Enterprises' effectiveness: a study on structure, focus, and enterprises' outcomes

Ефективност предузећа: студија о структури, фокусу и исходима предузећа

Matea Zlatković Radaković
University of Banja Luka, Faculty of Economics, Banja Luka, Bosnia and Herzegovina
matea.zlatkovic@ef.unibl.org, orcid.org/0000-0002-2472-5407

Abstract: To obtain and retain high performances enterprises are affected by various constituencies's needs and expectations which are important part of their organizational operationalization. The research goal is to validate the psychometric properties of a widely used holistic view of enterprises performance defined by competing value framework in context of enterprises in transition economy such as Republic of Srpska, Bosnia and Herzegovina. To fulfil the aim of the research, a quantitative, research design based on cross-section data was carried out to collect and analyses data from 224 organizational representatives. Covariance-based structural equations modeling was used to test the competing values approach and, if needed, to modify a measurement scale that identifies the extent to which sampled enterprises use the measurement criteria of each aspect of effectiveness to validate the effectiveness of enterprises. All models of effectiveness have acceptable reliability and convergent validity, and discriminant validity of each model was established. Model fit measures indicate acceptable goodness-of-fit. Academics and managers may consider using these measures of effectiveness to better understand the performance/effectiveness phenomenon and have better insight into possibilities for enhancement of different aspects of effectiveness. This study represents the first attempt to investigate and validate the presence of mutual dependence of certain aspects of effectiveness based on a competing values approach in a specific research context.

Keywords: effectiveness of enterprises; competing values approach; constituencies; covariance-based structural equation modelling

JEL classification: C39, D22, L20, L25

Сажетак: Како би постигла и одржала значајне перформансе предузћа су суочена са очекивањима и захтевима различитих конституената који су неизоставан дио функционисања предузећа. Циљ истраживања је вредновати психометријска обележја нашироко кориштеног свеобухватног приступа перформансама предузећа дефинисаног оквиром конкурентских вриједности у контексту предузећа Републике Српске, Босне и Херцеговине. Ради испуњавања постављеног циља, квантитативни упоредни истраживачки дизајн је употребљен ради прикупљања и анализе података добијених од 224 представника предузећа. Коваријансни приступ моделу структурних једначина је кориштен ради тестирања приступа конкурентских вредности, и, по потреби, извршено прилагођавање мерне скале која идентификује у којој мери узоркована предузећа користе мерне критеријуме сваког аспекта ефективности ради вредновања ефективности предузећа. Сви модели ефективности имају прихватљиве вредности поузданости и валидност садржаја и дискриминанта валидност свакод модела је успостављена. Мере подобности модела имају прихватљиве вредности. Академска заједница и менаџери могу размотрити употребу ових мера ефективности ради бољег разумевања феномена перформанси/ефективности и бољег увида у могућности унапређења различитих аспеката ефективности. Ово истраживање

представља прво настојање да се испита и вреднује присуство међусобне зависности одређених аспеката ефективности према приступу конкурентских вриједности у специфичном истраживачком контексту.
Кључне речи: ефективност предузећа, приступ конкурентских вредности, конституенти, коваријансни приступ моделу структурних једначина
ЈЕЛ класификација: C39, D22, L20, L25

Introduction

More than a century ago, numerous attempts to determine the origin of effectiveness of enterprises prevailed much of performance measurement stream (Taylor, 1911; Towne, 1886). Although intention to resolve the vague phenomenon of effectiveness has generated numerous attempts both among academics and the business community, the researchers made tremendous effort to organize in formal frame the criteria of enterprise effectiveness (Quinn & Rohrbaugh, 1983; Campbell, 1977). The most outstanding of these efforts has been the development of the competing values framework or approach to enterprise effectiveness (CVA) (Quinn & Rohrbaugh, 1983). Even though the CVA was originally developed to address the problem of identification of the effectiveness criteria, the CVA has been used in the examination of various enterprises' phenomena, such as enterprise culture, effectiveness and leadership styles, the development of the enterprise and human resources (Cameron & Freeman, 1991; Quinn & McGrath, 1985; Quinn & Spreitzer, 1991; Zammuto & Krakower, 1991). Some researchers used the CVA to study the stages of the enterprise development (Quinn & Cameron, 1983), compatibility between organizational culture values and business strategy (Bluedorn & Lundgren, 1993), the effectiveness of information systems used in management (Cooper & Quinn, 1993), and enterprise transformations (Hooijberg & Petrock, 1993).

According to the above, the CVA has a wide span of issues in contemporary organizational research stream and is a valuable methodology for better understanding of the conceptualization of effectiveness and measurement issues. To operationalize the CVA, Quinn and Spreitzer (1991) proposed the measurement scale for the CVA. According to their methodology, this research uses a covariance-based structural equations modeling technique (CB-SEM) to evaluate the structure of the CVA.

There has been limited empirical validation of the CVA as measurement instrument, especially in the cases of enterprises from transition economies. Some studies used different approaches such as multidimensional scaling, especially in the current research context (Zlatković, 2018), but they did not apply CB-SEM as an advanced modelling technique. Thus, the research aim is to assess viability of the previously psychometrically established CVA instrument. Therefore, it is important to understand if an organizational effectiveness instrument is reliable and valid when applied to the context of enterprises from Republic of Srpska, Bosnia and Herzegovina. The research findings reveal that it would be more valuable to apply the proposed measure of the enterprises' effectiveness based upon the CVA, as a more complex and holistic measure of the effectiveness and performance, allowing for adjustments when dealing with heterogeneous enterprises' settings and contexts.

In the first part of the paper, theoretical background of enterprise effectiveness and the usage of the competing values approach are presented, which implies that the competing values approach represents a valuable way of operationalizing enterprises' effectiveness in many different research contexts. Next, the research methodology represents data collection procedure, structure of sample and applied econometric modeling technique, align with the steps of the performed data analysis and research results. The results reveal that the competing values approach to effectiveness of enterprises in the context of Republic of Srpska, Bosnia and Herzegovina, are acceptable and viable. Also, certain suggestions made for the managers of the enterprises in the Republic of Srpska, Bosnia and Herzegovina, are discussed.

1. Theoretical background

Enterprise effectiveness represents the central theme of the organizational performance stream. The significance of the enterprise's effectiveness is represented by the fact that "enterprise effectiveness is ultimate and the highest aim of any form of the organizational analysis "(Hall, 1980). Many scholars and researchers have different approaches to addressing enterprise effectiveness, which, consequentially, leads to tremendous conceptualizations and definitions of enterprise effectiveness. All of these definitions depend on the level of the complexity, varying from simple view that "activity is effective if it fulfils the specific objectively determined goal" (Barnard, 1938) to effectiveness understood as reflection of the precise focus and concept in applied science rather than abstraction in pure science (Hannan & Freeman, 1977). Some authors suggest that the construct of effectiveness is a "value concept". There are infinite numbers of values that can serve as basis of effectiveness and therefore there can be infinite numbers of models of effectiveness (Zammuto, 1984). The construct of enterprise effectiveness is based on judgement of individuals upon desirable outcomes of enterprise functioning, from different point of views of the stakeholders, which are directly or indirectly influenced by enterprise performance (Zammuto, 1984). Enterprise effectiveness represents a "society construct, an abstraction located in the minds of organizational scholars and researchers" (Quinn & Rohrbaugh, 1983). The complexity of the issues regarding the assessment of the enterprise effectiveness is revealed in the fact that, in final analysis, enterprise effectiveness represents a phenomenon defined by the relevant stakeholders of the enterprise (Campbell, 1977).

Conceptualization, interpretation and measurement of the enterprise effectiveness still represents a challenge (Eydi, 2015; Olivier, 2014; Oghojafo, Muo, & Aduloju, 2012). Many researchers concur that the unique definition of enterprise effectiveness does not exist because it represents various aspects to each constituent (Eydi, 2015; Martz, 2008). However, there is consensus that the construct of enterprise effectiveness is comprehensive and compositive in nature and it requires development of the different aspects and measuring various criteria, while process and ends need to be treated while evaluating the enterprise effectiveness (Fedajev et al., 2022; Eydi, 2013; Oghojafo et al., 2012).

To acknowledge the multidimensional and complex nature of the construct of effectiveness, enterprise effectiveness is addressed as a broader concept than enterprise performance and

efficiency (Martz, 2008; Olivier, 2014). While establishing enterprise performance and efficiency measures represents the process point of view, the enterprise effectiveness models capture construct perspective (Martz, 2008). Enterprise effectiveness includes both measures of organizational performance and efficiency aspects (Martz, 2008; Venkatraman & Ramanujam, 1986) as well as other aspects of enterprise functioning important from the angles of different stakeholders (Richard, Devinney, Yip, & Johnson, 2009).

2. Enterprise effectiveness measurement

From the beginning of the early industrialization, defining and measuring enterprise effectiveness has represented a significant subject in organizational theory and research development. In earlier periods, the term "effectiveness" indicated efficiency or technological efficiency. (Taylor, 1911). In line with development of the concept of enterprise, the understanding of effectiveness and efficiency has changed. Meanwhile, more comprehensive concepts of effectiveness emerged that can differ regarding the idea of observing the effectiveness. Variety of these concepts could be understood only through acknowledging that nature of the concept does not possess limits and has numerous conceptualizations (Whetten & Cameron, 1984).

Traditional approaches to enterprise effectiveness measurement are characterized by partial and incomplete perceiving of the enterprise effectiveness. Further development of the concept of enterprise effectiveness revealed more complex and comprehensive approaches to assessing enterprise effectiveness. The mutual characteristic of the contemporary approaches to enterprise effectiveness represents the acceptance of the enterprise intention to achieve multidimensional objectives while executing various organizational activities and using available resources.

There are several most mentioned traditional approaches to enterprise effectiveness, such as goal attainment approach, internal process approach and system resource approaches (Eydi, 2013). The goal attainment approach suggests the determination of the goals to measure enterprise effectiveness. The criteria of effectiveness of internal process aspect reveal the significance of the intensity of relationships between individuals as criterion of effectiveness as well as confidence, integrated systems and procedures and continuous functioning as more precise measures of the enterprise effectiveness in comparison with goal attainment approach. The system resource approach indicates that ability of the enterprise is to draw near necessary inputs to establish viability and to measure resources and outcomes. Among others, the multiple constituencies approach and competing value approach are considered as contemporary approaches to enterprise effectiveness. The multiple constituencies approach is focused on determination of the crucial stakeholders and their views of the enterprises' effectiveness to reveal different and specific domains of interests in enterprise performance (Eydi, 2013).

2.1. Competing values approach to effectiveness

The competing values approach (CVA) to enterprise effectiveness is based on the identification of the fact that enterprises' objectives are managed by different expectations

of multiple stakeholders with mutually competing views on effectiveness subject. The CVA represents the product of the theoretical and empirical contributions of organizational effectiveness research stream (Quinn, 1981; Quinn & Rohrbaugh, 1981). This approach is based on three axes or value dimensions: focus, structure and outcomes (Quinn & Rohrbaugh, 1983). The organizational focus includes external and internal focus. Internal focus is characterized by well-being and employee development, while external focus addresses condition and evolution of the enterprise. The organizational structure emphasizes control and flexibility. The dimension outcomes focus on planning and defining the enterprises' objectives in the form of means, while efficiency and productivity relate to ends (Quinn & Rohrbaugh, 1983). The four models of effectiveness according to CVA are presented in Figure 1.

Figure 1: The categorization of the effectiveness criteria - competing values approach
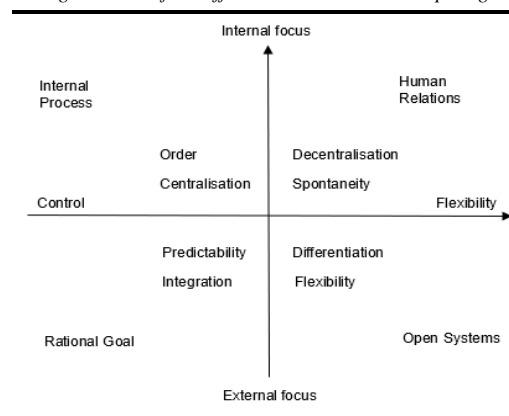
Source: adapted from Quinn and Rohrbaugh (1983)

According to CVA, the criteria of effectiveness are classified into four models of effectiveness: internal process, human relations, open systems, and rational goal model. The internal process model points out order, control, and communication and information processes. Enterprise's effectiveness is based on the process involved in the goods and services production (Muterera et al., 2012). Besides these characteristics, the internal process model includes measurement, identification of responsibilities and documentation, with emphasis on precise determination of roles and responsibilities. The criteria of effectiveness of human relations are focused on employee cohesion and morale as well as internal focus and flexibility. The aim is to fully develop and exploit the employees' potential and their commitment to enterprises' activities and operations. Consensus establishment and management conflict are also focal points of this model of effectiveness. The open systems model emphasizes that enterprises should acquire resources and use them productively to achieve determined objectives. It is characterized by flexibility and external focus, enterprise's growth, and readiness to address environmental challenges. The open systems' criteria of effectiveness reveal the importance of the innovation and adaption of enterprises to external environment (Morais & Graça, 2013) as key aspects of effectiveness

(Tregunno et al., 2004). The last among four models according to CVA, the rational goal model, is close to goal achievement model, and is directed towards stability and external focus. The model emphasizes the enterprises' ability to achieve precise goals determined by the stakeholders. Therefore, enterprises are assumed to be effective if they accomplish defined objectives such as profit or productivity (Morais & Graça, 2013).

According to CVA, characteristics of the four models of effectiveness reveal certain benefits of this approach. First, all issues regarding the multidimensional analysis of effectiveness are diminished because 16 criteria of effectiveness are included and sorted among four models of effectiveness. Second, problem of multiple criteria of effectiveness is resolved through deduction of the list criteria into narrow sets of discrete and well-defined criteria (Quinn & Rohrbaugh, 1981). Enterprise effectiveness is determined as value judgement of enterprise performance and therefore, "enterprise effectiveness definition determines the set of weighted criteria according to individuals' values, hierarchy, unit type, internal or external perspective and etc." (Quinn & Rohrbaugh, 1981).

The CVA is usable to visualize the possibilities to enhance the enterprise and to better understand effectiveness from different points of view. This approach encourages discussions on enterprise effectiveness measurement issues. The establishment of this approach provided an enormous contribution to better understanding of the enterprise effectiveness phenomenon because it simultaneously emphasizes the apparently contradictory values such as order and flexibility and internal and external focus, integrating the various concepts and theoretical fundamentals. The important contribution of the CVA is reflected in rising the awareness of the complexity effectiveness construct, revealing the emerged differences and connections of contradictory and competing values and their integration into comprehensive framework to help enterprises to deal with the issues of competing models. The value dimensions depicted in CVA indicate that effectiveness measurement is in line with various stakeholders' requirements. It enables inherent paradoxical nature of the effectiveness phenomenon to be represented in single framework, making it possible to balance between competing expectations regarding the identity of the enterprise as institution. The CVA emphasizes that the aim to determine the single criterion on effectiveness to be less likely to ensure higher value than the wider and more balanced approach as competing value view (Gulosino, Franceschini, & Hardman, 2016), which provides a holistic and compound view to measuring the effectiveness, allowing for adjustments in line with diverse enterprises' characteristics and backgrounds.

The CVA is widely used in many studies on organizational analysis to address various questions such as: enterprise culture and strategy (Bluedorn & Lundgren, 1993), transformation of enterprises (Hooijberg & Petrock, 1993), information systems management (Cooper & Quinn, 1993), employee participation (McGraw, 1993) and cooperation (Rogers & Hilderbrandt, 1993). Some studies used competing value view to investigate enterprise culture (Cameron & Freeman, 1985; O'Neill et al., 2021; Zeb et al., 2021), quality of life (Zammutto & Krakower, 1991), and organizational transition (Quinn & Cameron, 1983). Compared to other approaches to measuring effectiveness, the CVA has an important role in applied studies as well as in psychometric investigation, with high validity scores and reliability like multidimensional scaling (Quinn & Spreitzer, 1991) and

structural equation modeling (Kalliath, Bluedorn, & Gillespie, 1999). As mentioned earlier, the CVA is widely used to evaluate organizational culture, effectiveness and management styles.

2.2. Structural equation modeling – assessment of the viability of the CVA

The covariance based structural equation modeling (CB-SEM) technique is applied to investigate the CVA's viability in proposed research context. The CVA indicates that each latent construct of the enterprise's effectiveness shares two superordinate value dimensions: flexibility of control and internal of external orientation. This means that characteristic of each latent construct represents the distinctive ratio in which flexibility or stability and internal or external value dimensions are operating. According to theoretical framework of CVA, the human relations and open systems models of effectiveness have a common value dimension flexibility, the open systems and rational goal models of effectiveness have a common value dimension external orientation, the rational goal and internal process models of effectiveness share a value dimension order, and the internal process and human relations models of effectiveness share value dimension internal orientation, as shown in Figure 1. This conceptualization of enterprises' effectiveness indicates that CVA models of effectiveness that have common two superordinate dimensions (flexibility or control and internal or external orientation) are not orthogonal. Therefore, it is expected the models of effectiveness that have common superordinate value dimensions are more positively correlated, as follows. The research model according to CVA is presented in Figure 2.

Hypothesis 1: The correlation between the human relations and open systems CVA latent constructs is significant and positive.

Hypothesis 2: The correlation between open systems and rational goal the CVA latent constructs is significant and positive.

Hypothesis 3: The correlation between rational goal and internal process the CVA latent constructs is significant and positive.

Hypothesis 4: The correlation between internal process and human relations the CVA latent constructs is significant and positive.

According to competing value approach to enterprise's effectiveness, the two pairs of latent constructs of effectiveness placed in opposite quadrants in competing value framework do not share any common value dimension. Therefore, the value dimensions characteristic for human relations model of effectiveness such as high flexibility and internal orientation does not share value dimensions with the effectiveness criteria of rational goal model, characterized by high level of control and dominant external orientation. In line with above-mentioned, it is expected that the relationship between these two models of effectiveness is to be orthogonal, i.e. to be uncorrelated. Similarly, the internal process model effectiveness, characterized with pronounced order and dominant internal orientation, and effectiveness criteria of open systems model, which suggest high

flexibility combined with dominant external orientation, do not share any common value dimensions.

Figure 2: The conceptual research model of competing values approach to enterprise's effectiveness
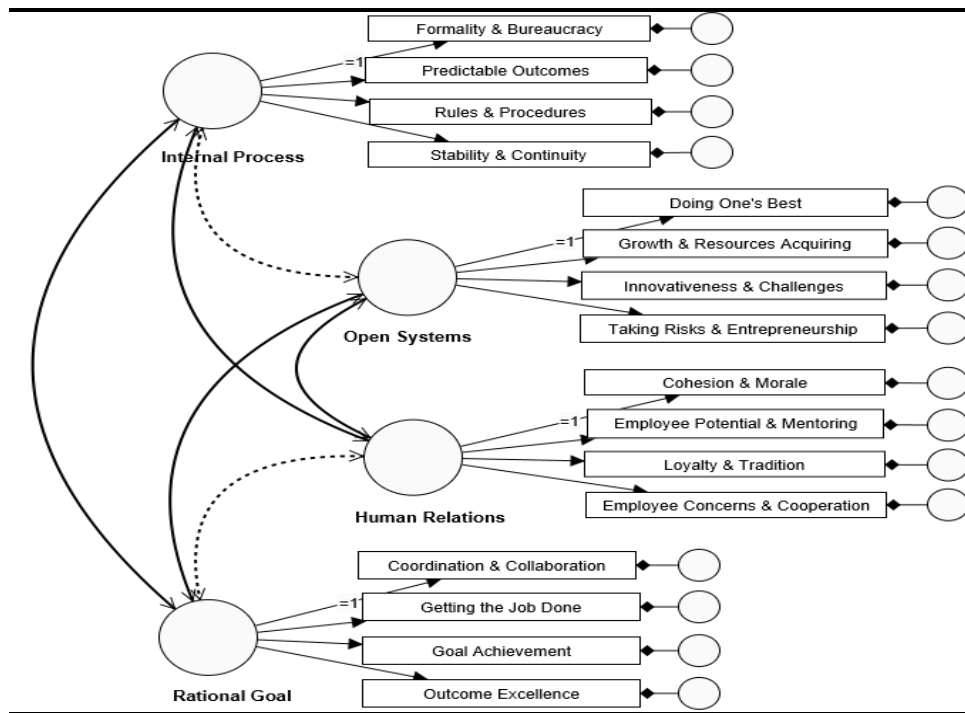
Note: Rectangles represent measurement variables, and ellipses represent four latent dimensions of effectiveness according to competing value approach. Curved double-headed arrows depict correlations between these effectiveness models. The conceptual model is developed according to Quinn (1988), Quinn and Spreitzer (1991), and other organizational effectiveness literature.

Source: the author's analysis

It should be emphasized that defined hypothesized relationships exist within the structure of the competing value framework to enterprise effectiveness. Several studies have tested the viability of this framework in specific context. Therefore, the viability and content validity of the theoretical competing value approach to enterprise effectiveness should be tested in proposed research context of this paper. According to this, before investigating the significance and intensity of the relationships between effectiveness latent dimensions in research model, the overall fit of the theoretical competing value framework to enterprises effectiveness was empirically verified (Hypothesis 5). Support for the overall fit of a theoretical model is obtained by the values of a several goodness-of-fit measures. Hence, it asssumed as follows:

Hypothesis 5: As indicated by several goodness-of-fit indexes, there is an acceptable overall fit of the competing value approach to enterprise's effectiveness to the collected dat, as depicted in Figure 2.

3. Methodology and data

The data collection procedure is done via a well-structured survey questionnaire delivered to enterprises by email or in person. The feedback on quality of the questionnaire items and its content validity was obtained by conducting a pilot study. The final version of the questionnaire was created, with minor modifications according to pilot group's recommendations. The existing measurement scale was used to evaluate all latent constructs in the conceptual model. For this purpose, the original 16-item scale developed by Quinn and Spreitzer (1991) was used, with established psychometric characteristics. To measure latent constructs the seven-point Likert-type scale was used with range from "7 =strongly agree" to "1=strongly disagree". Respondents were asked to indicate to what extent they agree or disagree with the measurement items of each latent construct.

The questionnaire instrument was delivered to enterprises operating in different sectors in the Republic of Srpska, Bosnia and Herzegovina. Along with the questionnaire, cover letter with all necessary information was delivered. Survey questionnaire written in native language was delivered to 500 organizations out of 3,838 organizations, using random sampling technique, registered at that moment in the Business Register of the Chamber of Commerce of Republic of Srpska. The 243 enterprises chosen to participate in the survey and sent fulfilled questionnaires. After data cleansing procedures to detect the presence of missing values, pattern responses and outliers, several questionnaires were excluded from sample. Finally, the 224 enterprises represented the final sample used for data analysis procedures. The structure of the sample by following characteristics: transformation process, size and age, is presented in Figure 3.

Figure 3: Sample structure by size, age and transformation process
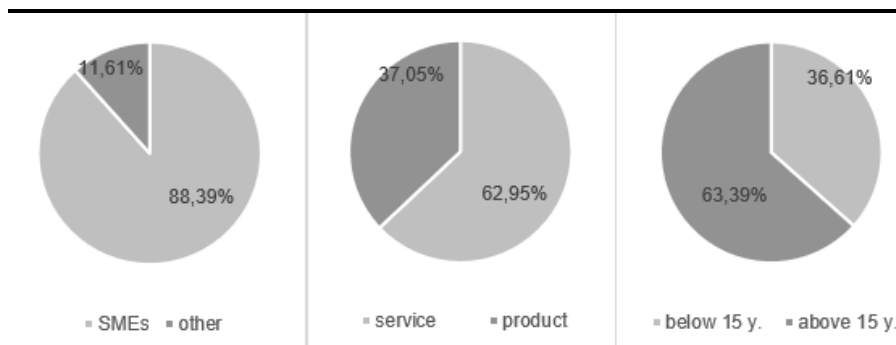
Source: the author's analysis

As presented in Figure 3, the final sample of the research consists of 84 (38%) and 140 (62%) product-oriented and service-oriented enterprises, respectively. Majority of the enterprises are SMEs (88.39%) older than 15 years (63.39%).

Additionally, majority of the product-oriented organizations belong to the following industries: construction, metallurgy and metal processing, agriculture, fishing, food, and tobacco industry. Among service-oriented organizations, majority of them are from communal and service, trade, and ICT sectors.

Structural equation modeling techniques allow defining the number of latent constructs in a research model. Also, it allows defining the number of items expected to associate with each latent construct in proposed conceptual model. The connection from one latent construct to the measurement indicators of another are constrained to have value zero (Bollen, 1989). These relationships in the conceptual model can be tested empirically for measures of the goodness-of-fit. The several goodness-of-fit indexes define the degree of correspondence between the implied and observed covariance matrices. These indexes characteristics represent a unique feature of the SEM technique compared to other techniques used in previous research to evaluate the CVA suitability. The suitability of a common-factor measurement model and the number of latent constructs known as latent constructs in the structural model cannot be determined completely (Kim & Mueller, 1978). However, the SEM techniques rise the level of confidence that the conceptual model is consistent with the parameters of the population. As second generation of the multivariate analysis techniques, SEM combines characteristics first generation techniques like principal component analysis and linear regression (Fornell & Bookstein, 1982) and it is assumed as useful technique in process of development and investigation of the theories which made this technique as "quasi-standard in novel research" (Hair, Ringle, & Sarstedt, 2012; Ringle, Sarstedt, & Straub, 2012). The CB-SEM can be considered as confirmatory approach by nature and very useful to further test established theory in various contexts.

4. Empirical analysis and discussion

Research model of enterprise effectiveness was evaluated using software SmartPLS version 4.0.9.8 (Ringle, Wende, & Becker, 2022), using CB-SEM technique. The performed analysis of the reflective measurement models revealed that an acceptable level of internal consistency, indicators' reliability and convergent validity and discriminant validity were established. For comparison purposes, the indicator of constructs' reliability Cronbach's α (1951) were calculated for all four constructs: internal process model (0.858), the open systems model (0.841), the rational goal model (0.795), and the human relations model (0.867). These coefficients compared favorably to those reported by Quinn and Spreitzer (1991): internal process model (0.77), open systems model (0.81), rational goal model (0.78), and human relations model (0.84), and those reported by Kalliath et al. (1999): internal process model (0.80), the open systems model (0.83), the rational goal model (0.83), and the human relations model (0.90).

The internal consistency analysis reporting the values of constructs' convergent validity and reliability as well as discriminant validity are presented in Table 1. The values

of indicators of internal consistency - Cronbach's α and composite reliability (ρ_c) (Churchill, 1979; Jöreskog, 1971) are considered high reliability and acceptable indices (above recommended thresholds of 0.6 (0.7) (Hair, Babin, & Krey, 2017; Nunnally & Bernstein, 1994). Internal consistency of the constructs is established.

Table 1: Competing values measurement scales of effectiveness – reflective measurement models

| Panel a: Convergent validity and reliability			
Human relations	Internal process	Rational goal	Open systems
Cronbach's α			
0.867	0.858	0.795	0.841
Composite reliability (ρ_c)			
0.870	0.875	0.800	0.846
AVE			
0.623	0.618	0.503	0.593
Panel b: Discriminant validity - HTMT criterion			
	Human relations	Internal process	Open systems
Human relations			
Internal process	0.406		
Open systems	0.709	0.372	
Rational goal	0.319	0.524	0.516

Source: the author's analysis

The values AVE exceed the threshold proposed in literature (0.5) (Hair et al., 2017). The indicators and constructs' reliability and validity assessments are presented in Table 1. Constructs' discriminant validity is checked using a recent criteria heterotrait-monotrait ratio (HTMT) (Hair et al., 2017). As more sensitive technique for detecting discriminant validity issues, HTMT criteria indicate HTMT values below more conservative HTMT threshold of 0.85 (Kline, 2023) suggesting that discriminant validity of constructs is established as shown in Table 2. The results of measurement model assessment are shown in Table 2, therefore, revealing that the measurement model was acceptable which provides a good foundation for testing the adequacy of goodness of fit of the proposed model.

The research findings suggest a good fit for the common-factor model as shown in Figure 4. A good fitting model is accepted if the value of goodness of-fit index is above threshold value of 0.9 (Hair et al., 2017). The estimated CB-SEM model has value of GFI = .93. Additionally, the estimated structural model has values of CFI = 0.96 (Bentler, 1990) and TLI = 0.95 (Tucker & Lewis, 1973), which are above threshold value of 0.9 indicating the adequate-fitting model is accepted. CFI is one of the most popular indices used in SEM. Root Mean Square Error of Approximation (RMSEA) (Steiger & Lind, 1980) takes the square root of the resulting ratio of the given population (Browne & Cudeck, 1992). It is considered the best informative fit index. Practical experience showed that a value of the RMSEA of about 0.08 or less would indicate a reasonable error of approximation and researchers would not want to use a model with a RMSEA greater than 0.1 (Browne & Cudeck, 1992; Hair et al., 2012; Shi & Maydeu-Olivares, 2020). Value of RMSEA of

estimated model is 0.05. To conclude, the fit indexes suggest that the measurement models is appropriate.

Figure 4: Results of structural equation modelling – competing value framework
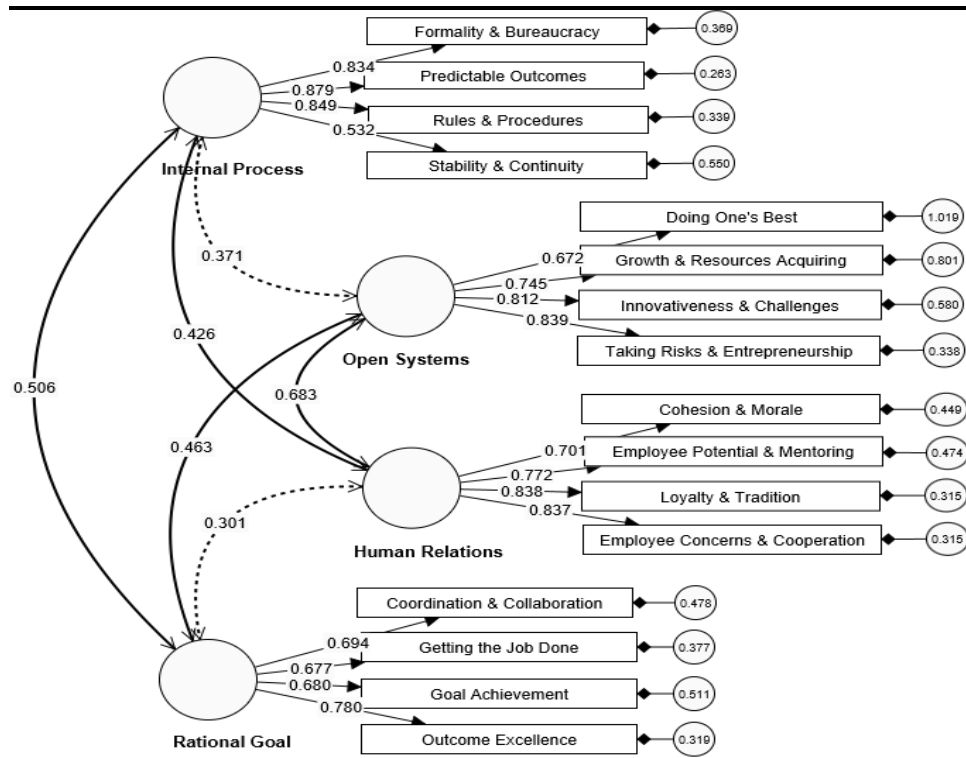
Note: The numbers shown in the diagram, from right to left, are: standardized error term, standardized outer loadings, and correlations between latent constructs.

Source: the author's analysis

Figure 4 depicts the estimates of the model's parameters. The standardized outer loadings are consistently large, mainly above value of 0.708. Some indicators have outer loadings slightly lower than 0.708 (doing one's best for open systems model; coordination & cooperation, getting the job done and outcome excellence for model rational goal) or have values between 0.4 and 0.6 (indicator of model internal process - formality & bureaucracy), which are considered as acceptable (Hair et al., 2017). Additionally, these indicators should be omitted only if their omitting increases the AVE values. The decision is made to retain them to increase the constructs validity content (Hair et al., 2017). The results shown in Figure 4 indicate an acceptable fitting measurement model that suggests the existence of the four aspects of the enterprise effectiveness in line with competing value approach. According to the defined hypotheses 1-4 there are significant and positive correlations between all four models of the enterprises effectiveness as follows: between

criteria of effectiveness of internal process and human relations, between human relations and open systems effectiveness models, between open systems and rational goal effectiveness models and between rational goal and internal processes effectiveness models. Obtained data support these four positive relationships between all four latent constructs of enterprise effectiveness. However, obtained results indicate the two surprising results opposite to hypothesized relationships between internal process and open systems, and between human relations and rational goal. The obtained values of correlations between these constructs of effectiveness are lower than between constructs that share common value.

Theoretically based insignificant relationships between effectiveness models in opposite quadrants of the competing value framework, namely, between internal process and open systems and between human relations and rational goal, are not supported by the findings of the evaluated model, as shown in Figure 4 (0.371 and 0.301, respectively).

The obtained results indicate the adequacy of the CVA using CB-SEM according to the defined hypotheses 5. Thus, the performed examination of the competing values approach to effectiveness was very successful—with the exception of the findings on discovered significant relationship between opposite models of effectiveness. Apparently, the enterprises in Republic of Srpska, Bosnia and Herzegovina, have simultaneously present value dimensions such as stability, flexibility and adaptability. Explanation for obtained results could be found in the assumption that these enterprises are finding themselves in period characterized by many market changes and, thus, aware of need to act quickly and adapt promptly internal as well as external in line with other enterprises. Enterprise have become more proactive in their actions to respond in time to predicted changes through development of creative changes in the organizational structures (Shortell, Morrison, & Friedman, 1990).

There is possibility that these enterprises only have stability and order in turbulent and unpredictable environment, as characteristic of the internal process model, and are possible through problem solving using creative and innovative approach and acknowledging new ideas, which depicts characteristics of the open systems model (Mirić, Aničić, & Petrović, 2023; Momčilović, Vujičić, & Doljanica, 2022). It would not be advisable to sort these enterprises as those characterized by only open systems criteria of effectiveness which would automatically eliminate the present values of the internal process model. To conclude, these enterprises are simultaneously flexible and stable. The presence of those enterprises that emphasize simultaneously several dimensions of the effectiveness, even contradictory ones such as characteristics of the internal process model and open systems model, as well as human relations and rational goal model, represents the paradox in line with nature of the competing value approach to effectiveness as one of the strengths of this approach (Quinn, 1988; Quinn & McGrath, 1985).

Even though some models of effectiveness are opposite to each other in the coordinate system that depicts the CVA, and paradox by nature, which does not imply that

these models of effectiveness are empirically opposed, mutually exclusive in real organizational environment (Kalliath et al., 1999).

Also, there is significant positive correlation between human relations and rational goal models in investigated enterprises. The research findings imply that these enterprises are simultaneously internally focused taking into account demands of the external settings. Enterprises attempt to obtain cohesion and employee morale, nurture atmosphere of mutual understanding and employee satisfaction, and to establish individual and collective goals compliance. However, employee loyalty and close connection among enterprises' members to establish stable and predictable environment is possible if these values are incorporated into enterprises' corporate strategy. Achievement of organizational goals has to be aligned with individual goals. Satisfied employees, close interaction and dedication to enterprise support the achievement of the organizational goals such as productivity and efficiency (Miletić, Aničić, & Gračanac, 2023).

Suggestions made by the CVA do not have to be treated as contradictory; rather, it is necessary to investigate the possible contradictions in every organizational setting (Kalliath et al., 1999; Quinn & Rohrbaugh, 1983). The question of what makes one enterprise more effective than another is continuously present in the organizational analysis. This dilemma is, in some respects, gradually answered with each research on effectiveness in specific settings using particular methodology providing new insights. The multidimensional scaling technique also supported the established latent constructs' items of CVA in this research context (Zlatković, 2018). However, in developing wider strategy for scale development of the CVA, this research employed CB-SEM, the most powerful statistical technique, which as that allows purification of the measurement variables from the measurement error which is not possible to do using technique such as multidimensional scaling. The research findings for the CVA to address effectiveness of enterprises in this specific research context represents an attempt to enrich the present organizational effectiveness research stream.

Conclusion

The research results suggest that it would be more appealing to adopt CVA to measure enterprise effectiveness as an indicator of the complex concept of effectiveness and performance. Using CVA, managers are able to identify the existence of the various value dimensions of the enterprises which are in line with distinct stakeholders' values in order to successfully manage enterprise effectiveness in different aspects. Managers are able to understand the magnitude of the simultaneous relationships between even seemingly contradictory values in order to effectively and efficiently manage overall enterprise performance. The use of CVA reveals to managers that direct attempts made to improve particular effectiveness criteria can consequentially lead towards rise of other effectiveness aspects. Even though the four latent constructs were obtained as unique constructs, it appears that they are correlated whether or not the proposed models of effectiveness have common value dimensions. Therefore, future research attention has to be made onto investigation of the measurement models of defined latent constructs cross various types of

enterprises and countries. Additionally, it could be interesting to examine the relative importance of each effectiveness model according to CVA in evaluated enterprises. However, if the examined enterprises want to determine the overall effectiveness and performance, the unidimensional structure should be applied. Meanwhile, to address various aspects of the effectiveness and possibilities to enhance it, the four-dimensional conceptualization should be addressed. As literature suggest close relationship between certain models of effectiveness and phases of the life cycle of the enterprises, future research should empirically test and validate the presence of criteria of effectiveness in each phase of enterprise development.

References

Barnard, C. I. (1968). *The functions of the executive* (Vol. 11). Harvard University Press.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological bulletin*, *107*(2), 238.

Bluedorn, A. C., & Lundgren, E. F. (1993). A culture-match perspective for strategic change. *Research in Organizational Change and Development*, *7*(5), 137-179.

Bollen, K. A. (1989). *Structural Equations with Latent Variables* (Vol. 210). John Wiley & Sons. Doi: http://dx.doi.org/10.1002/9781118619179

Browne, M. W., & Cudeck, R. (1992). Alternative ways of assessing model fit. *Sociological methods & research*, *21*(2), 230-258. Doi: http://dx.doi.org/10.1177/0049124192021002005

Cameron, K. S., & Freeman, S. J. (1985). *Cultural Congruence, Strength, and Type: Relationships to Effectiveness*. Michigan: School of Business Administration, University of Michigan.

Campbell, J. P. (1977). On the nature of organizational effectiveness. *New Perspectives on Organizational Effectiveness*, *13*, 55.

Churchill Jr, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of Marketing Research*, *16*(1), 64-73. Doi: http://dx.doi.org/10.2307/3150876

Cooper, R. B., & Quinn, R. E. (1993). Implications of the competing values framework for management information systems. *Human Resource Management*, *32*(1), 175-201. Doi: http://dx.doi.org/10.1002/hrm.3930320109

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*(3), 297-334. Doi: http://dx.doi.org/10.1007/BF02310555

Eydi, H. (2013). Confirmatory factor analysis of the sport organizational effectiveness scale according to competing value framework. *Universal Journal of Management*, *1*(2), 83-92. Doi: http://dx.doi.org/10.13189/ujm.2013.010207

Eydi, H. (2015). Organizational effectiveness models: Review and apply in non-profit sporting organizations. *American Journal of Economics, Finance and Management*, *1*(5), 460-467.

Fedajev, A., Voza, D., Panić, M., & Veličković, M. (2022). Economic challenges of entrepreneurs in the Republic of Serbia operating in the most prospective economic activities. *Anali Ekonomskog fakulteta u Subotici*, (47), 49-64. Doi: https://doi.org/10.5937/AnEkSub2247049F

Fornell, C., & Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. *Journal of Marketing Research*, *19*(4), 440-452. Doi: http://dx.doi.org/10.2307/3151718

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2012). Partial least squares: the better approach to structural equation modeling? *Long Range Planning*, *45*(5-6), 312-319. Doi: http://dx.doi.org/10.1016/j.lrp.2012.09.011

Gulosino, C., Franceschini III, L., & Hardman, P. (2016). The influence of balance within the competing values framework and school academic success on teacher retention. *Journal of Organizational and Educational Leadership*, *2*(1), n1.

Hair Jr, J. F., Babin, B. J., & Krey, N. (2017). Covariance-based structural equation modeling in the journal of advertising: review and recommendations. *Journal of Advertising*, *46*(1), 163-177. Doi: http://dx.doi.org/10.1080/00913367.2017.1281777

Hall, R. H. (1980). Effectiveness theory and organizational effectiveness. *The journal of applied Behavioral science*, *16*(4), 536-545. Doi: http://dx.doi.org/10.1177/002188638001600408

Hannan, M. T., & Freeman, J. (1977). The population ecology of organizations. *American Journal of Sociology*, *82*(5), 929-964. Doi: http://dx.doi.org/10.1086/226424

Hooijberg, R., & Petrock, F. (1993). On cultural change: using the competing values framework to help leaders execute a transformational strategy. *Human resource management*, *32*(1), 29-50. Doi: http://dx.doi.org/10.1002/hrm.3930320103

Jöreskog, K. G. (1971). Statistical analysis of sets of congeneric tests. *Psychometrika*, *36*(2), 109-133. Doi: http://dx.doi.org/10.1007/BF02291393

Kalliath, T. J., Bluedorn, A. C., & Gillespie, D. F. (1999). A confirmatory factor analysis of the competing values instrument. *Educational and psychological measurement*, *59*(1), 143-158. Doi: https://doi.org/10.1177/0013164499591010

Kim, J. O., & Mueller, C. W. (1978). *Introduction to Factor Analysis: What it is and How to Do It* (No. 13). Sage. Doi: http://dx.doi.org/10.4135/9781412984652

Kline, R. B. (2023). *Principles and Practice of Structural Equation Modeling*. New York: Guilford Publications.

Martz, W. A. (2008). *Evaluating Organizational Effectiveness*. Kalamazoo: Western Michigan University.

McGraw, R. B. (1993). Union–management interface: using the competing values framework as a diagnostic tool to bring increased involvement at the plant level. *Human Resource Management*, *32*(1), 51-73. Doi: http://dx.doi.org/10.1002/hrm.3930320104

Miletić, V., Aničić, D., & Gračanac, A. (2023). Evaluation of human resources policy in national organizations with different governing organizational structures. *Ekonomika*, *69*(3), 33-42. Doi: https://doi.org/10.5937/ekonomika2303033M

Minvielle, E., Sicotte, C., Champagne, F., Contandriopoulos, A. P., Jeantet, M., Préaubert, N., ... & Richard, C. (2008). Hospital performance: competing or shared values? *Health Policy*, *87*(1), 8-19. Doi: https://doi.org/10.1016/j.healthpol.2007.09.017

Mirić, A. A., Aničić, Z., & Petrović, M. (2023). EFEKTI UMREŽAVANJA NA INOVATIVNOST SOCIJALNIH PREDUZEĆA. *Economic Horizons/Ekonomski Horizonti*, *25*(1). Doi: https://doi.org/10.5937/ekonhor2301071A

Momčilović, O., Vujičić, S., & Doljanica, D. (2022). Analysis and influence of the level of innovation & leadership on the level of organizational changes. *Journal of process management and new technologies*, *10*(3-4), 131-140. Doi: https://doi.org/10.5937/jouproman2301097b

Morais, L. F., & Graça, L. M. (2013). A glance at the competing values framework of Quinn and the Miles & Snow strategic models: case studies in health organizations. *Revista Portuguesa de Saúde Pública*, *31*(2), 129-144. Doi: http://dx.doi.org/10.1016/j.rpsp.2012.12.006

Muterera, J., Hemsworth, D., Baregheh, A., & Garcia-Rivera, B. R. (2012). The leader-follower dyad: exploring the link between public sector leadership, employee satisfaction and performance. *Journal of Knowledge & Human Resource Management*, *4*(9).

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric Theory* (3rd ed.). New York: McGraw-Hill.

Oghojafor, B. E. A., Muo, F. I., & Aduloju, S. A. (2012). Organizational effectiveness: Whom and what do we believe? *Advances in Management and Applied Economics*, *2*(4), 81.

Olivier, B. H. (2014). *The development and validation of an assessment framework for measuring the organizational effectiveness of a metropolitan municipality in South Africa* (Doctoral dissertation, University of South Africa).

O'Neill, D., De Vries, J., & Comiskey, C. M. (2021). Leadership and community healthcare reform: a study using the Competing Values Framework (CVF). *Leadership in Health Services*, *34*(4), 485-498. Doi: https://doi.org/10.1108/LHS-01-2021-0007

Quinn, R. E., & Rohrbaugh, J. (1981). A competing values approach to organizational effectiveness. *Public Productivity Review*, 122-140. Doi: https://doi.org/10.2307/3380029

Quinn, R. E., & Cameron, K. (1983). Organizational life cycles and shifting criteria of effectiveness: some preliminary evidence. *Management Science*, *29*(1), 33-51. Doi: http://dx.doi.org/10.1287/mnsc.29.1.33

Quinn, R. E., & Rohrbaugh, J. (1983). A spatial model of effectiveness criteria: towards a competing values approach to organizational analysis. *Management Science*, *29*(3), 363-377. Doi: https://doi.org/10.1287/mnsc.29.3.363

Quinn, R. E., & McGrath, M. R. (1985). The transformation of organizational cultures: a competing values perspective.

Quinn, R. E. (1988). *Beyond rational management: mastering the paradoxes and competing demands of high performance*. Jossey-Bass.

Quinn, R. E., & Spreitzer, G. M. (1991). *The psychometrics of the competing values culture instrument and an analysis of the impact of organizational culture on quality of life*. Emerald.

Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2009). Measuring organizational performance: towards methodological best practice. *Journal of management*, *35*(3), 718-804. Doi: https://doi.org/10.1177/0149206308330560

Ringle, C. M., Sarstedt, M., & Straub, D. W. (2012). Editor's comments: a critical look at the use of PLS-SEM in" MIS Quarterly". *MIS quarterly*, iii-xiv. Doi: http://dx.doi.org/10.2307/41410402

Ringle, C. M., Wende, S., & Becker, J. M. (2022). SmartPLS 4. Oststeinbek: SmartPLS. *Retrieved April*, *3*, 2023.

Rogers, P. S., & Hildebrandt, H. W. (1993). Competing values instruments for analyzing written and spoken management messages. *Human Resource Management*, *32*(1), 121-142. http://dx.doi.org/10.1002/hrm.3930320107

Shi, D., & Maydeu-Olivares, A. (2020). The effect of estimation methods on SEM fit indices. *Educational and psychological measurement*, *80*(3), 421-445. Doi: https://doi.org/10.1177%2F0013164419885164

Shortell, S. M., Morrison, E. M., & Friedman, B. (1990). *Strategic Choices for America's Hospitals: Managing Change in Turbulent Times*.

Steiger, J. H., & Lind, J. C. (1980). Statistically-based tests for the number of common factors: Paper presented at the Annual Spring Meeting of the Psychometric Society. *Iowa City*.

Taylor, F. W. (1911). *The principles of scientific management*. Harper & brothers.

Towne, H. R. (1986, August). The Engineer as an Economist. In *Academy of Management Proceedings* (Vol. 1986, No. 1, pp. 3-4). Briarcliff Manor, NY 10510: Academy of Management. Doi: http://dx.doi.org/10.5465/ambpp.1986.4976735

Tregunno, D., Ross Baker, G., Barnsley, J., & Murray, M. (2004). Competing values of emergency department performance: balancing multiple stakeholder perspectives. *Health services research*, *39*(4p1), 771-792. Doi: https://doi.org/ 10.1111/j.1475-6773.2004.00257

Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, *38*(1), 1-10. Doi: http://dx.doi.org/10.1007/BF02291170

Venkatraman, N., & Ramanujam, V. (1986). Measurement of business performance in strategy research: a comparison of approaches. *Academy of management review*, *11*(4), 801-814. Doi: https://doi.org/10.2307/258398

Whetten, D. A., & Cameron, K. S. (1994). Organizational effectiveness: old models and new constructs. (In): *Organizational Behavior: the State of the Science*. Hillsdale, NJ: Lawre Erlbaum.

Zammuto, R. F. (1984). A comparison of multiple constituency models of organizational effectiveness. *Academy of Management Review*, *9*(4), 606-616. Doi: http://dx.doi.org/10.2307/258484

Zammuto, R. F., & Krakower, J. Y. (1991). Quantitative and Qualitative Studies of Organizational Culture. *Greenwich, CT: JAI Press Inc*.

Zlatković, M. (2018). Organizational effectiveness in Bosnia and Herzegovina: A competing values approach. *Strategic Management*, *23*(4), 15-25. Doi: https://doi.org/10.5937/StraMan1804015Z

Zeb, A., Akbar, F., Hussain, K., Safi, A., Rabnawaz, M., & Zeb, F. (2021). The competing value framework model of organizational culture, innovation and performance. *Business process management journal*, *27*(2), 658-683. Doi: https://doi.org/10.1108/BPMJ-11-2019-0464