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Abstract of the doctoral dissertation titled:

Intellectual Capital of the Human Resources Function and Its Assessment Using a Fuzzy Model

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This doctoral dissertation is devoted to the issue of intellectual capital of the human resources function (IC HRF) in organizations. The work has a theoretical-empirical character and focuses on developing and verifying a model of intellectual capital of the human resources function (IC HRF) using fuzzy methods.

The research problem concerns the lack of a comprehensive methodology for evaluating the intellectual capital of the human resources function. In the existing discussion conducted in this area, there is a lack of an approach that would, firstly, define intellectual capital at the level of organizational functions and, secondly, consider both the configuration of the components of this capital and their mutual interactions.

The aim of the work is therefore to develop a model of IC HRF and its empirical verification. This model is intended to enable the evaluation of the human resources function through the prism of its intellectual capital and to capture the dynamic relationships between its elements. To achieve this goal, the author defines a series of partial objectives and research questions. The research model and research procedure are described.

The theoretical framework of the conducted research is built on resource-based view theory (RBV) and intellectual capital theory (ICbV). These theories assume that the results achieved by an organization depend on the ability to create, maintain, and configure intangible resources in three key areas: human, structural, and relational.

The selected theoretical approaches are embedded in the broader context of a praxeological approach, enriched with the concept of organizational equilibrium. In this view, the organization is treated as a dynamic system of tensions, compromises, and interdependencies between different logics of action, interests of organizational actors, and environmental conditions. The application of such a constructed theoretical framework allows for understanding the organization as a structure in which organizational functions do not operate in isolation. They are connected by a network of knowledge flows, mutual influences, and negotiations of meanings. The intellectual capital of the human resources function can therefore directly and indirectly influence the intellectual capital of other organizational areas as well as the entire organization.

The implementation of the research plan proceeds in several stages according to the established research plan:

- The first stage includes defining the concept of IC HRF and a systematic literature review aimed at identifying intangible values affecting the functioning of this function. The identification of these values is the starting point in the process of establishing the taxonomy of IC HRF.

- The second stage uses the Delphi method to identify the components of IC HRF and the relationships occurring between them. Based on the taxonomy of IC HRF defined in this way, a fuzzy model of IC HRF is constructed using the fuzzy cognitive map method (FCM). The correctness of the model is verified through comparative analysis of data obtained in the model with qualitative data acquired using the case study method.

- The third stage focuses on determining the impact of IC HRF on the organization's human capital and the results it achieves. For this purpose, indicator analysis based on data from documentation and financial reports of the studied enterprises was used.

The dissertation consists of six chapters:

Chapter one presents the concept of intellectual capital as a key source of value creation and competitive advantage for organizations. The discussion emphasizes the strategic importance of IC and its dynamic and contextual character. The evolution of IC research is discussed from early theoretical frameworks, through the development of measurement concepts, to contemporary approaches integrating IC with the sustainable development agenda and technological transformation. Particular attention is paid to the issue of IC measurement and the usefulness of fuzzy methods, which allow capturing relationships between elements of

intangible resources. This constitutes the starting point for further analyses concerning the evaluation of IC HRF.

Chapter two discusses the concept of the human resources function, defining it as a complex set of elements including structure, processes, practices, roles, and effects of actions related to people. It is emphasized that HRF is implemented regardless of the adopted organizational model, engaging managers, management, HRF professionals, and employees themselves. Attention is drawn to the growing complexity of HRF and the strategic dimension of this area in terms of the resource-based approach, emphasizing its role in shaping human capital and linking actions with organizational goals. The limitations of traditional, indicator-based methods of measuring HRF and the need to consider intangible values in the measurement and evaluation process are also indicated.

Chapter three focuses on the configuration of IC elements, indicating that treating it as a uniform organizational resource constitutes a simplification. The author argues that individual IC elements can be assigned to specific functions, including HRF. Based on a systematic literature review, 22 subcategories of intangible resources of HRF were identified, assigned to human, structural, and relational capital. Comparative analysis confirmed their consistency with existing taxonomies of organizational IC, strengthening the validity of the adopted approach. The chapter concludes with the author's definition of IC HRF.

Chapter four presents the research model, objectives, research questions, and applied research methods: the Delphi method, fuzzy cognitive map (Fuzzy Cognitive Map - FCM), and case study. Each method is discussed in terms of their theoretical foundations, research tools, and manner of use in achieving the objectives of the conducted research. Different variants of the Delphi method for academic experts and practitioners are described. The process of building the IC HRF model and the organization of the case study, including the selection of organizations, interviews, document analysis, and questionnaires, are presented. The importance of methodological rigor and triangulation of methods and data sources is emphasized, which increases the credibility and interpretive value of the results.

Chapter five presents the stages of building the fuzzy IC HRF model based on FCM. The process of identifying the taxonomy of IC HRF, relationships between its elements, and determining the strength and direction of their interactions is described. Relationship weights were determined using the fuzzy logic control method (Fuzzy Logic Control - FLC). Finally, the chapter presents the conceptual IC HRF model in the form of a network of elements and

connections, ready to be supplied with empirical data. Additionally, the data collection procedure (survey) is described, which enables the application of the model in practice.

Chapter six contains the results of the case study and verification of the designed model. The characteristics of HRF and IC HRF model results were compared with qualitative data obtained in the studied organizations, which confirmed the correctness of the concept and its analytical-diagnostic value. The case study also revealed the influence of organizational context (culture, life cycle, socio-political environment) on the shape of IC HRF. The conducted research also demonstrated a positive relationship between the level of IC HRF and the organization's human capital and the results it achieves.

In the summary, the author organizes the answers to the research questions obtained during the conducted research and confirms the realization of the adopted research objectives. Based on the obtained results, implications for science and economic practice are defined. An important element of this part of the dissertation are the indicated limitations of the conducted considerations and the resulting further research directions:

- Extension of research on intellectual capital to other organizational functions
- Deepening quantitative-qualitative research in the scope of identification and measurement of relationships between components of intellectual capital
- Replacement of expert methods with empirical techniques such as structural modeling or network analysis
- Extension of the research scope to organizations from other economic sectors
- Further exploration of the possibilities of using fuzzy cognitive maps in intellectual capital research
- Detailing the fuzzy model with the possibility of evaluating the value of individual IC components

The result of the conducted research is the author's definition of intellectual capital of the human resources function and an empirically verified fuzzy model of intellectual capital of the human resources function. This model presents a new original way of evaluating the human resource's function based on assessing its intellectual capital using fuzzy methods. This approach allows not only for the identification of resources of the studied function, but also for the assessment of its development potential and capturing dynamic relationships between elements of its intellectual capital.