

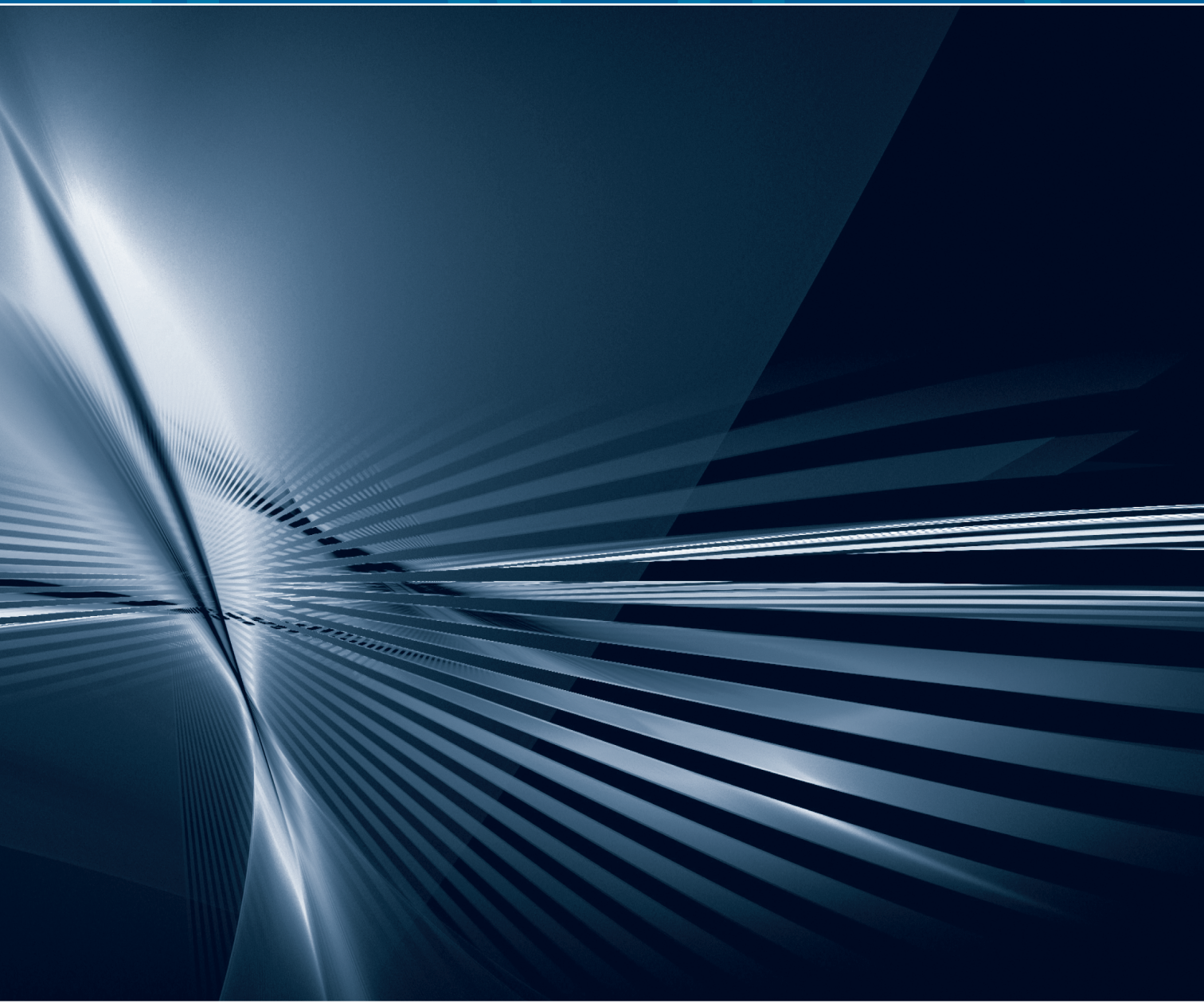
ORGANIZACIJA

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ORGANIZACIJA

Organizacija (Journal of Management, Informatics and Human Resources) is an interdisciplinary peer-reviewed journal which is open to contributions of high quality, from any perspective relevant to the organizational phenomena.

The journal is designed to encourage interest in all matters relating to organizational sciences and is intended to appeal to both the academic and professional community. In particular, journal publishes original articles that advance the empirical, theoretical, and methodological understanding of the theories and concepts of management and organization. The journal welcomes contributions from other scientific disciplines that encourage new conceptualizations in organizational theory and management practice.

We welcome different perspectives of analysis, including the organizations of various sizes and from various branches, units that constitute organizations, and the networks in which organizations are embedded.

Topics are drawn, but not limited to the following areas:

- organizational theory, management, development, and organizational behaviour;
- human resources management (such as organization & employee development, leadership, value creation through HRM, workplace phenomena etc.);
- managerial and entrepreneurial aspects of education;
- business information systems (such as digital business, decision support systems, business analytics etc.);
- enterprise engineering (e.g., organizational design, business process management, enterprise transformation paradigms etc.);
- papers that analyse and seek to improve organizational performance.

Organizacija (Revija za management, informatiko in človeške vire) je interdisciplinarna recenzirana revija, ki objavlja visoko kakovostne prispevke z vseh vidikov, ki so pomembni za organizacijske procese in strukture.

Revija je zasnovana tako, da spodbuja zanimanje za različne vidike v zvezi z organizacijskimi vedami in je namenjena tako akademski kot strokovni skupnosti. Revija objavlja izvirne članke, ki spodbujajo empirično, teoretično in metodološko razumevanje teorij in konceptov managementa in organizacije. Pozdravljamo tudi prispevke iz drugih znanstvenih disciplin, ki spodbujajo nove koncepte v organizacijski teoriji in praksi. Objavljamo članke, ki analizirajo organiziranost z različnih vidikov, so usmerjeni na organizacije različnih velikosti in iz različnih sektorjev, na enote, ki sestavljajo organizacije, in na mreže, v katere so organizacije vpete.

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- organizacijska teorija, upravljanje, razvoj in organizacijsko vedenje;
- management človeških virov (kot so organizacija in razvoj zaposlenih, vodenje, ustvarjanje vrednosti s pomočjo človeških virov, organizacijski pojavi na delovnem mestu itd.);
- vodstveni in podjetniški vidiki izobraževanja;
- poslovni informacijski sistemi (kot so digitalno poslovanje, sistemi za podporo odločanju, poslovna analitika itd.);
- podjetniški inženiring (npr. organizacijsko oblikovanje, upravljanje poslovnih procesov, paradigme preoblikovanja podjetij itd.);
- članki, ki analizirajo organizacijsko uspešnost in prizadevanja za izboljšanje le-te.

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Employee's Competence Profile for Adaptive Organization Management

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Background and purpose: Employees with their knowledge, skills and values are a connecting link between the deep organizational transformations and new technologies. In this regard, the human resource management system needs new approaches and tools for the diagnostics, training and personnel development based on the synchronization of the organization and the employee's values. The study aim is to develop a comprehensive methodology for building an employee's soft skills profile in order to form personalized educational trajectory and an adaptive management system creation.

Methodology: An approach to the soft skills profile's formation through broadcasting of the description of personality's behavioral indicators into actual supra-professional competencies is considered. Modeling and automation of the employee profile's soft skills was carried out. Statistical observation and empirical confirmation were used to evaluate the developed methodology. 115 respondents from different fields of science and technology from Reshetnev University took part in the diagnostic.

Results: The results show that the proposed complex automated personality diagnostics is valid. And it allows you to visualize the soft skills profile, determine the level of competencies' expression and identify the directions of the employee's individual development.

Conclusion: The study offers a comprehensive integrated methodology which allows you to assess the formation level of representatives' soft skills of various fields of activity. This development can be used both in the educational environment to form an education ecosystem in accordance with the requirements of the innovative economy development and in the enterprise management system to increase the production potential of both employees themselves and enterprises.

Keywords: *Soft skills; Employee competency profile, Education and development, Human resource management*

1 Introduction

Today, the economy is undergoing a digital transformation. It is a revolutionary process of transforming an organization's business model, not only by using digital

technologies, but also by introducing fundamental organizational changes in technology, culture, operations and the new products' principles creating.

The connecting link between the integration of deep organizational transformations and new technologies are

people - employees with their knowledge, skills and values (Boutetière et al., 2018). The key barriers to digital transformation are, first of all, a lack of qualified personnel, competencies and knowledge, as well as internal resistance in organizations (Harvard business review, 2017). On the one hand, it can be explained by the employees's concern about the possible job losses due to the automation of up to 50% of work processes by 2055 (Manyika et al., 2017). On the other hand, there is a staff involvement's low level. According to an ADP Research Institute study, only about 16 percent of employees are fully engaged (Hayes et al., 2019). To ensure a high level of employee engagement, it is necessary to develop a corporate culture, instilling the organization's value system in the employee through the areas of common interest with his values (Peček & Ovsenik, 2018).

Organizations are created by people with their value system's investment in the structure being created. An employee who comes to an organization at a certain life cycle stage doesn't realize what is happening. He also doesn't know what happened. He has no idea what will happen. There is a desynchronization of the employees and the organization values. According to this, it is necessary to find contact's points between the employee and the organization's values, for example, through the competence profiles' correlation of using the adaptive management system organization using artificial intelligence.

The employee profile's creation and implementation in the human resource management system in accordance with the competence model is a significant task for developing organizations. The formation of an employee's competence profile allows you to solve many organizational problems. For example: personnel recruitment and selection, adaptation, personnel audit, its assessment, comprehensive development, management reserve formation, etc. The competence profile, as a rule, consists of soft and hard skills.

Hard skills represent the professional competencies required to perform labor operations. They are reflected in job descriptions, regulations, professional standards; they can be clearly demonstrated, evaluated and verified.

Soft skills are supra-professional competencies. It is a set of socio-psychological qualities that do not depend on the professional activity sphere, but have a direct impact on the individual success. A person possesses them from birth or acquires them in the development and gaining experience process.

The skills' change occurs due to automation, robotization and the artificial intelligence using in organizational processes (Bughin et al., 2018). Increasingly, organizations are focusing on supra-professional skills, which are much more difficult to reproduce with the help of digital transformation tools and that are underlie of the changes taking place.

The personal qualities' value in comparison with knowledge in the engineering sciences' field was identify

in the Charles Riborg Mann's work "A Study of Engineering Education" in 1918 (Mann, 1918). The study by scientists from Harvard University, the Carnegie Endowment and the Stanford Research Center showed that "flexible skills" have almost 7 times more influence on a person's success in the profession.

Moreover, Google, as part of an internal study by Project Aristotle, revealed that the most productive teams have a wide range of soft skills (Strauss, 2017).

Studies by various scientists and companies at different times show that soft skills are the key to success not only in interpersonal relationships, but also to a large extent in professional activities (Kareem & Mijbas, 2019). They are the basis for the effective development of hard skills.

Today, the scientific community shows an active interest in the soft skills' study. The scientific articles consider competencies in the higher education system (Azasu et al., 2018; Diaconu et al., 2014; Gani et al., 2018), the emotional, social and cognitive competencies' influence on entrepreneurial intentions (Bonesso et al., 2018; Chien-Chi et al., 2020), the relationship between the personal power of the CEO, CEO competencies and company efficiency (Amedu and Dulevich, 2018), the impact of soft skills on project effectiveness (Gruden and Stare, 2018; Makbu et al., 2017), etc.

These studies show only the impact of the certain skills' development on the individual and companies' success. In this regard, it is necessary to focus on the assessment of the person development's soft skills.

Modern researchers propose methods for evaluating soft skills within a certain class (Liang et al., 2017; Wu et al., 2015). At the same time, the tools used are subjective, which does not guarantee the results obtained quality.

Despite the expansion of research in the field of soft skills development assessment and their impact on various performance indicators, it is the first article, the purpose of which is to develop a methodology for building a comprehensive soft skills profile. This profile combines cross-specific competencies. The methodology is universal and is intended for a wide range of users in various branches of science and technology. It is aimed at the practical application of integrated theoretical approaches in the human resource management system.

2 Problem

Today, supra-professional competencies' skill level is assessed in various ways. The most common of them are verbal and communicative methods (questionnaires, interviews), psychological testing, case methods and expert assessments methods (Strauss, 2017).

Such methods as competency interviews conducted in Russia using Western methods STAR (Situation - Target - Action - Result) (Swain, 2019), PARLA (Problem - Action - Result - Learned — Applied), CARE (Content,

Action, Role, Effect) (Klimenko, 2020), and expert assessments' methods according to the type of assessment "360 degrees" and its modifications ("90/180/270/540/720 degrees"), with all their advantages (high degree of objectivity (speaking of competency interviews), the ability to manage the structure of the collected data and their completeness), have a number of disadvantages that force the use of other methods of personality diagnosis:

- 1) Require significant labour, financial and time resources, both for the study preparation (elaboration of competency framework and questions), and for the data collection and processing, results' interpretation;
- 2) Develop a competency framework in the Russian market is carried out on the basis of expert opinions, without the using of quantitative data processing methods laid down by the founders of the competency-based approach (TalentCode, 2016);
- 3) Can be carried out only by qualified specialists, and in their absence, the involvement of external experts is required;
- 4) Give an incomplete idea of the employee's potential, limited by the organization's interests through the competence model;
- 5) The evaluation of "360 degrees" is characterized by subjectivity;
- 6) Inability to adequately assess all competencies with such methods creates the need for the application of additional ones.

Therefore, psychological testing methods are more popular (Carlson, 2020). The application's fields, as well as the research directions of this method are extensive. In this connection, many methods have been created, including those aimed at assessing competencies. They include such techniques as SHL personality questionnaires, Talent Q tests, Ontarget tests, Cattell multivariate personality questionnaires, FPI, MMPI, SMIL, MMIL, etc. (Carlson, 2020). Using the testing method simplifies the evaluation procedure due to the possibility of using ready-made techniques and automating the data collection process, interpreting the results, respectively, significantly less financial, labor, and time resources are required for the entire testing procedure. In addition, it guarantees a certain degree of objectivity, standardization, validity and reliability (statistically provable) (Philips, 2016). Despite all the advantages, the psychological testing existing methods have some disadvantages: the study focus, i.e. they do not reveal the full picture of the employee / applicant personality; they become obsolete, not responding to the demands of the modern labor market; the inability to interpret correctly without a highly qualified specialist, which makes testing methods in the classical form inapplicable.

Thus, all these methods can be classified as traditional, and in most cases, they have their own limitations (for example, the resources' cost for data collection and processing, interpretation of results, as well as the interpretation's complexity, insufficient adequacy and reliability of

results), which demonstrates the need to find new, alternative approaches or to modernize and combine existing ones to obtain a complete a person's soft skills profile.

3 Research question

An adaptive organization management system's development using artificial intelligence, aimed at expanding the employee competence profile within the framework of synchronizing his values and the organization's values, will eliminate the shortage of personnel, skills and knowledge to move to the next stages of digital transformation. It can be possible through the development of T-shaped specialists with a proactive position and capable of self-organization, and ensure the global competitiveness of the organization. The developed competencies should correspond to trends in management approaches. That is why one of the digital transformation's success factors is the development not only professional competencies, but also personal ones.

The main study issue is the employee soft skills profile's formation through the text description of personality behavioral indicators broadcasting into supra-professional competencies demand in the labor market. Personality behavioral indicators and their manifestation degree can be determined within the framework of complex automated diagnostics with the application of statements' quantitative assessment to question-situations. It will allow you to visually represent the level of competencies' expression and identify the directions of the employee's personal development in accordance with the organization's needs, which will lead to their common development trajectory's formation.

4 Methods

4.1 Analysis of psychodiagnostic personality research methods

As part of the study, an analysis of existing diagnostic techniques that reveal employee soft skills was carried out. The main criteria for choosing methods were: soft skills diagnostic test material; clarity, comprehensibility and accessibility of the test material for respondents: ease of processing empirical data; consistency of diagnostic tools.

During the diagnostic material's selection, the emphasis was placed methods which allow us to determine the most popular and relevant soft skills in the labor market. The analysis showed that on the part of employers in the personnel's selection, the reserve's formation, the personnel's promotion, the request goes to such soft skills as: leadership, ability to work in a team, responsibility for decision-making, emotional intelligence, flexibility, striv-

ing for self-development, focus on quality work, as well as competencies describing the employee's personality's psychotype.

Thus, the following tools were included in the process of building a soft skills profile: the DISC model, Alan Rowe's "Decision-making Style" methodology, Honey and Mumford's determining activity styles method, a psychotype test.

The DISC model is used to determine individual behavioral characteristics, namely, to identify the employee's strengths that form his behavior model. The methodology identifies 4 behavior's types which have a number of psychological differences that significantly affect the performance of tasks. Each behavior model has distinct features, the knowledge of which makes it possible to build constructive interaction in the organizational system (Kolesnikova et al., 2017).

Alan Rowe's methodology identifies 4 decision-making styles depending on the individual attitudes. The nature of making decisions depends on the completeness and reliability of the available information. Deterministic solutions (under conditions of certainty) and probabilistic solutions (under conditions of uncertainty and risk) are distinguished (Bayburin et al., 2018).

As the following methodology, D. Kolb's cyclic learning model (Kolb, A.Y. & Kolb, D.A., 2009) and Honey and Mumford's theory of 4 activity styles are used. According to these theories, an employee learns in one of four ways through conscious activity and thinking (Honey & Mumford, 1992).

Usually, in the determine personality psychotype's methods, attention is focused on the dominant personality psychotype with pronounced character traits. K. Jung became the first scientist who created a classification according to 4 psychotypes. The group of authors modified this technique, taking into account the various diagnostics' test tasks, for example, "Strategies of self-affirmation of personality" E. Nikitin, N. Kharlamenkova). Taking into account the individual employee typological characteristics allows HR services to get an idea of his emotional and volitional sphere, attitudes, motivation and values, that is, about the main components of individuality.

Thus, a comprehensive questionnaire of employee psychodiagnostic research was formed. The selected original methods consist of question-situations. However, there are different scales for evaluating judgments, one of which is the scale of attitudes. In this connection, it was necessary to modify the question-situations and introduce a single scale for evaluating judgments.

4.2 Scaling

The developed questionnaire presents questions-situations for which there are 4 statements in each (which corresponds to the characteristics of the personality studied in

four different projections - psychotype, activity style, decision-making style, behavior style). For each statement, an assessment of the respondent's attitude to the situation is recommended - how much it corresponds to the respondent's life attitudes. On the basis of which the assessment should be made using a scale of attitudes used to measure respondents' attitudes to the subject of the study. It should be combined with a strict ordering procedure, in which the statements' equivalence is not allowed. It is not allowed to assign the same ranks to two or more answer options. This is due to the need to identify the prevailing personality characteristics. For this purpose, it is important to assess the degree of respondents' agreement with statements describing different characteristics.

The study analyzes standard installation scales, such as the Likert scale and the Stapel scale (Hrabrova, 2018). The existing installation scales do not include a ranking procedure, which means that they need to be modified.

A comprehensive questionnaire's pilot study showed that the most suitable scale is the Likert scale, proposed in 1932 by Francis Likert, an American specialist in the fields of organizational psychology and management. Working with this scale involves evaluating statements from one critical point to the opposite critical point, in this case, the respondent is supposed to assess the degree of their agreement or disagreement with each statement on a scale of assessments containing 3, 4, 5, 6, 7 or more points. In this case, the scale may or may not contain a neutral value.

Thus, a modified 4-point Likert scale was used for the questionnaire to rank respondents' statements:

- 1 point - strongly disagree;
- 2 points - partially disagree;
- 3 points - partially agree;
- 4 points - strongly agree.

The presented scale has a symmetrical character. In addition to the rejection of the neutral value in the scale, its modification consisted in the application of the ranking statements' principles related to a single issue.

The test results' interpretation is possible by summing the ranks of statements relating to the same personality trait, both in absolute and relative terms.

The advantages of using this scale are that it provides relative reliability with a limited number of statements, and the data obtained is easy to process. In addition, the application of the same principle in all questions simplifies the survey procedure. And the imposition of ranking principles on the Likert scale makes it possible to determine the prevailing personality characteristics.

So, a comprehensive questionnaire was formed for employees' psychodiagnostic testing. The next step in the development of the soft skills profile was the creation of clusters competencies' model corresponding to the behavioral indicators of the selected techniques.

4.3 Modeling and automating soft skills profile

The authors' group identified the main supra-professional competencies corresponding to them, as part of the behavioral indicators' analysis for personality psychotype, behavior style, activity style and decision-making style. At the first stage of the analysis, about 20-30 competencies were formed for each personality type according to all 4 methods.

For convenience and ease of employee profile's interpretation developed by soft skills, it is necessary to reduce the competencies' list in each cluster. On average, it is recommend allocating up to 10 key competencies applicable to all positions (Parkinson, 1999).

Today, in the human resource management system, it is possible to identify the main soft skills that should be developed by employees to improve production efficiency. They were mentioned earlier. After conducting a comparative analysis of behavioral indicators interpreted in soft skills relevant in the labor market, and combining similar ones in meaning, the most popular competencies were selected, taking into account the possibility of their development or adjustment. The formed clusters of competencies are shown in Figure 1.

Further, the techniques were integrated into the employee profile's soft skills model. So, the model formed can be represented in the form of a 16-vector petal diagram (Figure 1). As a questionnaire's result, the data is processed by sum-

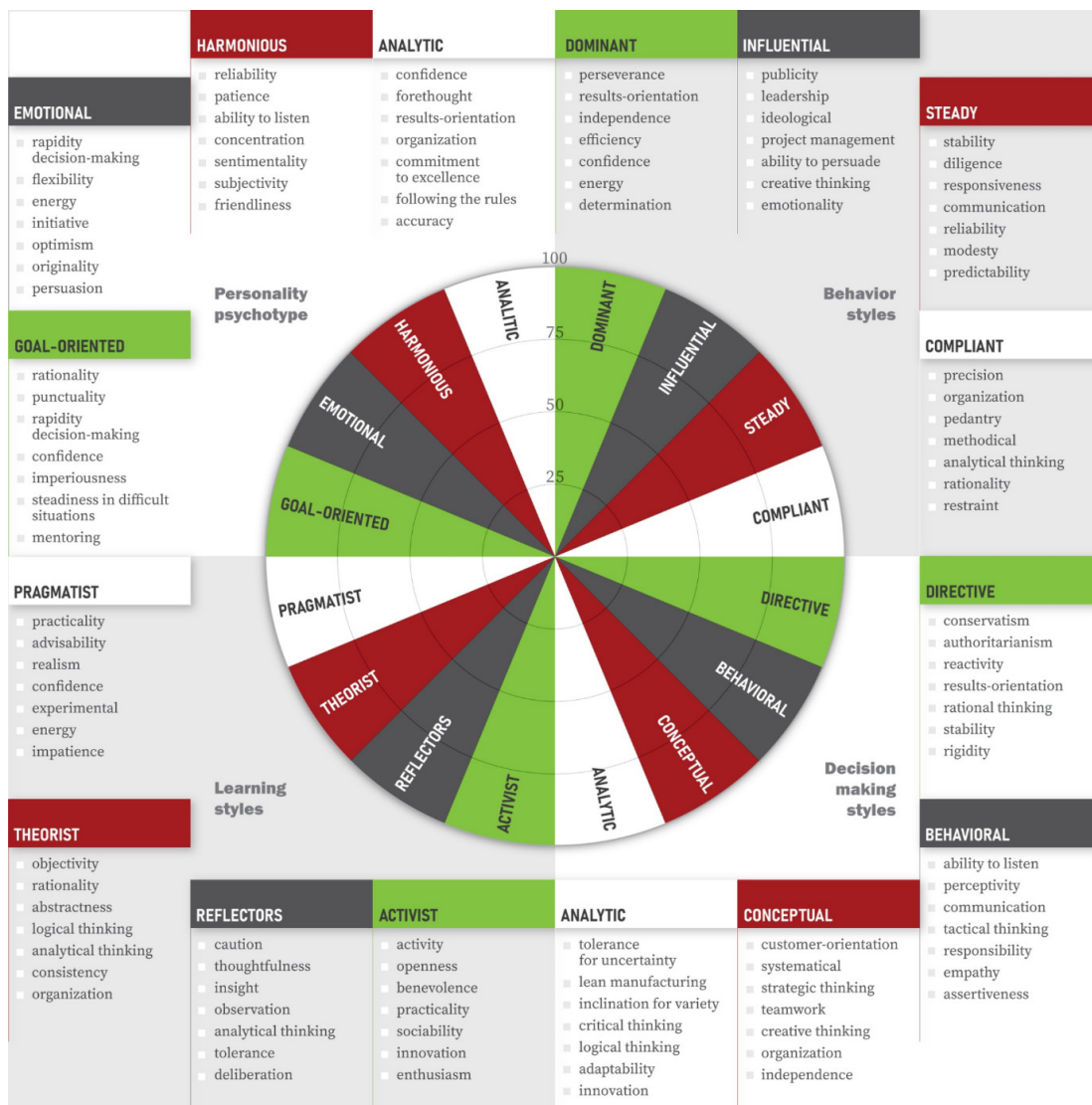


Figure 1: Model of the employee soft skills profile

ming ranks by groups of answers which characterize a particular type of personality. This amount demonstrates the degree of certain personality characteristics' manifestation in a person. The levels at which personality characteristics are manifested in each of the 16 sectors were taken as competence's levels.

In the literature, there are such stages of competence development as: insufficient level, developing, experienced, advanced, mastery (Shipilov, 2015). For the gradation of personal competence levels due to the complexity and ambiguity of the higher-level competencies' assessment, the proposed gradation was modified to 4 levels:

- 1) insufficient level (0-25%) - poor knowledge of competencies, infrequent use in practice;
- 2) developing level (26-50%) - the mastering competencies' process has been launched, but it is not always possible to effectively apply it in practice;
- 3) experienced level (51-75%) - competencies are ful-

ly mastered, effectively applied in standard practical situations;

- 4) mastery level (76-100%) - competencies are mastered at the expert level, applied in complex non-standard situations.

The formed soft skills profile model was automated. An electronic profile is a web server application that allows you to register, take a survey (Figure 2) and get acquainted with the data on the degree of development of a person's soft skills. JavaScript, HTML5, CSS were used to design the client side of the user interface to the software and hardware part of the service. The survey results are stored in the organization's database using the comprehensive questionnaire for as long as requires. The survey can be completed repeatedly in different time periods. In this connection, it is possible to track the development of the soft skills level.

Question: 19/64

I am especially good at ...

MAX

interacting with people

solving difficult problems

looking for opportunities

remembering dates and facts

MIN

arrange the answers in descending order of importance to you
results are saved automatically when you switch to another question

Figure 2: Part of the questionnaire for respondents

The main advantage of the electronic questionnaire is that the competencies' assessment for each of the 16 sectors is visualized in the form of a colored petal diagram. The resulting diagram shows the degree of manifestation of a personality particular type in a person and the corresponding soft skills, not limited to the dominant one. It

gives the most complete soft skills profile of an employee. In addition, due to automation, the time spent on completing the survey, processing and interpreting data was reduced by an average of 80%, which was revealed during the timing as part of the initial assessment of the employee profile reliability developed by soft skills.

5 Results

To assess the validity of the developed soft skills profile diagnostic methodology, a focus group consisting of 115 respondents was formed. The respondents included the students of Reshetnev Siberian State University of Science and Technology from various fields of science and technology: psychological, engineering, information and chemical industries.

Requirements' analysis for their representatives' competencies in scientific research, as well as the world databases of vacancies was carried out for each field of science and technology.

The petal diagram's construction for each field of science and technology with the superimposition of respondents' soft skills profiles obtained by passing the developed automated diagnostics was made. It made it possible to

identify the representatives' key competencies of the fields of science and technology. Further, a comparative analysis of global trends and the results of the soft skills survey of respondents' profiles were carried out.

According to the results of research in New Zealand, specialists in the field of psychology are distinguished by methodicality, restraint, listening ability, observation, stability, caution, analytical thinking (New Zealand Psychologists Board, 2018).

Within the diagnostics' framework carried out according to the developed methodology, the soft skills profiles of psychologists are dominated by such competencies as: reliability, patience, listening ability, friendliness, organization, pedantry, methodicality, analytical thinking, rationality, restraint, listening ability, communication, responsibility, empathy, assertiveness, practicality, expediency, realism, confidence, experimentation, energy (Figure 3).

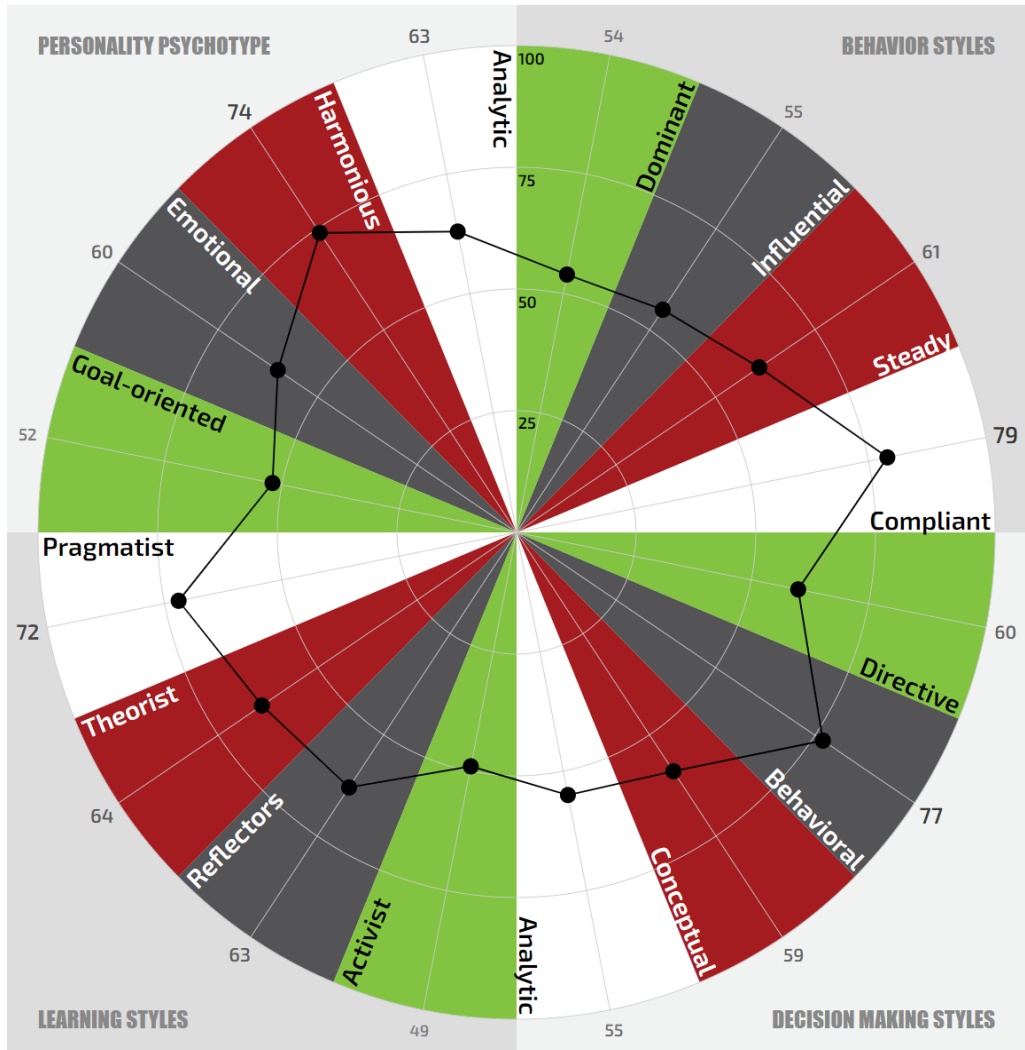


Figure 3: Average soft skills profile of psychological students (based on results of 23 respondents)

National Aeronautics and Space Administration puts forward such requirements for IT specialists as analytical thinking, tactical thinking, listening skills, restraint, organization, result orientation, following the rules (Hirshorn et al., 2017). Researchers from the Management Studies Department, Indian Institute of Information Technology focus on responsibility, methodicality, practicality, confi-

dence, experimentality (Dubey & Tiwari, 2020).

The analysis of IT respondents' soft skills profiles showed that such competencies as organization, methodicality, analytical thinking, restraint, listening ability, receptivity, communication, tactical thinking, responsibility, practicality, expediency, realism, confidence, experimentation, energy is more prevail (Figure 4).

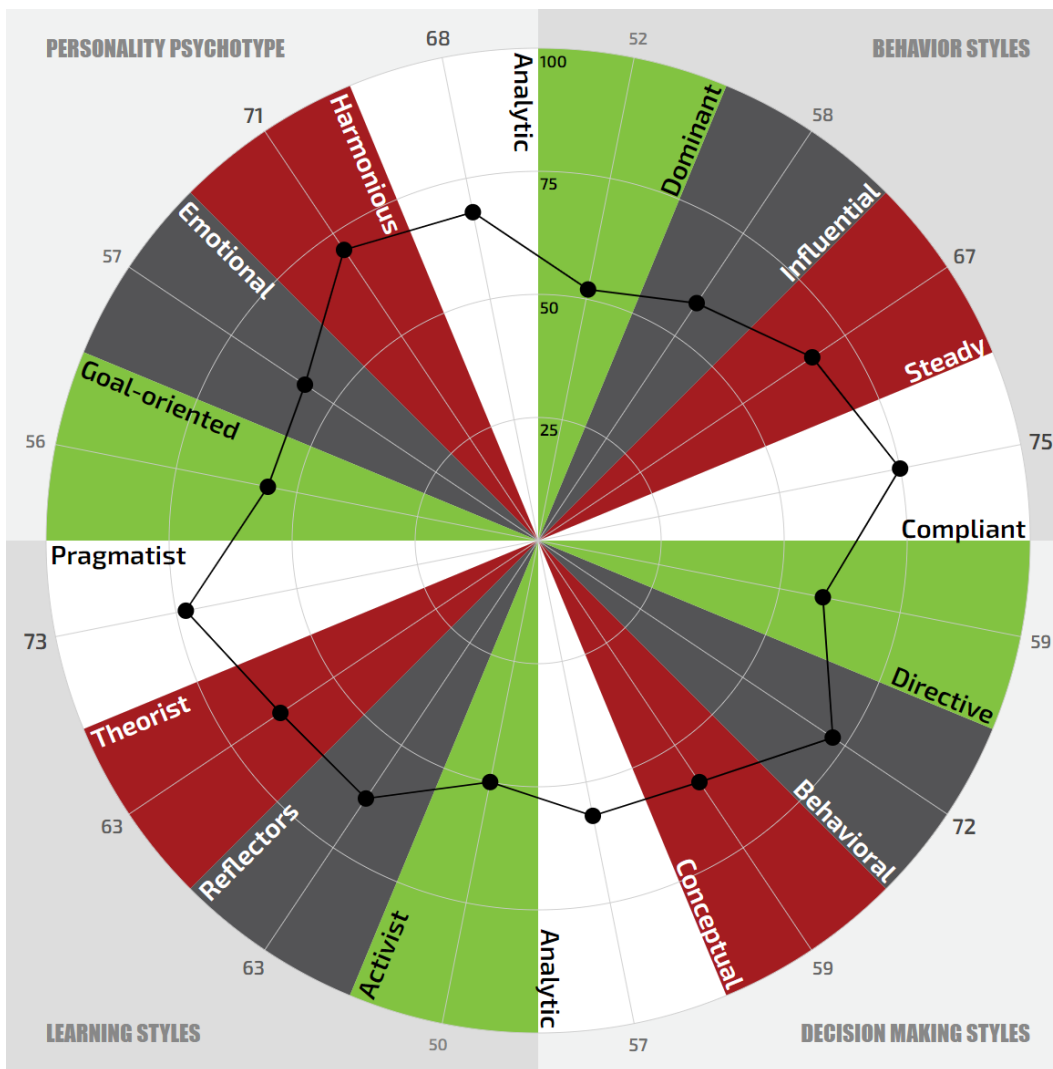


Figure 4: Average soft skills profile of IT students (based on results of 30 respondents)

Chemical industry specialists are distinguished by the presence of responsibility, accuracy, confidence, methodicality, experimentation, concentration, restraint, communication. It can be traced in the works of scientists from the University of Helsinki (Perna & Aksela, 2009) and researchers from China (Zhou et al., 2013).

The analysis of soft skills profiles of respondents in the

chemical industry showed that such competencies as confidence, balance, organization, accuracy, accuracy, pedantry, methodicality, analytical thinking, caution, observation, adaptability, innovation are more prevail (Figure 5).

Malaysian scientists recommend that engineers should possess such soft skills as rational thinking, analytical thinking and organization (Adnan et al., 2014).

Within the framework of the soft skills diagnostics of the engineers' profiles, confidence, result orientation, organization, striving for perfection, accuracy, reliability, patience, conceptuality, organization, methodicality, analytical thinking, rationality, tactical thinking, responsibility, practicality, experimentation, energy are more prevail (Figure 6). The competencies' development depending on the specifics of labor activity can be traced in the comparative analysis of respondents' soft skills profiles. According to the results, we can make a preliminary conclusion that the assessment of the soft skills profile according to the developed methodology is valid, since the key competencies of specialists in the fields of science and technology under consideration allocated by the world community correspond to the respondents' soft skills profiles.

6 Discussion and conclusion

There is an active interest in soft skills research in the literature. The main research is aimed at studying the impact of certain skills' development on the personal's and companies' effectiveness. There are no studies in the development of a methodology for the soft skills integrated assessment. In the literature, methods of subjective assessment of soft skills within a certain class are only rarely traced.

The study aim was to develop a methodology for building a complex soft skills profile. The result of the study showed that the soft skills profile can combine relevant cross-specific competencies.

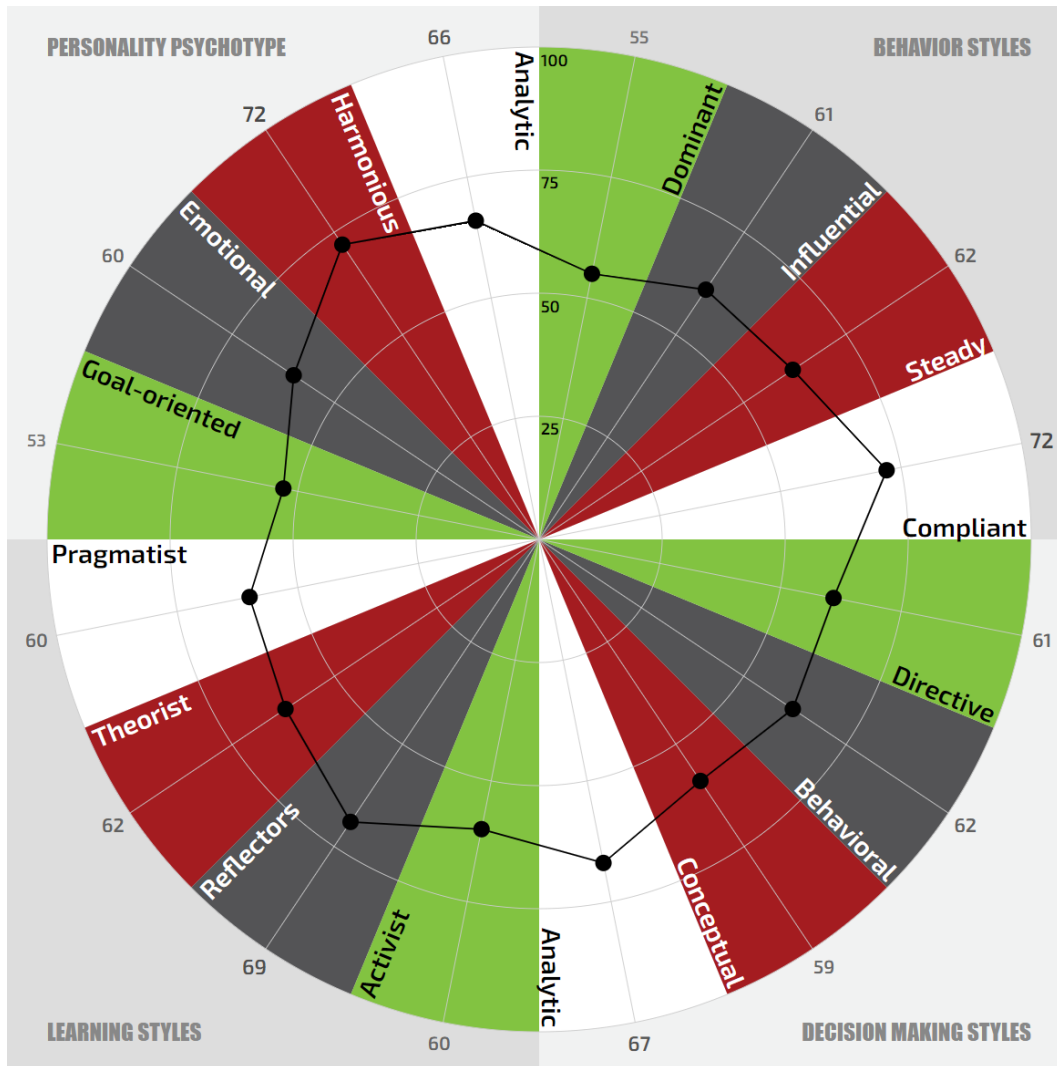


Figure 5: Average soft skills profile of chemistry students (based on results of 28 respondents)

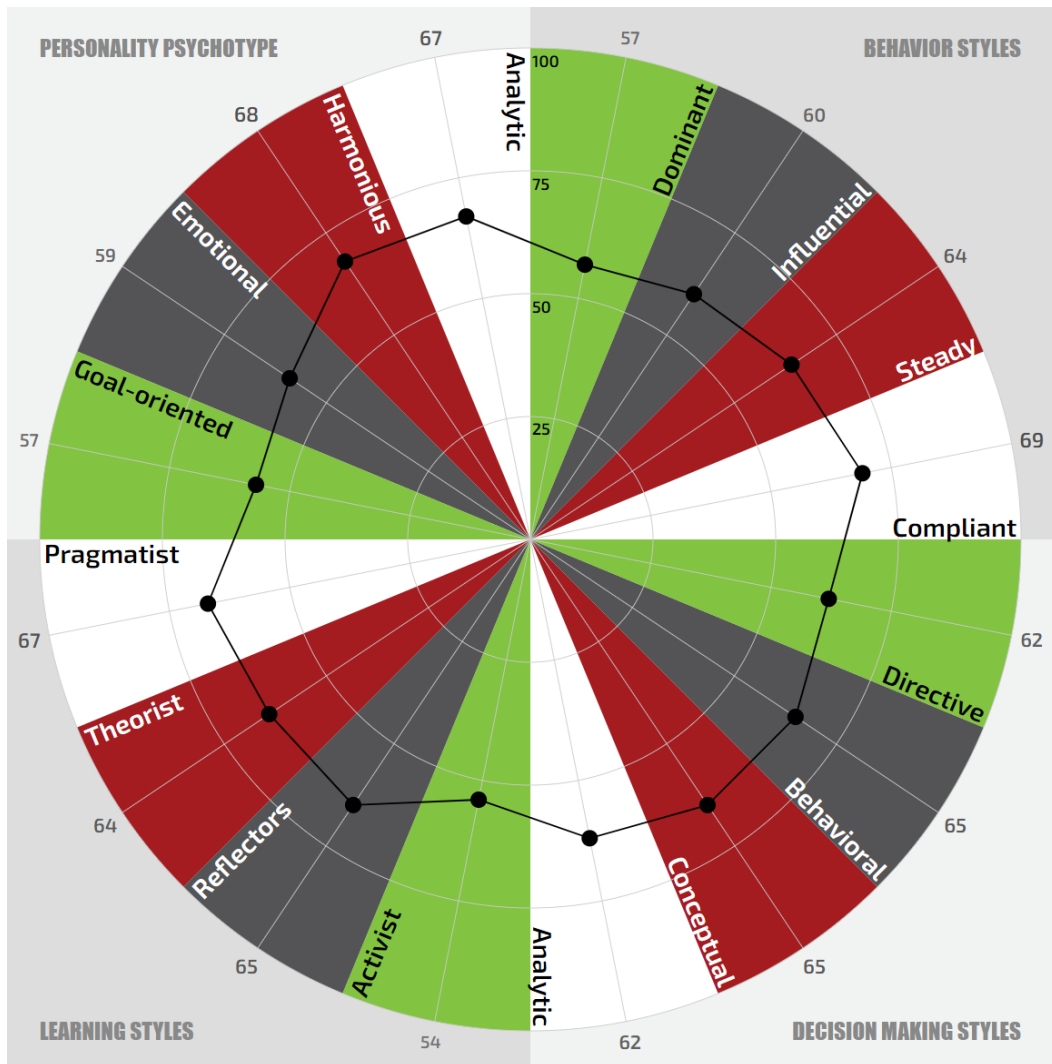


Figure 6: Average soft skills profile of engineering students (based on results of 34 respondents)

The study results showed that it is possible to form an employee’s soft skills profile by broadcasting a text description of personality behavioral indicators into supra-professional competencies. Psychometric testing can be used to determine personality behavioral indicators.

As part of the research analysis, it was found that the assessment of soft skills is mainly carried out through behavioral interviews and psychometric assessments (Baron et al., 2020; Jardim et al., 2020). Traditional psychometric examinations are unidirectional, expensive and time-consuming (Amarpreet, 2019). In this article, a modified toolkit is used. It allows you to evaluate various specific groups of soft skills (the DISK model, Alan Rowe’s “Decision Style” method, Honey and Mumford’s method of determining learning styles, and a psychological type test) and contains a small number of questions.

Identification of soft skills relevant to the labor market is based on research of the global employers needs. In the scientific community, this topic has been raised quite often and for a long time. For example, in the article “Building a soft skill taxonomy from job openings”, a search was conducted for terms related to various soft skills in global job databases using DBpedia and Word2Vec (Khaouja et al., 2019). Based on the proposed methodology, the researchers identified 10 basic interpersonal communication skills. The study “Responsible team players wanted: an analysis of soft skill requirements in job advertisements” describes a semi-automatic approach for extracting interpersonal skills from job advertisements (Calanca et al., 2019). It is shown how interpersonal skills affect the labor market’s results.

After conducting a comparative analysis of behavio-

ral indicators interpreted in soft skills relevant in the labor market, the most popular competencies for measuring and building a profile were selected.

The developed methodology formed the basis for the complex automated diagnostics of the soft skills profile, which corresponds to the trends of the world community in the framework of the global digital transformation of all spheres of activity.

The application's universal nature in various fields of activity is a distinctive feature of the developed soft skills profile and the methodology for its determination comprehensive diagnostics does not require using of additional techniques and allows you to significantly reduce time and financial costs.

6.1 Managerial implications of the study

This study offers an alternative way to assess the level of an employee profile's soft skills formation, which can be used both in the educational environment to form an education ecosystem in accordance with the requirements of innovative economic development, and in the enterprise management system to increase the production potential of both employees and enterprises.

The modern market economy poses a number of fundamental tasks to enterprises, the most important of which is the most effective human resources using, where one of the main tools is the competence approach. Accelerating changes in the environment, new business needs and opportunities emergence, changing consumer positions, the development of information technology and changing the role of human resources are aimed at developing a long-term and competitive enterprise HR strategy. Building an employee soft skills profile with the help of complex automated diagnostics will allow you to visually make the trajectory of an employee's personal development. Employee competencies' coordination with labor functionality in the strategic perspective will contribute to meeting the enterprise's needs and will directly affect productivity growth and increase the HR system efficiency.

One of the costly procedures in the traditional approach to human resource management is the personnel competence assessment, both at the recruitment stage and within the framework of the current competence assessment. Data processing and results interpretation take a large part of the time. Building an employee profile using the automated methodology proposed in the study framework makes it possible to eliminate this problem.

The employee competencies are dynamic, therefore, amenable to development. So, it is necessary for the organization to constantly update an employee data. Our integrated methodology for evaluating the soft skills of an employee's profile allows you to understand the vector of development of certain competencies, which in the future will lead to organizational values with employee values'

synchronization both from the employment moment and in the process of work.

The main strategic resource of the enterprise and the basis of its competitiveness are the organization's personnel. The effective personnel competencies using are largely ensured by the development of a measures' system aimed at increasing the level of labor productivity. The main labor productivity management goal at the enterprise is to find and implement possible reserves for its growth while ensuring a high level of employment. The social effectiveness of developing soft skills of an employee's profile is manifested in the possibility of achieving socially positive changes in labor activity indicators. The application's positive results of the developed methodology include: the development of personal and professional competencies of staff; the creation of a certain degree of freedom and independence (the ability to make decisions, determine the methodology of tasks, the intensity of activities, etc.); maintaining a favorable socio-psychological climate.

Automated diagnostics of employee's profile soft skills can be used as a self-sufficient product in HR procedures, as a tool for harmonizing the key competencies of an enterprise and the competencies of its employees.

An individual approach to learning as a global trend increases the value of building individual educational trajectories. In the education system, the results of the study can be used to identify the strengths and weaknesses of students in the construction of individual educational trajectories. These educational trajectories can be formed by superimposing profiles of highly qualified representatives of advanced enterprises in the region and profiles of students in the relevant areas of training. Thus, educational institutions will be able to train highly qualified personnel within the framework of orientation to the values of the market and the values of students with the formation of individual educational trajectories.

6.2 Limitations and future research

According to the authors, the approbation of the study results on 115 respondents is a key limiting factor in their assessment and the generalized conclusions' formation. Therefore, as noted earlier, the conclusions formed are preliminary. The complex methodology was verified on respondents from four fields of knowledge. The pilot model launch of automated diagnostics has shown good results in determining the leading competencies of their representatives and consistency with the research of the scientific community.

This limitation is easily resolved by conducting further research on the automated diagnostics testing on a larger number of respondents who are representatives of a wide range of fields of science and technology, as well as an additional analysis of world research on soft skills that are in demand in a particular field. It will be possible to

completely resolve it when launching diagnostics in real production practices. In other words, it is required to implement the introduction of a diagnostic tool as an element of the human resource management system of enterprises in various industries.

Based on the data obtained, researchers can conclude about the suitability of the formed models of representatives' soft skills profiles of various fields of science and technology and their use as standard for building soft skills profiles of certain professions.

This study does not consider the cost component of such system introduction, its maintenance and use in the current enterprise management system, which again requires the use of research results in production practice. Based on the research results, it will be possible to make a conclusion about reducing the costs of enterprise's forming and supporting the human resource management system, as well as to suggest further directions for improving the study results.

To increase the developed soft skills profile's adaptability for specific organizations, it is possible to continue the research within the integrating soft skills' framework in demand in the labor market and soft skills based on the company organizational values.

The developed methodology, as well as the automated soft skills profile diagnostic system, are the first stage of research work and require further development to the adaptive management system of the organization using artificial intelligence. The developed intellectual guide is a software module which based on the characteristics of the employee's and an organization's profiles. It compares their values and using the artificial intelligence, determines the educational trajectory and offers tasks for its development, taking into account the ways in which the employee perceives information. The development of new competencies will lead to the expansion of the employee's profile and the ability to perform new tasks in the area of interest, thereby obtaining a high-quality result. The organization, in turn, will receive new opportunities for development in the market and rapid adaptation to changing conditions. Thus, by investing in the employees' development, the organization receives T-shaped specialists with a proactive position and capable of self-organization. It directly leads to the potentials' realization of both the employee and the organization.

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Kompetenčni profil zaposlenega za prilagodljivo upravljanje organizacije

Ozadje in namen: Zaposleni so s svojim znanjem, veščinami in vrednotami povezovalni člen med globokimi organizacijskimi transformacijami in novimi tehnologijami. V zvezi s tem sistem upravljanja s človeškimi viri potrebuje nove pristope in orodja za diagnostiko, usposabljanje in razvoj kadrov, ki temeljijo na sinhronizaciji organizacije in vrednot zaposlenih. Cilj študije je razviti celovito metodologijo za izgradnjo profila mehkih veščin zaposlenega za oblikovanje personalizirane izobraževalne poti in oblikovanje prilagodljivega sistema vodenja.

Metodologija: Uporabili smo je pristop k oblikovanju profila mehkih veščin z oddajanjem opisa vedenjskih kazalnikov osebnosti v dejanske nadstropne kompetence. Izvedli smo modeliranje in avtomatizacija mehkih veščin profila zaposlenih. Za oceno razvite metodologije smo uporabili statistično analizo in empirično potrditev. V diagnostiki je sodelovalo 115 anketirancev z različnih področij znanosti in tehnologije z univerze Reshetnev.

Rezultati: Rezultati kažejo, da je predlagana kompleksna avtomatizirana osebnostna diagnostika veljavna. Omogoča vizualizacijo profila mehkih veščin, določitev stopnje izražanja kompetenc in prepoznavanje smeri individualnega razvoja zaposlenega.

Zaključek: Študija ponuja celovito integrirano metodologijo, ki omogoča oceno stopnje oblikovanja mehkih veščin predstavnikov različnih področij dejavnosti. Zaključke študije je mogoče uporabiti tako v izobraževalnem okolju za oblikovanje izobraževalnega ekosistema v skladu z zahtevami razvoja inovativnega gospodarstva kot v sistemu vodenja podjetij za povečanje proizvodnega potenciala tako zaposlenih kot podjetij.

Ključne besede: *Mehke veščine, Kompetenčni profil zaposlenih, Izobraževanje in razvoj, Upravljanje s človeškimi viri*

The Effect of Entrepreneurial Education and Culture on Entrepreneurial Intention

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Background/Purpose: Entrepreneurial education can have a positive effect on entrepreneurial intention of university students, yet universities in Jordan still do not direct their attention to invest in Entrepreneurial education. This study aims to investigate the effect of entrepreneurial education and Culture on entrepreneurial intention through psychological empowerment of university students.

Methodology: A questionnaire was distributed to a sample of 220 university students in Jordan who take any course in entrepreneurship. Data were analysed and hypotheses were tested through Structural Equation Modelling (SEM) using Statistical Package for Social Sciences (SPSS).

Results: The analysis of the study showed that; entrepreneurial education has a significant influence on psychological empowerment, psychological empowerment has a significant influence on entrepreneurial intentions, culture has a significant influence on psychological empowerment, entrepreneurial education has a significant influence on entrepreneurial intention and culture has a significant influence on entrepreneurial intention. The results of the study answer the calls of previous research to examine the role of culture and psychological empowerment in entrepreneurial education to affect entrepreneurial intention.

Conclusion: Universities in Jordan should focus more on entrepreneurial education by psychologically empowering students to increase their intentions towards entrepreneurship. This study contributes to the existing literature by providing a better understanding of the relationship between entrepreneurial education and entrepreneurial intention through culture and psychological empowerment.

Keywords: *Entrepreneurship, Entrepreneurial education, Entrepreneurial intention, Culture, Psychological empowerment*

1 Introduction

New venture's creation plays a vital role in global economies since it decreases unemployment levels and provides revenue for countries. Henceforth, the degree to which a country has the capability to perform innovatively is related to the presence of entrepreneurial activity (Piperopoulos, 2012). Worldwide there is an increasing problem of unemployment for graduating students as it has been shown that entrepreneurship can be the strategic option to solve this problem. Recently, Entrepreneurship has proven to be a crucial element of revolution of the brand-new international economy especially during the challenges of high unemployment rates which lead economies especially students to engage more in entrepreneurial activities (An-

war & Abdullah, 2021).

It is important to focus on entrepreneurial education for university students since it provides them with the needed knowledge and skills and encourage them to change their beliefs and attitudes towards starting their own businesses by giving them the needed knowledge and skills to become entrepreneurs (Raposo & do Paço, 2011). Entrepreneurship has proved to be a solution for economic downturns, especially the current COVID-19 crisis that the world is facing which calls for increasing the concern of entrepreneurial education and creating the entrepreneurship mindset for students (Maritz et al., 2020).

Furthermore, focusing on encouraging and psychologically empowering individuals are important elements to reach entrepreneurial intentions, by eliminating direct and

indirect obstacles which include the intangible obstacles inside individuals to make them feel conscious of their abilities, overcome barriers and have intentions to become entrepreneurs (Bratnicki et al., 2007).

Referring to previous studies (Drost & Mcguire, 2011; Shahab et al., 2019) as the researchers developed frameworks for entrepreneurial education and entrepreneurial intention by addressing the role of self-efficacy in enhancing intentions. Also, the study of Harun and Mark (2014) focused on highlighting the role of national culture to examine its effect on students' entrepreneurial intentions. Consequently, Jordan is considered a small and developing Middle Eastern country with limited resources and a high number of graduate students, as well as a high rate of unemployment, which has risen from 18.7% in 2018 to 19.2% in 2019 due to the high migration rates from sanctioned countries like Syria. Also, rising to 24.7 percent in 2020 due to the pandemic (Mugableh, 2020). Likewise, the discussion to reform high education in Jordan is prospering as it takes into consideration the need for the market by transferring knowledge among universities and industries. Nonetheless, the concept of entrepreneurial education is still considered a new concept in developing countries (Sandri, 2016). Which calls for the necessity to examine it in the context of the current study.

To the best of the researcher's knowledge, none of the previous studies took into consideration the role of psychological empowerment that focuses on increasing the internal inspiration for individuals to investigate its relationship between entrepreneurial education and entrepreneurial intention of university students. Therefore, and in the light of these gaps, the study aims to address the role of culture and psychological empowerment to highlight their effect on entrepreneurial intention.

2 Literature Review

The present research is based on multiple theories, first of all, drawing on the bases that Entrepreneurship is based on the Economic Theory which emphasizes that entrepreneurial activity can be comprehended through the abilities of humans that donate in the achievements and sustainability of economies (Casson & Casson, 2014).

Additionally, psychological empowerment which is derived from the social exchange theory as it contains the real interactions between individuals focusing on the elements that affect the process of human interactions. Similarly, the entrepreneurial education process includes interactions among professors and students to increase student's awareness and knowledge about the process to initiate their own businesses (Bae, Qian, Miao, & Fiet, 2014).

In the 1970's Geert Hofstede published his cultural model, and it is considered a turning point concept, a beginning, a base theory that assists in constructing the examination of cross-cultural theory, and one of the best

models that explained the behaviour of individuals (Sivakumar & Nakata, 2001). It has been shown that culture has an impact on the psychological development of individuals (Hofstede & Bond, 1984). In return, the intention of individuals towards Entrepreneurship varies across different societies due to the different aspect of culture that distinguishes each country from other countries around the world (Urban & Ratsimanetrimanana, 2015).

Based on the previously mentioned theories, specifically the social exchange theory as it has been the focus of conducting the research model because in the process of entrepreneurial education for university students the professor interacts with these students and share knowledge with them in order to generate intentions towards entrepreneurship. Also, interactions with students and psychologically empower them can be affected by the beliefs and values generated form their culture, which also includes interactions between individuals in the same society to exchange views, thoughts, and norms that can affect developing entrepreneurial intentions and lead to actions of actual start-ups.

2.1 Entrepreneurial Education

Entrepreneurial education is known as the process of informing and educating students to build their capabilities in order to initiate their own business (Lackéus, 2017). It contains any educational or informational course about the activities of entrepreneurship that aim to increase student's awareness and knowledge about the process to initiate their own businesses. As it increases student's entrepreneurial abilities and influences their entrepreneurial perceptions (Bae et al., 2014). As it has been shown that an individual, specifically a student, needs to have a solid background concerning entrepreneurial education in order to execute entrepreneurship in a professional manner reducing risks. Entrepreneurial education in universities need to include up to date courses and practical experience to generate their intentions toward becoming entrepreneurs (Alshabamiah et al., 2020).

In Jordan, the governmental policies modified the educational schemes to enhance student's abilities, creativity, and innovativeness. Nevertheless, in Jordanian universities there is a lack of a suitable educational offering and subjects that guides the mentality of entrepreneurship (Mehtap, 2014). Moreover, universities in Jordan do not only teach some courses of entrepreneurship, but eight of them have entrepreneurship and innovation centers inside the campus, such as Princess Sumaya University for Technology (PSUT), Al Yarmouk University, and the Hashemite University. On the other hand, none of the universities have a department for entrepreneurship nor an undergraduate degree concerning entrepreneurship. It has been shown that teaching the skills of entrepreneurship and taking advantage of entrepreneurial education at

early stages such as schools is low in Jordan, as entrepreneurship is self-taught by individuals and often done after graduation. Lastly, entrepreneurial education in Jordan is considered adequate but more efforts need to be executed in the processes of implementing entrepreneurial education (Alakaleek, 2019).

2.2 Psychological Empowerment

It is known as creating and communicating power of influencing the beliefs and attitudes of individuals (Iqbal et al., 2020). It is known as the process of increasing the internal inspiration for individuals by identifying some cognitive factors that reflect the way people view their duties in the job they perform. These cognitions include meaning, competence, self-determination, and impact (Zhu et al., 2012).

Meaning is known as the extent to which an individual perceives his work as valuable (Zhu et al., 2012). Competence expresses the consciousness which the individual has that he/she can achieve a mission efficiently and effectively (Siegall & Gardner, 2000). Self-Determination is the degree to which a person has the autonomy to accomplish missions according to his own direction (Avolio et al., 2004). The last dimension of psychological empowerment is Impact, it is known as the belief of a person that the work he accomplishes has a vital and crucial transformation by influencing and making a difference in the job he/she performs and in the results of the organization he works in (Spreitzer et al., 1999).

2.3 Culture

Organizational culture is a fundamental element of any organization as it represents the behaviors, mutual visions, and values that participate in creating the environment of an organization (Warrick, 2017). While national culture which is the focus of this study, is known as the way individuals in a specific culture speak, dress, think, and have norms and beliefs (Kaur and Chawla, 2016). Another definition reflects culture as a form of programming the minds of members, which differentiates individuals across societies (De Mooij & Hofstede, 2010). Culture of societies is considered a vital factor of entrepreneurial activities locally, since it impacts standards, morals and thoughts, thus emphasizing appropriateness of behaviours for individuals in the society (Lortie et al., 2019). Moreover, differences in cultures have been highlighted clearly in the cultural model of Geert Hofstede as he conducted a study in the IBM company, implemented the analysis around 40 nations, and came up with cultural dimensions (Wu, 2006). Hofstede classified culture into different dimensions such as Power Distance, Collectivism vs Individualism, Masculinity vs Femininity, Uncertainty Avoidance and Long-Term vs Short-Term Orientation (Vershinina et al., 2017).

The reason for choosing the three dimensions in the study is that as represented in figure 1 which shows that uncertainty avoidance scores 65 which shows that Jordan has high uncertainty avoidance, long-term orientation is 16 which shows that Jordan has short-term orientation and masculinity is 45 which indicates that Jordan is a feminine culture.

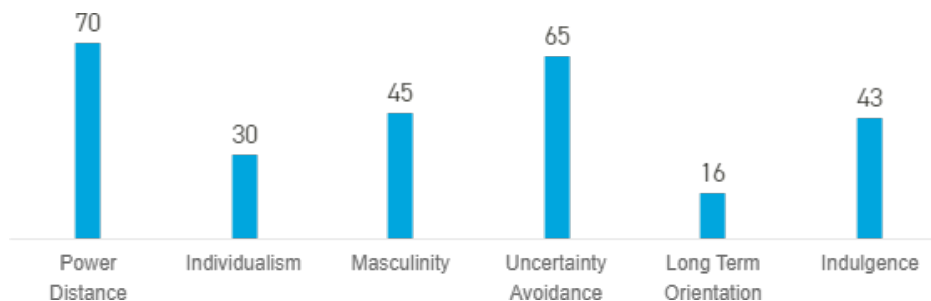


Figure 1: Hofstede's insight Jordan (Source: www.hofstede-insights.com)

In this study the dimensions that have been chosen from the cultural model of Hofstede are (uncertainty avoidance, Masculinity vs Femininity, long-term vs short-term orientation) referring to figure 1 depending on the scores of each dimension. As shown that in Jordan people have a high level of uncertainty avoidance, likewise societies that have a high level of uncertainty avoidance, have less tendency for entrepreneurship behaviour and a lower

probability of individuals to be independently employed (Yukongdi & Lopa, 2017).

As showing that Jordan is a feminine culture where in feminine cultures individuals appreciate the superiority of life and focus more on relations as they tend to have persistence, shared authorization, accomplishment, and team building so that they are more capable of collecting resources and building networks (Hofstede, 2019).

According to long-term orientation, Jordan is as short-term oriented culture that tends to have constancy, they are attached to traditions, and focus on the present and past events rather than planning for the future as they are less likely to devote enough time for entrepreneurial activities (De Mooij & Hofstede, 2010).

2.4 Entrepreneurial Intention

Intention means the extent that an individual creates an assessment towards a specific behaviour, likewise the higher the level of positivity regarding the consequences of initiating a start-up, the higher the favourability of executing the action (Joensuu-Salo et al., 2015). Moreover, entrepreneurial intention is the unquestionable indicator for entrepreneurship action, also comprehending the entrepreneurial intentions permits instructors, mentors, and decision-makers to have a transparent view of the way an intention can be created and the extent to which the values, insights, and motivations of novel business creators can influence their intention to actually initiate a new venture (Wang et al., 2011). It is important to concentrate on entrepreneurial intentions since it is the predictor and indicator of one's actual behaviours of entrepreneurship, so as when an individual has an intention to become an entrepreneur it is more likely that he will perform a positive perception about that behaviour and form an actual business. Hence, comprehending the entrepreneurial intentions of students helps in predicting and gives more validation to the upcoming entrepreneurial actions, because when Intention increases, the probability that an action will occur increases (Joensuu-Salo et al., 2015).

2.5 Research Model

According to the previously mentioned models, the study of Harun and Mark (2014) suggested that further research is needed in the area of entrepreneurial education, Psychology, and culture. Also, the study of Drost & Mcguire (2011) suggested further studying of entrepreneurial education with psychological factors and self-efficacy through conducting further quantitative analysis including Structural Equation Modeling (SEM) and Confirmatory Factor Analysis (CFA). Which is used to test if the data is consistent with the hypotheses used by the researcher. It is also used as a validation of the construct and to evaluate measurements. CFA is considered as powerful evidence of the convergent validity and the discriminant validity. Convergent validity refers to the extent to which several items that make up a construct are related. For a construct to meet convergent validity, all the items should have path coefficients that are greater than 0.6, if unstandardized, and 0.4, if standardised (Schumacker & Lomax, 2016). On the other hand, discriminant validity determines the extent of correlation between two or more constructs, and the maximum tolerable covariance is 0.85 (Heck & Thomas, 2015; Loehlin & Beaujean, 2017).

Therefore, the researcher integrated the models and included psychological empowerment in the entrepreneurial education process to address its effect on entrepreneurial intention and culture as an independent variable to have the following model structure shown in Figure 2.

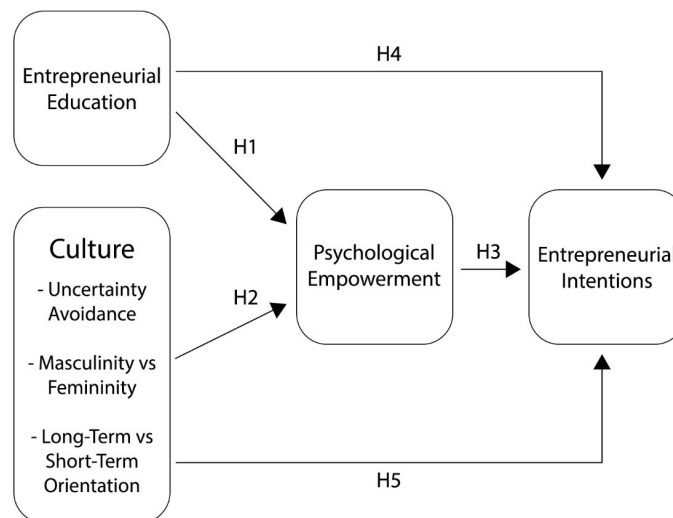


Figure 2: Research Model (Source: Developed by the researcher)

2.6 Entrepreneurial Education and Psychological Empowerment

Entrepreneurial education has a major effect on the beliefs and values that students have towards entrepreneurship since it is an influential and efficient way that delivers an important knowledge base for individuals' development and enhancing their psychological abilities (Lashgarara et al., 2014). Moreover, entrepreneurial education motivates individuals to become entrepreneurs, as students acquire knowledge and have a better understanding of entrepreneurship as a future career. This understanding can impact the entrepreneurial intention of individuals (Yukongdi & Lopa, 2017). The process of educating students about entrepreneurship does not include only giving them instructions about how to track businesses, but also it provides them with a complete system which gives students the power and development to become innovative and seize openings, as a result, improve the economic situation in their countries (Mehtap, 2014). Therefore, it is hypothesized:

H1: There is a significant relationship between Entrepreneurial education and Psychological empowerment.

2.7 Culture and Psychological Empowerment

Psychological empowerment process depends on individual's interpretation and the way he/she builds values and thoughts since an individual executes additional cognitive interpretation that exceeds the interpretation of realities. Nevertheless, some individuals might have a feeling that they are not empowered due to their way of interpreting facts such as they might have a feeling that they cannot do a task, or the work they do is not valuable, they do not have the freedom to accomplish tasks their own way so that they are afraid to take risks (Focka et al., 2011).

To the best of the researcher's knowledge, as the previous studies did not consider the relationship between culture and psychological empowerment, it has been concluded by the researcher that; when cultures have a low level of uncertainty avoidance they tend to take risks and deal with ambiguous situations so that they can be more psychologically empowered, in masculine societies where individuals give worth to competition and accomplishments tend to have a higher level of psychological empowerment and cultures who have long-term orientation look at the future and have long-term planning and have solid attitudes toward work which makes them more psychologically empowered. Therefore, it is hypothesized that:

H2: There is a significant relationship between Culture and Psychological empowerment.

2.8 Psychological Empowerment and Entrepreneurial Intentions

All organizations must inspire individuals to think and act in an innovative way, encourage them to experience creativity in solving dilemmas that might face them, and motivate them to take risks. Moreover, psychological empowerment has a vital role in encouraging individuals to comprehend their innovative ideas and initiatives. As a result, psychologically empowered individuals have a higher level of innovation and creativity (Bratnicki et al., 2007). It is important to highlight the positive impact of developing and internally empowering individuals (Ertürk, 2012). Likewise, when individuals feel that they have the capability of pursuing tasks successfully, their intention towards pursuing that task increases (Shahab et al., 2019). Therefore, it is hypothesized that:

H3: There is a significant relationship between Psychological empowerment and Entrepreneurial intentions.

2.9 Entrepreneurial Education and Entrepreneurial Intention

One of the major tools that can boost behaviours of individuals toward entrepreneurship is entrepreneurial education, as it has a strong relationship with increasing intentions. Entrepreneurial education provides a variety of information to leverage behaviours of individuals and has a strong impact on student's tendency to initiate a business. (Hattab, 2014). Entrepreneurial education can also affect the attitudes and beliefs of students, as a result, affecting their entrepreneurial intention and inspire them to become entrepreneurs (Piperopoulos, 2012). It has been shown that students who take entrepreneurial courses, have more self-efficacy than other students who do not take courses concerning entrepreneurship, therefore the possibility of having entrepreneurial intention is higher (Sun et al., 2017). Therefore, it is hypothesized that:

H4: There is a significant relationship between Entrepreneurial education and Entrepreneurial intention.

2.10 Culture and Entrepreneurial Intention

It is crucial to consider culture when discussing entrepreneurial intentions and actions because culture shapes the values, beliefs, and behaviours of individuals about the concept of entrepreneurship. Additionally, culture can enhance or prevent individuals from having entrepreneurial intentions or conducting entrepreneurial actions in their societies, as it is considered one of the most important factors for entrepreneurs, favourable cultural conditions can influence entrepreneurial intentions (Morrison, 2000;

Sajjad, Shafi, & Dad, 2012). According to Hofstede's cultural dimensions, cultures with a low uncertainty avoidance tend to have more entrepreneurship activities, cultures with high masculinity have more entrepreneurship, and cultures that are long-term oriented have higher levels of entrepreneurial activity (Urban and Ratsimanetrimanana, 2015). Therefore, it is hypothesized that:

H5: There is a significant relationship between Culture and Entrepreneurial intention

3 Research Methodology

3.1 Research Approach

The deductive approach has been used as the present research tends to examine existing theories and test them, since the deductive approach focuses on a previous and well-established theory to develop hypotheses by following a route from the generic theory to a specified state (Ryan, 2018). This research used already existing theories such as Hofstede's cultural theory, Psychological Empowerment through the social exchange theory and Entrepreneurship through the economic theory and built hypotheses based on the prior research and knowledge, also the hypotheses have been tested and conclusions have been derived based on testing processes and experimental analysis.

3.2 Research Choice and Data Collection Method

The current research used the quantitative approach since it is used for testing theories using the deductive method by having an existing theory, develop and explain hypotheses related to this theory it also emphasizes that the researcher and the research are separate from each other so that the researcher must examine the theory by having no impact on this theory. Moreover, the quantitative method is "experimental" which emphasizes generating hypotheses and research questions, testing them, and verify surrounding situations to avoid inadequate and unsuitable results (Slevitch, 2011).

According to the data collection method, this research used the survey method by distributing questionnaires online by using google forms and traditionally by distributing questionnaires to a non-probability convenient sample of 220 university students from 15 different universities in Jordan. The sample focused on students who study entrepreneurship, took or are taking any course related to entrepreneurship.

3.3 Survey Design

The survey was designed to include items for the constructs of the model, the items were taken from previously available scales such as entrepreneurial education which combined two scales taken from (Walter & Block, 2016; Souitaris et al., 2007). The scale of psychological empowerment with its four dimensions (meaning, impact, self-determination, and competence) was taken from (Spreitzer, 1995). entrepreneurial intention scale was taken from (Linan et al., 2011). And the scale of culture was taken from (Yoo, Donthu & Lenartowicz, 2011). As they created the scale to measure culture at the individual level derived from Hofstede's scale. The survey included forty-two items that measure the variables and four items that include demographics such as the educational level, experience level, gender, and age. The questionnaire used the five-point Likert scale ranging from strongly disagree to strongly agree. Furthermore, respondents were asked to fill out the survey either online or by distributing the printed questionnaire to them by going to universities and asking them to fill the printed questionnaire and collect them back.

3.4 Reliability

Reliability covers important measurements such as errors of measurements, reliability, and consistency. It confirms that the instrument of measuring does not contain errors and it provides the same results, also when the measurement error is low, the reliability becomes higher (Scholtes, Terwee, & Poolman, 2018). The reliability of each scale used is as presented in Table 1:

Table 1: Survey Design and Scales

Scale	Cronbach Alpha
Entrepreneurial Education	($\alpha = 0.81$), ($\alpha = 0.88$)
Psychological Empowerment	Ranging from ($\alpha = 0.83$ to $\alpha = 0.87$)
Entrepreneurial Intention	($\alpha = 0.87$)
Culture	Ranging from ($\alpha = 0.74$ to $\alpha = 0.91$)

3.5 Validity

The validity of content is known as the degree by which measurements reflect a precise field of information. It is also known as the way by which studies can be considered as means that represent the world and the area of information being studied (Newman, Lim, & Pineda, 2013). In this research, the validity of the content was tested by distributing the questionnaire to professors to make sure that it is easily comprehended by university students.

Furthermore, construct validity was used in this research which is known as the degree by which conclusions and findings are derived out of the operationalization in the research based on theories and constructs. It is important to assess construct validity, because by the absence of construct validity, researchers will not be able to predict and confirm the findings, the test results of theories might be inaccurate, and the hypotheses could be rejected due to error in measurements rather than being rejected due to the

inadequate theory (Bagozzi, Yi, & Phillips, 1991).

Face validity is known as the extent by which recipients create judgment for whether the items appropriately measure what they intend to measure (Hardestya & Beardenb, 2004). The items of the questionnaire have been reviewed subjectively, to make sure that they correspond with what the research aims to test.

4 Data Analysis

4.1 Demographic Analysis

The respondents of this research have been chosen on the bases of being an appropriate sample with non-observation to make sure their response will remain the same by using questionnaire to eliminate bias in the results. Table 2 presents the results of the demographic analysis:

Table 2: Demographics

Gender		Age		Educational Level		Experience Level	
Female	54.55%	18-24	89.5%	Undergraduate studies	65.5%	Students	73.2%
Male	45.45%	25 - 34	9.1%	Bachelor's degree	23.2%	Employed	18.6%
		35 - 44	1.4%	Masters' degree	11.4%	Self-Employed	8.2%

4.2 Reliability Analysis

For the study to be considered reliable, it is imperative to test for the reliability of the constructs to find the re-

lationship between these constructs. Beaujean (2017) recommend the use of the Cronbach's alpha for the determination of reliability. Therefore, in this study, reliability has been checked by testing the Cronbach Alpha for each scale of the constructs used in the model as shown in the Table 3:

Table 3: Reliability Testing

Construct	Cronbach's Alpha	N of Items
Entrepreneurial Education (EE)	0.915	9
Psychological Empowerment (PE)	0.907	8
Entrepreneurial Intentions (EI)	0.899	6
Uncertainty Avoidance (UA)	0.861	5
Masculinity (MS)	0.868	4
Long-term Orientation (LO)	0.856	6

From the foregoing, it is evident that none of the reliability statistics were less than the required minimum threshold of 0.70 and according to Pallant (2013), this confirms that all the constructs used in this study were internally consistent, that is, reliable.

4.3 Descriptive Analysis

This section evaluates the perceptions of the respondents for each construct. This was done using both measures of central tendency and measures of dispersion, by measuring the mean and the standard deviation. A 5-point

Likert scale was used to measure the perceptions by the respondents for each item, with 1 being strongly disagree and 5 being strongly agree.

The results (Table 4) show that on aggregate, the construct with the highest mean statistic rating was Psychological Empowerment followed by entrepreneurial education. The third highest rated item was entrepreneurial intentions. On the other hand, of the four constructs, the least rated was culture. While two of the sub-constructs for culture had relatively high mean statistics, uncertainty avoidance and long-term orientation. As a result, Masculinity was rated negatively by respondents which indicates they tend to be more feminine.

Table 4: Summary Statistics – Aggregate Ratings

Construct	Mean	SD	Skew	Kurt
Entrepreneurial Education (EE)	3.567	.830	-1.243	1.370
Psychological Empowerment (PE)	3.688	.723	-1.404	2.961
Entrepreneurial Intentions (EI)	3.457	.950	-.802	.101
Culture (CL).	3.315	.635	-.586	1.794
Uncertainty Avoidance (UA)	3.761	.810	-.910	1.328
Masculinity (MS)	2.759	1.091	-.080	-1.103
Long-term Orientation (LO)	3.424	.845	-.921	.814

4.4 Structural Equation Modelling

Upon exploring the constructs that had been validated for the study, this section seeks to test the research hypotheses that addressed the key research objectives.

Since the research constructs were made up of several items, this meant that the study involved the use of latent variables (Byrne, 2012). According to Hancock and Mueller (2013), while multiple linear regression can be applied, in this instance, it was not robust for latent variable modelling since the scholars argued that Structural Equation Modelling (SEM) was the optimal test to use. Narayanan (2012), further argue that the use of multiple regression poses challenges in that it forces variables to be aggregated, thereby failing to account of the individual item effects, which is handled in Structural Equation Modelling. In this regard, the researcher considered the use of Structural Equation Modelling for the testing of the research hypotheses above.

Nevertheless, the Covariance-Based SEM (CB-SEM) was used in this study due to Byrne (2016) notes that CB-SEM is optimal for sample sizes greater than 200, while VB-SEM is optimal for sample sizes less than 200. Regarding the multivariate normality, according to Kline (2016) and Hair et al. (2017), for the multivariate normality assumption to be met the multivariate kurtosis must be greater than 7.0, and the critical ratio must be greater than 1.96. And from the outcome, the multivariate kurtosis was 325.243, while the critical ratio was 43.747. In this regard, because the sample size used in this study was 220 > 200 and that the multivariate normality assumption was met, CB-SEM was done using IBM SPSS Amos v26. The results from the structural equation modelling are presented in Figure 3.

In order to test the developed model of the study, the researcher used Structural Equation Modelling (SEM) to test the presented hypotheses.

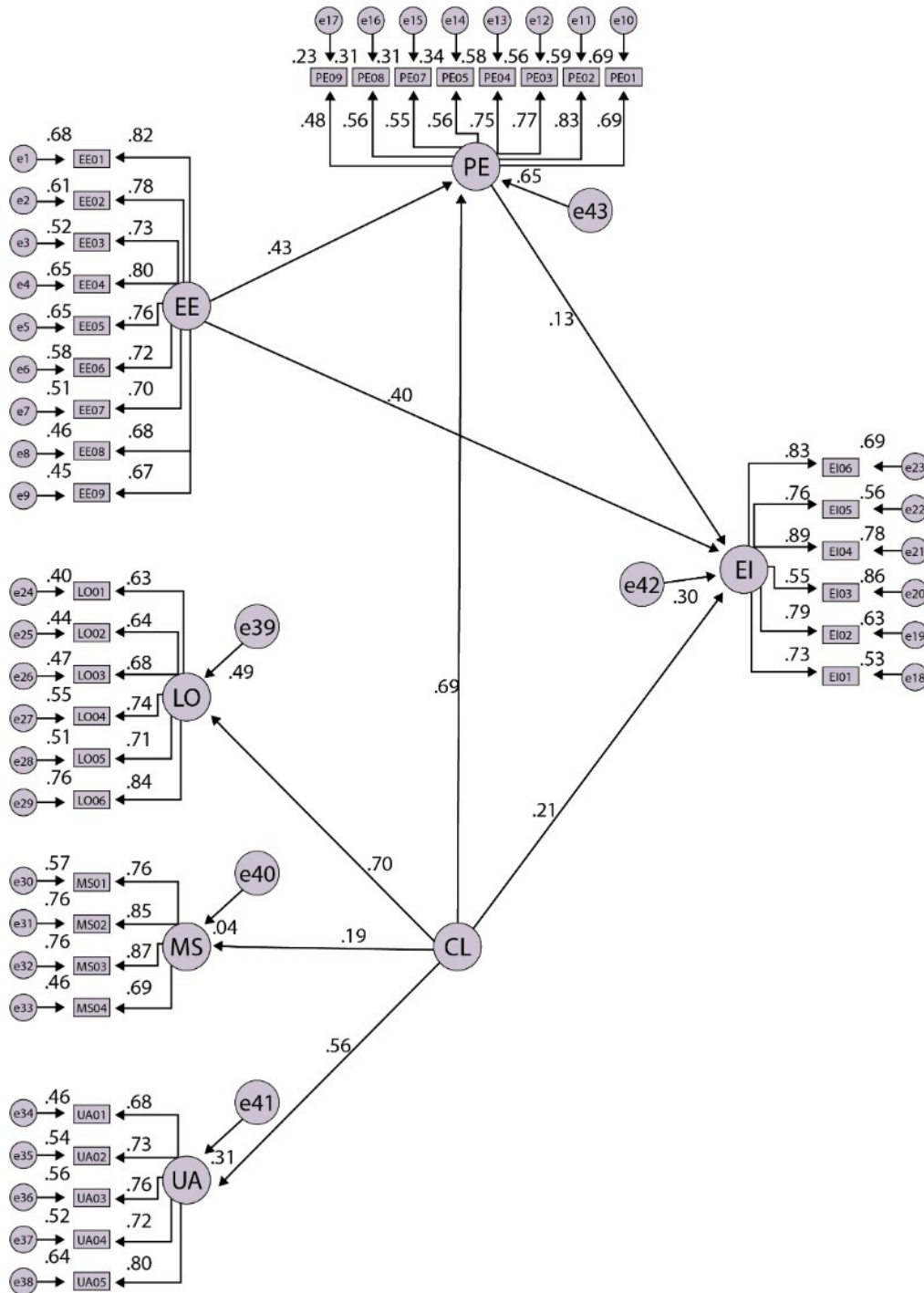


Figure 3: Structural Equation Model

Table 5: Path Coefficients

	Beta	S.E.	C.R.	P	R2
Psychological Empowerment <---Entrepreneurial education	.429	.066	6.552	.000	.688
Psychological Empowerment <---Culture	.685	.247	4.637	.000	.629
Entrepreneurial Intention <--- Culture	.208	.299	2.098	.036	.274
Entrepreneurial Intention <--- Entrepreneurial Education	.402	.104	3.788	.000	.353
Entrepreneurial Intention <--- Psychological Empowerment	.131	.172	1.997	.045	.654
R ²	.654				

From the results (Table 5), it is shown that the beta coefficient for all the hypotheses is positive and p value is less than 0.05. Which indicates that all hypotheses were confirmed; the researcher confirmed that entrepreneurial education had a statistically significant positive effect on psychological empowerment since beta coefficient was 0.429 and ($p = 0.000$), psychological empowerment had a statistically significant positive effect on entrepreneurial intentions as beta coefficient was 0.131 and ($p = 0.045$), there is a statistically significant positive relationship between culture and psychological empowerment since the beta coefficient was 0.685 and ($p = 0.000$), entrepreneurial education had a statistically significant positive effect on entrepreneurial intention as the beta coefficient was 0.402 and ($p = 0.000$), finally the researcher confirmed that there was a statistically significant relationship between culture and entrepreneurial intention since the beta coefficient was 0.208 and ($p = 0.036$).

The r-square statistic for the link between entrepreneurial education and psychological empowerment was 0.688, and this meant that 68.8% of the variation in the dependent variable was explained by the independent variable, the r-square for the relationship between psychological empowerment and entrepreneurial intention was 0.654 which meant that 65.4% of the variation in entrepreneurial intention is explained by psychological empowerment. For culture and psychological empowerment, the r-square was 0.629, suggesting a total variance explanation of 62.9%. R-square for entrepreneurial education and entrepreneurial intention was 0.353 which meant that 35.3% of the variation in entrepreneurial intention is explained by entrepreneurial education. Finally, culture explained just 27.4% of the variation in entrepreneurial intention. Overall, the r-square statistic was 0.654, and this meant that 65.4% of the variation in the dependent variable was explained by the independent variables. This being a high statistic, which means that the variables considered for this study

explained the greatest variance and that the residual variance unexplained was as a result of factors beyond the scope of this study.

5 Discussion

5.1 Theoretical Implications

The current study contributes to existing research by adding psychological empowerment with its four dimensions in the entrepreneurial education process to highlight its effect on entrepreneurial intentions of university students in Jordan. It is also among the first to link culture as an independent variable with psychological empowerment using Hofstede's cultural model to address its effect on entrepreneurial intentions of students, contributing in increasing the awareness of universities and instructors in educating and empowering students as they will increase their interest and invest more in preparing students that are knowledgeable and capable of establishing their own businesses, as a result, the study will contribute in helping Jordan to enhance its economy through entrepreneurship. Five hypotheses were generated to inspect the relationship between variables. This study is an extension to previous studies, as it answers the call of researchers (Anlesinya et al., 2019; Sharma, 2018) as they suggested to study the psychological factor and culture in other contexts and in different nations.

This study answers the call of (Drost & Mcguire, 2011; Harun and Mark, 2014). As they suggested focusing on the psychological factor and culture in the process of entrepreneurial education. Furthermore, this study is the first to add psychological empowerment in the entrepreneurial education process, it is also the first to use culture following one of the most prevalent cultural models (Hofstede's cultural model) that provided a better understanding of the

way individuals behave and how they differ from one culture to another (De Mooij & Hofstede, 2010). By linking culture with psychological empowerment to examine its effect on entrepreneurial intentions of university students. The study provides a complete comprehensive model to combine psychological empowerment and culture as an expansion to the previous studies.

It is also the leading study to combine psychological empowerment and culture to examine their effect on entrepreneurial intention in Jordan.

Outcomes of this study reveal that culture has a positive effect on psychological empowerment and a positive effect on entrepreneurial intention, as it provides an answer to the suggestion of Harun and Mark (2014) as they suggested that the studies of entrepreneurial education should consider culture. Their study has examined the role of some independent variables chief among them is country culture, but without adding psychological empowerment. Also, their study was conducted in four countries (America, China, Belgium, and Turkey). Moreover, other studies (e.g. Anlesinya, Adepoju & Richter, 2019) highlighted the relationship between culture and women's entrepreneurial intention in the African context specifically in Ghana. As the research suggested to study culture in a different context. Though, the current research investigated the effect of culture on entrepreneurial intentions by adding psychological empowerment and applied it in the Jordanian context.

Additionally, the outcomes of the current study underline the generalization of the effect of psychological empowerment in a Middle Eastern country (Jordan). Although, the previous study

of Drost and McGuire (2011) showed consistent findings regarding the relationship between entrepreneurial education and entrepreneurial intention through self-efficacy in western cultures.

The study of Sharma (2018) focused on studying the effect of culture and Gender on entrepreneurship intentions and was conducted in India, as it suggested for future studies to include the national culture of a specific country to examine its effect on entrepreneurial actions. Correspondingly, to the best of the researcher's knowledge, there were no studies that focused on linking psychological empowerment with its four dimensions in the entrepreneurial education process, to examine its effect on entrepreneurial intentions of university students within the Jordanian context.

5.2 Practical Implications

The model of the current study is developed to examine the effect of entrepreneurial education on entrepreneurial intentions as much research are available in this area. To the best of the researcher's knowledge, the current research aims to fill the gaps of the preceding research, as it is an addition to the previous literature by adding psychological empowerment and culture to examine their effect

on entrepreneurial intentions. Also, this research is applied to university students in Jordan. Therefore, the developed model of the current research contributes to assist academic entities specifically universities.

Entrepreneurial education in Jordan can be improved by adding psychological empowerment to the process, as it has been shown from the findings of the current study that using psychological empowerment in the process of entrepreneurial education can affect student's entrepreneurial intentions positively. This suggests that universities and instructors of entrepreneurship courses can focus on internally inspiring and motivating students to make them feel that they have the ability to establish their own business by training and giving them the freedom to establish business ideas, as it will have a greater impact on their decision of becoming entrepreneurs, rather than focusing only on providing them with theoretical information and knowledge about entrepreneurship. This can be done by conducting training for instructors to change their teaching way by increasing their abilities in empowering and internally inspiring students to motivate them and increase their entrepreneurial intentions.

Moreover, by practicing psychological empowerment in the education process, this will affect the cultural backgrounds of students, making them change their beliefs, attitudes and decrease the high level of uncertainty avoidance, making them more empowered and capable of establishing their start-ups. This study contributes to changing society's culture by inspiring the future generation of students and encourage them to take the risk by having creative business ideas and initiating their start-ups.

Furthermore, when entrepreneurial education in Jordan is enhanced by internally inspiring students, this will encourage them to have their businesses and to choose entrepreneurship as their future profession, rather than focusing on the theoretical side of entrepreneurial education by focusing on providing them with information and knowledge while the student will still hold the same cultural beliefs.

Also, it is important to have entrepreneurship undergraduate major as it has many benefits such as providing realistic experiences for students to initiate their business, having a larger number of opportunities, students will learn skills and gain knowledge about the entrepreneurial process, and increasing the opportunity and intentions of students to become entrepreneurs (Oosterbeek, et al., 2010). At the same time connecting the entrepreneurship department in universities in Jordan with entrepreneurial incubators in order to provide students with practical experience to expand their knowledge and intentions to start their business.

When universities focus on psychological empowerment in educating students about entrepreneurship, this will increase their intentions of establishing their own businesses, as a result, this will contribute in enhancing the economic situation of Jordan. Due to the reason that

start-ups play a vital role in developing the economic situation of a country by decreasing unemployment rate and increasing competition in the market by encouraging creativity (Mesnard and Ravallion, 2006).

6 Limitations

There are some limitations to this research. First of all, the study has a cross-sectional design that limited the opportunity to fully comprehend the behaviour of students. It is suggested for future studies to adopt the longitudinal research design to better comprehend the changing intentional behaviour of university students. Second of all, the COVID-19 crisis limited the time for the researcher to collect data, as the Government has issued the decision of closing universities which restricted the ability to visit universities to distribute the questionnaire face-to-face as it took more time to collect the data online. Third, the study was conducted in Jordan only. Future studies can validate the model of the study by applying it in other countries in the Middle East such as Lebanon, Syria, and Turkey. Forth, the study focused on entrepreneurial intentions of students and did not investigate the elements beyond the intention, as it is recommended for future studies to add other dependent variables for the model such as start-up action to better understand what's beyond the intentions of students. Fifth, the small sample size, it is recommended for future studies to have a bigger sample size. Finally, the study used only three dimensions of Hofstede's model. Future studies can use the whole five dimensions of Hofstede's cultural model to better understand the effect of cultural dimensions, as this study used only three of the dimensions.

7 Conclusion

Entrepreneurial education is the crucial element nowadays that can differentiate the entrepreneurial behavior of students as it can positively affect their entrepreneurial intention. Admitting to the fact that everyone is living in a society that has its own cultural beliefs and values that contributes to shape the attitudes of individuals, it has been shown that culture can affect the entrepreneurial intention of students. Consequently, to encourage students to have entrepreneurial intentions, an important factor that this study has shed the light on is psychological empowerment by using it in the process of educating students about entrepreneurship to motivate them and shape their intentions toward entrepreneurship as it also can be affected by their cultural surroundings.

The current study aimed to highlight the factors that contribute to shape entrepreneurial intention of students in Jordan by constructing a model to examine the effect of entrepreneurial education and culture on entrepreneurial

intentions considering the role of psychological empowerment. It has been shown that educating students about entrepreneurship by internally motivating them can positively affect influencing their intentions towards entrepreneurship, the study also highlighted the role of culture in affecting the process of psychologically empowering students also shaping entrepreneurial intentions. Hence, all hypotheses were confirmed and all variables in the developed model were significant. Furthermore, the current research model has been applied in Jordan for the first time, as it will be useful for universities and instructors to follow in order to increase the entrepreneurial intentions of students, as a result contributing to enhancing the economic situation of a developing country like Jordan.

Literature

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Vpliv podjetniške izobrazbe in kulture na podjetniško namero

Ozadje/Namen: Podjetniško izobraževanje lahko pozitivno vpliva na podjetniške namere študentov. Vendar univerze v Jordaniji še vedno ne usmerjajo pozornosti k vlaganju v podjetniško izobraževanje. Namen te študije je raziskati vpliv podjetniške izobrazbe in kulture na podjetniško namero s pomočjo psihološkega opolnomočenja študentov.

Metodologija: Vprašalnik je bil razdeljen vzorcu 220 univerzitetnih študentov v Jordaniji, ki obiskujejo predavanja iz katerega koli predmeta iz podjetništva. Podatki so bili analizirani in hipoteze preizkušene z modeliranjem strukturnih enačb (SEM) z uporabo Statističnega paketa za družbene vede (SPSS).

Rezultati: Analiza študije je pokazala, da; podjetniško izobraževanje pomembno vpliva na psihološko opolnomočenje, psihološko opolnomočenje pomembno vpliva na podjetniške namere, kultura pomembno vpliva na psihološko opolnomočenje, podjetniška izobrazba pomembno vpliva na podjetniško namero in kultura pomembno vpliva na podjetniške namere. Rezultati študije so odziv na predloge v prejšnjih raziskavah, da bi preučili vlogo kulture in psihološkega opolnomočenja v podjetniškem izobraževanju pri vplivu na podjetniško namero.

Zaključek: Univerze v Jordaniji bi se morale bolj osredotočiti na podjetniško izobraževanje s psihološkim opolnomočenjem študentov, da povečajo svoje namere do podjetništva. Ta študija prispeva k obstoječi literaturi z zagotavljanjem boljšega razumevanja razmerja med podjetniško izobrazbo in podjetniškimi namerami s kulturo in psihološkim opolnomočenjem.

Ključne besede: Podjetništvo, Podjetniško izobraževanje, Podjetniška namera, Kultura, Psihološko opolnomočenje

Appendix: List of Measurement Items

EE1-Entrepreneurship program helped me develop my sense of initiative—a sort of entrepreneurial attitude.

EE2- Entrepreneurship program helped me to better understand the role of entrepreneurs in society.

EE3- Entrepreneurship program made me interested to become an entrepreneur.

EE4- Entrepreneurship program gave me skills and know-how that enable me to run a business.

EE5- Entrepreneurship program creates my understanding of the attitudes, values, motivations of an entrepreneur (why do entrepreneurs act).

EE 6- Entrepreneurship program creates my understanding of the action one needs to take in order to start a business (what needs to be done).

EE 7- Entrepreneurship program creates my understanding of the practical management abilities and skills in order to start a new venture (how does one starts a business).

EE 8- Entrepreneurship program creates my abilities to create networks (who do you need to need to know).

EE 9- Entrepreneurship program creates my ability to identify an opportunity (when to act).

Psychological empowerment

Meaning

M1-The work I do is very important to me.

M2-My work activities are personally meaningful to me.

M3-The work I do is meaningful to me.

Competence

C1- I am self-assured about my capabilities to perform my work activities.

C2-I have mastered the skills necessary for my job.

Self-Determination

SD1 -I have significant autonomy in determining how I do my job.

SD2 -I can decide on my own how to go about doing my work.

SD3-I have considerable opportunity for independence and freedom in how I do my job.

Impact

IM1-My impact on what happens in my department is large.

IM2-I have a great deal of control over what happens in my department.

IM3-I have significant influence over what happens in my department.

Entrepreneurial Intention

EI1 -I am ready to do anything to be an entrepreneur.

EI2 -I will make every effort to start and run my own business.

EI3 -I do not have serious doubts about ever starting my own business.

EI4 -I am determined to create a business venture in the future.

EI5- My professional goal is to be an entrepreneur.

EI6 -I have high intention of starting a business.

Culture

Uncertainty avoidance

UA1 -For me it is important to have instructions spelled out in detail so that I always know what I'm expected to do.

UA2 - For me it is important to closely follow instructions and procedures.

UA3 - For me rules and regulations are important because they inform me of what is expected of me.

UA4- For me standardized work procedures are helpful.

UA5 - For me instructions for operations are important.

Masculinity

MAS1 - For me it is more important for men to have a professional career than it is for women.

MAS2 -For me men usually solve problems with logical analysis; women usually solve problems with intuition.

MAS3 -For me solving difficult problems usually requires an active, forcible approach, which is typical of men.

MAS 4 - For me there are some jobs that a man can always do better than a woman.

Long-term orientation

LO1- I go on strongly in spite of disagreement (Persistence).

LO2- I have Personal steadiness and stability.

LO3- I do Long-term planning.

LO4 -I give up today's fun for success in the future.

LO5- I work hard for success in the future

The Adoption and Implementation of High-Performance Work System in Subsidiaries of Japanese Multinational Companies in Vietnam: a Qualitative Study

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Background and purpose: Managing human resource in foreign subsidiaries of Multinational Companies (MNCs) has been a challenging task due to the cultural diversity. High Performance Work System (HPWS) has been adopted by headquarters of MNCs in their subsidiaries as a form of control. The current research aims to explore the adoption and implementation of HPWS in subsidiaries of Japanese MNCs in Vietnam.

Design/Methodology/Approach: A qualitative research design was conducted with data collected from semi-structured in-depth interviews with 33 managers working in 11 subsidiaries of Japanese MNC in Vietnam. Content analysis was used to analyze the data.

Results: The results suggested that although HPWS was not fully implemented in these establishments, ability enhancing, motivation enhancing and opportunity enhancing bundle of HPWS were adopted to a varying extent. In addition, HPWS was adopted as a reactive response rather than a strategic choice. Finally, cost-benefit consideration may provide explanation for the non-systematic implementation of HPWS in affiliations of Japanese MNCs in Vietnam.

Conclusion: The research provides some evidences to support the best-fit approach to HPWS adoption and implementation. Although HPWS has the potential to improve organizational performance, it must be internally aligned with the context of the organization.

Keywords: *High performance work system, Adoption, Implementation, Subsidiaries, Japanese multinational companies, Vietnam*

1 Introduction

Vietnam is a transition economy, with only 30 years of experience since the structural reform from a strictly centralized system, to a market-oriented economy. Open policies and high economic growth have attracted waves of foreign direct investment, mainly in the form of Mul-

ti-national Companies (MNCs) (Bartram, Stanton, & Thomas, 2009; Budhwar, Varma, & Patel, 2016). These businesses have introduced human resource (HR) management practices used primarily by companies in Western cultures (King-Kauanui, Dang, & Coteleur, 2006). However, research in Vietnam suggested a diversity of HR practices being implemented by such companies in Vietnam

(Nguyen, Teo, & Ho, 2018). Vo and Stanton (2011), for example, explored the differences in the adoption of HR practices among MNCs of US and Japan origin. Specifically, the transfer of HR practices from headquarters to Vietnamese subsidiaries was found to be easier among US MNCs than Japanese MNCs. Other research acknowledged the dilemma faced by MNCs in transferring their HR practices to Vietnamese subsidiaries and highlighted the role of industrial sectors in the successful introduction of HR practices in subsidiaries (Vo & Hannif, 2012). Overall, available pieces of evidence support the divergent views of HR practices adopted by subsidiaries of MNCs operating in Vietnam (P. S. Budhwar et al., 2016; Nguyen et al., 2018). On the other hand, others studies advocate the adoption of High Performance Work System (HPWS) by MNCs in their subsidiaries in order to enhance competitiveness (Foley, Ngo, & Loi, 2012; Demirbag, Tatoglu, & Wilkinson, 2016).

HPWS refers to a combination of separate but complementary human resource management practices aiming at fostering employee ability, motivation, and commitment (Datta, Guthrie, & Wright, 2005). The role of HPWS in improving organizational performance has been well documented in the literature (Combs, Liu, Hall, & Ketchen, 2006; Subramony, 2009). In addition, several meta-analyses have confirmed the positive impact of HPWS on firm performance across societal cultures (Rabl, Jayasinghe, Gerhart, & Kühlmann, 2014; Dastmalchian et al., 2020). Not only at the organizational level, the positive links between HPWS and individual attitude and behaviors have been reported (Jiang, Lepak, Hu, & Baer, 2012; Fang et al., 2015). With the available evidence, it is necessary to investigate the adoption of HPWS in subsidiaries of MNCs in Vietnam, which has not been heavily researched. The current study, therefore, addresses this gap in the current literature by examining the extent to which HPWS is adopted by subsidiaries of Japanese MNCs in Vietnam, and the reasoning behind such level of adoption.

Japan has been among the top countries in terms of Foreign Direct Investment (FDI) in Vietnam with the amount of more than \$42 billion as of 2017 (MPI, 2017). While Japanese Multinational Companies (MNCs) in Vietnam have enjoyed continuous success, they are also facing tremendous problems. According to Retro (2019), among 796 surveyed Japanese companies in Vietnam, nearly 66% are reporting profit, while about one-fifth of them are operating at loss. In addition, wage hikes, fierce competition, quality of employees, and difficulties in developing new clients are among the top challenges faced by Japanese companies in Vietnam. Japan enjoyed its great success with its global strategy during the 1980s with the surge in outward FDIs, with the transfer of management and production techniques as the key success factor (Fitzgerald & Rowley, 2015). However, Hirasaka, Kusaka, and Brogan (2021) reported a rapid decline in the competitiveness of

Japan during the last 30 years, which saw its ranking drop from 1st in 1990 to 34th in 2020. They pointed out that current business leaders in Japanese companies cannot respond effectively to changes in the environment by making appropriate decisions. The ineffectiveness of human resources development programs is to blame for the problems. Similarly, Nakagawa, Nakagawa, Fukuchi, Sasaki, and Tada (2018) suggested that while Japanese companies help in developing the host countries' competitiveness in manufacturing, their performances were below expectation. One of the main causes for the phenomenon is related to the Japanese international management style, in which a similar management style is adopted in the host-country subsidiaries as it is adopted in the headquarter (Buckley, 2009).

Specifically, this research aims to answer the following research questions:

RQ1: To what extent do subsidiaries of Japanese MNCs in Vietnam adopt High Performance Work System? How strong are these systems in such subsidiaries?

RQ2. What are the drivers and obstacles of HPWS adoption in these subsidiaries?

RQ3. What are the benefits and costs of adopting and implementing HPWS subsidiaries of Japanese MNCs in Vietnam?

To answer the above research questions, we try to explore the extent to which managers know about HPWS as a system and the extent to which HPWS components are adopted and implemented at the subsidiaries. Then, we evaluate the strength of the HRM systems in Japanese Subsidiaries based on the framework proposed by Bowen and Ostroff (2004) in which a strong HRM system should be perceived as high in distinctiveness, consistency, and consensus.

We then seek to figure out the reasons for HPWS adoption in these subsidiaries. Finally, the current study explores the possible benefit and cost of adopting and implementing HPWS in Japanese operations in Vietnam.

A qualitative research design with in-depth interviews was conducted to collect data. This exploratory research adds to the current understanding of HPWS adoption in subsidiaries of Japanese MNCs in Vietnam in the following aspects. First, this research is among the first to investigate the diffusion of HPWS among subsidiaries of Japanese MNCs in the context of Vietnam. Second, this study examines both the benefits and cost of HPWS adoption among subsidiaries of Japanese MNCs in Vietnam. Finally, this paper takes the view of local managers in exploring the possible pros and cons of HPWS implementation in subsidiaries of MNCs to effectively design HRM systems in the respective organizations.

2 Literature review

2.1 High performance work system (HPWS)

Some thirty years ago, a group of scholars (Huselid, 1995; Delaney & Huselid, 1996; Huselid & Becker, 1997) proposed that a set of human resource management practices would promote competitiveness and enhance the performance of the implementing firms. In addition, these authors also found the synergy effects of the mentioned practices. These HR practices are often referred to as “high performance work practices” (Huselid, 1995), “progressive HRM practices” (Delaney & Huselid, 1996) or “high performance work system” (Macky & Boxall, 2007). The current study inherits the term high performance work system (HPWS) to refer to “a set of separate but interrelated human resource management practices aiming at fostering employee ability, motivation, and commitment” (Datta et al., 2005). Although there is no universally agreed upon list of practices to constitute HPWS, these can be categorized according to the ability-motivation-opportunity framework (Jiang et al., 2012; Do, Budhwar, & Patel, 2019; Phuong, 2020). This study conceptualizes HPWS as consisting of three bundles: 1) ability-enhancing practices that deal with rigorous selection and progressive training; 2) motivation-enhancing practices which include transparent and objective performance appraisal and performance-based compensation and advancements; and 3) opportunity enhancing practices that focus on delegation of authorities, participative decision making and provision of supports.

2.2 Determinant of HPWS adoptions

Extant research has identified many factors predicting the adoptions of HPWS in organizations, ranging from the macro external environments such as national economic growth rate and registration (Lawler, Chen, Wu, Bae, & Bai, 2011), and industrial factors such as manufacturing and service operations (Combs et al., 2006) to firm characteristics such as firm age, firm capital (Phuong, 2020), relationship with stakeholders (Qiao, Wang, & Wei, 2015), and ownership types (Demirbag et al., 2016). In addition, studies also acknowledge the influence of top management characteristics as determinants of HPWS adoption. Qiao et al. (2015) found that owners’ commitment to human resources as an important determinant of HPWS adoption. Phuong (2020) showed that CEO’s educational attainment is positively related to the extent of HPWS implementation. Lawler et al. (2011) report that the presence of a third-country general director also increases the probability of HPWS admission.

Regarding the diffusion of HPWS from headquarters

to subsidiaries of MNCs, extant works have provided shreds of evidence of both convergent and divergent findings. Overall, researchers seem to agree that MNCs utilize HPWS as a strategic management tool and a mechanism of control (Foley et al., 2012; Demirbag et al., 2016). Studying the operation of various MNCs in one host country, Foley et al. (2012) found that headquarters’ strategic human resource management orientation is positively influences the adoption of HPWS in subsidiaries. In addition, the stronger the influence of headquarters the larger the extent that HPWS is adopted in subsidiaries. Similarly, in a study of one source country, i.e. US-based, MNCs, Lawler et al. (2011) also found similar results in which the influence of the parent companies are important predictors of HPWS adoption in subsidiaries. On the other hand, there were also remarkable differences across MNCs of different origins. For example, Foley et al. (2012) studied subsidiaries of MNCs in Hong Kong context and found that American MNCs tend to adopt HPWS to the largest extent, followed by European MNCs, and Asian MNCs to the least. Instead of implementing HPWS, Asian MNCs tend to appoint source country CEO to exert control over the subsidiaries. In addition, comparable management philosophy which stresses benevolence, certainty and consensus, instead of strategic management is also identified as the reason for the low level of HPWS adoption in subsidiaries of Asian MNCs. Lawler et al. (2011) studied US MNCs’ subsidiaries in different host countries and indicated that some host country characteristics such as economic growth and per capital spending on education foster the application of HPWS in subsidiaries of US MNCs. Demirbag et al. (2016) found that the diffusion of HPWS in subsidiaries in Turkey is different between two groups of MNCs, the developed-country based and emerging-country based. Specifically, the author reported that developed-country MNCs focus more on strategic HRM, training, and empowerment while emerging-country MNCs emphasize the transparency of information sharing and performance-related compensation. Budhwar et al. (2017) studied the development of HRM in MNCs from BRICS nations and found that HRM constitutes a major weakness among MNCs in most countries except for the Indian IT sector. The authors also suggested that while HPWS is widely adopted in many MNCs in different areas of the world, there is a paucity of research on the adoption and influence of HPWS on firm performance in the BRICS context. In a recent study, Ahmad, Allen, Raziq, and ur Rehman (2019) compared the adoption of HPWS between MNCs and domestic firms in Pakistan and indicated that there were differences between these two types of firms in the adoptions of such practices as performance review, performance-related compensations, and training. The research also reported that the host-country institutions influence the adoptions of HRM practices in MNCs’ subsidiaries. Min, Zhu, and Bambacas (2018) studied the adoption of HPWS among Chinese indigenous firms found that unlike MNCs

in China, certain HPWS practices have been implemented in conjunction with local traditional HRM practices. Overall, available research concluded that there is no universal pattern of HPWS adoption in subsidiaries of MNCs, with characteristics of both source countries and host countries coming into play. The inconclusiveness of previous works also justifies the current study.

3 Method

3.1 Procedure

This study employs qualitative method with data collected from semi-structured in-depth interviews with Vietnamese middle managers working in Japanese subsidiaries. In total, 33 semi-structured interviews with Vietnamese managers in 11 Vietnamese subsidiaries of Japanese MNCs were conducted. To collect the data, the research has gone through several steps. First, based on the list of Japanese MNCs companies provided by the Japan External Trade Organization (JETRO) Vietnam, the authors, with the support from Vietnam Japan Institute for Human Resources Development, contacted 50 companies in five provinces in Northern Vietnam to invite them to join the research. Because each of the subsidiaries is under the director of a Japanese expatriate, personal contacts with the Japanese General directors are necessary. After one month, 11 companies agreed to participate in the study. Second, at each of the subsidiaries, an official meeting with the General Director and Human resource – Administrative manager was held before the interviews. During the meeting, the research team explained and clarified the purpose and process of the study. Only after getting consent from the Japanese General Director, were the interviews conducted. Third, at each company, three interviews were held with HR-Admin manager, and two other middle managers based on the General Director's assignment. The research team also had the opportunity to conduct a 15-minute interview with the General Director regarding their previous work experience and current assignment at the subsidiary. The interviews were conducted from March to December of 2020 with several periods of suspension due to Covid 19.

As required by the participating companies, all interview sessions were conducted at the site of the subsidiaries. In addition, the names of the companies and the participants must be kept confidential. Interview schedules were arranged by the head of the HR-Admin departments based on the interviewees' and interviewers' convenience. Each interview session lasts up to 60 minutes. As per companies' regulations, no videos, pictures, and voice recordings were allowed during the interviews. Therefore, the research team used a pre-designed form to record responses from the interviewees, with each of the two interviewers taking notes simultaneously. After the interviews, the two

interviewers exchange and compare notes to prepare an interview script. Three days after the interview, a script of the interview content was sent to each of the interviewees for verification and confirmation.

The current study deploys the standardization vs. localization debate (Pudelko & Harzing, 2007). Standardization refers to the notion that MNCs wish to transfer their HRM practices from their home country to subsidiaries either to maintain control or to exert competitive advantage (Fenton-O'Creevy & Wood, 2007). On the other hand, institutional theory (Kostova & Roth, 2002) argues that firms need to conform to the external institutional force to gain legitimacy and to survive. Localization occurs when MNCs adapt their practices to the host environment. Then, based on the cost-benefit analysis (CBA) framework, this paper seeks explanations for the level of HPWS adoption in the targeted subsidiaries. Based on the above conceptual framework, the questions are developed as follows: (1) What HPWS practices are adopted in the organization and to what extent? (2) Why are these HPWS practices adopted? (3) What are the drivers and obstacles to HPWS adoption and implementation in the organization? (4) What are the benefits and cost of HPWS implementation?

To ensure that the respondents fully understand the questions in the interview, the researchers sent a cover letter to each of the respondents one week before the interviews. In this letter, a widely used definition of HPWS was supplied to the interviewees. This study adopts the definition put forward by (Datta et al., 2005, p. 135) in which HPWS refers to "systems of human resource (HR) practices designed to enhance employees' skills, commitment, and productivity". After that, the interviewees were provided with a list of 13 HPWS practices used in this research. The list of HPWS practices was extracted from previous works in the Vietnamese context (Do & Shipton, 2019; Phuong, 2020). The practices are divided into ability enhancing, motivation enhancing, and opportunity enhancing practices. The full list of items is given in Appendix 1.

In addition, throughout the interviews, directions and clarifications were provided when necessary to ensure clarity of answers. After each session, the interviewers concluded with a summary of what was discussed to ensure the accuracy of the data. In addition, to ensure the accuracy of data and unbiased responses, the researchers made clear to the respondents that the study aims to understand their perceptions and opinions regarding the adoption of HPWS in their respective organizations. Therefore, there were no right or wrong answers and no attempts to link their answers with their skills or ability (O'Dwyer, 2004).

3.2 Data analysis

In the current study, the participants' responses were analyzed using content analysis technique (Krippendorff,

Table 1: Information about subsidiaries and respondents

Subsidiary/ Company	Industry	Year operating In Vietnam	Current General Director's Western Experience	Firm size	Interviewees
A	Automobiles	25	U.S experience	101-200	HR, FM, SM
B	Construction and Engineering	20	None	101-200	HR, PM, QC
C	Supporting industry/ Manufacturing	22	None	201-300	HR, PUR, FM
D	Auto parts	17	U.S experience	201-300	HR, PE, PUR
E	Chemical/plastic	15		201-300	HR, IT, FM
F	Supporting industry/ Manufacturing	14	None	101-200	FM, HR, ACC
G	Medical Equipment	14	None	201-300	IT, FM, QC
H	Solutions / Software	15	None	<100	PM, HR, ACC
I	Water Solution	7	No	<100	SM, HR, ACC
J	Consulting Service	4	Yes	<100	GM, PM, SALE
K	Engineering	22	No	201-300	PM, HR, QC

Note: HR: Human Resource, ACC: Accounting and Finance Manager, SM: Sale and Marketing Manager, PM: Project Manager, QC: Quality Control Manager, PUR: Purchasing Manager, FM: Factory Manager, IT: Information Technology Manager, GM: General Manager.

2018). Following an inductive reasoning process, the current study aims to develop new findings from collected data. Data analysis was conducted in accordance with the four stages proposed by Bengtsson (2016), including de-contextualization, re-contextualization, categorization, and compilation. Specifically, data analysis was performed with the following 5 steps. First, interview notes and scripts were read and reviewed multiple times to identify relevant and meaningful statements by extracting and paraphrasing loops. Second, these statements were then subtracted, consolidated, and clustered into categories. Third, the categories were subsequently modified and redefined when new information emerges. Fourth, a code system was developed and each category was given a corresponding code. Fifth, each transcript was reviewed thoroughly and appropriate codes were attached with the relevant texts. To ensure the validity of findings, two researchers analyzed the data separately and then results were discussed and debated until consensus was reached (Graneheim & Lundman, 2004).

4 Results

4.1 The adoption and implementation of HPWS, and the strength of the HR practices

At the beginning of the interviews, the researchers asked the respondents about their familiarity with the

term HPWS based on the definition provided to them. It appeared from the interview data that most of the respondents have not heard about the term. There were only two exceptions, the human resource managers at company E and company I. According to these managers, they have learned about the term during the MBA courses that they attended at the universities.

"I was introduced to the term during my HRM course which I completed as a part of my MBA program. The professor clarified the components of HPWS as well as the possible positive impacts it may exert on the firm's performance. But it seems that these systems are more popular in US-European companies". I have been working for 3 Japanese Companies so far but none of them have adopted a full version of such systems." (HR at company E).

Respondents are asked to evaluate the strength of the HPWS based on three dimensions of distinctiveness, consistency, and consensus (Ostroff & Bowen, 2000). Bowen and Ostroff (2004) proposed that a strong HRM system should be perceived as high distinctiveness, high consistency, and high consensus. Distinctiveness measures the visibility, understandability, legitimacy of the HR department, and relevance to employees' goals (Li, Frenkel, & Sanders, 2011). Consistency requires that the HRM system creates an unambiguous perception about the causal relationship between behaviors and consequences. In addition, HRM practices must display consistency between what has been said and what has actually been done. Finally, consensus refers to the agreement among policymakers –

typically HR and line managers – in the way HR practices are implemented (Delmotte, De Winne, & Sels, 2012). It was shown that although only a few of the interviewed managers heard about the term HPWS, they had a good understanding of the three bundles of HPWS, namely ability enhancing practices, motivation enhancing practices, and

opportunity enhancing practices. In addition, the respondents reported that, while one or more practices in each of the bundles are implemented, they are not usually adopted and implemented as a system. Moreover, the respondents also indicated a low level of distinctiveness, consistency, and consensus in the implementation of such practices.

Table 2: HPWS adoption and implementation, and strength of the system

Firm	Ability Enhancing Practice	Motivation Enhancing Practice	Opportunity Enhancing Practice	Distinctiveness	Consistency	Consensus
A	△	△	△	Low	Low	Low
B	△	O	△	Low	High	Low
C	△	X	△	Low	Low	Low
D	O	△	△	High	Low	High
E	△	△	△	Low	Low	Low
F	△	△	△	Low	Low	High
G	△	△	O	Low	Low	Low
H	△	△	△	Low	Low	Low
I	X	△	O	Low	Low	High
J	△	X	△	Low	Low	Low

X: No practice implemented; △: One or more practices implemented; O: All practices implemented.

“We are implementing a bit of everything but not in a systematic way. Regarding recruitment, for some positions, we receive a lot of applications, we can seek the qualities that we wanted. However, for other positions, we have to accept candidates who are just 60% to 70% of our expectations”. (HR at company C).

“In many cases, it is the Japanese Managers who have the final say in hiring decisions. Although I and the direct supervisor rejected the candidates based on their lack of competency, the Japanese managers made the decision.” HR Company E.

“Training for operators and production workers is conducted at the work stations. I assigned a senior operator to train the newcomers. Extensive training is available only for senior managers, I am among 15 managers to attend the training program.” (FM at company A).

“Training at my company mainly focuses on compliance, safety, security, and quality assurance. Another work-related training is conducted at the worksite based on the job training method. There is no official training plan”. (PM at Company K).

“As required by the headquarter, we are trying to build a new human resource system, in which we focus on linking pay and bonus with performance as well as competency. But this is applied only for V3 (senior staff level) and above. For lower levels, there will be no change”. (FM at company F).

4.2 Drivers and Obstacles to HPWS adoption and implementation

It can be drawn from the interviews that the adoption and implementation of HPWS components in Japanese MNCs subsidiaries in Vietnam was largely reactive rather than proactive. There was consensus among the respondents that changes in the HRM practices were applied to cope with the declining market and increasing competition from local companies.

“More than 98% of our business are from Japanese Client. After 30 years, Foreign Direct Investment from Japan started to slow down. We need to look for Non-Japanese clients. We had to change our human resource policies toward performance-oriented ones.” (PM at Company K).

“When we started our business here, there are few local competitors. But after 20 years, many Vietnamese companies can compete with us. They are much more flexible and aggressive in approaching our traditional clients. We have been losing our business. From the last few years, we started focusing on training, delegation, and performance-based compensation for our front office staff.” (PM at Company B).

“We used to sell our products from Business to Business. However, the market is becoming more competitive recently. We had to focus on the Business to Customer

Market and a new sale force has been established with separate remuneration systems largely based on performance.” (SM at Company E).

Another driver for the adoption and implementation among subsidiaries of Japanese MNCs in Vietnam was related to diminishing productivity and high turnover rate due to rigid compensation and promotion systems.

“Some of the staff lose their motivation, they are already at the top of their salary rank. The company does not have policies for them to improve their position or salary

level”. (ACC at company F).

“We have a six-month backorder and we are far behind our delivery schedule. We need to assemble 23 vehicles per day to meet the demand. We are stuck at 19 vehicles a day, but we used to assemble 31 per day. The production workers told me that no matter how many vehicles they assemble a day, their salaries stay the same, so they only commit to a fair day’s work. I proposed to the director board that we need to apply a piece-rate system to motivate our production workers”. (SM at Company A).

Table 3: Drivers and Obstacles to HPWS adoption and Implementation

Drivers of HPWS adoption and implementation	Percentage of respondents mention	Sample Comment
Reaction to Poor Performance and Market Difficulty	75.6%	We need a new breed of employees who are more competitive and aggressive in order to win the non-Japanese market. About half of the managers join the company during the last three years. (HR company A)
		We have experienced negative growth for the last three years. This trend is not short-term, now we need to look for new markets but our people are not equipped with necessary ability and skills. We need to develop a new HRM system. (FM at company C).
		We are facing fierce competition in all markets, including Japan. The whole global company has to adopt a new HRM system. Here we hired a consulting company to set up our system in compliance with headquarters’ requirements. (HR at company B).
Low productivity and High turnover rate	60.6%	Our productivity decreases, we used to produce 150% of current daily output. The workers are no longer motivated to perform. (FM at company E)
		Our price is 30% higher than those offered by our main competitors, mostly indirect cost. We need to make our workforce “lean”. Some people earn high salaries but contribute very little. (PM Company I)
		We are losing our key people in almost every department. Pay is one of the reasons but lack of motivation and growth opportunities are also obvious. (HR company D)
Obstacles to HPWS adoption and implementation	Percentage	Sample Comment
General Director’ short-term assignment	63.6%	The G.D. will complete his assignment in a year. He is not making a lot of change. (HR at Company E)
		He is not here for long. He will not overhaul the old system because it is costly and it will take time for results to realize. Success is also uncertain. (PUR Company C).
Compatibility Across Foreign Establishment	57.5%	We need to ensure that our human resource management practices are compatible with those in other establishments such as Thailand and Indonesia. (HR at Company F).
		It is difficult to apply a new HRM system because the headquarter emphasizes a similar system in all operational bases. (GM at company J).
Lack of HR expertise	66.7%	The company did not have a Human Resource department before. The company has tripped its employees during the last five years. I was hired from another company to build the HR system. (HR at Company H).
		In fact, I think we don’t have Human Resource department, what the department does mainly involves administrative work like compensation and benefit, and general affairs work such as social insurance or annual leave. All other tasks like recruitment, training, and performance management are delegated to direct managers like me. (PUR at company C).

Regarding the obstacles in adopting and implementing HPWS, it appeared from the interviews that although the General Directors at Japanese MNCs in Vietnam may acknowledge the potential influence of HPWS, they hesitate to thoroughly adopt such a system because of their short-term assignments in Vietnamese subsidiaries. In general, the Japanese expatriates will be assigned to work as a General Director in one subsidiary for a period of three years. Based on their performance at the subsidiary, the period may be extended to 5 years. In addition, the international experience serves as one important criterion for the subsequent assignment of promotion.

“I have proposed the plan for the adoption of performance-enhancing human resource practices several times during the company’s management meetings. The General Director seemed unwilling to make a wholesale change to the system because he knows that he will not stay here for long.” (HR at company D).

“My boss told me that he is in his final year in the country, so he would not try to interrupt the system. He suggested that I could speak to the new G.D who will arrive very soon”. (FM at company G.)

During the interviews with the General Directors, such impact was confirmed.

“I will be here for three years and this is my second year in charge. I don’t want to change everything here. The previous General Director had set up all the structure and process, I will only adjust them to match with the condition”. (G.D at Company D).

“I will be here for three years, and to be frank, I would like to extend my stay in Vietnam. I need to focus on improving business results and not to make dramatic changes to the overall systems.” (G.D. at company J).

Another obstacle to the adoption and implementation of HPWS in Japanese subsidiaries in Vietnam was that such systems have not been implemented in other subsidiaries. The headquarter would like to ensure comparable systems across subsidiaries in the same region.

“My G.D told me that the human resource management practices have been designed by our Headquarter in Japan and they are applied consistently in our subsidiaries in other countries as well”. (HR at Company D).

“We can adjust our recruitment procedures and policies. However, we could not change our salary levels because they have been determined by the headquarter. Sometimes we found a very good candidate but we could not recruit them because of our rigid salary table”. (PM at company H).

“We also have the global competency guide and promotion must be based on these competencies. In order to be promoted, the candidates have to be trained by the Headquarters and pass the exams”. (HR at company D).

The final obstacle to the adoption of HPWS adoption and implementation, according to the interviewed managers was the lack of HR expertise. There was a strong

agreement that the roles of the human resource department in their companies are mainly administrative and general affairs rather than human resources.

“I am the manager of the HR-GA (Human Resource-General Affair) department and was rotated from QC department. I don’t have expertise and experience in human resource management. We hired a professional HR consulting company to build our HR system two years ago. However, the system is not yet implemented because we are not trained to operate it”. (HR at Company G)

4.3 The benefits and cost of HPWS adoption and implementation

According to the managers, the application HPWS bundles of ability, motivation, and opportunity enhancing practices is expected to exert a positive impact on employee motivation and productivity.

“This year, for the first time, the G.D. announced the company’s profit target for the years and the amount of bonus for each level of target achieved. The employees seem to pay a lot of attention to it. I find that the employees are working harder.” (FM at company C).

In addition, managers believe that a new high performance human resource system would help in cutting indirect costs. According to them, the current system is bulky and overlapping. Application of the new system would largely reduce redundancy and reduce indirect costs.

“We are providing solution and work in projects, we do not need that much personnel in the back-office. I think we can cut about 50% of the total back-office staff to save cost.” (ACC at company H).

Finally, managers also indicate that the adoption of opportunity-enhancing practices such as autonomy or empowerment would

“When working with Japanese clients, it must be contacted and followed by a Japanese manager because it is the custom. However, when dealing with local or non-Japanese clients, we need to make quick decisions and we need to be flexible”. (PM at company K).

Regarding the potential cost of adopting and implementing HPWS in subsidiaries of Japanese MNCs. There was a unanimous concern that applying the new high performance work system would lead to a massive turnover rate. The managers suggested that the new system would create a lot of job demand while at the same time salary and benefit of some positions would be reduced.

“According to the new salary table proposed by the consulting company, about 30% of the position will face a significant pay cut. In addition, fringe benefits will also be reduced. We announced the new policy in March and since then 12 employees resigned”. (HR at company K).

Set up cost is mentioned by many of the managers as one of the potential costs of implementing HPWS in their

Table 4: Perceived benefits and cost of HPWS adoption and implementation

Benefit and Cost of HPWS adoption and implementation	Percentage	Sample Comment
Productivity increase	67%	Only 20-30% of the new recruits meet my expectation. It will take a lot of time to train them. The company should focus on hiring the right people rather than picking anyone who applies. (FM at company F).
		Our staff will surely do better if their effort and performance are fairly rewarded. I can promise at least 30% increase in productivity if rewards are based on performance. (FM at Company A).
Indirect cost reduction	57.5%	I hope the new HR system can make ways to manage poor performers out of the company. Some of our staff are just playing around at work without fear of losing their jobs. (QC at company K).
		Some departments are very awkward. There are 4 employees in one department whose job can be done by just one person. If we can reduce some redundant staff we can cut our cost. (PUR at company C).
Competitiveness	51.5%	Decision-making at this organization is extremely slow. For the approval of just 250 dollars for running a campaign, I had to wait for nearly a month. An effective delegation policy is needed at this company. (SM at company A)
		The G.D wanted us to expand to the Non-Japanese market, but we are very slow in response to customers' inquiry because of the centralized decision-making. (SM at company I)
High Turnover	72.8%	Many of the employees will be negatively influenced by the new system. They lost their benefits and many of them decided to quit. (ACC at company F).
		The new system is view as a threat to many positions. Unlike before, they are now required to work and achieve measurable targets. Some of the employees talk about quitting. (HR at company C).
Set-up cost	48.4%	We hired one of the most prestigious consulting company to set up the personnel system. It was very costly.
		The headquarters required that we hire a Japanese consulting company to set-up the new HR system. The consulting fee of this company is much higher than other famous companies in the market, but we have no choice.
Operating/training cost	42.4%	We had to hire an outside consultant to conduct training to all our management on how to use the new system.
		Even the Japanese Directors are not familiar with the new system. We need to hire a Japanese Consulting Company to train them.

organizations. Because of the shortage of HR expertise, the new HR system must be developed by an outside consulting company. The process was perceived as lengthy and costly.

“It took nearly one year and a half for the consulting company to finish setting up the system. The cost for this phase is almost 20% of our total annual payroll. The second phase will also be costly”. (HR at company B).

Training cost and operation cost represent another concern for managers in applying the new human resource management system. The new system must be well announced and cascade down to all employees. In addition, training and consultation during the application of the new system also require significant investment.

“To be able to operate the new system, a lot of training and consultation would be necessary. Because our super-

visors are not involved in the development process, they need to be trained from the basic details.” (HR at company F).

Cost-benefit consideration

It emerged from the interview that although the General Directors might be aware of the potential benefit of HPWS, the associated cost hinders the application of such systems in the subsidiaries. Rather, the management of the subsidiaries opts for the cheaper alternative to gradually adopt such systems.

“The G.D. asked me to estimate the cost for setting up the new HR system. He concluded that we are not able to afford the amount. He then assigned a task force including of members from various departments to adjust the current system step by step”. (ACC at company G).

“The G.D. announced that he is hiring a new senior HR manager to be in charge of setting the new system. The main reason was to save costs. He understood that the process would be longer but much less costly”. (GM at Company J).

“I was hired to develop the new HR system in this company. The boss expected the new system to be up and running in three years. I can recruit up to 3 staff to help me on this project”. (HR at company K).

5 Discussions

The current qualitative study aims firstly to evaluate the adoption and implementation of HPWS in Japanese MNC subsidiaries in Vietnam (RQ1). The results indicated that none of the investigated companies currently adopt a fully integrated High Performance Work System. Rather than that, the individual organization adopts each bundle of HPWS to a varying degree. Moreover, the study provides evidence that the strength of the HRM system in the establishments is low. The findings further add to the complexity of evidence regarding the adoption and implementation of HPWS in subsidiaries of Japanese MNCs. On the one hand, both Takeuchi, Lepak, Wang, and Takeuchi (2007) and Park, Mitsuhashi, Fey, and Björkman, (2003) found that HPWS increased the performance of both Japanese local companies and subsidiaries of Japanese corporations Russia and the US, providing supports for the notion of “best practices” in HRM. On the other hand, Miah and Bird (2007) acknowledged remarkable differences in the application of HRM practices among local Japanese companies, Japanese subsidiaries in South Asian Countries, and indigenous South Asian firms. They argued that HRM practices in Japanese subsidiaries are influenced by both styles of the parent company and the style dominated in the local companies. Therefore, HRM practices in such establishment are adjusted according to the context of the host country. Findings of the current research, together with those reported by Miah and Bird (2007) provide evidences of a bet fit approach rather than a best practice

approach (Koster & Benda, 2020) to HPWS among foreign affiliations of Japanese MNCs. It can be found from the data that HPWS adoption and implementation are perceived by the managers as a reaction towards the changes in the environment and responses to internal problems rather than as a proactive strategic choice. This finding contradicts to previous studies, which claimed that MNCs utilize HPWS as a strategic management tool (Foley et al., 2012; Demirbag et al., 2016). However, a recent study on the implementation of HPWS in Vietnamese local firms (Do et al., 2019, p.155) provided evidence that Vietnamese firms consider HPWS as one of the effective means that help organizations to respond to external pressures. This finding provides support for the localization approach to HRM as suggested by the institutional theory.

The second aim of the research is to identify the drivers and obstacles to the adoption and implementation of HPWS in subsidiaries of Japanese MNC in Vietnam (RQ2). Among the obstacles to the adoption and implementation of HPWS, the short-term assignment of GD was perceived to be significant. In addition, the requirement of comparability of HRM across foreign establishments might hinder the implementation of HPWS in one establishment. Finally, lack of HR expertise was acknowledged as one of the difficulties in such adoption. The fact that HPWS has been implemented to a certain degree in each subsidiary can be explained the tendency to adopt and implement HPWS in a step-by-step manner by Japanese MNCs (Takeuchi & Chen, 2001). Similar scheme has also been reported by Takeuchi, Wakabayashi, and Chen (2003) who found that high commitment work practices such as retention-focused ones were implemented as a prerequisite for the adoption of HPWS in Japanese affiliations in China and Taiwan.

In answering RQ3, the current paper found out that HPWS can bring about improvement in productivity, indirect cost reduction, and competitiveness but the adoption of HPWS also incurs significant set-up cost, training cost, and high turnover rate. In addition, cost-benefit consideration is an important determinant of HPWS adoption in Vietnamese subsidiaries of Japanese MNCs. This finding seems to agree with previous work in the topic conducted in Vietnam. For example, Phuong (2020) found that capital resource was positively correlated with HPWS adoption among Vietnamese firms.

6 Contribution and Implications

The current paper makes several contributions to the current understanding of HPWS. Theoretically, the results add to common knowledge that HPWS is implemented in subsidiaries of MNCs as either a strategic management tool or control mechanism. In fact, the adoption of HPWS in Vietnamese establishments of Japanese MNCs can be viewed as a reaction strategy in response to the changes

in the environment. Moreover, the findings support institutional theory which argues that the institutional environment significantly influences a firm's internal structure and policies. In a study of HPWS adoption in local Vietnamese firms, Do et al. (2019) found that most managers in the interviewed firms believed that HPWS is a key success factor in fostering human capital, which in turn enhances firm performance.

Second, regarding the obstacles to HPWS adoption, the current study finds that the assignment of a Parent-Country General Director, especially on a short-term basis, presents a significant barrier to the adoption and implementation of HPWS in Vietnamese subsidiaries of Japanese MNCs. Although Japanese General Directors acknowledge the potential benefits of HPWS, they often hesitate to make a wholesale change to the HRM system, due to limited time in charge. This finding adds to previous suggestions that the use of Japanese directors, which is common in Japanese companies, is an obstacle to business development (Maharjan & Sekiguchi, 2017), and that the presence of a third-country general director may increase the probability of HPWS admission (Lawler et al., 2011).

Third, the findings suggested that while HPWS has been acknowledged as HRM best practice, the adoption of HPWS involves both benefits and cost. This research proposed that cost-benefit consideration can provide an explanation for the underutilization of HPWS rather than lack of knowledge on the benefit of HPWS or lack of resources for HPWS implementations.

On the practical side, HPWS has been found to be a potential source of competitive advantage for Japanese subsidiaries operating in Vietnam. Therefore, in order to improve the business performance, Japanese subsidiaries may need to introduce HPWS practices one by one, focusing on the most salient practices such as merit-based compensation and selective hiring. As pointed out by Huy, Vu, Hoang, and Nguyen (2020), the Vietnamese labor market is competitive, firms who wish to implement selective hiring may need to couple it with a performance-based system. Previous works have suggested that the traditional ways of doing business in Japanese organizations make it difficult for business expansion to non-Japanese clients due to a lack of appropriate skills among employees (Nakagawa et al., 2018). Furthermore, the seniority-based human resource management system creates a barrier for improving employees' productivity. In addition, because inadequate HRM expertise hinders the adoption of HPWS, this can be resolved by hiring competent HR managers who set up the necessary condition for the step-by-step implementation of HPWS.

7 Limitations

The first limitation of the current study was that it investigated the adoption and implementation of HPWS

solely from the perspective of managers. Because there may be differences between the perception of HRM practices between employees and employers and among employees (Wang, Kim, Rafferty, & Sanders, 2020), therefore, the results may not fully capture the opinions of all stakeholders. Future research can explore and compare the perceptions from different perspectives to create a more thorough understanding of HPWS adoption and implementation in subsidiaries of Japanese MNCs.

The second limitation was that the current study was conducted with a small sample of Japanese subsidiaries in Vietnam. In addition, the companies investigated in this study were relatively small in size. Because firm size has been verified to foster the implementation of HPWS (Phuong, 2020), the results may not generalize to large Japanese MNCs in Vietnam. Future research may compare the implementation of these practices in small and large subsidiaries of Japanese MNCs in Vietnam.

8 Conclusion

High performance work system has widely been regarded as universal best practices in human resource management. Many MNCs from developed countries use HPWS in their foreign establishments as a control mechanism or as a strategic management tool. Despite evidence of successful adoption and implementation of HPWS in subsidiaries of MNCs, this research suggests that the effective adoption and implementation of human resource management systems in subsidiaries of MNCs may be dependent on a number of factors such as the business environment of the subsidiaries, the availability of resource, and the readiness of the personnel. This research explores the adoption and implementation of HPWS in Vietnamese affiliations of Japanese MNCs and sheds some light on the transfers of HRM practices from Japanese headquarters to their foreign establishments.

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Sprejetje in implementacija visokozmogljivega delovnega sistema v hčerinskih družbah japonskih multinacionalnih podjetij v Vietnamu: kvalitativna študija

Ozadje in namen: Upravljanje s človeškimi viri v tujih podružnicah multinacionalnih podjetij (MNC) je bila zaradi kulturne raznolikosti zahtevna naloga. High Performance Work System (HPWS - Visoko zmogljiv delovni sistem) so MNC uvajale v svojih hčerinskih družbah kot obliko nadzora. Namen trenutne raziskave je raziskati sprejetje in implementacijo HPWS v hčerinskih družbah japonskih MNC v Vietnamu.

Zasnova/metodologija/pristop: Kvalitativne raziskave je bila izvedena s podatki, zbranimi iz delno strukturiranih poglobljenih intervjujev s 33 menedžerji, ki delajo v 11 podružnicah japonskih MNC v Vietnamu. Za analizo podatkov je bila uporabljena analiza vsebine.

Rezultati: Čeprav HPWS ni bil v celoti implementiran v vseh obravnavanih podjetjih, so bili paketi HPWS za izboljšanje sposobnosti, izboljšanje motivacije in priložnosti sprejeti v različni meri. Poleg tega je bil HPWS sprejet kot reaktivni odziv in ne kot strateška izbira. Končno, upoštevanje stroškov in koristi lahko zagotovi razlago za nesistematično izvajanje HPWS v podružnicah japonskih MNC v Vietnamu.

Zaključek: Raziskava ponuja nekaj dokazov, ki podpirajo najbolj primeren pristop k sprejetju in izvajanju HPWS. Čeprav ima HPWS potencial za izboljšanje organizacijske uspešnosti, mora biti interno usklajen s kontekstom organizacije.

Ključne besede: Visokozmogljiv delovni sistem, Prezem, Implementacija, Hčerinske družbe, Japonske multinacionalne družbe, Vietnam

Appendix 1

High Performance Work System Scale

1. My company strives to select the right employees.
2. Long-term employee potential is emphasized.
3. My company applies a rigorous staffing process.
4. Extensive training programs are provided to employees.
5. Promotional training programs are offered to employees
6. Performance is evaluated based on objective quantifiable results.
7. Individuals receive bonuses based on the profit of the organization.
8. Compensation is linked to individual/group performance
9. Employees are allowed to participate in performance management process.
10. My company fosters employee's involvement in decision-making
11. Employees of this firm are given lots of opportunities to decide how to do their work.
12. My company provides employees with challenging and fulfilling jobs.
13. My company provides a lot of support for the employees.

Knowing When and How to Trust Superiors' Decisions: Toward a Conceptual Model of Subordinate Managers' Behavior

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Background/Purpose: The study explores subordinate managers' propensity to trust superiors' decisions. Its purpose is twofold: first, to provide lower-level managers with a tool to know when and how to trust superiors' decisions for a better organizational performance, and second, to lay the foundations for the development of a conceptual model of subordinate managers' behavior.

Methods: The research philosophy adopts an inductive content analysis perspective. A mixed-methods research design is applied, using both qualitative and quantitative approaches. Data is collected through questionnaire, focus groups, interviews, and literature review. A total number of 219 managers from eight Bulgarian business organizations filled the questionnaire and 92 of them participated in group discussions and interviews.

Results: The majority of the managers surveyed tend to trust their immediate superiors. As a result of group discussions, the main advantages and disadvantages of managers with opposing attitudes toward trust are identified. A decision tree model of subordinate manager's appropriate behaviors is proposed.

Conclusion: Inferior managers can have an active role in managing trust in their superiors' decisions. Several situational factors, including superior's competence and integrity, and organizational culture, determine the degree of trust that the subordinate manager should observe concerning the decisions and requests of the immediate superior.

Keywords: *Trust, Distrust, Subordinate manager, Immediate superior, Managerial behavior*

1 Introduction

1.1 Scope of the subject

For more than a century, scholars have been studying managers and their behavior. So far, research focus has been mainly put on the work of managers as superiors and much has been written about them as decision-makers and team leaders. Remarkably, their activity as subordinates stands in the shadows, nevertheless it is apparent at all levels of management (even CEOs have to report to a board of directors). As Bhawuk & Ferris (2000) put it, managers have to switch their roles all the time: they are bosses one

moment and subordinates the next. However, the way they deal with the two roles remains unexplored (Alvehus et al., 2016).

The limited research on the role of managers as followers and subordinates can be explained with its contradictory and heterogeneous nature. The perception of their active role in the management process at first glance contradicts the understanding that subordinates (regardless of their position) are passive executors of decisions made by superiors. As a matter of fact, managers are not regular executors – they do the operational planning, organize the implementation process, exercise control, and are responsible for the outcome.

As a result of neglecting this role, there is a shortage

of concepts in the modern scientific literature that describe and explain the behavior of the manager as a subordinate. This shortage is even more noticeable in terms of guiding models that recommend certain behaviors of subordinate managers regarding the specifics of the situation (as opposed to the literature on leadership, in which these models abound). To fill this gap, it is time for scholars to consider the main challenges faced by inferior managers, analyze them systematically, and focus their efforts on developing more comprehensive models of subordinate managers' behavior.

As one of these challenges, the issue of interpersonal trust can serve as a starting point for future debates on the subject. Many researchers and practitioners perceive trust as a key organizational factor that can build competitive advantages and increase the efficiency and ability to develop (Bieñkowska et al., 2018), defining its role as critical and crucial (Agnihotri, 2017). It has already been proven that trust influences important organizational aspects, such as managerial effectiveness (McGregor, 1967), employee involvement (Thomas et al., 2009), individual performance (Colquitt et al., 2007), team performance (De Jong et al., 2016), commitment (Chow et al., 2015), job satisfaction (Guinot et al., 2014), decision-making (Natorski & Pomorska, 2017) and dyadic cooperation (Balliet & Van Lange, 2013). At the same time, over-trusting can have negative consequences (Möllering & Sydow, 2019; Maciejovsky & Budescu, 2020), especially if it affects the performance of responsible tasks, as is usually the case with most managers.

The rich research material gathered over the years provides favorable opportunities for a more detailed insight into this issue through the prism of managers as subordinates. The effectiveness of their work as implementers of higher managers' decisions is a function of the trust between superiors and inferiors (Vecchiotti, 2018). It is important to study interpersonal trust in the organization (Hasche et al., 2020) and even more important to investigate the vertical relationships of managers particularly, because they can exert influence downwards and upwards (Kotsev, 2021).

In this respect, the present study can be seen as an attempt to contribute to the filling of three significant gaps in existing research. First, contemporary theories on trust and leadership/followership often view the different streams as overall constructs instead of multifaceted phenomena (Hasel & Grover, 2017). Although there are some studies trying to integrate leadership, followership and trust theories (e.g. Han & Harold, 2019; Khan et al., 2020), present research continues to be predominantly focused on leadership practices for building trust of followers (e.g. Le & Tran, 2021, Dirks et al., 2021). This paper might be considered a first of its kind as it combines modern followership and trust theories to develop a functional tool for subordinate managers.

Second, unlike most previous studies, here both parties (the trustor and the trustee) hold managerial positions. This implies a better assessment of the situation by the subordinate manager, due to the opportunity to use her (or his) experience as a team leader in the relationship with the superior. However, scholars are not unanimous on whether this assessment favors superior's decisions trustworthiness. According to Hurley (2006), roughly half of all managers in the USA don't trust their superiors, while Andersen & Kovač (2012) report different results in Europe. A contribution of this paper is the provision of additional data on trust between management levels. Trying to provide further clarification, trust propensity of Bulgarian inferior managers is studied.

Finally, unlike contemporary trust research as conducted by organizational science, which is interested mainly in trust determinants (e.g. Lleo et al., 2016; Bencsik & Juhasz, 2020), trust formation (e.g. Valenti et al., 2020; Zidane, 2021), and trust impact (e.g. Burke et al., 2007; Cho & Ringquist, 2011), this paper attempts to provide an answer to questions "when" and "how". The study assumes that subjective trust is a personal choice (Srinivas et al., 2018) and it can vary depending on the person and the situation (Yin et al., 2020). However, I refuse to accept that the ultimate trust is a cure-all for every organizational ill and try to recommend a "dosage of the drug" according to the specific situation. As a result, the paper suggests a decision tree model, recommending when and how lower-level managers can trust their superiors.

1.2 Literature review and conceptual framework

Scholars' interest in followership and subordination has been steadily increasing since the beginning of the 21st century (Bligh, 2011). A growing number of academic and business publications recognize that it is the followers rather than the traditional leaders who make things happen in today's organizations (Mullen, 2016). Even so, research on followership still lags behind leadership studies: only 8% of all articles published in *The Leadership Quarterly* at the end of 2017 used the term "follower" (or a derivative) in their title, compared to 83% that used the term "leader" (Bastardoz & Van Vugt, 2019).

Interpersonal trust has also generated considerable interest in the organizational sciences in recent years (Ma et al., 2019). It is found important especially in situations that demand collaborative effort (Coletti et al., 2005) and even more important in supervisor-subordinate relationships, as trust improves cooperation and mitigates agency problems by enhancing information exchange and reducing subordinates' perceived need to engage in short term opportunistic behavior (Hartmann & Slapničar, 2009). Moreover, employees' trust in supervisors is positively linked to all

forms of organizational commitment: affective, continuous, and normative (Akkaya, 2020).

These undeniable advantages have led many studies to focus on interpersonal trust between managers and subordinates. Regrettably, most of them do not go beyond identifying leadership behaviors (e.g. Whitener et al., 1998; Biljsma & Van de Bunt, 2003) and other trust-building factors (e.g. McKnight & Chervany, 2006; Tomažević & Aristovnik, 2019), omitting the possibility of a wrong or malicious decision by the superior. Knowing that people (including higher-level managers) are not perfect, such optimism seems out of place. The unconditional readiness to adopt and implement a decision that does not contribute to the achievement of organizational goals calls into question the concept of generalized trust as a panacea for everything, embraced by many scholars since the 1990s (Reeskens, 2009).

Fortunately, subordinates do not always demonstrate such conformity. Exploration practice shows that they tend to resist superiors, perceived as incompetent (Darioly & Schmid, 2011). It appears that distrust is not the opposite of trust (Van De Walle & Six, 2014) and sometimes it could be the better option. Recent studies confirm that when distrust is present, organizations remain alert and are prepared for unexpected adversities (Raza-Ullah & Kostos, 2020). In fact, any reasonable doubt in the trustworthiness of the potential trustee can make distrust rational (Ziegler, 1998).

Building on the work of Mayer et al. (1995), recent studies have confirmed that trust cannot be maintained or developed when the levels of superior's competence (ability) and fairness (integrity) are low (Poon, 2013; Bugdol, 2018), or the organizational culture does not support it (Jabeen & Isakovic, 2018; Jeong & Chun, 2019). Furthermore, the level of inferior managers' certainty in their subjective trustworthiness evaluation is an additional variable that has to be considered (Holtz et al., 2020). Under the diverse influence of suchlike factors, superior managers are trusted to different degrees (Andersen, 2019).

To date, no model has been developed (at least to my knowledge) to suggest the proper degree to which inferior managers can trust and comply with their superiors' decisions and requests. However, the potential application of the model proposed here is not limited to this function. It can also serve as a basis for creating a broader conceptual model of the overall behavior of the manager as a subordinate. In addition to trust propensity, a future broader concept may include other important personal characteristics that affect the superior-inferior relationship.

It should be clearly stated that the present study focuses on 'inferior-superior' relationships and not on the 'follower-leader' connection, where trust is a determinant (Balcerzyk, 2020). Furthermore, it only applies to immediate levels in the organization. In this regard, the terms 'subordinate manager', 'inferior manager', and 'lower-level manager' are used interchangeably, as are the terms 'superior', 'senior manager', and 'higher-level manager'.

1.3 Aim, objectives, and research questions

The purpose of this paper is twofold: first, to provide lower-level managers with a tool to know when and how to trust superiors' decisions for a better organizational performance, and second, to lay the foundations for the development of a conceptual model of lower-level managers' behavior.

The main objectives are as follows:

O1. To explore in eight Bulgarian business organizations inferior managers' propensity to trust superiors' decisions or to trust their own judgment.

O2. To identify and analyze the advantages and disadvantages of managers with a propensity to trust or distrust their superiors.

O3. To build a decision tree model to recommend when and how lower-level managers can trust their superiors.

Taking into account the conceptual framework and objectives of the study, the following research questions are addressed in this paper:

Q1. Do Bulgarian managers as subordinates tend to trust the decisions of their immediate superiors or tend to trust their own judgment?

Q2. What are the advantages and disadvantages of managers who tend to doubt superiors' decisions?

Q3. What are the advantages and disadvantages of managers who tend to trust superiors' decisions?

Q4. When is it advisable for inferior managers to trust the decision of a superior and when to doubt?

The paper is organized into four sections. The next section describes the methods used in the study. The third section is the review of research findings and is the heart of the paper. It is split into two sub sections, one entitled 'Analysis' (referring to empirical results), and the other 'Modeling' (dedicated to the transformation of the results into a decision-tree model). Finally, an interpretation of results is provided, conclusions, limitations, and future research directions are outlined.

2 Methods

2.1 Research design

The research philosophy of this study adopts an inductive content analysis perspective.

The study applied a mixed-methods research design, using both qualitative and quantitative approaches to explore a complex phenomenon such as trust in detail (Halcomb & Hickman, 2015) and to provide a better understanding of managers' trust propensity and behavior. A combination of two research strategies was used to obtain empirical data. Since the study aims to lay the foundations for the development of a new conceptual model, exploratory

tory research was involved. It also aims to survey inferior managers' trust propensity, defined as "a dispositional willingness to rely on others" (Colquitt et al., 2007), and to describe its impact on task performance, which implied descriptive research strategy.

In the first phase of the study, taking advantage of a questionnaire approach already developed to study leadership styles (Myers, 1970), I developed a ten-item questionnaire, designed to measure managers' trust propensity relating research question Q1. Expert reviews and a pilot study with 17 graduate students were conducted for content and face validity of the questionnaire. Reliability was tested by test-retest of the same respondents two weeks later ($P=.71$). Moreover, being a part-time leadership trainer, I had the opportunity to involve trainees in my research. During an open training session, the cognitive interviewing method was entailed as a second step to validate the

questionnaire. Ten lower and middle-level managers gave their feedback by two well-recognized techniques: thinking aloud and verbal probing (Priede & Farrall, 2011). As a result of the pretesting procedure, four items were removed from the questionnaire, three items were modified and reliability was raised to 0.86.

In its final version, the questionnaire includes only six items, shown in Table 1. Each item consists of a pair of two statements. Respondents have to assign a score from 0 to 10 to each statement to show how strongly they agree ("0" indicating strong disagreement and "10" – strong agreement). The points assigned for each pair have to total ten. The degree of individual propensity to trust superiors (PTS) is calculated by the formula $PTS = (a) + (d) + (e) + (h) + (i) + (k)$. The gravity of the result to 0 testifies to a propensity not to trust superiors. As the result approaches 60, the propensity to trust superiors gradually prevails.

Table 1: Trust in superiors questionnaire

Statement	Score
(a) Usually the goals set by the boss and the paths for their achievement coincide with your own views.	.....
(b) You often have the feeling that the goals and objectives assigned to you are contradictory and mutually exclusive.	..... (10)
(c) Before accepting a superior's decision, you prefer to check it out.	.....
(d) You always accept superiors' decisions without questioning them.	..... (10)
(e) You can easily trust your boss's judgment when problems arise.	.....
(f) You don't agree quickly with your boss's judgment in ambiguous situations.	..... (10)
(g) If superiors' decisions and actions are inexplicable to you, you begin to doubt their adequacy.	.....
(h) If you don't see the point in superiors' decisions, you tend to assume that their position allows them to take into account things invisible to you.	..... (10)
(i) You think people are too suspicious of superiors in general.	.....
(j) You personally often have doubts about superiors' motives or competence.	..... (10)
(k) The boss always knows what has to be done, because he/she sees the "big picture".	.....
(l) Even if the boss is competent, he/she has no idea of the details of my work.	..... (10)

As a measure of central tendency of a set of quantitative observations with different importance, weighted arithmetic mean is used (Pulamolu et al., 2017). The individual PTSs are divided into four class intervals (0 to 15, 16 to 30, 31 to 45, and 46 to 60), calculating the weighted arithmetic mean \bar{x} defined by

$$\bar{x} = \frac{\sum_{i=1}^n x_i f_i}{\sum_{i=1}^n f_i} \quad (1),$$

where x_i are the data values to be averaged and f_i is the number of managers (the weight) in the i -th interval.

Regarding research questions Q2, Q3 and Q4, a qualitative approach is followed to gain an in-depth knowledge of the topic. Each of the three complex questions is decomposed into simple sub questions (Table 2):

Table 2: Research questions Q2-Q4 and sub questions

Research questions	Sub questions
Q2. What are the advantages and disadvantages of managers who tend to <i>doubt</i> superiors' decisions?	Q2.1. What are the advantages of managers who tend to doubt superiors' decisions"? Q2.2. What supporting arguments can you provide? Q2.3. What are the disadvantages of managers who tend to doubt superiors' decisions? Q2.4. What supporting arguments can you provide?
Q3. What are the advantages and disadvantages of managers who tend to <i>trust</i> superiors' decisions?	Q3.1. What are the advantages of managers who tend to trust superiors' decisions? Q3.2. What supporting arguments can you provide? Q3.3. What are the disadvantages of managers who tend to trust superiors' decisions? Q3.4. What supporting arguments can you provide?
Q4. When is it advisable for inferior managers to trust the decision of a superior and when to doubt?	Q4.1. Can you describe a situation in which <i>lack of questioning</i> superior's decisions resulted in better organizational performance? Q4.2. Why did you trust the superior's decision? Q4.3. Can you describe a situation in which <i>lack of questioning</i> superior's instructions resulted in worse organizational performance? Q4.4. What you could do differently? Q4.5. Can you describe a situation in which <i>questioning</i> superior's instructions resulted in better performance? Q4.6. Why and how exactly did you express your distrust? Q4.7. Can you describe a situation in which <i>questioning</i> superior's instructions resulted in worse performance? Q4.8. What you could do differently?

2.2 Data collection

Alongside the survey questionnaire, focus groups and semi-structured interviews were used for primary data collection (Saunders et al., 2019). These were conducted as

a part of in-company training programs in eight Bulgarian clothing (garment and apparel) manufacturers – two large enterprises (250 employees and more) and six medium-sized businesses (50 to 249 employees). Eleven focus groups were formed, each comprising of five to seven

managers. The duration of group discussions ranged from one hour to one hour and twenty minutes. Minutes were taken during the events for both data sources (focus groups and interviews).

Participants in the qualitative data collection were lower and middle-level managers ($N = 92$). All of them filled in the questionnaire and discussed issues related to questions Q2, Q3, and Q4. The homogeneity of the focus groups was ensured by division of participants: the lower-level managers ($N=71$) expressed their opinion in group discussions, while the middle-level managers ($N=21$) were interviewed individually. The interviews lasted an average of about an hour: the first half gathering information on the specifics of the organization (needed for the training assignment), and the second half of this time was dedicated to discussion of questions Q2, Q3 and Q4 in an open-ended manner based on semi-structured conversation. Departures from the guiding questions were encouraged (Silverman, 2013).

An inductive thematic analysis was used to analyze both group discussions and interviews. Following Lester et al. (2020) earlier work, the analysis process included seven phases: preparing and organizing the data, transcribing the data, becoming familiar with the data corpus, memoing the data, coding the data, producing themes and categories

from underlying coded passages, and making the analysis process transparent. A 15-point checklist (Braun & Clarke, 2006) was used to assess the quality of the thematic analysis.

In addition, 127 lower managers from the same companies, who did not attend the training courses, filled in the questionnaire, too. As a result, a total number of 219 questionnaires were received. Survey respondents were predominantly female (81.2%), aged 25-45 (57%), and had up to 3 years of work experience as managers (53.4%).

3 Results

3.1 Analysis

Results of the survey show that 75 managers (34.2%) tend to doubt the decisions of their superiors (the first two intervals), as 17 of them with scores from 0 to 15 express high distrust to superiors and a strong preference to trust primarily on their own judgment (Table 2). The remaining 144 managers (65.8%) from the third and fourth intervals tend to trust the decisions of their superiors, and 35 of them (16% of the sample) indicate a high degree of trust.

Table 3: Distinctive features and number of respondents in each interval, and data values to be averaged

Interval		Feature		
0 ÷ 15	7.5	High distrust	17	127.5
16 ÷ 30	22.5	Moderate distrust	58	1308.0
31 ÷ 45	37.5	Moderate trust	109	4087.5
46 ÷ 60	52.5	High trust	35	1837.5
Total			219	7360.5

By substitution in the formula (1), arithmetic mean value of 33.61 is obtained. Thus the answer to the first research question is provided: the majority of the managers surveyed tend to trust their immediate superiors. Is this good or bad news?

To answer this question, it is necessary to analyze the advantages and disadvantages of the two extremes (high distrust versus high trust). Basically, this implies answering the second and third research questions – a task performed during the focus group discussions and interviews. The ideas presented by the participants regarding the answer to Q2 (What are the advantages and disadvantages of managers who tend to doubt superiors' decisions?) are summarized below.

A. Advantages of managers who tend to doubt superiors' decisions:

- They do not automatically follow the decisions and requests of the superior. This is probably due to their belief that there are always ways to get a job done better. Based

on the information at their disposal, they try to understand the meaning of the decisions and modify them depending on the conditions of the specific situation.

- They make the most of their knowledge and skills. As a result of their efforts, the organization receives reliable information from the "firing line". Their expert judgment is difficult to manipulate by a superior.

- These managers warn of problems and identify opportunities. They often play the role of devil's advocate, which allows them to identify flaws and weaknesses on time.

- Often these managers prove to be an inexhaustible source of unconventional ideas. They do not hesitate to take radical approaches if they are convinced of their benefits. Hence, they support and maintain the innovative spirit in the organization.

- Skeptical managers unintentionally improve the individual results of their superiors. As senior managers expect resistance from their doubtful subordinates (explicit

or implicit), they pay more attention to the quality of the decisions they make, devoting additional time to gathering detailed information, analyzing alternative approaches, and refining their arguments. Thus, higher-level managers maintain consistently high standards in their work, which benefits the organization as a whole.

B. Disadvantages of managers who tend to doubt superiors' decisions:

- They are often lousy team players. Their doubts can undermine team spirit, bring a split and reduce the motivation for achievement of others.

- Constant doubts are a serious prerequisite for the corrosion of relationships. Consequently, lower-level managers risk not only their careers but also the effectiveness of their joint, not particularly synergistic, activities.

- In organizations with a large number of skeptical managers, the likelihood of losing focus and coordination increases. The lack of trust between the different management levels leads to a waste of time for explanations and inspections. It becomes difficult to reach an agreement even on the main goals and direction. In such cases, Boccialetti (1995) notes that if the differences are very large, the organization becomes a chessboard, a jungle, or even a battlefield.

- The information exchange between them and the superior is not particularly intense. Communication between the two levels is rarely sincere and open. Each of the parties seeks to attract more allies – an aspiration that takes a lot of energy from both sides, and at its extreme can affect the effectiveness of the entire organization.

During the focus group discussions, it was pointed out that it is possible to observe significant fluctuations in the levels of trust and distrust of a lower-level manager towards different higher-level managers because the trust of the subordinate largely depends on the qualities of the senior manager. Other studies confirm this assumption – subordinates who feel that the superior cares about them and helps them, have a higher degree of trust in her (McAllister, 1995). The same subordinates may show a weaker tendency to trust another manager.

Participants in the focus groups and interviews also have identified the advantages and disadvantages of managers who tend to trust their superiors' decisions. Thus, they have provided the answer to Q3:

C. Advantages of managers who tend to trust superiors' decisions:

- These managers are good team players, ready to regard organizational goals as personal goals. Superiors generally approve when subordinates leave it to them to set important goals and priorities.

- Seeing that subordinate managers share their goals and tasks, superiors tend to consult with them more often and delegate more responsibilities to them. In addition, because they are confident that the set goals and tasks will be followed, they do not emphasize tight control of subordinate performance. Thus, paradoxically, lower-level

managers increase their influence and become more independent.

- Favorable “superior-inferior” relationships are maintained. The level of conflict between the two parties is kept low without much effort. This significantly reduces the level of stress in the overall work and increases the likelihood of lower-level managers receiving support from the higher level.

- Enhanced communication between inferior and superior managers is observed. The level of information exchange is high and on this basis, the management decisions taken by both parties timely reflect situational adversities.

- As an advantage, which personally affects inferior managers and not the organization, one can take into account the fact that usually trustful subordinates are offered favorable career opportunities (Marineau, 2017). This is easy to explain – superiors tend to promote those subordinates who support and follow them.

D. Disadvantages of managers who tend to trust superiors' decisions:

- Trustful managers do not want to confront their superiors. Too little conflict may encourage stagnancy and mediocrity. Superiors are likely to cultivate faith in their own infallibility and to ignore some warning signs of impending danger.

- The conceptual skills of these managers are missing or poorly developed. Constant compliance with superiors leads to impairment of these skills. In the case of promotion to a higher position, where abstract thinking and creativity are needed, this can be especially negative.

- Conflicting objectives and tasks terrify trustful managers, as it is difficult for them to decide which one to follow. This is due to their blind faith in superiors and lack of anticipation of possible complications.

- Trustful managers lose their sense of personal responsibility. They are likely to make external attributions and blame outside forces (e.g. other employees, unfavorable external environment, or bad luck) for their failures.

The analysis of the advantages and disadvantages presented above sends a clear message: there are plenty of situations in which lower-level managers have to trust superiors' decisions, but in other cases, a certain amount of distrust may be more useful. Based on this very general inference and the concrete answers to Q.4 sub questions of the managers surveyed, a model has been developed that gives some guidance to subordinate managers in deciding what these “other cases” are and what exactly “a certain amount” means.

3.2 Modelling

Figure 1 shows a product of the group discussions and individual interviews on the subject – a behavior chain that covers all possible nuances of the behavior of subordinate managers in the distrust-trust continuum. It was developed

through inductive thematic analysis of the responses received to Q.4.4, Q.4.6 and Q.4.8. The chain comprises a series of behaviors classified according to the predominant orientation of the subordinate to resist or comply with the ideas of the superior.

The chain is composed of five basic managerial behaviors:

- The manager confronts the superior, trying to prove the inappropriateness of the assigned task;

- The manager checks the appropriateness of the task before proceeding to its implementation or to express careful disagreement;
- The manager weighs the request of the superior, without expressing open consent or disagreement with it;
- The manager agrees with the superior, adapting her/his own opinion to the senior manager’s point of view;
- The manager accepts the ideas of the superior as her/his own, without questioning their appropriateness.

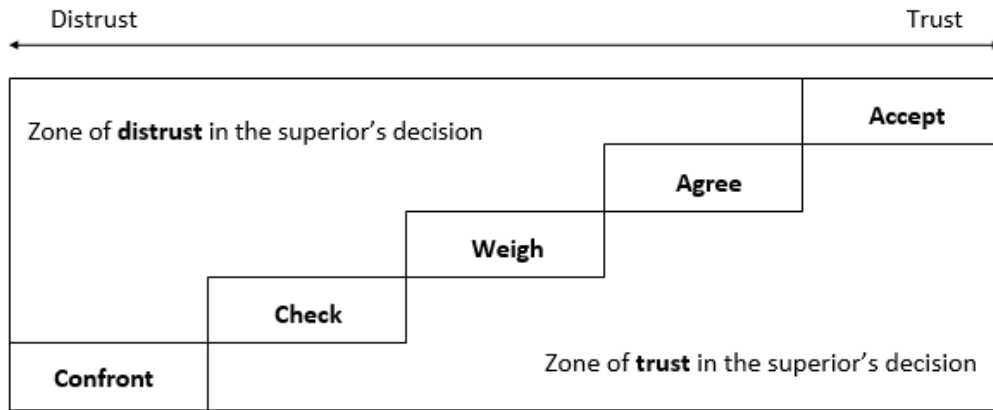


Figure 1: Behavior chain

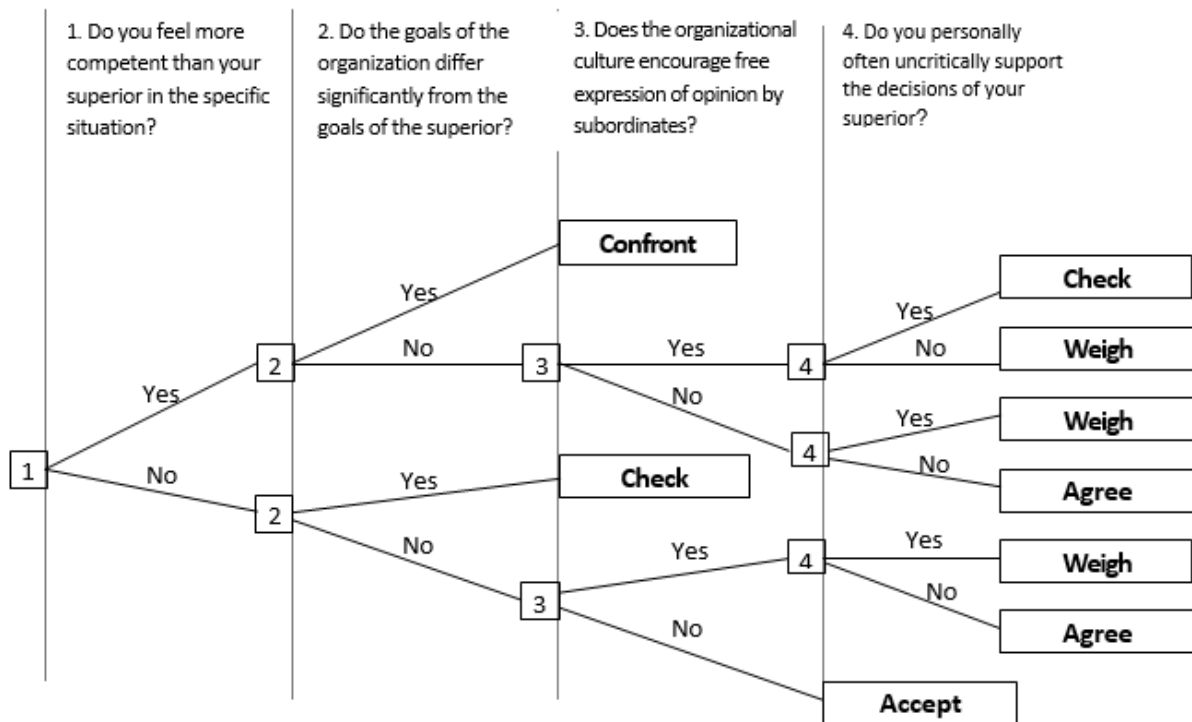


Figure 2: Decision tree model of subordinate manager's appropriate behaviors

The chain does not include the ultimate degree of resistance – rejection because managers with such an orientation would make the interaction between the two levels impossible. Their readiness to reject superior's decisions and requests would violate the basic principles of subordination in the organization.

Adopting a well-known leadership decision tree approach (Vroom & Yetton, 1973), the model of self-management presented in Figure 2 enables the manager as a subordinate to independently look over and determine the behavior that is appropriate and adequate to the situation.

The model is limited to four questions, the first three of which reflect influencing factors already mentioned in the literature review section – superior's competence and integrity, and organizational culture. The answers form a tree of alternative decisions recommending appropriate behavior from the distrust-trust continuum. The decision tree analysis highlights the most important factors that influence subordinate managers' judgment when and how to trust superior's decisions and requests.

The first question inferiors have to answer is particularly important because it affects the superior's ability to make the right decisions: "Do you feel more competent than your superior in the specific situation?" The answer to this question (as well as to the rest) requires absolute certainty on the part of subordinates regarding their adequate assessment of the situation. They can only confront the views of the immediate superior if they have sufficiently reliable and objective information about some particular competence shortcomings. Sometimes, however, reliability and objectivity of information are difficult to determine, as the subordinates do not have the big picture and may not have a clue about the existence of additional information. A positive answer to this question can be considered a necessary but not sufficient condition for a manifestation of resistance. A negative answer indicates that the subordinate does not have the competence needed to judge the decisions of the higher-level manager and should exhibit more conformity behavior.

The second question concerns the motives of the senior manager: "Do the goals of the organization differ significantly from the goals of the superior?" It is clear that if higher-level managers pursue their own (possibly selfish) objectives, it is necessary to counteract them in order to support the organizational goals. Subordinates must be careful in answering this question, as they may have been left with the wrong impression of the true motives and goals of the superior. It is advisable to choose a negative answer in case of uncertainty. If the answers to the first and second questions are positive, there is no need to consider the other questions – undoubtedly, subordinates must be ready to resist if they do not agree with the decision and they are convinced that organizational interests are not being served, while the superior pursues personal goals.

The third question is related to the norms adopted by the organizational members: "Does the organizational

culture encourage free expression of opinion by subordinates?" This question examines the extent to which subordinates' different opinions are supported or condemned by other members of the organization. If the answer is "Yes", expressing disagreement with the opinion of the superior can be justified by others (including the immediate superior) and perceived as a manifestation of commitment to organizational problem solving – a situation that favors orientation towards resistance. On the other hand, if the answer is "No", i.e. the affinity for new ideas and employee involvement is minimal, if any, asserting a different opinion may be perceived as an attempt to compromise hierarchical authority and subordination. Although recent research shows that in the event of difference of opinion, superiors are prone to cooperation and negotiation with subordinates (Ruskova & Ruseva, 2018), conformity-oriented behavior is recommended in this case.

The last question indirectly reflects the expectations of the higher-level manager: "Do you personally often uncritically support the decisions of your superior?" The need for this clarifying question stems from the fact that the quality of superiors' decisions to some extent depends on their expectations regarding the reaction of subordinates – an issue addressed during the focus groups discussions, regarding Q.4.6. If superiors are accustomed to receiving full support from their subordinates, they may not make enough effort to formulate the problem and generate alternatives to solve it. This adversely affects the quality of decisions made by superiors. Therefore, a subordinate who plays the role of a skeptic in the implementation of teamwork can be especially useful as a corrective tool to neutralize superior's unneeded relaxation and to improve the decision-making process. In most cases, this answer does not significantly affect the choice of inferior's appropriate behavior. If the answer is "Yes", the orientation of the subordinate manager should be less conformal in order to counteract the inclination of the superior described above. If the answer is "No", more conformity behavior is recommended, which does not harm the organization but allows to achieve a certain balance in subordinate's reactions.

4 Discussion and conclusion

The considered model of self-management reveals opportunities for improving the work of subordinate managers and can be a useful tool for determining appropriate situational behaviors. This provides opportunities to overcome the negatives inherent in each of the two continuum extremes. Following the model, inferior managers can reduce their resistance if teamwork and uncritical execution of instructions received are required. In other cases, the model may recommend a more skeptical approach to superior's opinion and, if necessary, taking on the role of the boy, who announces to the public that the king is naked.

Superior manager's benevolence is deliberately not

considered in the decision tree so as not to affect inferiors' objective judgment. Subordinate managers need to appreciate the logic of the model before they start answering questions. This increases the probability of understanding questions accurately and retrieving correct answers. In addition, only if inferior managers appreciate the questions and are convinced of their soundness they will have the necessary willpower to change their behavior in the direction recommended by the model.

It should be noted that both trusting and distrusting inferiors have their place and importance in the organizational hierarchy. Lower-level managers can strengthen their active role in managing relationships with superiors by overcoming the extremes in their orientations towards trust or distrust. This will help them maintain an appropriate dynamic balance between the two propensities. Without underestimating the risk of straining the relationship with a superior in case of doubt, they should keep in mind the danger of reducing organizational effectiveness and competitiveness due to the implementation of a series of inadequate management decisions made from above. By adopting such a balanced approach, they will be able to take full advantage of the opportunities provided by the proposed model of self-management.

A question may arise whether there is any chance or possibility for subordinate managers to express their doubt in superiors. Some could argue that no matter whether they feel distrust inside, inferiors still have to follow the instructions given and carry out the orders received. They could realistically support their statement with arguments related to organizational hierarchy and compulsory subordination. However, this would not be entirely true. As said earlier, subordinate managers can exert influence downwards and upwards. Of course, this does not mean that they can refuse to complete the task, but they may check the appropriateness of the task before proceeding to its implementation, just as the model suggests. There are various ways to do this depending on the situation, for example to gather additional information, or to express careful disagreement by asking for a written order. In some cases inferior managers may even choose to confront the superior and try to prove the inappropriateness of the assigned task. For instance, to propose an alternative decision and cautiously explain its advantages. Even if the superior does not accept it, the inferior would be released (at least to some extent) from responsibility for any possible damages.

Most likely it would be easier for a subordinate manager to keep quiet and comply. However, the model is not about the inferior's convenience and mood, but for higher managerial effectiveness and better organizational performance. Sometimes the inferior is the only one left before a wrong decision is implemented. And sometimes the inferior may have to act as a fuse to keep the whole installation from burning.

This paper is not the first to study managerial trust-build-

ing. Past work, however, has focused mainly on the role of the superior (e.g. Sitkin & George, 2005; Lapierre, 2007). Analyzing the possibility for the manager as a subordinate to choose when and how to trust superior's decisions, the study reinforces and extends prior work on trust management. Nevertheless, it does not support the trust decision tree as proposed by Klein (2001). In contrast with Klein's assumption that when deciding not to trust, the result cannot be positive, the current study assumes the existence of situations in which displaying a certain amount of distrust could be more practical. Moreover, it shows that in some cases the manifestation of trust can have a negative impact on the achievement of organizational goals.

The carefully designed and tested questionnaire, as well as the qualitative analysis of the interviews and group discussions conducted, can be considered as strengths of this study. They reveal the predominant propensity of subordinates to superior's decisions – the majority of the managers surveyed tend to trust their immediate superiors (thus answering Q1). The paper also identifies the main advantages and disadvantages of managers with opposing attitudes toward trust (thus answering Q2 and Q3). On this basis, a behavior chain and a decision tree model of subordinate manager's appropriate behaviors are proposed. The model could provide some useful insights for managers on when to trust superiors' decisions and when to doubt (thus answering Q4).

Compared to most previous attempts for modeling managerial behavior, the model proposed here has two significant differences. First, it focuses on modeling just one behavioral characteristic (readiness to trust) and does not have the ambitions of some previous research to fully understand (e.g. Sterman, 1989) and explain (e.g. Stewart, 2019) the overall behavior of managers. Second, and perhaps more important, I believe that no other authors have tried to adapt Vroom and Yetton's leadership decision tree to components of subordinate managers followership.

The model developed may facilitate the development of similar approaches to modeling managerial behavior and organizational subordination that can be used for other important behavioral challenges of lower-level managers, such as decision-making on how close or distant should they be to a superior. A series of decision trees similar to the present one would be a valuable tool for inexperienced managers and could be used as a guide in managing relationships with superiors.

However, the study is not without limitations. First, it covers only garment and apparel companies. It is unclear whether the survey would yield a similar result in other manufacturing industries, commercial businesses, public institutions, and NGOs. Second, it disregards the impact of individual diversity (age, ethnicity, gender, sexual orientation, etc.) on trust propensity of managers. Third, too much reliance is placed on the objectivity of subordinate managers in answering questions from the decision tree.

Fourth, the proposed theoretical model has not been tested in practice and its reliability has not been properly proven.

Finally, subordinate manager's behaviors need to be considered in a more systematic approach. How do the temperament, needs, and other individual differences affect manager's decision on how much to trust a superior? How does this decision correspond to other challenging questions that inferior managers face, for example, what relational distance to keep from the senior management person? How does the decision to follow instructions or take the initiative relate to trust propensity and how it affects both, career growth and organizational performance? These and many other complex questions wait to be answered.

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Kdaj in kako zaupati odločitvam nadrejenih: predlog konceptualnega modela ravnanja podrejenih menedžerjev

Ozadje/Namen: Študija raziskuje nagnjenost podrejenih menedžerjev k zaupanju odločitvam nadrejenih. Njen namen je dvojen: prvič, da vodjem nižje ravni zagotovi orodje, ki jim pomaga odločati, kdaj in kako zaupati odločitvam nadrejenih za boljšo organizacijsko uspešnost, in drugič, postaviti temelje za razvoj konceptualnega modela obnašanja podrejenih menedžerjev.

Metode: Uporabljena je zasnova raziskav z mešanimi metodami, ki uporabljajo tako kvalitativni kot kvantitativni pristop. Uporabili smo perspektivo induktivno analizo vsebine. Podatki smo zbrali s pomočjo vprašalnika, fokusnih skupin, intervjujev in pregleda literature. Vprašalnik je izpolnilo 219 menedžerjev iz osmih bolgarskih podjetij. V skupinskih razpravah in intervjujih je sodelovalo 92 udeležencev.

Rezultati: Večina anketiranih menedžerjev ponavadi zaupa svojim neposrednim nadrejenim. Kot rezultat skupinskih razprav se kažejo glavne prednosti in slabosti menedžerjev z nasprotnim odnosom do zaupanja. Avtor predlaga model drevesa odločanja za oceno primernega vedenja podrejenega vodje.

Zaključek: Nižji menedžerji imajo lahko aktivno vlogo pri upravljanju zaupanja v odločitve nadrejenih. Več situacijskih dejavnikov, vključno s kompetenco in integriteto nadrejenega ter organizacijsko kulturo, določa stopnjo zaupanja, ki bi jo moral podrejeni vodja upoštevati glede odločitev in zahtev neposredno nadrejenega.

Ključne besede: *Zaupanje, Nezaupanje, Podrejeni vodja, Neposredni nadrejeni, Menedžersko vedenje*

Employee Participation in the Decision-Making Process and Organizational Citizenship Behavior: The Mediating Role of Affective Commitment

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Purpose: The purpose of this article is to examine the relationship between employee participation in the decision-making process (EPDMP) and organizational citizenship behavior (OCB) while considering the mediating role of affective commitment (AC).

Methods: The article is based on primary cross-sectional data collected using questionnaires and applying a convenience sampling method among employees in Bosnia and Herzegovina (B&H). The sample consists of 302 employees from 127 companies across multiple industries.

Results: First, there is a positive relationship between EPDMP and two dimensions of OCB – organizational citizenship behavior directed at individuals (OCBI) and organizational citizenship behavior directed at the organization (OCBO). Second, the findings suggest that AC mediates the relationship between EPDMP and OCBI and OCBO. Furthermore, OCBI is found to mediate the relationship between AC and OCBO.

Conclusion: This article extends the literature by introducing the mediating role of AC in the relationship between EPDM and two dimensions of OCB and the mediating role of OCBI in the relationship between AC and OCBO.

Keywords: *Employee participation in the decision-making process, Affective commitment, Organizational citizenship behavior, Bosnia and Herzegovina*

1 Introduction

The nature of the business has drastically changed over the last few decades, where we have witnessed the emergence of a new management approach concentrated on human resources, empowerment, involvement, delegation, and teamwork (Ghani & Memon, 2020). For countries in transition, a shift to capitalism, among other changes in the business environment, brought many threats and opportunities to organizations adjusting their structures to make the best out of the changes. This led to a dilemma between a centralized structure characterized by the strict hierarchy that aims for efficiency and decentralization, which brings flexibility that allows for adaptation and learning.

Since decentralization enables lower organizational levels to exercise more autonomy, responsibility, and control over resources (Daft, 2009), it is expected that employee participation in the decision-making process (EPDMP) follows it. In that case, employees generate better knowledge and contribute to organizational growth and sustainability (Christie et al., 2003). Further, the importance and contribution of EPDMP to overall organizational performance is indisputable, but the relationship is not straightforward. The effect of EPDMP initially happens at lower and later translates to higher organizational levels. In line with this, employee participation relates to employee morale (Steel & Mento, 1987), organizational commitment (OC) (Park, 2015), and organizational citizenship behavior

(OCB), which further benefits the company's performance (Tsui-Hsu Tsai & Jing Lin, 2014). Since decentralization enables lower organizational levels to exercise more autonomy, responsibility, and control over resources (Daft, 2009), it is expected that employee participation in the decision-making process (EPDMP) follows it. In that case, employees generate better knowledge and contribute to organizational growth and sustainability (Christie et al., 2003). Further, the importance and contribution of EPDMP to overall organizational performance is indisputable, but the relationship is not straightforward. The effect of EPDMP initially happens at lower and later translates to higher organizational levels. In line with this, employee participation relates to employee morale (Steel & Mento, 1987), organizational commitment (OC) (Park, 2015), and organizational citizenship behavior (OCB), which further benefits the company's performance (Tsui-Hsu Tsai & Jing Lin, 2014).

A vast amount of research on EPDMP has been focused on developed countries and Western samples (Parnell et al., 2012). Furthermore, Parnell et al. (2012) argue that the degree of participation is contingent on the stage of economic development. Therefore, the current state of knowledge can rely on previously mentioned samples and has to be extended with more studies from emerging, developing, and transitional economies. As such, Bosnia and Herzegovina (B&H) provides an interesting context as a country that is still in the transition process from socialism to capitalism (Knezović & Greda, 2021). Furthermore, the country is characterized by labor-intensive industries and a high number of employed people in the government and public sector, which does not create a "fertile environment" for higher employee participation. When it comes to the private sector, employees are relatively underpaid, and their opportunities within the companies are limited. In particular, even small companies, by a larger degree, emphasize a strong top to bottom approach in terms of authority and decision making. Therefore, the role of EPDMP in different employee-related outcomes is worth studying.

The relationship between EPDMP and OCB is especially interesting as OCB can be exhibited on both individual and organizational levels (Williams & Anderson, 1991). In particular, at the individual level, organizational citizenship behavior toward individuals (OCBI) refers to behaviors that contribute directly to individuals and indirectly to the organization, such as having a good relationship with colleagues and helping them (Williams & Anderson, 1991). OCBI is also known under the term altruism (Smith et al., 1983). As it concerns the organizational level, organizational citizenship behavior toward the organization (OCBO) refers to the individuals' actions that directly contribute to the organization (Williams & Anderson, 1991). These actions involve punctuality, attending to the work above the norm (Smith et al., 1983), efficient

and effective use of resources, and working time (Organ, 1997).

However, the current literature is limited in several ways. First, although its presence in the literature is relatively high, employee participation in the decision-making process has been observed mainly as a part of a set of high-involvement work practices or other human resource management practices (Boselie, 2010; Knezović et al., 2020). Besides, regarding the relationship between EPDMP and two-dimensional OCB, the existing research on this topic is scarce, with a few works suggesting that the relationship is positive (Boselie, 2010). Therefore, by observing EPDMP independently, the first objective of this study is to investigate the relationship between EPDMP and two dimensions of OCB.

Second, the research has neglected the mechanisms through which EPDMP contributes to the employee and organizational outcomes. When it comes to both OCB dimensions, it is evident that the relationship is rather complex, as some studies reported indirect relationships (Bogler & Somech, 2005; Muhammad, 2004; Park, 2016). As OCB refers to positive voluntary actions toward the organization, it takes more than simple empowerment to trigger such behavior. In fact, employee participation is related to both organizational commitment (OC) and OCB, while they are also interconnected (Cohen & Liu, 2011; Hasani et al., 2013). EPDMP replenishes the emotional bond between employees and the organization as employees tend to feel more involved within the company's processes and future direction. Therefore, employees' commitment can be observed as an underlying factor in the relationship between EPDMP and OCB. As commitment is also a multidimensional construct, not all commitment forms are equally important. In particular, Mercurio (2015) demonstrates that affective commitment (AC) predicts work behaviors, including OCB, better than other forms of commitment. It is expected that employees with strong AC actually want to stay within the organization, identify with it, are involved in it, and enjoy being a member of the organization (Allen & Meyer, 1990). Thus, in search of possible mechanisms, we investigate the mediating role of AC in the relationship between EPDMP and OCB dimensions.

Third, although existing literature offers valuable insights into the EPDMP-OCB relationship (Boselie, 2010), there are not enough substantial studies that encompass its unquestionable complexity. The research lacks a closer, in-depth approach to provide new information by focusing on factors mediating this relationship. As OCBI is a more direct result of employee-related practice, there is a question of whether OCBI is a valid mediator in the relationship between OCBO and its antecedents. Therefore, this study's third objective is to demonstrate a more precise understanding of the relationship between EPDMP, AC, and the two dimensions of OCB.

2 Literature review and hypotheses

2.1 Employee participation in the decision-making process (EPDMP)

Employee participation is related to empowering lower-level employees to engage and take responsibility for making organizational decisions. The idea behind the establishment of participative decision-making is that the satisfaction of employees' higher needs will improve their job performance and benefit the whole organization (Noah, 2008). Further, employee involvement or direct participation can be defined as employees' ability to influence decisions related to their job (Duncan & Zhou, 2013). Employee participation is a process that involves interaction, communication to and from management, influence on management, and decisions by employees (Dickson, 1983). This enables employees to align their and organizational interests, which is the main goal of employee participation.

The influence of EPDMP is multidimensional as it is positively associated with perceived organizational support (Park, 2015), which leads to organizational commitment (Aube et al., 2007), employee engagement, and satisfaction (Ahmed & Nawaz, 2015). Zhu et al. (2014), who studied the participation of new generation employees, found that it is positively related to their job satisfaction. Similarly, Guinot et al. (2021) argue that participative decisions are positively related to job satisfaction, which is consistent with Firth et al. (2004), who reported that job dissatisfaction and insufficient organizational commitment significantly influence the intention to quit. If accompanied by the perception of fairness and/or learning needs satisfaction, employee participation in decision-making reduces turnover intention (Kumar & Jauhari, 2016). Although EPDMP has been investigated in different studies, its relationship with OCB is yet to be examined.

2.2 Organizational Citizenship Behavior (OCB)

OCB is described as a voluntary behavior of an individual that is not identified formally by the organizational reward system but contributes to overall organizational effectiveness (Dominic et al., 2021). OCB is of immense importance for organizations as it is positively related to several outcomes across the organizations (Tsui-Hsu Tsai & Jing Lin, 2014).

Williams and Anderson (1991) differentiate between three types of organizational behavior: OCB-Organization (OCBO), OCB-Individual (OCBI), and In-Role Behavior (IRB). While the three-dimensional construct was operationalized earlier, most of the research is related to two dimensions: OCBI and OCBO. Therefore, OCBI involves

helping new colleagues who have heavy workloads or were absent; listening to, taking an interest in, and sharing information with other employees; assisting supervisors when not asked (Williams & Anderson, 1991); and making innovative suggestions (Smith et al., 1983). OCBO involves attending the work above the norm, giving advanced notice when unable to come, not taking undeserved breaks, not spending much time on personal phone conversations, not complaining about insignificant things, conserving and protecting organizational property, respecting informal rules (Williams & Anderson, 1991), being punctual, not taking unnecessary time off work, not spending time in idle conversations (Smith et al., 1983), and conserving organizational resources (Organ, 1997). It is possible to conclude that OCBI is generally concerned with helping and having good relationships with colleagues. At the same time, OCBO refers to contributions to efficiency, productivity, effectiveness, and order by performing voluntary actions.

Although OCB's role within the organization is undisputable, the factors that enhance such behavior are still being researched (Al-Madadha et al., 2021). One recent study suggests that a psychological identification with the job could be a major force behind OCB (Dartey-Baah & Addo, 2019). In particular, companies have to consider practices such as job autonomy and participation in the decision-making process (Boselie, 2010). A systemic review of the literature on employee participation and OCB shows a positive relationship between the two concepts (Kasekende et al., 2016). Additionally, Ma et al. (2021) assert that certain aspects of empowerment have positive indirect relationships with OCB dimensions. Further, the authors indicate that job satisfaction has a mediating-moderating effect on the relationship between structural empowerment and OCB (Narzari & Palo, 2020). However, studies that observe EPDMP independently and relationship with two dimensions of OCB are non-existent.

In particular, when employees participate in the decision-making process, they are better informed about the companies' objectives and novelties, which lead to more positive actions. Therefore, we propose the following hypotheses:

H1a: There is a positive relationship between employee participation in the decision-making process (EPDMP) and organizational citizenship behavior toward individuals (OCBI).

H1b: There is a positive relationship between employee participation in the decision-making process (EPDMP) and organizational citizenship behavior toward the organization (OCBO).

2.3 Affective commitment (AC)

The AC refers to the emotional bond employees develop toward their organization and keeps them within it

(Allen & Meyer, 1990). A plethora of literature suggests that AC can result from different human resource practices such as perceived organizational support (El Akremi et al., 2014), career development (Knezović & Greda, 2021), and empowerment practices (Raineri, 2017). Empowerment practices have been observed from different perspectives. As such, Rogiest et al. (2015) suggest that an involvement-oriented organizational climate increases employees' AC. The social-exchange theory supports this since employees are willing to tie themselves to the organization if they perceive certain benefits for themselves. In this case, employee involvement allows employees to exhibit psychological ownership, which increases overall effectiveness. Further, it improves partnership and teamwork that creates favorable culture. Additionally, learning culture, accompanied by dialogue and structures facilitating knowledge sharing, is significantly related to the AC to change (Malik & Garg, 2017).

Existing literature indicates that EPDMP positively impacts AC. This relationship is either direct or mediated by factors such as perceived organizational support, job satisfaction, organizational culture, etc. Similarly, as in the EPDMP-OCB relationship, previous research has some shortcomings. Again, employee participation is approached partially (e.g., direct participation quality or employee voice) or as part of decentralization, involvement, empowerment, or other HRM practices (Rogiest et al., 2015; Raineri, 2017). However, the argument behind EPDMP lies in the fact that employees' involvement creates a conducive environment for different employee benefits, which leads to a stronger bond with the organization. In principle, as employees are more involved in deciding the organization's direction, they will be more attached to the organization. When it comes to the context of B&H, it is essential to emphasize that EPDMP is relatively new on the market and that many employees are facing it for the first time. As EPDMP is something more common in developed economies, it represents an excellent option for motivating people and committing them to the organizational cause as it is not something they are used to but brings different sets of benefits. Therefore, we argue that:

H2: There is a positive relationship between employee participation in decision-making (EPDMP) and affective commitment (AC).

2.4 Affective commitment (AC) and organizational citizenship behavior (OCB)

Regarding OCB, Bateman and Organ (1983) argued that social exchange theory—a person's willingness to reciprocate the good done to her/him—is a major force behind it. Since then, many authors have examined the relationship between organizational commitment and OCB.

Although the multidimensional effect of committed employees was suggested repetitively, the AC is found to be the main source of commitment theories and the core element of organizational commitment. According to Mercurio (2015), AC may have a stronger impact on work behaviors than other commitment components. This is in line with the work by Cohen and Liu (2011), who suggested that AC is more valid than normative and continuance commitment. In line with this, Hasani et al. (2013) reported a positive relationship between organizational commitment and OCB, with AC as the strongest OC component. They further argued that high commitment brings more sacrifice, prudence, and loyalty among the staff. Earlier, Cohen and Liu (2011) suggested that a positive relationship between organizational commitment and OCB exists only because of AC.

Existing findings indicate that AC is positively associated with OCB (Khaola & Rambe, 2021; Obedgiu et al., 2020; Khaskheli et al., 2020). Specifically, AC causes an increase in employee job satisfaction, which is positively related to both OCB dimensions. Regarding a two-dimensional approach to OCB, research also suggests AC is favorably related to both dimensions (Huang & You, 2011). However, the role of AC in its relationship with OCBI and OCBO is rather impartial as existing research did not clearly emphasize the importance of AC among other components of OC and the multidimensionality of OCB. Hence, a more complex relationship between these three concepts is assumed and presents an interesting examination topic as it creates significant value for the organization. Therefore, we propose the following hypotheses:

H3a: There is a positive relationship between affective commitment (AC) and organizational citizenship behavior toward individuals (OCBI).

H3b: There is a positive relationship between affective commitment (AC) and organizational citizenship behavior toward the organization (OCBO).

2.5 The mediating role of affective commitment (AC)

The inclusion of employees, which encompasses significant aspects of employee participation, positively impacts OCB (Cottrill et al., 2014). Although studies on the relationship between EPDMP and OCB exist, most of them report a distant one with several potential mediators such as autonomy, motivation, or job satisfaction. However, this "black-box" of the mechanism through which EPDMP results in OCB still remains unknown, and there is a need for more thorough research. This is especially true for understanding OCB as a two-dimensional construct.

One dominant role that AC occupies in the literature is the mediating one (Renkema et al., 2021). Several works found the mediation role of AC between certain variables

and OCB. For example, AC mediates the relationship between perceived organizational support and OCB (Liu, 2009), transformational leadership and OCB (Khaola & Rambe, 2021), and corporate social responsibility and OCB (Khaskheli et al., 2020). Keeping in mind the explanatory value of mediators' involvement in the relationships and theoretical background, which undoubtedly shows the mediating nature of AC, there is a justified basis for examining the relationship between EPDMP and OCB with the AC as a mediator. In principle, Silverthorne (2004) argues that employee involvement creates a sense of psychological ownership. In line with this, Shukla (2019) found a positive relationship between psychological ownership and OCB. We argue that EPDMP creates an inclusive environment across the company. In that way, when employees contribute to the organization by being involved in decision-making, they tend to be more emotionally tied to the organization. Such employees are more likely to exhibit citizenship behavior toward their colleagues and the organization. Therefore, the following hypotheses have been proposed:

H4a: Affective commitment (AC) mediates a positive relationship between employee participation in the decision-making process (EPDMP) and organizational citizenship behavior toward individuals (OCBI).

H4b: Affective commitment (AC) mediates a positive relationship between employee participation in the decision-making process (EPDMP) and organizational citizenship behavior toward the organization (OCBO).

When it comes to the two-dimensional approach to OCB, we can expect that organizational practices aimed at individuals first result in OCB at the individual level and then at the organizational. For example, employees' AC increases their OCBI (Huang & You, 2011), which is related to interpersonal relations within the organization. Employees who stay longer within the organization become more familiar with the organizational rules, policies, and procedures (OCBO) and willingly contribute beyond formal requirements (Mohammad et al., 2010). Even though existing literature lacks a more precise and in-depth approach to the topic, it indicates the possibility that even the relationship between AC and different dimensions of OCB is extremely complex. Recognizing that AC is a variable related to an individual's emotional attachment leads to a conclusion that it initially affects the individual (OCBI) and then translates to an organizational level (OCBO). Considering that AC increases OCB that further benefits the organization, we can assume that this interaction occurs at two different levels. Similar propositions are offered in the work by Nishi et al. (2008). Therefore, we propose the following hypothesis:

H5: Organizational citizenship behavior toward individuals (OCBI) mediates the positive relationship between affective commitment (AC) and organizational citizenship behavior toward the organization (OCBO).

All of the proposed relationships between EPDM, AC, OCBI, and OCBO are summarized in the conceptual framework in Figure 1.

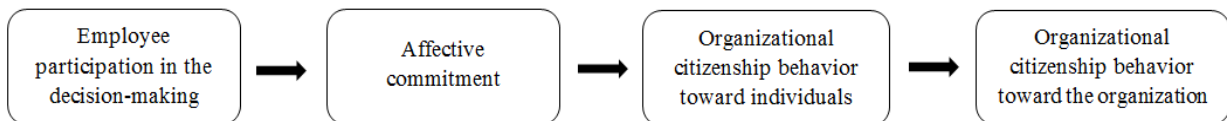


Figure 1: Conceptual model

3 Methods

Primary cross-sectional data were collected from employees working in different industries across B&H. Surveys were distributed using a convenience sampling method, which allowed for a larger and more divergent sample. As there is no available database from which participants could be selected, the only way is to conveniently select participants. Using our own network, we directly contacted employees and asked them to participate in the study. This is a common approach where a lack of databases may increase the risk of possible sample bias (Vandekerckhof et al., 2019).

The questionnaire contained four main constructs, and they were all adopted in original forms. EPDMP was measured by the five-item construct adopted from Steel and Mento (1987). It was based on a seven-point Likert scale (ranging from strongly disagree to strongly agree).

AC was measured with six items adopted from Rhoades et al. (2001). OCBI and OCBO constructs were adopted from Saks's (2006) versions of Lee and Allen (2002), and each involved four items. AC, OCBI, and OCBO constructs were all based on a five-point Likert scale (ranging from strongly disagree to strongly agree). All scales are presented in Appendix.

As the constructs were originally in English, we used back-to-back translation methods by which we checked for content validity. The questionnaires were delivered in hard copies to 302 employees in different companies. To ensure participation, we developed a cover letter that explained the study's purpose, guaranteed anonymity, and required their consent to be valid and used in the research. Hence, after the collected data were checked, the total sample was 302 employees. Responses collected were analyzed, and the results were reported credibly without intentional misrepresentation.

In the sample, 55.8% of respondents were men compared and 44.2% women. Furthermore, 60.5% of respondents were highly educated. When it comes to work experience, 44.7% of employees worked for more than ten years. The number of employees in the surveyed companies ranged from 3 to 1700. However, 66.3% of them were small companies (less than 50 employees). Finally, when it comes to industries, employees came from service (53%), manufacturing (17%), trade (16%), and other (14%).

Data analysis was performed using IBM SPSS Statistics and IBM Amos. Hypotheses are tested utilizing structural equation modelling (SEM). SEM is a group of statistical models that can estimate and explain various interrelated and dependent relationships and show unobserved occurrences in them (Hair Jr. et al., 2014). Com-

pared to regression analysis, SEM has several benefits when assessing mediation. Namely, SEM provides a better assessment of the causal relationships in the model and better observation of the simultaneous nature of direct and indirect effects and the dual role of the mediator (Gunzler, 2013).

4 Analyses and results

Data analysis in this research includes preliminary analysis and testing of hypotheses. The preliminary analysis encompasses the examination of reliability, validity, descriptive statistics, and correlations among variables. The results are shown in Table 1.

Table 1: Descriptive statistics, reliability, validity, and correlations

		M	SD	α	AVE	CR	1	2	3	4
1	EPDMP	4.88	1.29	0.93	0.71	0.92	(0.84)			
2	AC	3.74	0.83	0.91	0.63	0.91	0.52**	(0.79)		
3	OCBI	3.73	0.84	0.91	0.73	0.91	0.33**	0.44**	(0.85)	
4	OCBO	3.74	0.83	0.89	0.67	0.89	0.37**	0.60**	0.74**	(0.82)

Note(s). N=302. **p<0.001. EPDMP – Employee participation in the decision-making process; AC – Affective commitment; OCBI – Organizational citizenship behavior toward individuals; OCBO – Organizational citizenship behavior toward the organization; CR – Composite Reliability; AVE – Average Variance Extracted; Square roots of AVE is in parentheses.

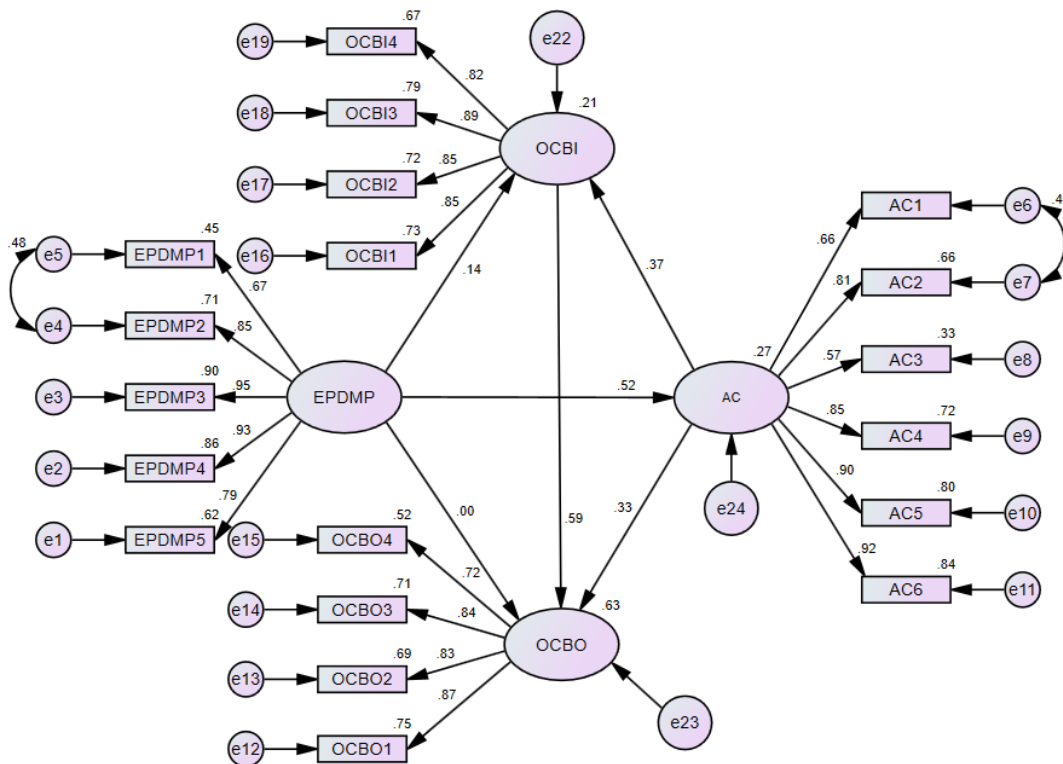


Figure 2: Final model

The constructs used in the questionnaire initially need to be checked for reliability and validity. Both Cronbach's alpha and composite reliability values suggest that the scales used are highly reliable as they are well above the common threshold of 0.70 (Bekele et al., 2014). Regarding the validity, we checked for convergent and discriminant by using Confirmatory Factor Analysis (CFA). First, all 19 items were statistically significant ($t > 1.96$; $p < 0.001$) with their factor loadings above .50. Second, we calculated the average variance extracted (AVE) for each construct, and the results showed that all values were above the common threshold of 0.50 (Bagozzi & Yi, 1988). Finally, we calculated the square roots of AVE. The values calculated were higher compared to the correlation of paired coefficients. Therefore, we can state that all constructs' convergent and discriminant validities were reached.

Finally, we performed Harman's single-factor test to check for common method bias. The results showed that a

single factor in extracting was less than 50% (41.8%). This shows that there is no evidence for common method bias.

4.1 Hypotheses Testing

The hypotheses testing were done through SEM. The values of the model fit were good after two modifications ($\chi^2 = 323.73$, $df = 144$, $\chi^2/df = 2.25$, Goodness of Fit Index = 0.903, Tucker Lewis Index = 0.954, Comparative Fit Index = 0.961, and Root-Mean-Square Error of Approximation = 0.064). The final model is presented in Figure 2.

The values of the standardized estimates of initial paths in Table 2 suggest that the basic conditions for mediation were reached since EPDMP, AC, OCBI, and OCBO were positively related. Besides, these results provided support for H1a, H1b, H2, H3a, and H3b.

Table 2: Standardized weights for structural model

Individual pathways	Std. est.	SE	t	p	Note
EPDMP → OCBI	0.354	0.035	5.908	0.000	H1a
EPDMP → OCBO	0.393	0.034	6.554	0.000	H1b
EPDMP → AC	0.535	0.034	9.739	0.000	H2
AC → OCBI	0.469	0.056	7.916	0.000	H3a
AC → OCBO	0.611	0.053	10.683	0.000	H3b
OCBI → OCBO	0.737	0.056	12.693	0.000	-
<i>Full model</i>					
EPDMP → AC	0.520	0.034	9.425	0.000	-
EPDMP → OCBI	0.139	0.040	2.083	0.037	-
EPDMP → OCBO	0.00	0.030	0.003	0.998	-
AC → OCBI	0.371	0.066	5.385	0.000	-
AC → OCBO	0.333	0.053	5.920	0.000	-
OCBI → OCBO	0.591	0.055	10.52	0.000	-

Note(s). EPDMP – Employee participation in the decision-making process; AC – Affective commitment; OCBI – Organizational citizenship behavior toward individuals; OCBO – Organizational citizenship behavior toward the organization. AC - $R^2 = 0.271$, OCBI - $R^2 = 0.211$, OCBO - $R^2 = 0.635$.

The full model analysis showed that the relationship between EPDMP and AC is similar to the one outside the model ($\gamma = 0.52$, $p < 0.001$). Furthermore, the relationship between EPDMP and OCBI remained positive and significant ($\gamma = 0.139$, $p < 0.05$), indicating a partial mediator between these two variables. Finally, the direct relationship between EPDMP and OCBO did not exist at all within the model. This occurrence signals that another factor fully mediates the relationship between the two variables. Therefore, we performed additional analysis to check for the indirect effects of EPDMP and OCBO and OCBI

through AC. The results are presented in Table 3.

The results in Table 3 indicate that, EPDMP has an indirect effect on OCBI through AC ($\gamma = 0.100$, $p < 0.05$) and OCBO ($\gamma = 0.114$, $p < 0.01$). Therefore, there is sufficient evidence to support both H4a and H4b. Furthermore, we present the full model by using both AC and OCBI as mediators in the relationship between EPDMP and OCBO. The results show that the pathway is statistically significant ($\gamma = 0.066$, $p < 0.01$), which provides evidence to support H5.

Table 3: Mediation effects

Model pathways	Estimate	Lower	Upper	p	Note
EPDMP → AC → OCBI	0.100	0.081	0.123	0.014	H4a
EPDMP → AC → OCBO	0.114	0.086	0.144	0.009	H4b
EPDMP → AC → OCBI → OCBO	0.066	0.051	0.089	0.005	H5

Note(s). EPDMP – Employee participation in the decision-making process; AC – Affective commitment; OCBI – Organizational citizenship behavior toward individuals; OCBO – Organizational citizenship behavior toward the organization.

5 Discussion and conclusions

Even though EPDMP and OCB are highly present concepts in the literature, their relationship complexity is fairly unobserved. Therefore, this research aimed to offer information that will increase its understanding with evidence-based employee perceptions. Results reached through this research provide new information on the overall EPDMP-OCB relationship and explain a wide range of complex sub-relationships between employee participation, AC, OCBI, and OCBO. In response to a growing interest in this particular relationship, this study made four important contributions to the literature, with a specific focus on the B&H context.

First, it enriched the scarce business research in B&H and the region generally, which is now improved by examining EPDMP, AC, OCB, and mutual relationships. In transitional economies, it is not just the case of organizational change but also of employees' mindset. B&H is one of the countries that are still going through the process of transition. The country's economy is among the last in Europe and the world generally. Local companies have low performance, lack institutional support, and face serious international competition (Arnaut & Jerković, 2017). The economy of B&H is highly uncompetitive, characterized by unsatisfactory labor-employer cooperation and a low willingness to delegate authority (Schwab, 2019). This contextual contribution is important due to the never-ending privatization process and embracement of contemporary management approaches.

Second, we investigated the relationship between EPDMP and a two-dimensional construct of OCB. The findings show that a positive relationship exists in both cases. This means that if the organization creates an inductive environment where employees are encouraged to state opinions, propose ideas, and make decisions, they are more likely to exhibit OCB. These findings are in line with the results reported by Boselie (2010) and Dartey-Baah and Addo (2019), who state that employee involvement enhances practices, empowerment, and job involvement, and respectively, positively affects OCB.

Third, we investigated whether AC plays a mediator

in the relationship between EPDMP and OCB. Since the mediation question drags several sub-questions, several objectives were developed to answer it. At first, there was a need to test the relationship between EPDMP and AC. The results suggest a positive relationship between EPDMP and affective organizational commitment. This finding is congruent with those presented by Rogiest et al. (2015) and Raineri (2017), which state that employee participation, involvement-oriented organizational climate, empowerment practices, and employee empowerment are positively related to affective organizational commitment. Second, there was a need to test the relationship between AC and OCB. Accordingly, AC is found to be positively related to both dimensions of OCB. The findings were consistent with Hasani et al. (2013) and Obedgiu et al. (2020). Besides, our findings support the assertion of Cohen and Liu (2009), which emphasized the relevance of AC in the OC-OCB relationship. Finally, we tested the mediation effect of AC on the relationship between EPDMP and OCB, where AC was found as a valid mediator within.

Finally, we tested for the role of OCBI as the mediator. In particular, we argued that citizenship behavior would be first exhibited at the individual level and subsequently at the organization. Our results suggested that there is partial mediation in the case of EPDMP and OCBI, while the full mediation is in the case of EPDMP and OCBO, which supports the argument about the complexity of the relationship (Muhammad, 2004; Bogler & Somech, 2005). This is why we performed the additional test to check whether OCBI plays a mediator as well. The results suggested that EPDMP influences AC, which positively affects OCBO through the mediation of OCBI. There is no previous comprehensive work that is consistent with the findings on the mediation role of OCBI between AC and OCBO. However, critical analysis of the literature presented has laid the theoretical assumption of this relationship that is now supported by the evidence.

Managerial Implications

Based on the results discussed, we provide relevant insights into organizational practice for companies in B&H. The first is related to allowing employees to participate in a decision-making process. The effect of such an approach

is multidimensional as it increases the extent to which they identify, enjoy being a part of the organization, and eventually stay with the company. To achieve that, managers should allow employees whose work-group or job is affected by the company's decisions to participate in their making. Also, managers should clearly point out that they are interested to hear and consider employees' opinions about company-related matters. Additionally, it is important to establish a system that allows EPDMP and makes sure that they understand, use, and know it. Implementing such an EPDMP system will show employees that their organization really cares for their wellbeing and increases their affection. Affectively committed employees will tend to reciprocate the amount of care received by showing high intention to stay, considering organizational problems as their own, and being proud members of the organization. Affectionately committed employees will help, care for, and dedicate a significant portion of time to their colleagues. This behavior will further lead them to exercise citizenship behaviors that benefit the whole organization, such as performing voluntary actions that benefit the organizational image or preventing possible problems.

The second implication of the research is that managers have to systematically understand the process of increasing employees' OCB. For example, they should initially motivate the employees to perform small altruistic acts and show empathy toward their colleagues. Therefore, managers should strive to increase individual-level OCB, which will naturally lead to performing those actions at the organizational level, as is shown in this research. To summarize, to achieve all the benefits of OCB, managers need to allow employees to impact decision-making processes that involve their jobs. This will further lead to their AC and, finally, to altruism at the individual level and general compliance at the organizational level.

Limitations

Although this study offers valuable insights into the complexity of EPDMP-OCB relationships, it has certain limitations. First, it is based on cross-sectional data, which reduces the chance to establish completely credible evidence of causation between the variables as it would be possible with longitudinal research. Further, the research used convenience sampling, which does not provide all population members with an equal chance of participation. Additionally, the data was collected among companies from multiple industries, leaving the possibility that the data was affected by the extremes that characterize only the companies from a certain industry. There is the possibility that employees were biased while giving responses about EPDMP, AC, and, especially, OCBI and OCBO. Results could be more accurate if managers' views were considered, at least in terms of OCBI and OCBO perceptions, as employees might be subjective about their altruism and general compliance. Finally, the examined relationship

could involve several variables other than the AC that could play a significant role between EPDMP and OCB (e.g., POS or organizational culture).

Future Research

Apart from the above-mentioned limitations, we propose several recommendations for future studies. Initially, to overcome some limitations faced by this work, future research should consider managers' perceptions and examine employees among companies from the same industry to make more specific recommendations to managers. Further, the use of probability sampling techniques would also increase the chances of generalizing the results. Moreover, longitudinal research would offer much more reliable data on the causation effects of EPDMP on AC and OCB. Additionally, authors should explore different factors affecting EPDMP-AC and AC-OCB relationships by introducing other related variables. Furthermore, studies should involve potential mediators other than AC between EPDMP and OCB. However, the AC-OCBI-OCBO relationship requires most of the attention in future works as it has been unfairly neglected up to date.

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Sodelovanje zaposlenih v procesu odločanja in organizacijsko državljansko vedenje: posredniška vloga navezanosti na organizacijo

Namen tega članka je preučiti razmerje med sodelovanjem zaposlenih v procesu odločanja (EPDMP) in organizacijskim državljanskim vedenjem (OCB) ob upoštevanju posredniške vloge navezanosti na organizacijo (AC).

Metode: Članek temelji na primarnih presečnih podatkih, zbranih z uporabo vprašalnikov in z uporabo priročne metode vzorčenja med zaposlenimi v Bosni in Hercegovini (BiH). Vzorec je sestavljen iz 302 zaposlenih iz 127 podjetij v več panogah.

Rezultati: Prvič, obstaja pozitivna povezava med EPDMP in dvema dimenzijama OCB – organizacijsko državljansko vedenje, usmerjeno v posameznike (OCBI) in vedenje organizacijskega državljanstva, usmerjeno v organizacijo (OCBO). Drugič, ugotovitve kažejo, da navezanost na organizacijo posreduje v razmerju med EPDMP in OCBI in OCBO. Poleg tega je bilo ugotovljeno, da OCBI posreduje v razmerju med AC in OCBO.

Zaključek: Članek širi literaturo in prispeva k znanju z uvedbo posredniške vloge AC v odnosu med EPDM in dvema dimenzijama OCB ter posredniške vloge OCBI v odnosu med AC in OCBO.

Ključne besede: Sodelovanje zaposlenih v procesu odločanja, Navezanost na organizacijo, Organizacijsko državljansko obnašanje, Bosna in Hercegovina

Appendix

Employee participation in the decision-making process	
EPDMP1	Within my work-group the people most affected by decisions frequently participate in making the decisions.
EPDMP2	In my workgroup there is a great deal of opportunity to be involved in resolving problems which affect the group.
EPDMP3	I am allowed to participate in decisions regarding my job.
EPDMP4	I am allowed a significant degree of influence in decisions regarding my work.
EPDMP5	My supervisor usually asks for my opinions and thoughts in decisions affecting my work.
Affective commitment	
AC1	I would be happy to work at my organization until I retire.
AC2	Working at my organization has a great deal of personal meaning to me.
AC3	I really feel that problems faced by my organization are also my problems.
AC4	I feel personally attached to my work organization.
AC5	I am proud to tell others I work at my organization.
AC6	I feel a strong sense of belonging to my organization.
Organizational citizenship behavior (individual)	
OCBI1	Willingly give your time to help others who have work-related problems.
OCBI2	Adjust your work schedule to accommodate other employees' requests for time off.
OCBI3	Give up time to help others who have work or non-work problems.
OCBI4	Assist others with their duties.
Organizational citizenship behavior (organizational)	
OCBO1	Attend functions that are not required but that help the organizational image.
OCBO2	Offer ideas to improve the functioning of the organization.
OCBO3	Take action to protect the organization from potential problems.
OCBO4	Defend the organization when other employees criticize it.

Predicting HR Professionals' Adoption of HR Analytics: An Extension of UTAUT Model

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Background and Purpose: To scale up HR innovation with HR technology, organizations worldwide are putting effort into adopting HR Analytics (HRA) among HR professionals and the actual use of HRA for organizational decision-making. This study aims to explore the behavioral intention to use HRA from the perspective of HR professionals by using UTAUT.

Methodology: Partial least squares structural equation modeling (PLS-SEM) was employed to validate the model based on data collected via a survey from 270 HR professionals in India.

Results: The result revealed a significant positive impact of performance expectancy, effort expectancy, social influence, and facilitating condition on behavioral intention to use HRA. However, organization culture negatively moderates the relationship between HRA adoption intention and adoption behavior. The establishment of organizational culture as a moderator in Indian organizations is unique.

Conclusion: The study extends the explanatory context of UTAUT and provides feasibility for the organizations to guide HR professionals to adopt HRA from multiple paths of intention and usage behavior. Managers, business leaders, and policymakers can use this finding to assist HRA adoption in their organizations.

Keywords: Human resource analytics, Adoption intention, Adoption behaviour, Organization culture, UTAUT

1 Introduction

Companies worldwide are experiencing the digital transformation of all their business functions, and HR or human resources has no exception. Digitalization of HR, amongst others, includes the adoption of HR analytics, a software tool to garner real-time and metrics-based insights for improved decision-making. The adoption of HR analytics has proved to be a game-changer, enabling organizations to enhance employee skills, improve retention and gain a competitive edge (Van der Togt & Rasmussen, 2017). HR analytics is today a huge instrument for making progress; it exploits present information to expect future ROI and is viewed as a wellspring of vital benefit (Bengal, 2019; Bindu, 2016). Several studies have testified its role in improving decision-making and managing, among other functions (Wandhe, 2020; Mohammed & Quddus,

2019). Despite the perceived benefits, the adoption of HRA among HR professionals remains sluggish (Vargas et al., 2018; Marler & Boudreau, 2017), primarily due to the adoption barriers of technology.

Understanding the adoption behaviour is necessary for the adoption of technology. Various adoption model is used to study the intention to use technology and its acceptance, i.e., actual adoption (behaviour/actual usage) of technology (Wang et al., 2020). Studies explain how technology adoption impacts behavioural intention (Senaratne et al., 2019; Kabra, 2017). Ajzen (1985) states that "behavioural intention is an individual's subjective possibility of performing a specified behaviour, which is the major contributing factor to actual usage behaviour."

Although research has been extensively conducted and many theories proposed to explain it in different contexts of adoption, some critical issues remain to be addressed.

Extant literature (eg. Fernandez & Gallardo-Galardo, 2020; Kabra et al., 2017) on technology adoption is more focused on individual factors; however, it ignores the major barriers to adoption, most specifically the organizational factor. However, the organizational factor plays a key role in any technology adoption, so there is a gap in the literature on this aspect, which the current study aims to fill using the UTAUT model.

Several studies have evaluated the adoption of HRA giving more importance to individual factors (Fernandez & Gallardo, 2020; Vargas et al., 2018; Marler & Bourder, 2017). However, there is a need to extend our understanding of the influence of the organizational factor on HRA adoption. Organizational culture “has been identified as a critical factor in the success or failure of technology adoption” in an organization (Masoumeh et al., 2018; Wang & Chang, 2016). Limited efforts have been made to understand the role of the organizational factor, represented by organizational culture, in understanding and analyzing the adoption behaviour. Organizational culture influences the value and beliefs of an individual (Mohtaramzadeh et al., 2018; Eskiler et al., 2016). Organizational culture plays a unique role in technology adoption. Studies have explored the cultural impact on technology acceptance (Sunny, Patrick & Rob, 2019; Dwivedi, et al., 2016). Previous studies have considered the technology model to evaluate Intention towards adoption (Ahmad, 2020; Singh et al., 2020). Intention is considered a “good preceder of actual behaviour” (Ajzen, 2002). It is seen a majority of studies have not considered adoption barriers from the organizational level, which is clearly represented by organizational culture. Studies (Akhtar et al., 2019) indicate that organizational culture significantly impacts intention toward technology acceptance. And also has a significant impact on actual technology adoption behaviour (Baptista & Oliveira, 2015). This indicates that organizational culture is vital in strengthening the relationship between Intention toward HR analytics adoption and behaviour. Thus, this study proposes organizational culture as a moderating factor, moderating the relationship between HRA adoption intention and usage behaviour. To the best of our knowledge, this is the first study of its kind to study the impact of organizational culture on HRA adoption.

In summary, after reviewing existing literature, we find the research lacking in several key aspects impacting technology adoption, specifically in the context of HRA adoption. While research has focused on individual-level factors, for instance, the response of HR professionals as an adoption barrier, little focus has been given to the organizational factor, that is, organizational culture and how it impacts the adoption. This study aims to address this gap in the literature and provide new and crucial insights into HRA adoption by organizations. Accordingly, a conceptual model is then proposed regarding adopting HRA using UTAUT model. Organizational culture is incorporated into

the Model as a moderator. This study adds to the existing literature by representing that organizational culture (weak/strong) plays a crucial role in adopting HRA.

Data is collected from HR professionals in India, and the proposed model is evaluated. The examination of the outcomes is shown and clarified briefly in the paper’s results and discussions areas. The discoveries are advised in the last segment, and the hypothetical and useful ramifications of the discoveries are from that point discussed.

2 Literature review

2.1 Logical framework for Human Resource Analytic Adoption Behaviour

To examine user expectation and user adoption of the technology, specialists have utilized different innovation appropriation models, for example, the innovation diffusion theory (IDT), technology-organization-environment framework (TOE), institutional theory (IT), theory of planned behaviour (TPB), technology acceptance model (TAM), and unified theory of acceptance and use of technology (UTAUT). Hosseini et al. (2016) and Cao et al. (2017) indicated that these models have been utilized to clarify technology adoption conduct in the management research field.

HRA or human research analytics is software used to analyze data to improve employee performance and retention (Vargas et al., 2018; Marler & Bourder, 2017). Successful adoption of HRA depends on both the organization and the individual behaviour of employees (Grayson et al., 2018). It is seen in some organizations that did not take individual employee intention and behaviour into account while implementing HRA, leading to adverse impact. The UTAUT model has been used to study user behaviour and Intention to accept or resist HRA implementation, thereby predicting its success or failure, as the case may be. According to Venkatesh & David (2003), user behaviour is determined by their intention to perform the behaviour. Various researchers have adopted UTAUT to analyze the adoption of new technology (Altalhi, 2021; Ammenwerth, 2019). The adoption behaviour of the employee depends to a large extent on the organizational culture, amongst other factors. Existing literature shows that organizational culture can be a barrier to successful HRA implementation apart from end-users. UTAUT has been abundantly used in literature to predict user intention and behaviour towards technology adoption and is considered as amongst the best to study technology adoption in various contexts (Altalhi, 2021; Ammenwerth, 2019). While existing literature has thrown some light on organizational culture, the focus has been on individual factors, which is a gap that this study aims to fill.

Organizational culture influences the value and beliefs of employees, thereby impacting their behaviour (Eskiler et al., 2016). Several studies suggested that organizational culture plays an important role in advancing technology adoption decisions (Liu et al., 2010; Khazanchi et al., 2007). They likewise feature the significance of thinking about culture while assessing technology acknowledgment (Borkovich et al., 2015; Srite, 2006). Accordingly, while thinking about technology acknowledgment and adoption, it is imperative to remember that culture impacts a person's reasoning and behaviour. Considering a particularly immense impact culture has in transit individuals figure, it would be a consistent presumption that it would affect how they see, think, and carry on comparable to technology (Srite, 2006; Hofstede, 2001). Previous literature throws light on how organizational culture impacts individual intention to adopt technology (Akhtar et al., 2019) and impacts their adoption and usage (Gu et al., 2014).

HRA is one of the more complex technologies in the context of HR (Vargas et al., 2018; Marler & Bourder, 2017). According to Jac Fitz-Enz (2010), "Analytics is a mental framework, first a logical progression and second a set of statistical tools." The relationship between organizational culture and information technology is complex and confrontational. According to Gu et al. (2014), technology adoption affects organizational culture and brings a genuine issue into the standard action inside the organization. This, in turn, leads to a redefining of the existing culture to encompass the new norms. Ribiere and Sitar (2003) showed that "organizational culture (OC) represents the character of an organization, which directs its employees' day-to-day working relationships and guides them on how to behave and communicate."

2.2 Hypothesis Development

2.2.1 Performance Expectancy

Performance expectancy is "the degree to which an individual believes that using the system will help him or her to attain gains in job performance (Venkatesh et al., 2003, p.447)". In this study, performance expectancy relates to the individual's perception, i.e., HR professionals using HRA will enhance their work performance with ease, influencing the behavioural intention to adopt HRA. Research has proven performance expectancy as a "strong predictor of behavioural intention" for acceptance of new technology (Kabra et al., 2017; Venkatesh et al., 2012). Studies show that using new technology enhances an individual's job performance, the use of HRA improves the performance of an individual. To this extent, HRA has proved to be a game-changer, to enhance employee skills, improve decision-making, and managing other functions (Wandhe, 2020; Mohammed & Quddus, 2019; Van der Togt & Rasmussen, 2017). Previous research found that

performance expectancy impacts behavioural intention to adopt new technology (Venkatesh et al., 2012). Based on previous research, we hypothesize the following:

Hypothesis 1: Performance expectancy positively affects HR professional behavioural intention to adopt HRA.

2.2.2 Effort expectancy

Effort expectancy is "the degree of ease associated with the use of the system (Venkatesh et al., 2003, p.450)". In this study, effort expectancy relates to the belief that using HRA is easy for HR professionals. Previous research found the relationship between effort expectancy and behavioural intention while adopting a technology (Akhtar et al., 2017b; Jennings et al., 2015). Studies show how the system complexity influences an individual's intention, the convenience of using the technology and the system's compatibility with the individual experience and skill affect their intent to use the technology (Kabra et al., 2017; Akhtar et al., 2012). The ease or effort associated with utilizing the technology makes individual believes that system is easy to use. An individual's belief towards using the technology, i.e., HRA is easy to use, higher will be the intention to adopt HRA. The direct impact of effort expectancy on behavioural intention on users to adopt technology has been seen in various studies (Kabra et al., 2017; Venkatesh et al., 2012). Based on previous research, we hypothesize the following:

Hypothesis 2: Effort expectancy of HR professional positively affect behavioural intention to use/adopt HRA.

2.2.3 Social influence

Social influence is "degree to which an individual perceives the importance of others' belief of using the new system (Venkatesh et al., 2003, p. 451)". In this study, social influence is termed as HR professional belief about how other organizations' HR believe about HRA usage. As social influence reflect the "effect of environmental factors such as opinions of a user's friends, relatives, and superiors on behaviour" (Venkatesh et al., 2003), when they are positive, it may encourage the HR to adopt HRA. Prior research in adoption found that an individual behaviour would incline to adopt the technology if colleagues and coworkers impact behavioural intention to adopt the technology (Kabra et al., 2017). Furthermore, the intention also depends on the support and commitment from top management and the peer group within the organization. This belief depends on subjective norms, image, and social factors. Previous studies show that social influence significantly impacts HRA adoption (Vargas et al., 2018; Kabra et al., 2017). Thus we hypothesize:

Hypothesis 3: Social influence positively impacts HR professional behavioural intention to adopt HRA.

2.2.4 Facilitating condition

Facilitating conditions are “the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the system (Venkatesh et al., 2003, p. 453)”. Using technology requires some specific skills, infrastructure, resources, etc. The user would be motivated to adopt the technology for the organization’s benefit. Studies have theoretically supported the role of facilitating conditions (e.g., Kabra et al., 2017; Akhtar et al., 2012). In this study, facilitating condition is termed as the belief of HR professionals working in an organization about the existence of all the necessary support to use HRA. Previous studies have shown the impact of facilitating conditions to adopt the technology (Kabra et al., 2017; Akhtar et al., 2012; Venkatesh et al., 2003). Therefore we hypothesize:

Hypothesis 4: Facilitating conditions positively influence the behavioural Intention of HR professionals to adopt HRA.

2.2.5 Behavioural Intention

According to Venkatesh & Davis (2000), behavioural intention can be interpreted as individual willingness towards any aspect, reflecting their behaviour. Therefore, it is the predictor of behaviour (Ajzen, 1991), i.e., “a person’s readiness to perform a given behaviour.” Earlier studies have documented the relationship between intention and behaviour (Venkatesh et al., 2003; Venkatesh & Davis, 2000). Research gives evidence that individual willingness, i.e., intention to perform a behaviour predicts the actual behaviour (Wang et al., 2020; Taherdoost, 2020). Previous research has also confirmed a strong relationship between intention and behaviour (Bankole & Bankole, 2017; Attuquayefio & Addo, 2014). Furthermore, behavioural intention also explains why people behave in a certain way in certain situations (Osbourne and Clarke 2006). Previous literature shows that a person’s readiness to use a technology depends on their acceptance and intention to use it (Fisk et al., 2011; Lin & Hsieh, 2007). Social sciences literature proves that behavioural intention (BI) directly impacts actual use (Bankole & Bankole, 2017; Attuquayefio & Addo, 2014). Various other studies also show a direct relationship between intention to use and the actual use of technology (Wang et al., 2020; Attuquayefio & Addo, 2014; Venkatesh et al., 2003). This study suggests that individuals with intention to use HRA will be more amenable to adopting HRA. Finally, since this study explores the intention to use HRA, the condition of actual usage behaviour is also of interest. Thus, in the context of this study, intention to adopt HRA is assumed to have a positive effect on HRA adoption. Therefore, the study hypothesis that:

Hypothesis 5: Intention to adopt HRA significantly influence the adoption behaviour of HRA.

2.2.6 Organizational Culture

Organizational culture influences the value and beliefs of individual behaviour (Eskiler et al., 2016). According to Liu et al., 2010 organizational culture is a collection of shared assumptions, values, and beliefs reflected in its practices and goals while also enabling the members to understand the organizational functions.” Various dimensions have been used in literature to measure organizational culture, such as flexibility, control orientation (Khazanchi et al., 2007), and relational and transactional orientation (McAfee, 2002). But many researchers prefer to evaluate organizational culture using cultural traits, attributes, and dimensions that measure values, beliefs, and assumptions of an individual (Gordon & DiTomaso, 1992; O’Reilly et al., 1991). Based on the organizational culture definition by O’Reilly et al. (1991), Tsui et al. (2006) conceptualized a framework to identify organizational culture in different firms in China. They identified five dimensions: management control, customer orientation, employee orientation, innovativeness, and social responsibility. A study was conducted by Mohtaramzadeh & Cheah (2018), in which they implemented all these five dimensions of organization culture to measure the “B2B e-commerce adoption in manufacturing companies in Iran”. Tsui et al. (2006) explored the cultural impact on technology adoption using these five dimensions (Mohtaramzadeh et al., 2018; Kariyapperuma, 2016). Accordingly, we use the five cultural dimensions proposed by Tsui et al. (2006) to measure the impact of organizational culture on the adoption of HRA.

Studies show that organizational culture contributes a major role in adopting technology (Khazanchi et al., 2017; Liu et al., 2010). Culture has been widely studied in different contexts (Srite, 2006); however, limited attention has been given to study its role in the adoption of technology (Teo & Huang, 2018). A few exceptions show that organizational culture plays a significant role in technology adoption (Bankole et al., 2017; Liu et al., 2010). Organizational culture influences individual behaviour in adopting technology (Bankole & Bankole, 2017; Tseng, 2017). It is seen as a critical factor for technology adoption (Mohtaramzadeh et al., 2018; Borkovich et al., 2015) and either strengthens or weakens it. Researchers claim that organizational culture influences “individual behaviour in adopting technology” (Mohtaramzadeh et al., 2018). Understanding the importance of organizational culture in the adoption of technology is important as it impacts the thinking and behaviour of the employees (Teo & Huang, 2018) acts as a moderator between adoption and behavioural intention of an individual (Mohtaramzadeh et al., 2018; Zhao & Zhou, 2018). So far, only a few moderating variables, like age,

gender, educational qualification, have been explored in the context of HRA adoption (Vargas et al., 2018). Culture has been extensively cited in the literature, showing an important role to play in this context (Halper, 2014). Based

on previous research, we hypothesize the following.

Hypothesis 6: Organizational culture significantly moderates the relationship between HRA adoption intention and usage behaviour (HRA adoption Behaviour).

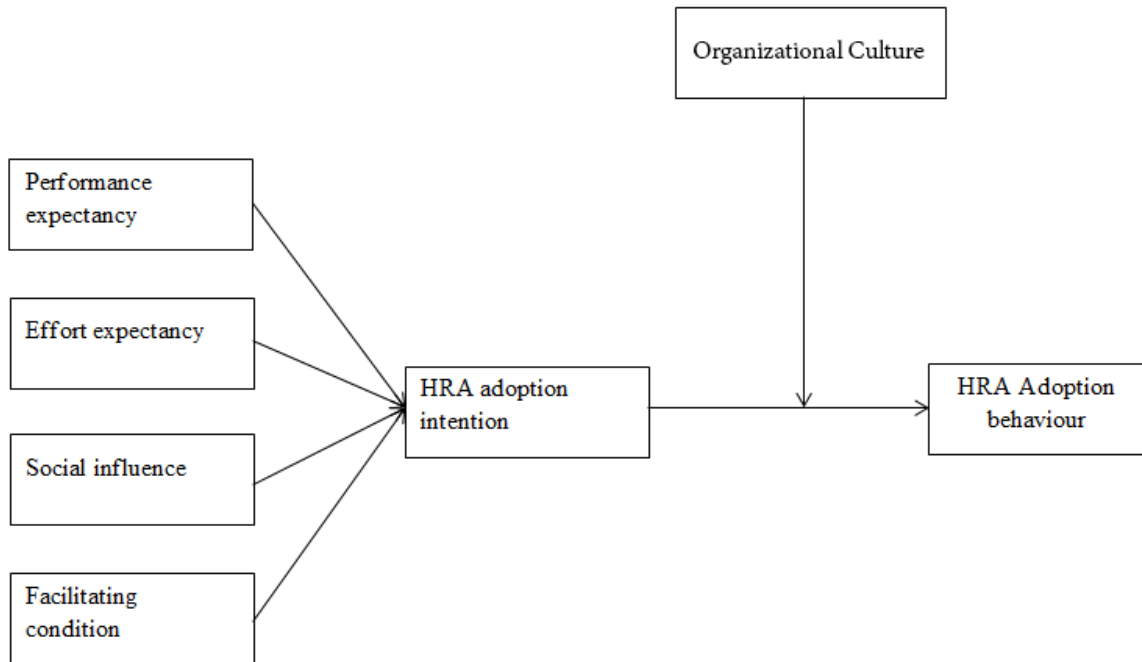


Figure 1: Proposed Model

3 Research Methodology

The Partial Least Squares (PLS) based Structural Equation Modeling (SEM) technique examines the aforementioned relationships in Figure 1. PLS is a “regression-based path modeling technique that estimates path coefficients and partials out variance for the model” (Hall et al., 2012). PLS is highly recommended when the model consists of latent variables or composite-based models or used latent variables scores to estimate the inner model or for a small sample size (Hair et al., 2022). And also, this technique is suitable for exploratory testing and predictive applications. Our study is an initial attempt to empirically examine the behavioural intention to adopt HR analytics. Consequently, PLS is appropriate to test the inter-relationship we developed based on the literature review

3.1 Questionnaire design and variable measurement

To test the proposed model in Figure 1, the questionnaire survey method was chosen for data collection. Each

construct is measured using multiple items, developed using the procedure suggested by Churchill (1979). A five-point Likert scale ranging from 1 = “strongly disagree” to 7” strongly agree” is used to measure the items. The questionnaire’s reliability and items are ensured by the exhaustive literature review, incorporating the experts’ opinions, and observing Cronbach’s Alpha values. Additionally, the questionnaire has been pilot tested on 27 respondents to avoid any ambiguity if present in the contest of HR analytics. We used Venkatesh and Davis (2003) items to measure independent variables, and intention to adopt HRA was estimated using a three-item scale (Appendix). A five-scale item used by Rogers (2003) was used to measure HRA adoption.

Organizational culture is a multi-dimension construct (Cooke & Rousseau, 1988); therefore, it is important to evaluate each dimension separately. We adapted scales from Tsui et al., (2006) and Tsui et al.,(2002) to measure organization culture using twenty four (24) items under five dimensions :(i) innovativeness employee orientation (INN) (4); (ii) customer focus (CF) (5); (iii) employee orientation (EO) (8); (iv) social responsibility (SR) (3); and (v) systematic management control (SMC) (4). A clear

definition of each construct was also provided to avoid confusion among respondents.

3.2 Sample selection and data collection

An online questionnaire survey using Google Forms was used to collect data from HR professionals working in organizations that had adopted HRA in India. A pilot study was done consisting of 27 samples to check the construct reliability and validity of the survey instrument. These samples were not included in the final sample of the study. Few changes were made after evaluating the pilot study. A purposive snowball sampling method was used for the purpose of data collection. The target population for this study is HR, who have experience using analytics. A total of 286 responses was received from 350 targeted respondents, 270 responses were taken into consideration for analysis, and 16 were eliminated due to errors. They yielded more

than 80% response rate and were acceptable for the survey (Jennings et al., 2015). To enhance the response rate, telephonic reminder, personally contacted and visited them. Based on previous studies, the sample size was suitable for further analyses as (Hair et al., 1998) suggested that a sample size ranging between 5 and 10 times the number of items used in the scale is considered adequate.

A total of 270 usable responses were used for this study. Among these, 150 were from females (55.56%) and 120 from males (44.44%), currently working in organizations that had adopted HR analytics. A detailed review of respondents' demographics is provided in Table 1. According to markets research reports by Sierra-Cedar, LinkedIn, and Deloitte, the respondents were taken, which found that the adoption of HR analytics greatly influenced the industry. Information technology, Financial Services, and retail show India's highest adoption rate. However, the variance difference within the industries was found insignificant.

Table 1: Respondents' Demographics

Category	Items	No of Respondents	Percentage
Gender	Female	150	56%
	Male	120	44%
	Grand Total	270	100%
Age	21-30	85	31%
	31-40	108	40%
	41-50	64	24%
	Above 50	13	5%
	Grand Total	270	100%
Experience	6-10 Year	124	46%
	11-15 Year	58	21%
	1-5 Year	65	24%
	More than 15 Year	23	9%
	Grand Total	270	100%
Job Position	Manager	119	44%
	HRIS	77	29%
	Generalist	47	17%
	Specialist	27	10%
	Grand Total	270	100%
Industry	Information Technology	120	44%
	Financial Services	81	30%
	Retail	51	19%
	Health	18	7%
	Grand Total	270	100%

3.3 Common method bias

It is important to address bias in data as it can impact the accuracy of results (Podsakoff et al., 2003). Accordingly, Harman's single factor technique was used to test the common method bias based on exploratory factor analysis. The results reveal that the total variance for a single factor is 32.15%, which is less than the threshold value of 50%. Second, the full collinearity appraisal approach was utilized to distinguish Common method bias (Kock, 2015). The worth of the Variance inflation factor (VIF) was underneath the limit worth of 3.3 (Hair et al., 2017; Kock, 2015); the highest VIF was 3.1 for innovation, which means that this study does not have a common bias problem.

3.4 Data Analysis

A multivariate analysis approach, that is, partial least squares path modelling was chosen to test the proposed model (Figure 1). This technique is widely used in social science research (Hair et al., 2013) and is recommended as the most suitable method for a small sample size with no multivariate homogeneity and normality requirements on data (Hair et al., 2017). Kaiser-Meyer-Olkin (KMO) test of sampling adequacy and Bartlett's test of sphericity were employed to check whether the data set was suitable for factor analysis. The resulting KMO statistic value was 0.873, and Bartlett's test result was significant at $p < .05$, suggesting that the data was appropriate for analysis and indicated an acceptable correlation among the items. Thus, the results show that factor analysis was suitable for the

data used in this study. The analysis was conducted using SmartPLS 3.0 with bootstrapping, and 2000 resamples were used to measure the path coefficient and significance level.

4 Result

4.1 Measurement Model

Several tests were conducted to measure reliability, convergent, and discriminant validity, such as composite reliability and Cronbach α score for reliability, AVE for convergence and Fornell-Larcker criterion, and Hetero-trait-Monotrait Ratio (HTMT) for validating discriminant validity. Factor loading for each variable was tested to ensure they loaded to their respective constructs and did not cross-load with other constructs. The loading of each item exceeded 0.7 (Hair et al., 2013). An appendix shows all the item loadings. From the table, we can see that in some cases, the item loading was lower than the suggested threshold of .070 (Chin, 2010). Literature indicates that item loading between 0.6 and 0.7 is acceptable if the loading of an item in the same construct is high. Table 2 presents the reliability of the measurement items verified at the item and construct levels using Cronbach's (α), composite reliability (CR), and average variance extracted. The result indicates that Cronbach's (α) values and CR score are larger than the suggested 0.70, and AVE values are greater than the threshold of 0.50, indicating acceptable convergent validity for the first order construct.

Table 2: Convergent validity

Construct	Cronbach's Alpha (α)	Average Variance Extracted (AVE)
Behaviour (AB)	0.822	0.650
Effort Expectancy (EE)	0.704	0.521
Facilitating Condition(FC)	0.714	0.529
Intention (IN)	0.873	0.797
Performance Expectancy (PE)	0.683	0.524
Social Influence (SI)	0.711	0.626
Organisation Culture (OC)	0.885	0.686
Employee Orientation (EO)	0.771	0.526
Customer Focus (CF)	0.862	0.647
Innovativeness (INN)	0.738	0.579
Systematic Management Control SMC	0.858	0.642
Social Responsibility (SR)	0.787	0.703

Five latent variables were used to form the second-order construct: organizational culture. Table 2 presents the convergent validity of the five variables: innovativeness, customer focus, employee orientation, social responsibility, and systematic management control. Appendix 1 indicates the loading. Some items' loading was less than 0.70. According to Hair et al. (2012), these items can be deleted to increase the validity and reliability of the data. Therefore, we excluded one item from innovation and two

items from employee orientation to achieve acceptable CR and AVE. Table 2 indicates that CR score and AVE of the five constructs are larger than the threshold of 0.70 and 0.50, respectively. Table 3 shows the convergent validity using AVE square roots larger than the correlation among construct diagonally. This indicates that the measurement model for the five constructs has good convergent and discriminate validity to form the second-order construct.

Table 3: Second-Order Construct Correlation and Square Root of AVE

	CF	EO	INN	SMC	SR
CF	0.804				
EO	0.546	0.725			
INN	0.668	0.645	0.761		
SMC	0.547	0.443	0.581	0.801	
SR	0.587	0.597	0.462	0.57	0.838

Table 4: Fornell–Larcker criteria

	1	2	3	4	5	6	7
1. Behaviour	0.81						
2. Effort Expectancy	0.17	0.72					
3. Facilitating Condition	0.28	0.25	0.73				
4. Intention	0.53	0.47	0.49	0.89			
5. Organisation Culture	0.61	0.37	0.39	0.54	0.83		
6. Performance Expectancy	0.31	0.41	0.18	0.55	0.35	0.70	
7. Social Influence	0.18	0.54	0.16	0.43	0.24	0.30	0.79

Table 5: Heterotrait-monotrait ratio of correlations (HTMT)

	1	2	3	4	5	6	7
1. Behaviour							
2. Effort Expectancy(EE)	0.21						
3. Facilitating Condition(FC)	0.40	0.43					
4. Intention	0.62	0.56	0.69				
5. Organisation Culture(OC)	0.73	0.44	0.54	0.73			
6. Performance Expectancy(PE)	0.38	0.59	0.34	0.67	0.42		
7. Social Influence(SI)	0.23	0.77	0.26	0.52	0.30	0.45	

The convergent validity of the second-order constructs was calculated manually using the formula suggested by Sarstedt et al. (2019). CR, and average variance extracted (AVE) of the higher-order construct, organizational culture, were above the recommended limits of 0.70 and 0.50, respectively. Table 2 shows that all the constructs, including first and second-order constructs, have good convergent validity.

Discriminant validity was examined using two methods; a variance comparison was extracted from the construct with joint variance. We found that the square root

of AVE is significantly higher than its correlations with different constructs for each construct. Table 4 shows Fornell–Larcker criteria diagonally, confirming that the discriminant validity is higher than its maximum correlation with any other construct.

Heterotrait-Monotrait ratio of correlations (HTMT) was employed in the second test. Table 5 indicates the HTMT value between each construct, less than the suggested critical value of 0.85 (Kline, 2011). Therefore, our constructs establish adequate discriminant validity.

Table 6: Direct path coefficients with significance

	Path Coefficient (β)	T Statistics	P Values	Significance
Intention -> Behaviour	0.166	2.538	0.010	**
OC*Intention -> Behaviour	-0.116	2.594	0.010	**
OC -> Behaviour	0.523	9.856	0.000	***
EE -> Intention	0.130	2.375	0.018	*
FC -> Intention	0.356	7.543	0.000	***
PE -> Intention	0.373	8.326	0.000	***
SI -> Intention	0.186	2.759	0.004	***

(Note= OC- Organization Culture; EE- Effort Expectancy; FC- Facilitating Condition; PE-Performance Expectancy; SI-Social Influence; “***” Significant at $p < 0.01$; “**” Significant at $p < 0.05$; “*” $P < 0.1$)

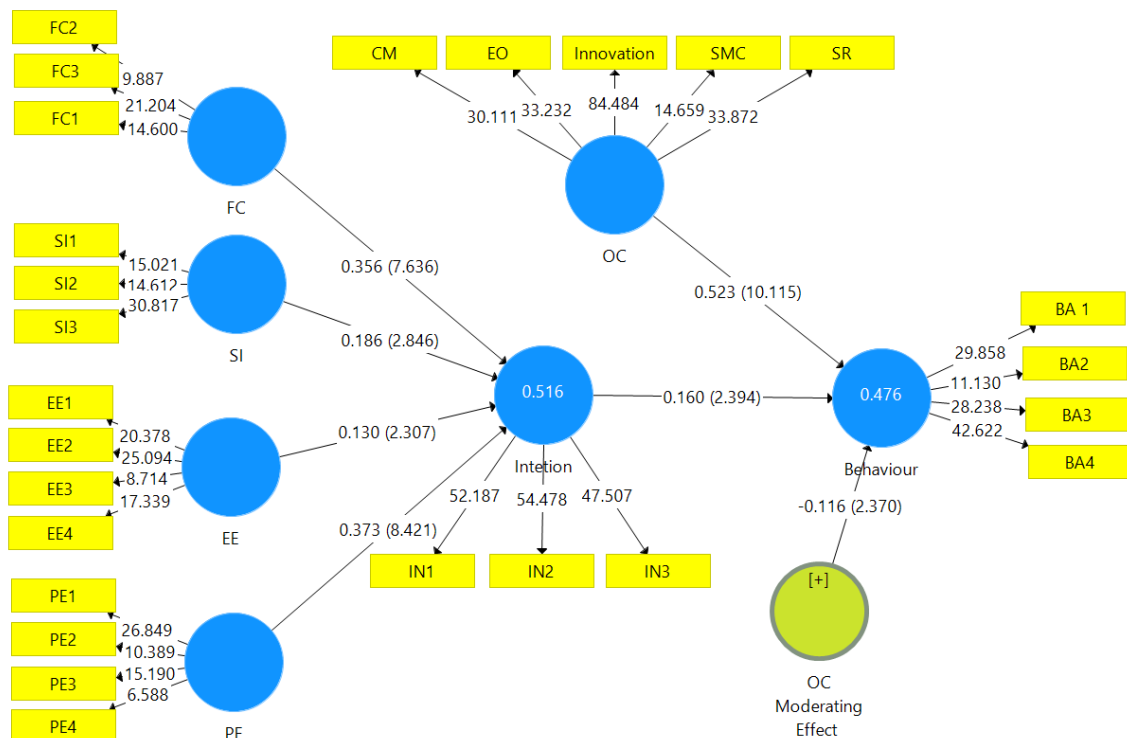


Figure 2: Structural Model with path coefficient, factor loading with significance $T > 1.96$ and R^2

4.2 Structural Model

To test the proposed model, we examined the overall explaining power of the structural Model, with variance explicated basis the independent variables and the degree and robustness of its paths, where all our hypotheses were parallel to a specified structural model path. The measurement model result indicates that the reliability and validity of the second-order construct, thus, qualifies for structural model estimates. Figure 2 presents the structural Model's parameters: the loading factor of each construct, standardized path coefficient (β), and variance of the endogenous variable (R2) obtained using PLS-SEM graphs. The significance of estimations is calculated by running a bootstrap analysis with 2000 resamples. Results of each hypothesis were obtained by examining the path significance provided in Table 6, with the total path coefficients, t-statics, and p-values.

Table 6 and Figure 2 present the estimated structural Model. R2 was used to measure the explaining power, which is interpreted similarly as regression (Chin, 2010). The explained variance of more than 10 % is considered suitable explanatory power (Falk & Miller, 1992). The R2 value for behaviour and intention to use HRA was 47.6% and 51.6%, respectively, indicating acceptable explanatory power of the Model. All paths estimated as per the proposed hypothesis were significant.

Note: FC- Facilitating Condition; SI-Social Influence; EE- Effort Expectancy; PE-Performance Expectancy; IN-Intention; OC-Organizational Culture; BA-Behavioural Adoption; CM- Customer Focus; EO-Employee Orientation; Innovation; SMC-Social Management and control; SR-Social responsibility)

4.3 Moderating test

In testing the interaction effect between HR analytics adoption intention and behaviour, the result indicates that organizational culture's negative moderating effect is significant ($\beta = -0.116, p < 0.010$), thus supporting H2. The direct link between intention to adopt HRA and adoption behaviour of HRA is provided in Table 6 and shows that it is positive and significant. However, the interaction link between intention to adopt HRA and organizational culture toward the HR analytics adoption behaviour ($OC * Intention \rightarrow HRA$ adoption behaviour) is negative (-0.116) and significant. The negative moderating effect between organizational culture means that if the value of organizational culture increases, the direct link between intention to adopt HRA and HRA adoption behaviour decreases. Therefore hypothesis H2 is supported.

Figure 3 demonstrates the moderating interaction pattern using Aiken (1991), which is the process of finding slopes above and below the mean within one standard deviation of organizational culture. The finding implies that organizations with low organizational culture exhibit a stronger effect between HRA adoption intention and HRA adoption behaviour than high organizational culture, as indicated in Figure 3. Even in the case of high organization culture, the effect between HRA adoption intention and HRA adoption behaviour is linear, indicating the role of both high and low organizational culture in predicting HRA adoption behaviour. However, high organizational culture is less predictive than low organizational culture.

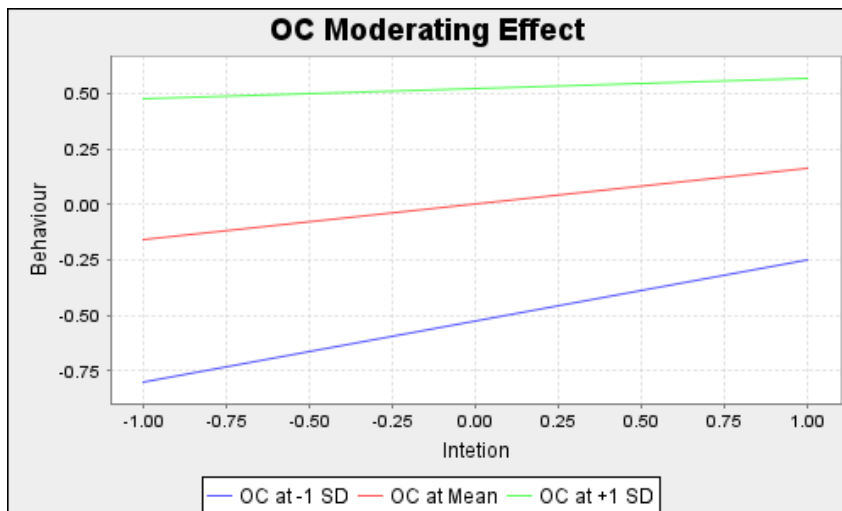


Figure 3: Moderating Interaction Effect

5 Discussion and implication

5.1 Discussion

The findings of this research suggest that all the hypothesis are supported (Fig 2). All the factors like EE, PE, SI, and FC have a significant positive impact on the intention of HR professionals to adopt HRA. Also, HRA adoption intention has a significant positive influence on HRA adoption behaviour. This finding validates the original idea of the UTAUT theory (Venkatesh & Davis, 2003). However, organization culture (OC) is a moderating variable governing the relationship between intention to adopt HRA and HRA adoption behaviour. The significant negative result of organizational culture is found in the relationship between intention to adopt HRA and HRA adoption. In other words, organization culture “weakens” the relationship between intention and behaviour to adopt HRA by influencing the HRA adoption behaviour of the HR professionals. These discoveries are clarified by how associations with “strong culture” are better situated to embrace HRA. This is on the grounds that associations with “strong culture” are bound to be imaginative; ready to send information, abilities, data sharing along the worth chain; embrace technology boldly; accentuate group assembling; and have more champions when contrasted with organizations with “weak culture” (Liu et al., 2010; Khazanchi et al., 2007). Accordingly, the way toward embracing new technology is worked within organizations with “strong culture” when contrasted with those with “weak culture.” Halper (2014) suggests that organizations that are using analytics “analytics culture” is important for adoption of it. Vargas et al. (2018) state that “organizations must redefine their culture to analytics culture to gain benefits of HRA. Different countries have different cultures, i.e., a national culture. Due to the cultural differences, technology adoption also differs from country to country and organization to organization. Various studies have shown how national culture impacts technology adoption (Brown et al., 1998; Suite & Karahanna, 2006; Merchant, 2007). Therefore, the adoption of technology also varies from country to country and organization to organization. Wang et al. (2020) conducted a study in the context of China and showed a positive moderating role of organizational culture in information technology adoption (ICT). In contrast, a study conducted by Mohataramzadeh et al. (2018) in Iran shows a negative moderating role of organization culture on B2BE adoption. Therefore, the findings of this study convey a very important message for Indian organizations to adopt innovative culture to implement HRA successfully.

5.2 Implication for research

The study contributes noteworthy research insights into HRA adoption. Findings of the study offer insights into HR

professionals’ perception towards HRA adoption. There is dearth of scientific evidence aiding to decision-making concerning HRA adoption (Marler & Boudreau, 2017). Evidence from existing research suggests that HR Analytics has positive effects, yet adoption rate is slow (Vargas et al., 2018; Marler & Boudreau, 2017). This study attempts to fill this gap in literature concerning the empirical evidence for HRA adoption. The study attempts to understand the low adoption of HRA through the lens of HR professionals in the Indian context. A major part of existing research has only focused on the individual intention as an adoption barrier in successful HRA implementation. This study focuses on intention and usage behaviour using the UTAUT theory to adopt HRA. Secondly, it is probably the first study in HRA adoption that integrates organization culture as a moderator using UTAUT theory to study HR professionals’ adoption intention and behaviour in adopting HRA. Thus, integrating organizational culture as a moderator in UTAUT theory for HRA adoption is a new perspective that will enhance the literature on the subject. The study strengthens previous literature highlighting the effect of social influence on an individual’s adoption of innovation (Frambach & Schillewaert, 2002; Talukder, 2012).

5.3 Implication for practice

The study also has practical implications. The study explores the moderating effect of organizational culture, which reduces the adoption behaviour of HRA by HR professionals. Therefore, it provides broad insights which organizations can use to create an innovative analytic culture, which serves as fertile ground for HRA adoption as organization culture plays an important role in technology adoption. Employees may be willing to adopt new technologies but are restricted by the organizational culture. The study can assist managers in understanding the facilitators and barriers of HRA adoption. The study supports the fact that HR professionals may be more likely to use HRA if systems are easy to use and training is provided. Thus, Managers can remove barriers to HRA adoption by introducing additional support and training programs (role plays, demonstration, innovation champions, and support groups). The value of HRA adoption needs to be promoted to increase the positive behavioural intention towards HRA as it directly influences the HRA adoption. Open and greater communication can increase the probability of adoption among potential employees. Providing the tools, resources, adequate, timely support, and training will result in developing positive intention, which has been shown to positively influence HRA adoption behaviour.

6 Limitation and suggestions for future work

This study has certain limitations that can be the subject of future research. First, it is only limited to organizations in India. However, more research needs to be conducted for other countries to enhance the generalizability of findings. This is more true as cultural ethos and values vary from one country to another. A study on cross-cultural national differences on HRA adoption is also needed. Second, HRA adoption data is collected by cross-sectional method i.e., at one point of time. Therefore, a longitudinal survey method research would be preferable for more casual inference between variables. Third, the study focuses only on organizational culture as a moderating variable between the adoption intention of HRA and HRA adoption behaviour. There is a need to understand whether other moderating factors can effect or influence the Intention to adopt HRA for transformation of adoption intention HRA and HRA adoption behaviour. Future studies can be conducted to understand other moderating variables that can affect the intensity of behavioural Intention or promote the transformation of HRA adoption intention to adoption behaviour. Future work can also be focussed on testing the model in different culture which will provide better and deeper insights on the role of culture in promoting HRA adoption.

7 Conclusion

This study investigates the relationship between HR professionals' intention to use and usage behaviour in adopting HRA. It investigates the predictor (Intention to adopt HRA) and formation mechanism on the usage behaviour (HRA adoption behaviour). Existing literature shows that studies have mainly focused on individual barriers in adopting HRA (Vargas et al., 2018). This study extends the literature by adding organization culture as a moderating variable to understand this relationship. This is because organizational culture plays an important role in technology adoption (Mohtaramzadeh et al., 2018; Borkovich et al., 2015). Accordingly, we conducted an empirical study to investigate the HRA adoption behaviour. Our results point to a significant positive relationship between adoption Intention of HRA and HRA adoption behaviour. However, the moderating role of organizational culture has a negative significant influence on the the adoption intention of HRA and HRA adoption behaviour. This implies that organizational culture should be carefully managed for the successful adoption of HRA and other technologies. It is seen that organizations have failed to adapt their culture to make it more innovative and analytical. Organizations urgently need to redefine their culture in tune with the evolving times and thus provide fertile ground for

technology to take roots, grow, and thrive. Employees in a technology-ready company will be more amenable to accepting new technology and reaping its various benefits.

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Sprejemanje kadrovske analitike s strani kadrovskih strokovnjakov: razširitev modela UTAUT

Ozadje in namen: Da bi spodbudili inovacije pri upravljanju s kadrovskimi viri (HR) s tehnologijo kadrovske analitike, si organizacije po vsem svetu prizadevajo za uvedbo analitike človeških virov (HRA) med kadrovske strokovnjake in dejansko uporabo HRA za organizacijsko odločanje. Namen te študije je raziskati vedenjski namen uporabe HRA z vidika kadrovskih strokovnjakov z uporabo UTAUT.

Metodologija: Izbrali smo modeliranje z uporabo strukturnih enačb z delnimi najmanjšimi kvadrati (PLS-SEM) za potrditev modela na podlagi podatkov, zbranih z raziskavo med 270 kadrovskimi strokovnjaki v Indiji.

Rezultati: Pokazal se je pomemben pozitiven vpliv pričakovane učinkovitosti, pričakovanega napora, družbenega vpliva in organizacijske podpore na vedenjsko namero za uporabo HRA. Vendar organizacijska kultura negativno vpliva na razmerje med namero po uvedbi HRA in vedenjem pri uvajanju. Analiza organizacijske kulture kot moderatorja v indijskih organizacijah je originalen prispevek raziskave.

Zaključek: Študija razširja pojasnjevalni kontekst UTAUT in osvetljuje izvedljivost za organizacije. Podaja smernice kadrovskim strokovnjakom pri uvajanju HRA in osvetli pomen namere in vedenja pri uporabi HRA. Vodje, managerji v podjetjih in oblikovalci politik lahko ugotovitve raziskave uporabijo za pomoč pri sprejemanju HRA v svojih organizacijah.

Ključne besede: Kadrovska analitika, Namen posvojitve, Vedenje pri posvojitvi, Organizacijska kultura, UTAUT

Appendix

Adopted Scale	Loading
“Performance Expectancy	
Using HRA improves my working result	0.801
Using HRA enables me to accomplish my job/work quicker	0.663
Using HRA will increase my productivity	0.725
Using HRA improves my job performance	0.571
Effort Expectancy	
It will be easy for me to become skillful at using HRA	0.744
Learning to use HRA will be easy for me	0.778
I clearly understand how to use HRA	0.607
I do not have difficulty in explaining why using HRA may be beneficial	0.744
Social Influence	
People who influence my behaviour think that I should use HRA	0.771
People who are important to me think that I should use HRA	0.744
In general, I have been supported in the use of HRA	0.854
Facilitating Condition	
I have the necessary resources to use HRA	0.670
HRA is compatible with other systems that I use	0.785
A specific person or group is available for assistance with difficulties concerning the use of HRA.	0.722
HRA Adoption Intention to Use	
I intend to use HRA as often as needed	0.900
Whenever possible, I intend not to use the HRA	0.867
To the extent possible, I would use the HRA frequently	0.908
HRA Adoption Behaviour	
I am beginning to explore using HRA	0.814
I am interested in using HRA	0.712
I use HRA for some specific task	0.814
Using HRA improve the quality of work I do	0.847
Using HRA gives me greater control over my work	0.826
Employee Orientation (EO)	
Promoting feeling–sharing among employees	0.749
Emphasizing team building	0.617
Encouraging cooperation	0.673
Trusting in employees	0.705
Fertilizing cooperative spirit	0.701
Concerning the individual development of employees	0.724
Consideration among employees	0.691
Caring about opinions from employees	0.641
Customer Focus (CF)	

Satisfying the need of customers at the largest scale	0.792
Sincere customer service	0.856
Customer is number	0.860
Providing first-class service to customers	0.739
The profit of customer is emphasized extremely	0.767
Innovativeness (Inn)	
Developing new products and services continuously	0.807
Ready to accept new changes	0.718
Adopting high-tech bravely	0.758
Encouraging innovation	0.765
Systematic management and control (SMC)	
Keeping strictly working disciplines	0.854
Formal procedures generally govern what people do	0.735
Having a clear standard on praise and punishment	0.720
Possessing a comprehensive system and regulations	0.885
Setting a clarity goals for employees	0.798
Social Responsibility (SR)	
Showing social responsibility	0.857
The mission of the firm is to serve	0.882
Emphasizing economic as well as social profits."	0.773

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