract concept that loses its meaning and significance without proper application. With the emergence and adoption of knowledge management processes, knowledge began to be utilized as a strategic resource. Knowledge management processes encompass knowledge acquisition, storage, transfer, sharing, and application. On the other hand, business processes comprise an organized group of tasks and activities that work together to transform inputs into outputs, thereby creating value for the customer.

Connecting these two areas, which were previously observed independently, creates a synergistic effect, wherein knowledge management is viewed as a complement to implementing all steps defined in workflows in order to improve the consistency, coherence, and security of business processes, subsequently enhancing business process performance.

Accordingly, knowledge management forms the

foundation of a holistic approach to business process management, enabling business processes to be executed in the best possible manner. The goal of knowledge management is to improve organizational capabilities as the foundation of business processes, through better utilization of the organization's individual and collective knowledge resources.

Thematic research provides practical insights for organizations aiming to optimize the synergy between knowledge management and business process management. This study offers practitioners the opportunity to understand potential research challenges, limitations, and gaps in integrating business process management and knowledge management. The contribution of interconnecting knowledge management and business process management is reflected in an increase in employee knowledge that can be applied to tasks within business processes, thereby improving business process performance, promoting core competencies, and ultimately optimizing overall business performance.

Furthermore, connecting knowledge with business processes significantly contributes to better decision-making.

Empirical Research Methodology

In today's business environment, which is characterized by frequent changes and an increasing number of competitors, enterprises can survive if they shape an organizational structure that can easily adapt to a changing business environment. Based on these characteristics, a process-oriented organizational structure, compared to a functional organizational structure as the most common one, is adaptable to the

modern business environment. Designing a process-oriented organizational structure depends on the implementation of key business processes, which include innovative, manufacturing, and post-sales business processes, as well as all activities taking place within these processes. Since knowledge is considered a strategic resource in enterprises operating in modern business environments, the research in this paper is based on proving the impact of knowledge management processes on the performance of business processes as key components of a process-oriented organizational structure.

To prove the impact of knowledge management processes on business processes, a central research hypothesis and two working hypotheses were formulated in this paper.

Central research hypothesis: "Knowledge management processes affect the performance of business processes."

First working hypothesis: "There is a statistically significant difference among enterprises in measuring business process performance depending on the application of knowledge management processes."

Second working hypothesis: "Knowledge management processes equally affect the performance of business processes."

To prove the impact of knowledge management processes and activities on business processes, appropriate statistical methods were applied: namely, the Kruskal-Wallis test as a non-parametric hypothesis testing technique, and multiple regression analysis.

The population in this research consists of medium

and large enterprises in Bosnia and Herzegovina belonging to knowledge-based economic activities. There are two reasons why large and medium enterprises in Bosnia and Herzegovina were selected for this study:

1. A larger number of employees.
2. A simpler process of designing a process-oriented organizational structure in large and medium enterprises, which consists of a higher number of business activities.

In accordance with the Law on Accounting and Auditing, enterprises were classified by size using the following criteria: the average value of business assets, total annual revenue, and the average number of employees. When determining knowledge-based economic activities, data from the Statistical Office of the European Communities (Eurostat) was used. Eurostat published Annex 3 - High-tech aggregation by NACE Rev. 2¹, in which it classified manufacturing industries according to their level of technological development. Within Annex 3 - High-tech aggregation by NACE Rev.2, Eurostat also defines knowledge-based service activities, as well as those service activities that are least knowledge-based, in a similar manner to manufacturing activities. The structure of the Classification of Economic Activities of Bosnia and Herzegovina KD 2010 by sector is fully aligned with the new version of NACE Rev. 2 (adapted from the EU NACE classification, chronology of development, and links between NACE Rev. 2 and

other classifications).

Thus, the total number of large and medium enterprises from knowledge-based manufacturing and service sectors in Bosnia and Herzegovina is presented in Table 3.

Table 3

Large and Medium-Sized Knowledge-Based Manufacturing and Service Enterprises in Bosnia and Herzegovina

No.	Type of Activity	Enterprises in Bosnia and Herzegovina
1	Manufacturing activities	523
2	Service activities	646
Total Number of Enterprises		1,169

Source: Authors

The total number of enterprises in this research is 1,169. Since the enterprises in the population are classified by type of activity, the research sample is formed accordingly, possessing all the characteristics of a stratified random sample.

The estimation of the sample size was carried out using the Raosoft calculator (www.raosoft.com/samplesize.html), which is used to estimate sample size. By applying the Raosoft calculator and entering the population value of 1,169 large and medium-sized B&H enterprises, the recommended sample size is 290 enterprises, with a 95% confidence level and a 5% margin of error. The stratified random sample is presented in Table 4.

¹ The abbreviation NACE (General Industrial Classification of Economic Activities within the European Communities) is an acronym used to designate various versions of statistical classifications of economic activities developed in the European Union since 1970. Since that period, NACE has undergone

several revisions: the revised version, called NACE Rev. 1, was established in 1990; a slightly updated version, NACE Rev. 1.1, was established in 2002; and the new NACE Rev. 2 was established in 2008 and remains in use today.

Table 4*Stratified random sample*

No.	Type of activity	Enterprises in Bosnia and Herzegovina
1	Manufacturing activities	130
2	Service activities	160
Total Number of Enterprises		290

Source: Authors

The total number of enterprises in the stratified sample is 290, consisting of 130 manufacturing enterprises and 160 service enterprises.

Conducting any research requires the collection of data, which is subsequently processed using appropriate methods. Accordingly, data collection within this research is carried out using a questionnaire as a research instrument. The questions in the questionnaire were designed based on previous research, from which relevant data and insights available in the literature are derived.

The questionnaire consists of three parts: the first part contains general information about the enterprise and the respondents, the second part contains questions related to knowledge management processes, and the third part consists of questions measuring business processes. Within the questionnaire, the questions were presented using a Likert scale with the aim of determining the respondents' level of agreement with specific statements. After designing the questionnaire, the reliability of the measuring instrument is determined to evaluate how well the selected variables and their component statements represent the intended concept (measuring instrument), whether they measure it at all in the

way the researcher believes they should, and whether a set of specific variables (a construct) can be considered a measuring instrument or a measurement scale. All of the above can be established by testing the reliability of the proposed measuring instrument.

The Cronbach's alpha coefficient represents, as previously mentioned, a measure of the internal consistency of a set of statements and can take values between 0 and 1; the closer this coefficient is to the value of 1, the more reliable the measurement scale is. The remainder of this section presents the reliability results of the measuring instrument used, which was determined by applying Cronbach's alpha coefficient to each domain, i.e., each sub-scale of the measuring instrument.

Table 5*Cronbach's Alpha Coefficient Values for Knowledge Management Processes and Business Processes*

No.	Section Title of the Questionnaire	Cronbach Alpha's value
1.	Knowledge Management Processes	
1.1.	Knowledge acquisition process	0.871
1.2.	Knowledge storage, transfer and sharing process	0.942
1.3.	Knowledge application process	0.942
2.	Business Processes	0.958

Source: Authors

Based on the reliability coefficient values (Cronbach's alpha coefficients) shown for all subscales within the measurement scales of knowledge management processes and business

processes which are integral parts of the questionnaire, it can be concluded that the questionnaire used for data collection represents a highly reliable measuring instrument.

After designing the questionnaire and establishing its reliability as a measuring instrument, the questionnaires were forwarded to large and medium-sized enterprises to be completed.

Out of a total of 290 enterprises that constituted the research sample, only 153 enterprises returned the completed questionnaires. Table 6 shows the number of enterprises that participated in the research relative to the total number of enterprises in the population and the stratified sample.

Table 6

Total number of enterprises that participated in the research relative to the population and stratified sample

No.	Type of Activity	Total Number of Enterprises		
		Population	Stratified Sample	Research Participants
1	Production Activities	523	130	55
2	Service Activities	646	160	98
Total		1,169	290	153
Representation of enterprises in the research		13.09	52.76	100.00

Source: Authors

Table 7

Basic characteristics of enterprises

No.	Basic characteristics of enterprises	Number and structure of enterprises	
		f	%
1	Type of enterprise activity		
1.1.	Manufacturing industry	55	35.95
1.2.	Information and communication	32	20.91
1.3.	Financial and insurance activities	19	12.42
1.4.	Professional, scientific and technical activities	41	26.80
1.5.	Administrative and support service activities	6	3.92
	TOTAL	153	100.00
2	Method of establishment and types of enterprise capital		
2.1.	Private/own capital	75	49.02
2.2.	Joint venture with a domestic partner	12	7.84
2.3.	Joint venture with a foreign partner	15	9.81
2.4.	State capital	11	7.19
2.5.	Foreign capital	40	26.14
	TOTAL	153	100.00
3	Years in operation		
3.1.	Less than 5 years	7	4.58
3.2.	5-10 years	24	15.69
3.3.	11-15 years	18	11.76
3.4.	16-20 years	20	13.07
3.5.	More than 20 years	84	54.90
	TOTAL	153	100.00

Continuation of Table 7*Basic characteristics of enterprises*

No.	Basic characteristics of enterprises	Number and structure of enterprises	
4	Market type		
4.1.	Domestic market	49	32.03
4.2.	Domestic and foreign market	86	56.21
4.3.	Foreign market	18	11.76
	TOTAL	153	100.00

Source: Authors

The total number of enterprises that participated in the research is 153. Relative to the total number of enterprises in the population, only 13.09% of enterprises participated in the research, whereas relative to the stratified sample, 52.76% of enterprises participated in the research.

Prior to applying statistical methods to test the established hypotheses, the basic characteristics of the enterprises and respondents were presented.

The basic characteristics of the enterprises are the type of activity, method of establishment, types of enterprise capital, length of existence of the enterprise, and market types. Table 7 presents the basic characteristics of the enterprises.

If we compare the number of production and service enterprises that participated in the research, it can be concluded that the majority of

enterprises belong to service activities (98 enterprises), while 55 enterprises belong to the knowledge-based manufacturing sector. The highest number of participating enterprises was founded using private capital and has been operating for a period between 5 and 20 years, indicating that these companies were established within the context of the modern business environment. Most enterprises operate in both domestic and foreign markets, in order to place their products, these companies need to follow modern business trends and innovate accordingly to meet the diverse needs of consumers in both markets.

Following the presentation of the basic characteristics of the enterprises, the basic characteristics of the respondents are also presented. Table 8 displays the basic characteristics of the respondents.

Table 8*Basic Characteristics of Respondents*

No.	Basic characteristics of respondents	Number and structure of respondents					
		Male		Female		Total	
		f	%	f	%	f	%
1	Gender and age of respondents						
1.1.	Up to 30 years old	15	14.56	8	16.00	23	15,03
1.2.	31-40 years old	52	50.49	24	48.00	76	49,68
1.3.	41-50 years old	27	26.21	15	30.00	42	27,45
1.4.	Over 50 years old	9	8.74	3	6.00	12	7,84
	TOTAL	103	100.00	50	100.00	153	100.00

Continuation of Table 8*Basic Characteristics of Respondents*

No.	Basic characteristics of respondents	Number and structure of respondents					
2	Gender and education level of respondents						
2.1.	Higher education	5	4.85	0	0.00	5	3,27
2.2.	University degree	64	62.14	27	54.00	91	59,48
2.3.	Master's degree	24	23.30	13	26.00	37	24,18
2.4.	Master of science	8	7.77	9	18.00	17	11,11
2.5.	Doctorate (Ph.D)	2	1.94	1	2.00	3	1,96
TOTAL		103	100.00	50	100.00	153	100.00
3.	Gender and position of respondents						
3.1.	Top management	52	50.49	18	36.00	70	45,75
3.2.	Middle management level	34	33.01	21	42.00	55	35,95
3.3.	Lower management level	6	5.82	4	8.00	10	6,54
3.4.	Non-managerial positions	11	10.68	7	14.00	18	11,76
TOTAL		103	100,00	50	100.00	153	100.00
4	Gender and length of work experience						
4.1.	Less than 5 years	9	8.74	4	8.00	13	8,50
4.2.	5-10 years	31	30.09	13	26.00	44	28,76
4.3.	11-15 years	23	22.33	12	24.00	35	22,87
4.4.	16-20 years	20	19.42	8	16.00	28	18,30
4.5.	Over 20 years	20	19.42	13	26.00	33	21,57
TOTAL		103	100,00	50	100.00	153	100.00

Source: Authors

The largest number of respondents (103 or 67.32%) are male, while a smaller number of respondents (50 or 32.68%) are female. The most numerous group of respondents consists of young to middle-aged people who hold a university degree, a master's degree, or a Master of Science degree. The largest number of respondents (135 or 88.24%) perform managerial positions at the top, middle, and lower levels of management. The smallest number of respondents (18 or 11.76%) perform non-managerial tasks. The majority of respondents (107 or 69.93%) have between 5 and 20 years of work experience, a smaller number (33 or 21.57%) have over 20 years of work experience, while the smallest number (13 or 8.50%) have less than 5 years of work experience.

The basic characteristics of the enterprises and the respondents show that the research was conducted

in companies operating in a modern business environment and that the respondents who participated in the study possess sufficient knowledge and expertise to provide objective answers to the questions posed.

Results and Discussion

In the modern business environment, the only organizations that can survive are those that emphasize the establishment and improvement of business processes which form the foundation of a process-based organizational structure. Key business processes can be established by applying knowledge as a strategic resource in knowledge-based enterprises.

To demonstrate the impact of knowledge management processes and activities on the

performance of key business processes, appropriate statistical methods were applied, specifically the Kruskal-Wallis test as a non-parametric hypothesis testing technique, and multiple regression analysis. The application of the Kruskal-Wallis test requires classifying companies into three groups ("possesses," "undecided," and "does not possess"). The group named "possesses" includes all companies that agreed or strongly agreed with the

majority of statements regarding the knowledge management process in the survey questionnaire. Companies that neither agreed nor disagreed with the majority of statements were classified into the group named "undecided." The group named "does not possess" includes all companies that disagreed or strongly disagreed with the majority of statements. Table 9 shows the companies categorized into these three groups.

Table 9

Classification of Companies by Group

Group Name	Knowledge management process					
	Knowledge Acquisition		Storage, Transfer and Sharing of Knowledge		Knowledge Application	
	f	%	f	%	f	%
Does not possess	13	8.50	11	7.19	6	3.92
Undecided	20	13.07	16	10.46	15	9.80
Possesses	120	78.43	126	82.35	132	86.27
TOTAL	153	100.00	153	100.00	153	100.00

Source: Authors

According to the data presented in the table, it can be concluded that the largest number of companies possess knowledge management processes, a significantly smaller number of companies have an undecided attitude toward knowledge management processes, while the smallest number of companies do not possess knowledge management processes. The primary objective of classifying companies into three groups is to determine whether there is a statistically significant difference in measuring business process performance among companies that possess, do not possess, or have an undecided attitude toward knowledge management processes.

Since the companies are classified into three ranks whose attitudes were measured using an ordinal measurement scale and originate from a population with an unknown distribution shape, the conditions for applying a non-parametric test are met, specifically the Kruskal-Wallis test, which serves as a non-parametric alternative to one-way analysis of variance. The results of applying the Kruskal-Wallis test, which demonstrates the existence of a statistically significant difference in measuring business process performance depending on the implementation of knowledge management processes, are presented in Table 10.

Table 10

Results of the Kruskal-Wallis Test for the Subscales of Knowledge Acquisition, Storage, Transfer, Knowledge Sharing, Knowledge Application, and Business Process Performance

No.	Knowledge Management Process		Indicators of the relationship between knowledge management process and business process performance			
			$\mu \pm \sigma$	K-W test	df	p
1	Knowledge Acquisition Process	Does not possess	86.00 $\pm$ 19.27	27.41	2	0.000
		Undecided	97.90 $\pm$ 18.72			
		Possesses	109.73 $\pm$ 15.59			
		Total	106.16 $\pm$ 17.81			
2	Knowledge Storage, Transfer, and Sharing Process	Does not possess	83.00 $\pm$ 27.07	20.20	2	0.000
		Undecided	100.13 $\pm$ 12.42			
		Possesses	108.95 $\pm$ 15.78			
		Total	106.16 $\pm$ 17.81			
3	Knowledge Application Process	Does not possess	83.17 $\pm$ 30.18	14.05	2	0.001
		Undecided	94.33 $\pm$ 19.97			
		Possesses	108.55 $\pm$ 15.64			
		Total	106.16 $\pm$ 17.81			

Source: Authors

Looking at the results presented in Table 10, it can be concluded that business process performance shows a statistically significant difference ($p=0.000$, $p=0.000$, $p=0.001$ where $p<0.05$) among companies that possess, do not possess, or are undecided regarding knowledge management processes. Accordingly, companies that possess the processes of knowledge acquisition, storage, transfer, and sharing, as well as knowledge application, achieve the highest overall rating scores (109.73, 108.95 and 108.55) related to business process performance. If companies hold an undecided attitude toward the processes of knowledge acquisition, storage, transfer, and sharing, as well as knowledge application, they have lower overall rating score values (97.90, 100.13 and 94.33). The lowest overall rating scores (86.00,

83.00 and 83.17) are found in companies that do not possess the processes of knowledge acquisition, storage, transfer, and sharing, or knowledge application.

Based on everything stated so far, it can clearly be concluded that there is a statistically significant difference in measuring business process performance among companies that possess, are undecided about, or do not possess knowledge management processes. Although the application of the non-parametric Kruskal-Wallis test showed that the processes of acquiring, storing, transferring, sharing, and applying knowledge contribute to improving business process performances, multiple regression analysis was also applied. Multiple regression analysis was conducted to determine

which of the knowledge management processes has the greatest impact on business process performance.

Thus, the regression model describes the impact of the knowledge management process on business process performance. Table 11 provides an overview of the significance of this regression model.

Table 11

Significance of the Regression Model of Knowledge Management Process and Business Process Performance

	R	R ²	F	df	p
Model	0.593	0.352	20.10	(4; 148)	0.000
Independent variables (predictors): Knowledge acquisition, Storage, Transfer and Sharing; Knowledge Application					
Dependent variable: Business process performances					

Note: R - correlation coefficient; R² - coefficient of determination

Source : Authors

The regression model representing the relationship between the knowledge management process and the business process performance subscale is statistically significant, as shown by the data presented in Table 11 ($F(4, 148)=20.10$, $p=0.000$, $p<0.001$). The representativeness of the regression model is proven by the value of the coefficient of determination (R^2), which shows that 35.20% of the variance in business process performance is explained by the joint impact of knowledge management processes as a set of independent (predictor) variables. Table 12 shows the values of the regression coefficients, based on which it can be determined whether the set of knowledge management processes actually impacts business process performances.

Table 12

Values of Regression Coefficients

Predictors	B	se (B)	β	t	p
Constant	36.96	7.81		4.73	0.000
Knowledge acquisition	0.19	0.27	0.09	0.70	0.484
Knowledge storage, transfer and sharing	0.09	0.15	0.07	0.59	0.558
Knowledge application	0.81	0.27	0.35	2.96	0.004
Independent variables (predictors): Knowledge acquisition; Knowledge Storage, Transfer and Sharing; Knowledge Application					
Dependent variable: Business process performances					

Note: B – unstandardized regression coefficient, se (B) - standard error of the unstandardized regression coefficients, β – standardized regression coefficients, t - t-statistic, p - p-value

Source: Authors

Based on the values of the regression coefficients shown in Table 12, it can be concluded that one subscale of the knowledge management process makes a unique and statistically significant contribution ($p<0.05$) to explaining business process performances. Specifically, the process of knowledge application has the largest statistically significant impact on business process performances, with the highest regression coefficient value ($\beta=0.35$; $p=0.004$, $p<0.05$). The other two knowledge management processes (knowledge acquisition and knowledge storage, transfer, and sharing) do not have a unique, statistically significant impact on the variation of business process performances, as shown by their regression coefficient values (knowledge acquisition: $\beta=0.09$; $p=0.484$, $p>0.05$; and knowledge storage, transfer, and sharing: $\beta=0.07$; $p=0.558$, $p>0.05$). Based on all of the above, it can be concluded that only the process of knowledge application has a statistically significant impact on

business process performances, whereas the processes of acquiring, storing, transferring, and sharing knowledge do not demonstrate a statistically significant impact.

Conclusion

In the modern business environment characterized by daily changes related to the emergence of globalization, technological development, the rise of the knowledge economy, hyper-competition, and demands for socially responsible business practices, the only enterprises that can survive are those who improve their business processes by applying knowledge as a strategic resource. One of the organizational structures based on business processes that can respond quite well to the demands of the business environment is the process-oriented organizational structure. Since this concerns a modern business environment in which knowledge becomes a strategic resource along with the adaptability of the organizational structure to environmental conditions, the research was conducted in large and medium-sized enterprises engaged in knowledge-based activities in Bosnia and Herzegovina. The data collected in the study show that the largest number of these enterprises were founded with domestic and foreign capital who have existed for over 20 years, and operate on both domestic and foreign markets. All these enterprise characteristics indicate that these are companies operating within a modern business environment and delivering their products/services to both domestic and foreign markets. Since a large number of enterprises market their products/services domestically and internationally, it can be concluded that these companies conduct research and development, generate innovation, and apply knowledge to produce products and provide services that meet the needs and desires of

customers in domestic and foreign markets. The key characteristics of the respondents show that the majority are male, young to middle-aged, and predominantly hold a university degree, a master's degree, or a Master of Science degree. The highest number of respondents perform managerial duties at top, middle, and lower management levels. In addition, the largest number of respondents have between 5 and 20 years of work experience. All these characteristics lead to the conclusion that the respondents possess sufficient knowledge, competence, and experience to provide accurate and objective answers to the questionnaire items. The main goal of the research is to determine whether knowledge management processes affect the performance of business processes that form the basis of a process-oriented organizational structure.

In order to prove the main goal of the research, a central research hypothesis was formulated: "Knowledge management processes affect the performances of business processes."

To prove the central research hypothesis, two working hypotheses were established:

The first working hypothesis states: "There is a statistically significant difference between enterprises in measuring the performance of business processes depending on the application of knowledge management processes."

This hypothesis was tested using the non-parametric Kruskal-Wallis test, which aimed to determine a statistically significant difference in measuring the performance of business processes among enterprises that possess, are undecided about, or do not possess knowledge management processes.

Based on the research results, it can be concluded that enterprises with established knowledge management processes have the highest average overall score regarding the measurement of business process performance. A lower average overall score for measuring business process performance is found in enterprises that are undecided regarding knowledge management processes. The lowest average overall score is held by enterprises that do not possess knowledge management processes. Therefore, the first working hypothesis is confirmed, as it was shown that companies with knowledge management processes measure business process performances to a greater extent.

The second working hypothesis reads: "Knowledge management processes equally affect business process performance."

This hypothesis was tested using multiple regression analysis which aimed to determine the individual impact of knowledge management processes on business process performances. Based on the processed data, it can be concluded that among all knowledge management processes, only the knowledge application process has a unique and statistically significant impact on business process performance. The other two processes, knowledge acquisition process and knowledge storage, transfer, and sharing process, do not have a statistically significant impact on business process performances. Therefore, the second working hypothesis was rejected, as it was established that knowledge management processes do not have an equal impact on business process performance.

However, an entirely new conclusion can be reached if the overall knowledge management process is considered as a whole, wherein the knowledge

application process cannot exist without the preceding processes of knowledge acquisition, as well as knowledge storage, transfer, and sharing. Based on this, knowledge management processes affect business process performances in such a way that the knowledge application process has a direct impact on business process performance, while the acquisition processes and the storage, transfer, and sharing processes have an indirect impact through the application process.

From everything stated so far, it can be concluded that the central research hypothesis has been confirmed, and that knowledge management processes affect business process performance in large and medium-sized enterprises in Bosnia and Herzegovina whose activities are knowledge-based.

During the conduct of this research, certain limitations emerged, including:

- The research did not include medium and large Bosnian and Herzegovinian enterprises engaged in other types of activities.
- Not all enterprises in the research sample answered the survey questionnaire, but only a portion of them.
- Only one employee in each enterprise (most of ten a manager) answered the survey questionnaire.

In addition to these limitations, there are recommendations for future research, which include:

- Observing manufacturing and service enterprises separately to determine which group places greater emphasis on knowledge management processes and their impact on business process performances.

- Determining which specific types of manufacturing and service activities apply knowledge management processes the most and what is their impact on business process performance.
- Conducting research in medium and large enterprises engaged in other types of activities to determine whether these enterprises use knowledge management processes and whether these processes impact business process performance.
- In addition to knowledge as a strategic resource, observing other organizational factors and their impact on business process performance to determine whether knowledge or other factors truly contribute to creating the business processes that form the basis of a process-oriented organizational structure.

The significance of this paper is reflected in finding ways in which enterprises can shape a process-based organizational structure founded on the application of business processes that are focused on creating added value for customers. Compared to other organizational structures, the process-based organizational structure is widely applied in organizations because it can serve as a supplement to a functional or some other organizational structure.

Based on the data presented in the paper, it can be concluded that enterprises possessing knowledge management processes also have better-developed business process performance compared to enterprises that are undecided or do not possess knowledge management processes. Enterprises that wish to improve business process performance in order to survive in the modern business

environment should introduce and develop knowledge management processes.

This paper provides a significant contribution in practical terms because it helps enterprises understand how they can survive in the modern business environment. Thus, enterprises focusing on the implementation and improvement of business processes should first work on applying knowledge management processes that contribute to the improvement of business processes. Knowledge as a strategic resource can only be applied through knowledge management processes, specifically the process of knowledge acquisition, the process of knowledge storage, transfer, and sharing, as well as the process of knowledge application. If knowledge management processes are not applied, knowledge remains an abstract concept that finds its role in theory but not in practice. The practical implications of this paper are reflected in the fact that knowledge is increasingly being applied for practical purposes with the aim of improving business processes and, consequently, the enterprise's overall business. Enterprises that do not apply knowledge management processes or have an undecided attitude toward knowledge management processes do not have developed business processes either; therefore, their success in the modern business environment is unfavorable. The process of knowledge application contributes the most to improving business process performance. Enterprises seeking to advance their operations and enhance business process performance should apply knowledge. In practical terms, the application of knowledge also depends on other knowledge management processes. Thus, knowledge cannot be applied if it is not acquired, stored, transferred, and shared. Therefore, enterprises must first work on knowledge

management processes related to knowledge this knowledge can be applied to improve business acquisition, storage, transfer, and sharing so that processes.

Data Availability: The data that support the findings of this study are available from the corresponding author upon reasonable request.

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Vpliv procesov upravljanja z znanjem na poslovne procese kot temelj procesno usmerjene organizacijske strukture

Izvleček

V sodobnem poslovnem okolju vloga znanja postaja vse pomembnejša, zlasti z nastankom in razvojem gospodarstva znanja, ki je nadomestilo gospodarstvo industrije. Zato znanje postaja ključni vir, od katerega je odvisno delovanje podjetja. Z uporabo znanja kot strateškega vira podjetja oblikujejo ustrezno organizacijsko strukturo. Glavni cilj tega članka je ugotoviti vpliv procesov upravljanja znanja na uspešnost poslovnih procesov kot temelja procesno usmerjene organizacijske strukture v srednjih in velikih podjetjih v Bosni in Hercegovini, ki delujejo v na znanju temelječih panogah. Za doseg tega cilja sta bila uporabljena neparametrični Kruskal–Wallisov test in analiza multiple regresije. Rezultati raziskave so pokazali, da procesi upravljanja znanja dejansko vplivajo na uspešnost poslovnih procesov, ki tvorijo temelj procesno usmerjene organizacijske strukture. Vrednost tega članka je v dejstvu, da se znanje vse bolj uporablja v praksi z namenom izboljšanja poslovnih procesov in posledično splošne poslovne uspešnosti.

Ključne besede: poslovno okolje, upravljanje z znanjem, procesno usmerjena organizacijska struktura