

MODELLING EMOTIONAL INTELLIGENCE DEVELOPMENT IN ENTREPRENEURS: STRATEGIC APPROACH

YULIIA FEDOROVA,^{1,2} ANNA PILKOVÁ,¹ JURAJ MIKUŠ,¹
MARIAN HOLIENKA,¹ JULIIA PIDLISNA³

¹ Comenius University Bratislava, Faculty of Management, Bratislava, Slovakia
yuliia.fedorova@fm.uniba.sk, anna.pilkova@fm.uniba.sk, juraj.mikus@fm.uniba.sk,
marian.holienka@fm.uniba.sk

² V. N. Karazin Kharkiv National University, Kharkiv, Ukraine
yuliia.fedorova@fm.uniba.sk

³ Universidad Europea, Faculty of Law, Education and Humanities, Madrid, Spain
eihuman2016@gmail.com

Emotional intelligence (EI) is a key competency for successful entrepreneurship. Interest in the development of EI in education is growing rapidly and requires strengthening the methodological base. A systematic literature review brought together the latest knowledge in different fields and revealed the opportunity for fundamental development of the EI of entrepreneurs. This study aims to provide a detailed description of the 4-component instrumental model of EI development for entrepreneurs (4EIE Model), based on combining the latest knowledge in psychology and entrepreneurship. The 4EIE Model consists of 4 main components (namely Self-Awareness, Self-Management, Social Awareness and Relationship Management), according to the latest version of D. Goleman's mixed model and supporting the development of 15 important entrepreneurial competencies, according to the EntreComp conceptual model. The 4EIE Model is convenient to use in a university environment.

DOI
[https://doi.org/
10.18690/um.epf.5.2025.73](https://doi.org/10.18690/um.epf.5.2025.73)

ISBN
978-961-286-984-7

Keywords:
emotional intelligence,
model,
entrepreneurial
competences,
entrepreneurship,
components of emotional
intelligence

JEL:
A20,
C83,
O35



University of Maribor Press

1 Introduction

The concept of emotional intelligence (EI) entered mainstream discourse following the publication of D. Goleman's seminal work (Goleman, 1995), in which EI was positioned as a pivotal construct in understanding human behaviour and interpersonal effectiveness. According to D. Goleman, EI is the ability to identify one's feelings and those of others, to motivate oneself, and to manage emotions in both one and others effectively (Goleman, 1995). The model of D. Goleman is called a mixed model (Cherniss & Goleman, 2001). It combines some approaches to EI: the ability-based model by Mayer and Salovey (Mayer et al., 2000) and *the trait-based* model by Petrides (Petrides & Furnham, 2001).

Over the past 30 years, interest in EI has increased and taken an interdisciplinary direction. In the Web of Science databases, the focus on EI has shifted from psychology to education (Figure 1).

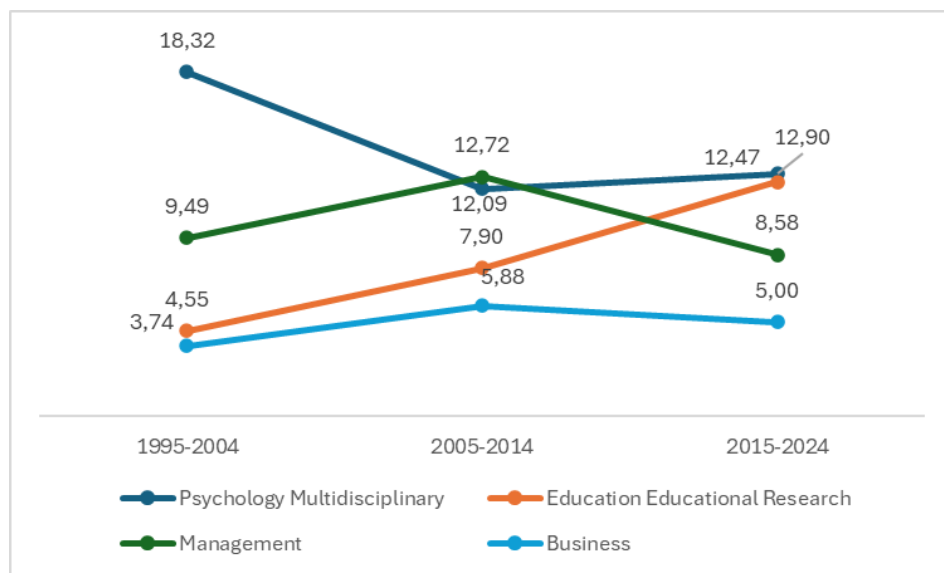


Figure 1: The scientific publications on the topic of EI in the last 30 years in WoS
Source: WoS, own elaboration

The categories of management and business retain the leading positions in terms of EI topics. The main challenge in these areas remains quantifying employee EI's impact on a company's financial performance. Despite the identification of a positive correlation between employee EI and customer loyalty (Bayighomog & Arasli, 2022), EI and leadership skills (Gardner & Stough, 2002), EI and saving time in achieving the desired results (Zhang & Hao, 2022), EI and building high-performing groups (Jin et al., 2012), EI and reduced turnover intention (Uzunbacak et al., 2022), it is still difficult to establish a direct quantitative impact of EI on company's financial performance. The main problem in quantifying the benefits of EI is the inability to separate EI from other types of human capital (Fedorova, 2020)

However, the annual increase in scientific research (Figure 2) enriches the understanding of the composition of EI, allowing knowledge to be pooled in interdisciplinary studies.

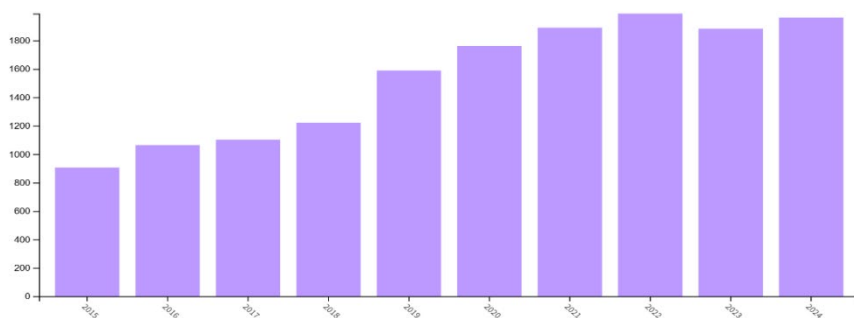


Figure 2: The scientific publications on the topic of EI in the last 10 years in WoS
Source: WoS

The positive impact of EI on success in entrepreneurship is shaping new challenges in the educational environment. The next logical step in training future entrepreneurs is to strengthen the methodological basis of entrepreneurs' EI development, which includes the latest research in psychology, management, and business. Some studies highlight the importance of self-awareness for entrepreneurial success (Crespí et al., 2022) and emphasise the roles of self-awareness, self-regulation, social awareness, and social skills in entrepreneurship

(Chien-Chi C, 2020). We have identified a gap in the methodology for teaching EI to entrepreneurs.

This paper aims to form a model for developing the entrepreneur's EI based on synthesising knowledge in psychology and entrepreneurship. This approach aligns with Sustainable Development Goals such as #3 quality education and #4 good health and well-being (United National, 2015). The development of future entrepreneurs' EI contributes to increasing the efficiency of higher education. It allows entrepreneurs to be prepared to build effective intergenerational collaborations with the older generations in the labour market (Perez-Encinas et al., 2021).

2 Theoretical Background

Emotions and entrepreneurial passion play a crucial role in successful entrepreneurship (Lu X et al., 2022). Understanding the composition of EI has been expressed through the evolution of models of EI development. The three fundamental models of EI development are the EI ability model by Mayer and Salovey, Bar-On's Emotional-Social Intelligence model and the emotional competencies model focused on the workplace by Goleman (Cherniss & Goleman, 2001).

The EI model of mental abilities by Mayer and Salovey (Mayer & Salovey, 1997; Brackett & Salovey, 2006) is regarded as the most foundational, as it is derived from the analysis of a substantial number of theoretical studies and substantiated by empirical evidence from both basic and applied fields. It consists of 4 key components: perceiving emotions, using emotions to facilitate thought, understanding emotions, and managing emotions. These branches encompass recognising emotions, leveraging emotions to enhance thinking, comprehending emotional dynamics, and regulating emotions in oneself and others.

Bar-On's Emotional-Social Intelligence model (Bar-On, 2005) is more complex than Mayer and Salovey's EI Model. It consists of 5 high-level factors with 15 subfactors: 1) Intrapersonal Skills refer to the ability to be aware and understand emotions, feelings, and ideas in the self (subfactors: Self Regard, Emotional Self Awareness, Assertiveness, Independence, Self-Actualization); 2) Interpersonal Skills refer to the

ability to be aware and understanding emotions, feelings, and ideas in the others (subfactors: Empathy, Social Responsibility, and Interpersonal Relationship; 3) Adaptability refers to the ability to be open to change our feelings depending on the situations, (subfactors: Reality-Testing, Flexibility, and Problem-Solving; 4) Stress Management refers to the ability to cope with stress and control own's emotions (subfactors: Stress Tolerance and Impulse Control), and lastly, 5) General Mood refers to the ability of feeling and expressing positive emotions, and being optimistic (subfactors: Optimism and Happiness) (Bar-On, 2005).

The emotional competencies model by Goleman, which focuses on the workplace, is the most appropriate as it focuses on applying EI in a business environment. Initially, this model (Goleman, 1995) contained 25 competencies divided into five components: motivation, self-management, empathy, self-awareness, and social skills (Goleman, 1995). This version is still most often cited in scientific studies of EI. However, Goleman's Model was later simplified, motivation was excluded (Wolff, 2005), and currently, Goleman's model contains four components (self-awareness, self-management, social awareness, and relationship management) with 18 competencies (Cherniss & Goleman, 2001).

Thus, in the evolution of scientific thought on EI in the field of practical application, a convenient and uncomplicated model of EI consists of 4 components: self-awareness, self-management, social awareness, and relationship management. Based on Goleman's model, the 4EI Model (Mikuš et al., 2022) was developed for the business environment, which also contains four components but 19 different competencies. Based on the above models and considering the entrepreneur's competencies, this paper proposes the 4-component instrumental model of entrepreneurial EI development (4EIE Model).

The key and emotionally coloured traits in the entrepreneurial decision-making process are passion and well-being (Davis et al., 2017; Dijkhuizen et al., 2018), optimism and other emotional characteristics (Hubner et al., 2020; Haddoud et al., 2022), and high emotional stability (Hachana et al., 2018). Research into emotions in entrepreneurship has experienced a steady annual increase (Lu X et al., 2022).

3 Methodology

This study is based on models closely aligned with the work environment, including the latest version of Goleman's model (Cherniss & Goleman, 2001) and the Entrepreneurship Competence Framework (EntreComp) developed by the European Commission (Bacigalupo et al., 2016). We systematically searched Web of Science databases using the keywords 'entrepreneurial competencies', 'self-awareness', 'self-management', 'social awareness' and 'relationship management'. We selected the most significant studies of EI in psychology and management, business, and entrepreneurship and identified correlations between important competencies of entrepreneurs and essential components of the 4-factor model of EI development. EntreComp outlines 15 core entrepreneurial competencies essential across European countries and serves as a foundation for entrepreneurship education.

4 Results

We define entrepreneurship as a process of seizing opportunities and ideas and converting them into value for others (Ffe-Ye, 2012). The core entrepreneurial skills encompass a range of attributes, including entrepreneurial passion, teamwork skills, collaborative attitude, trust-building, open-mindedness, long-term goal orientation, self-determination, conscientiousness, intergenerational reflection, resilience, empathy, responsibility, analytical thinking, willingness to learn, and cultural awareness (Lojda et al., 2021; Perez-Encinas et al., 2021), entrepreneurial passion and optimism (Lu X at el., 2022). However, we believe that the most important competencies of an entrepreneur are presented in the methodology of EntreComp, which is well-recognised in the countries of the European Union.

Figure 3 shows the 4-component instrumental model of entrepreneurial EI development (4EIE Model).

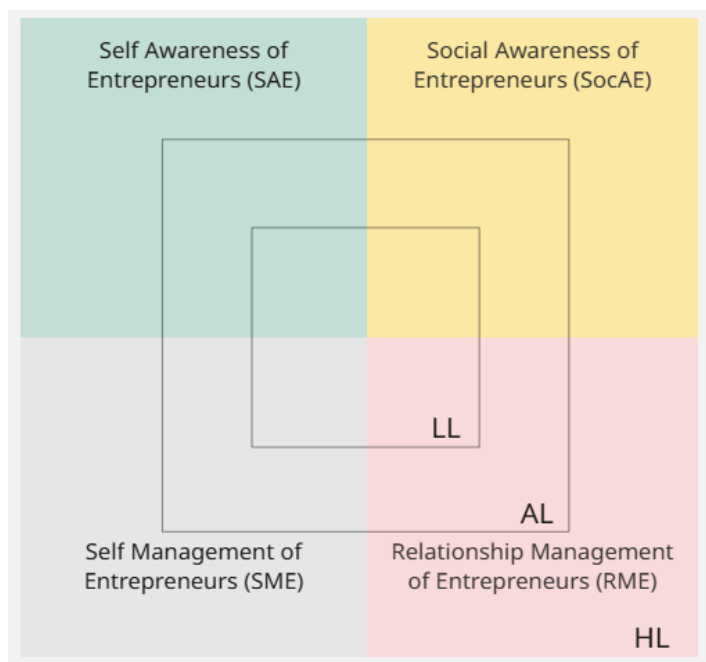


Figure 3: The 4EIE Model

Source: own elaboration

The 4EIE Model consists of the following components namely Self-Awareness of Entrepreneurs (SAE), Self-Management of Entrepreneurs (SME), Social Awareness of Entrepreneurs (SocAE), and Relationship Management of Entrepreneurs (RME). The model helps to build an entrepreneur's EI profile. The 4EIE Model uses the Stan scale from 0 to 10. For every component, the results from 0–3 is a low level (LL), more than 3 to 7 is an average level (AL), and more than 7 to 10 is a high level (HL). The 4EIE Model consists of quadrants equal to the component's value (0 to 10).

The respondent EI profile may look like this: $\{HL^{SAE}; HL^{SME}; HL^{SocAE}; AL^{RME}\}$.

Table 1 presents the components of the 4EIE Model and describes the entrepreneurial competencies they provide.

Table 1: The components of the 4EIE Model (source: own elaboration)

EI component	EI component in Entrepreneurship
Self-awareness (SA) emphasizes the significance of being aware of one's emotions and understanding their impact on personal performance (Cherniss & Goleman, 2001).	SAE is the ability to identify opportunities for creating value, generate new ideas, think strategically, analyse, plan and forecast based on understanding one's motives, behaviours, weaknesses and strengths <u>Entrepreneurial competencies</u> of EntreComp that EI develops: Spotting opportunities, Creativity, Vision, Valuing ideas, Ethical and sustainable thinking, Self-awareness and self-efficacy, Financial and economic literacy, Learning through experience, and Planning and management.
Self-management (SM) is the ability to regulate distressing effects like anxiety and anger and to inhibit emotional impulsivity. (Cherniss & Goleman, 2001)	SME is the ability to control one's behaviour to achieve one's goals, to adapt, to take responsibility, be motivated, use time and resources effectively under conditions of risk and uncertainty. <u>Entrepreneurial competencies</u> of EntreComp that EI develops: Self-awareness and self-efficacy, Mobilising resources, Motivation and perseverance, Taking the initiative, Planning and management, and Coping with uncertainty, ambiguity and risk.
Social awareness (SocA) enables individuals to understand their surroundings and recognize how their behavior affects, and is affected by, the feelings and emotions of other people (Cherniss & Goleman, 2001).	SocAE is the ability to understand and empathise with the emotions of colleagues, team members, investors, consumers, and stakeholders, accept differences of other cultures and generations, uphold corporate culture, and foster teamwork. <u>Entrepreneurial competencies</u> of EntreComp that EI develops: Spotting opportunities, Ethical and sustainable thinking, Working with others, and Mobilising others.
Relationship Management encompasses a range of competencies, including mentoring and developing others, exerting influence, effective communication, managing conflicts, leading teams, driving change, fostering connections, and promoting teamwork and collaboration (Cherniss & Goleman, 2001).	RME is the ability to build the effective communications and cooperation, healthily resolving conflicts, leadership, and the ability to inspire and manage a team and realise the potential of team members. <u>Entrepreneurial competencies</u> of EntreComp that EI develops: Coping with uncertainty, ambiguity and risk, Taking the initiative, Mobilising others, Working with others, and Learning through experience.

The 4EIE Model assumes a sequential development of components from SA to RM.

5 Discussion and Conclusion

The literature analysis has revealed the growing interest in EI in education and the lack of a methodological background for the development of EI in entrepreneurs. The synthesis of the latest knowledge in psychology and entrepreneurship made it

possible to propose the 4EIE Model for developing EI in entrepreneurship. The 4EIE Model is built on four core components—Self-Awareness of Entrepreneurs, Self-Management of Entrepreneurs, Social Awareness of Entrepreneurs, and Relationship Management of Entrepreneurs—based on the updated version of D. Goleman's mixed model and supports the development of 15 essential entrepreneurial competencies outlined in the EntreComp conceptual framework. The 4EIE Model is useful for developing entrepreneurs' EI in the educational environment. This work fills the gap in the methodological base in the development of entrepreneurs' EI. The study is interdisciplinary and corresponds to the trend of EI development in the educational environment. The next step is to create a questionnaire, based on which it will be possible to build individual and group EI profiles of entrepreneurs.

Acknowledgements

This work was funded by the EU NextGenerationEU through the Recovery and Resilience Plan for Slovakia under the project No. 09I03-03-V01-00055; and the Slovak Research and Development Agency under Grant APVV-19-0581.

References

- Bacigalupo, M., Kampylis, P., Punic, Y., Van den Brande, G. (2016). EntreComp: The Entrepreneurship Competence Framework. *Luxembourg: Publication Office of the European Union*; EUR 27939 EN doi:10.2791/593884.
- Bar-On, R. (2005). The Bar-On model of emotional-social intelligence. In P. Fernández-Berrocal and N. Extremera (Guest Editors), *Special Issue on Emotional Intelligence. Psicothema*, 17
- Bayighomog, S., & Arasli, H. (2022). Reviving employees' essence of hospitality through spiritual well-being, spiritual leadership, and emotional intelligence. *Tourism Management*, 89. <https://doi.org/10.1016/j.tourman.2021.104406>
- Bratton, V. K., Dodd, N. G., & Brown, F. W. (2011). The impact of emotional intelligence on the accuracy of self-awareness and leadership performance. *Leadership & Organization Development Journal*, 32(2), 127–149. <https://doi.org/10.1108/01437731111112971>
- Cherniss, C., & Goleman, D. (2001). The emotionally intelligent workplace: How to select for, measure, and improve emotional intelligence in individuals, groups, and organisations. *Jossey-Bass*.
- Chien-Chi C, Sun B, Yang H, Zheng M & Li B (2020). Emotional Competence, Entrepreneurial Self-Efficacy, and Entrepreneurial Intention: A Study Based on China College Students' Social Entrepreneurship Project. *Front. Psychol.* 11:547627. doi: 10.3389/fpsyg.2020.547627
- Crespí, P., Queiruga-Dios, M., & Queiruga-Dios, A. (2022). The Challenge of Developing Entrepreneurial Competence in the University Using the Project-Oriented Learning Methodology. *Frontiers in psychology*, 13, 966064. <https://doi.org/10.3389/fpsyg.2022.966064>
- Damasio H, Grabowski T, Frank R, Galaburda A, & Damasio A.(1994) The return of Phineas Gage: clues about the brain from the skull of a famous patient doi: 10.1126/science.8178168.

- Davis, B. C., Hmieleski, K. M., Webb, J. W., & Coombs, J. E. (2017). Funders' positive affective reactions to entrepreneurs' crowdfunding pitches: *The influence of perceived product creativity and entrepreneurial passion*. *J. Bus. Venturing* 32, 90–106. doi: 10.1016/j.jbusvent.2016.10.006
- Dijkhuizen, J., Gorgievski, M., van Veldhoven, M., & Schalk, R. (2018). Well-being, personal success and business performance among entrepreneurs: a two-wave study. *J. Happiness Stud.* 19, 2187–2204. doi: 10.1007/s10902-017-9914-6
- Fedorova, Y. (2020). Emotional capital of the manager as a source of income for the enterprise. *Scientific View: Economics and Management*, 2(68), 164–170. doi.org/10.32836/2521-666X/2020-68-29
- FFE-YE. (2012). Impact of Entrepreneurship Education in Denmark - 2011. In L. Vestergaard, K. Moberg & C. Jørgensen (Eds.). *Odense: The Danish Foundation for Entrepreneurship - Young Enterprise. United Nations. General assembly resolution A/RES/70/1. Transforming our world: The 2030 agenda for sustainable development. Seventieth United Nations General Assembly*, 25 September 2015, New York. <https://en.unesco.org/sustainabledevelopmentgoals>.
- Gardner, L., & Stough, C. (2002). Examining the relationship between leadership and emotional intelligence in senior level managers. *Leadership & Development Journal*, 23, 68–79. <https://doi.org/10.1108/01437730210419198>
- Goleman, D. (1995). Emotional intelligence. Bantam Books.
- Goleman, D. (2000). Leadership that gets results. *Harvard Business Review*, 78, 78–90.
- Hachana, R., Berraies, S., & Fütü, Z. (2018). Identifying personality traits associated with entrepreneurial success: Does gender matter? *J. Innov. Econ. Manage.* 27, 169–193. doi: 10.3917/jie.027.0169
- Haddoud, M. Y., Onjewu, A. K. E., Nowinski, W., & Alammari, K. (2022). Assessing the role of entrepreneurship education in regulating emotions and fostering implementation intention: evidence from *Nigerian universities*. *Stud. High. Educ.* 47, 450–468. doi: 10.1080/03075079.2020.1758652
- Haricharan, S.J. (2022). Is the leadership performance of public service executive managers related to their emotional intelligence? *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 20(0), 1773, <https://doi.org/10.4102/sajhrm.v20i0.1773>
- Hubner, S., Baum, M., & Frese, M. (2020). Contagion of entrepreneurial passion: Effects on employee outcomes. *Entrepr. Theory Pract.* 44, 1112–1140. doi: 10.1177/1042258719883995
- Jin, Z., Lukachin, C., Gopalan, A., & Sun, W. (2012). Correlation between SCIAMACHY, MODIS, and CERES reflectance measurements: Implications for CLARREO. *Journal of Geophysical Research*, 117(D5), Article D05114. <https://doi.org/10.1029/2011JD017051>
- Lojda, J., Němec, O., Nývlt, V., & Ližbetinová, L. (2021). *Mezigenerační sdílení kompetencí* (1 ed.). České Budějovice.
- Lu X, Xiong Y, Lv X & Shan B (2022). Emotion in the Area of Entrepreneurship: An Analysis of Research Hotspots. *Front. Psychol.* 13:922148. doi: 10.3389/fpsyg.2022.922148
- Mayer, J. D., Caruso, D. R., & Salovey, P. (2000). Models of emotional intelligence. In R. Sternberg (Ed.), *Handbook of intelligence* (pp. 396–420). Cambridge University Press.
- Mayer, J. D., Caruso, D. R., & Salovey, P. (2016). The Ability Model of Emotional Intelligence: Principles and Updates. *Emotion Review*, 8(4), 290–300. <https://doi.org/10.1177/1754073916639667>
- Mikuš, J., Pilková, A., Fedorova, Y., & Btytan, Y. (2022). Model for the emotional intelligence's development in entrepreneurship. In *The Poprad Economic and Management Forum 2022* (pp. 402–409). VERBUM. <https://www.pemf-conference.com/publishing/>
- Perez-Encinas, A., Bueno, Y., Santos, B., & Nieto-Mejía, C. (2021). Are there differences and complementarities between senior and young entrepreneurs? An intergenerational perspective. *Sustain- ability*, 13(9), Article 5202. <https://doi.org/10.3390/su13095202>
- Petrides, K. V., & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality*, 15(6), 425–448

- Pruzan, P. (2001). The Question of Organisational Consciousness: Can Organisations Have Values, Virtues and Visions? *Journal of Business Ethics*, 29(3), 271–284.
<https://doi.org/10.1023/A:1026577604845>
- Spencer, L.M. & Spencer, S.M. (1993). *Competence at Work: Models for Superior Performance*. John Wiley & Sons, New York.
- United Nations. (2015). *General assembly resolution A/RES/70/1. Transforming our world: The 2030 agenda for sustainable development*. Seventieth United Nations General Assembly, 25 September 2015, New York. <https://en.unesco.org/sustainabledevelopmentgoals>
- Uzunbacak, H. H., Erhan, T., & Akcakanat, T. (2022). Emotionally intelligent employees' work outcomes: The mediating role of organisational commitment. *Etikonomi*, 21(1), 11–40.
<https://doi.org/10.15408/etk.v21i1.20541>
- Zhang Qi & Shengyue Hao (2022). Construction Project Manager's Emotional Intelligence and Team Effectiveness: *The Mediating Role of Team Cohesion and the Moderating Effect of Time*. Doi: [org/10.3389/fpsyg.2022.845791](https://doi.org/10.3389/fpsyg.2022.845791)

