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Emotional and cultural intelligences: a comparative analysis between the United States of America and Romania

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Abstract. *Cultural intelligence (CQ) and emotional intelligence (EQ) represent key competencies of multicultural leadership in the new normal global business environment. This paper aims to present a comparative quantitative study concerning emotional and cultural intelligences in USA and Romania, backed by a brief geo-linked bibliometric literature review. The bibliometric analysis is performed with VOSviewer for the works focusing on these two variables published in USA and, respectively, in Romania. Inspired by the findings of this comparative analysis, it is performed a quantitative research based on 604 questionnaires distributed to managers in USA and in Romania, and on statistical processing using SPSS software. The statistical results show that both CQ and EQ constitute significant vectors in developing multicultural leadership and organizational performance in a multicultural business environment for both USA and Romania. The comparative study reveals a higher level of CQ and EQ in the Romanian business environment than in USA. The difference could be explained by the focus on rationality and profit maximization in the American business education. The contribution of the paper comes from these findings and they can help researchers and practitioners to stimulate their efforts in improving CQ and EQ competences.*

Keywords: emotional intelligence, cultural intelligence, multicultural leadership, global management, knowledge dynamics, comparative study.

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Introduction

Our current era is characterized by extensive and fast paced worldwide upheaval, encompassing both technological and sociological transformation. Social media and artificial intelligence are causing significant changes in how people think, work, and relate, while our heightened connectedness with individuals from around the world is exposing us on day to day basis to diverse perspectives and people that we could not have envisioned a decade ago (Dima, 2018; Livermore, 2022).

On one side, the boundaries between work and life are becoming increasingly blurred and no matter how hard we try, our emotions cannot be left at the work office door, nor on the desktop from remote work from home - they come with us wherever we go. On

the other side, the geographical boundaries are washed away by increased migration and remote labor phenomenon (Bratianu & Paiuc, 2023), and managing culturally diverse teams is testing the cultural intelligence vector of leadership on an everyday basis (Bratianu et al., 2021). Our perspective is also backed by the fact that, among the top 10 skills required to flourish in the Fourth Industrial Revolution, *emotional intelligence* has been highly advocated by the World Economic Forum (Engelbrecht-Aldworth, 2021).

In this post-COVID context, leaders who demonstrate care and consideration for the experiences of those around them, who appreciate, integrate and build on cultural diversity while also performing up to standards and managing their responsibilities, have become increasingly valued in today's society (EURES, 2021; Paiuc, 2021a). Due to the gap in the literature concerning the relationship between emotional intelligence and cultural intelligence, we formulate the following research questions for the present analysis:

RQ1: Can emotional intelligence be considered as a predictor for cultural intelligence in USA and Romania?

RQ2: Are emotional intelligence and cultural intelligence the main vectors of multicultural leadership in the USA and Romania?

RQ3: How can the interests for emotional intelligence and cultural intelligence be compared in the USA and Romania?

The analysis comprises two parts: the first part is a qualitative investigation performed with VOSviewer, version 1.6.19 (Van Eck & Waltman, 2021); the second part is based on an investigation of 604 questionnaires collected from the USA and Romania and statistically processed with SPSS.

Regarding the article's structure, after the introduction, there is a specific literature review concerning the main concepts: EQ and CQ. The paper will present next the data sources and applied methodologies, and it will conclude with findings and their interpretation. The last section is summarizing our conclusions and show some limitations and possible future-related research on this topic.

Literature review

Emotional intelligence

Emotional intelligence refers to the capacity to understand and handle one's own emotions, as well as perceiving and having an effect on the emotions of others (Salovey & Mayer, 1990). Based on that, Goleman defines *emotional competence* as a learned capability based on emotional intelligence that result in outstanding performance at work (Goleman, 1998). On a more recent note, EQ is portrayed as the ability to effectively understand, use and manage on one's own emotions, to reduce distress, connect in a meaningful way with others, be empathetic and overcome upcoming or unfamiliar difficulties (Goleman, 1998; Ordiñana-Bellver et al., 2022; Sparrow & Knight, 2006).

Salovey and Mayer (1990) propose a four-dimensional model of emotional intelligence that consist of the following components: recognizing and understanding emotions (emotional perception and identification), using emotions to facilitate thinking (emotional facilitation of thoughts), comprehending emotions (emotional understanding), and managing emotions for oneself and others (emotional management). Goleman (1998) posits that emotional intelligence can be broken down into five different dimensions,

including self-awareness, self-regulation, motivation, empathy, and relationship management. For each of these components he proposes evaluation scales.

Building on it, Bar-On (1997) proposes an *emotional quotient inventory (EQ-i)* assessment that provides a score on overall emotional intelligence as well as five composite scales and their corresponding 15 subsets. These include intrapersonal EQ (self-regard, emotional self-awareness, assertiveness, independence, and self-actualization), interpersonal EQ (social responsibility and interpersonal relationships), stress management EQ (stress tolerance and impulse control), adaptability EQ (reality testing, flexibility, and problem-solving), and general mood EQ (optimism and happiness).

Previous researches suggest that emotional intelligence is directly linked to successful leadership (Goleman, 1995) and accounts for approximately 85 % to 90 % of first-rate performance in higher management roles, resulting in more significant overall financial gains for the company.

From another perspective, 18-25-year-olds experience the highest prevalence of severe mental illness compared to other age groups; consequently, many companies face difficulties in rapidly adapting as more employees with these diagnoses join the workforce (Weber, 2020). In this context, Gen Z, as the loneliest generation in the workplace, with 73 % feelings as being alone expects their managers to be knowledgeable (34 %) and empathic with those they lead (26 %). Millennials prioritize being prepared (24 %) and quick at problem-solving (23 %), while Generation X and Boomers value honesty (41 %), and open communication (41 %) (Centre for Generational Kinetics, 2020). In this context, *emotional intelligence* has been linked to improving health outcomes, relationships, team productivity and job performance.

Translating these above features into a financial framework, in a society where 90 % of top performers are also those with a high in emotional intelligence, individuals who possess a significant level of EQ tend to earn an additional $ 29,000 on an annual basis compared to those who have a low level of emotional intelligence (Bradberry, 2020). Doe (2015) builds on this and concludes that emotional intelligence is increasingly seen as the difference between success and failure for leaders and implicit for leadership due to how emotions often shape decisions made during challenging or highly-complex circumstances and contribute to the organizational intellectual capital (Bratianu, 2007; Bratianu & Paiuc, 2022; Hill, 2008; Kahneman, 2011).

Cultural intelligence

Although cultural intelligence or "cultural quotient" (CQ) was shared and introduced to the business communities only in 2000, its foundations lie in interpersonal intelligence (Gardner, 1983). In 2003, Professors Christopher Earley and Soon Ang published their Stanford University Press book on cultural intelligence, which quickly gained global acceptance, leading to the first Symposium on Cultural Intelligence held at the Academy of Management four years later (de Mello e Souza & Tomei, 2021). *Cultural intelligence* refers to the capacity to communicate, work effectively and prosper across cultural differences and within culturally diverse situations. It is more about empathizing and actively working to understand the customs and norms of cultures outside of your own (Earley & Mosakowski, 2004).

Earley and Ang (2003) present four interconnected perspectives on how one can conceptualize CQ: metacognitive, cognitive, motivational, and behavioral, while Ang, Van

Dyne and Tan (2011) constructed an initial nomological network that outlines the predictors and outcomes of the four central CQ capabilities, namely: motivational CQ (CQ Drive), cognitive CQ (CQ Knowledge), meta-cognitive CQ (CQ Strategy), and behavioral CQ (CQ Action). CQ Drive denotes an individual's level of interest, confidence, and persistence in operating in culturally diverse surroundings, whereas cognitive CQ refers to a person's comprehension of cultural similarities and differences. Meta-cognitive CQ pertains to how well an individual plan for, remains aware of during and assesses multicultural interactions. Finally, behavioral CQ comprises how much an individual exercises flexibility and uses an extensive range of behaviors and skills during multicultural encounters.

Unlike emotional intelligence, which refers to an individual's ability to manage their own emotions, CQ is not specific to any culture and focuses on a wide range of capabilities and skills that are relevant to situations involving cultural diversity and learning organizations (Ang et al., 2011; Bratianu et al., 2020; Crowne, 2013). Cultural intelligence and emotional intelligence share one critical component, that of having their decision driven by knowledge dynamics. Individuals with a high level of cultural intelligence can return to their routine in a matter of hours or days after being plunged into an unfamiliar environment, while it may take those with low CQ levels several weeks or even months to readjust (Earley & Mosakowski, 2004).

Data sources and methodology

Bibliometric analysis

The data was retrieved on March 29, 2021, from the Scopus database, the world's largest abstract and citation database of peer-reviewed research literature, as reflected in Table1. The retrieval type was thru an advanced search function, while the retrieval interval was the standard one from the early launching days of the platform till the end of March 2023. The default values provided by Scopus were utilized on all the rest of the retrieval settings.

Table 1. Main concepts searched results on Scopus

	Returned results	
Searched expressions in Scopus	**USA**	**ROMANIA**
"cultural intelligence"	2628	46
"emotional intelligence"	20449 *	499
"cultural intelligence AND "emotional intelligence"	445	9

Source: Authors' own results.

The records from Scopus containing rich information (citation information, bibliographical information, abstract and keywords and other information) were exported under CSV files. While for CQ and CQ + EQ, we have not used additional filtering matrixes, for EQ, we have limited the number of records to 10573 (*) by selecting only the social studies, business, management and accounting, and economics, econometrics and finance-related writings. The bibliometric software VOSviewer version 1.6.19 (Visualization of Similarities) (Van Eck & Waltman, 2021) was used to study and map the co-occurrence of keywords; from the above-mentioned CSV files – using a full counting method.

Comparative quantitative analysis

For establishing the sample size in the USA, we used the standard procedure. Using a confidence level of 90 %, a basic margin of error of 5 % and a standard population proportion of 50 % the recommended sample size was 273. We have chosen to scale up the sample size in the United States to 302 in order to reduce the margin of error under 5 %, landing to a 4.75 %. For Romania, using a confidence level of 90 %, a basic margin of error of 5 % and a standard population proportion of 50 % the recommended sample size was 272. We have chosen to scale up the sample size in Romania to the same number of 302 in order to reduce the margin of error under 5 %, landing to a 4.74 %. A probabilistic approach was used for best initial sampling sizing. An online questionnaire-based survey was used for data collection among multicultural managers gathering a number of 302 answers from the USA and 302 from Romania. The data collection period was October 2022 - February 2023.

Our study reached out to potential participants for the questionnaire through targeted online social media and personal connections such as LinkedIn, Facebook, and email. We have provided information about the study's purpose, obtained the participants' consent, and assured them of the confidentiality of their responses. The valid response rate was for the USA: 84 % (302 valid and recorded answers from 368). All considered without any missing data. For Romania, the answer rate was 86 % (302 valid answers recorded from 351). All considered without any missing data. We selected these two countries because of the experience of present paper's authors with their business systems. Also, research in EQ and CQ domains started and developed almost exponentially in the USA, which is a reasonable argument to consider it as a reference system. In order to have a comparable data base, we stopped the survey answering when reaching the number of 302 valid responses (with an approximate correct response rate of 85 %) in both countries in order to stay within our assumed margin of error and confidence level (as described above) and also to base our analytics on same sampling. All considered without any missing data.

For CQ, the 20-item scale of Ang, Van Dyne and Koh (2006) was used for this purpose. In this regard, the questionnaire CQ-related part is composed of four subscales: Cognitive (6 items), Meta-cognitive (4 items), Behavioral (5 items) and Motivational (5 items). Responses were assessed on a scale of 1 to 7, ranging from *strongly disagree* to *strongly agree*.

Wong and Law's Emotional Intelligence Scale (WLEIS) was utilized to capture EQ via its16 items structured into four subscales: Self-Emotional Appraisal (SEA) with four items, Others' Emotional Appraisal (OEA) with four items, Use of Emotion (UOE) (4 items) and Regulation of Emotion (ROE) also with four items. The response sheet also involves a 7-point Likert scale ranging from strongly disagree to agree strongly.

A demographic information questionnaire was also used to obtain information about participants' main descriptives (Table2).

Table 2. Frequency distribution of the leaders' demography characteristics

Characteristics	Frequency	Percentage (%)
Country		
Romania	302	50
USA	302	50
Total	**604**	**100**
Gender		
Female	289	47.8
Male	315	52.2
Total	**604**	**100**
Age		
18-25	16	2.6
26-40	234	38.7
41-60	323	53.5
61 and above	31	5.1
Total	**604**	**100**
Education		
High school only	17	2.8
University graduate	349	57.8
Master graduate	197	32.6
PhD graduate	41	6.8
Total	**604**	**100**

Source: Authors' own results.

Potential questionnaire respondents were contacted and engaged via online social media and personal networks. They were contacted through social networks like LinkedIn, Facebook, or e-mail. The participants were informed about the purpose of the study, and their consent to participate in the study was appropriately taken. They were assured of the confidentiality of the data and were thanked for their participation.

To enter collected data into SPSS, codes were given to each response. Before running data analysis processes, cleaning and screening of data were done to avoid misleading results. To make the dataset free from errors, missing values and out-of-range values were identified by running frequency analysis for each variable and statement. Extracted missing and out-of-range values were replaced by means of their nearest cases. Statistical analysis was performed by using SPSS, version 25.0. Data were analysed by descriptive statistics for computing the frequency, percentage, mean, standard deviation, and pie charts of demographic variables. Bivariate correlation was used to find out the correlation between all variables.

Two tests, the Kolmogorov-Smirnov and Shapiro-Wilk tests, were utilized to assess normality. For instance, considering the "Metacognitive-CQ" variable, the Kolmogorov-Smirnov test yielded a statistic of 0.144, with 604 degrees of freedom and a significance level of 0.000. Similarly, the Shapiro-Wilk test produced a statistic of 0.918, with 604 degrees of freedom and a significance level of 0.000 for the same variable. We also assess reliability to ensure the consistency and stability of the measurement tools or scales employed in research (see Table 3). The table provides information on the reliability of two scales: Cultural Intelligence and Emotional Intelligence. The reliability statistics are

measured using Cronbach's alpha, which is a commonly used measure of internal consistency.

Table 3. Reliability Statistics

Scales	Cronbach's Alpha	N of Items
Cultural Intelligence	.567	20
Emotional Intelligence	.049	16

Source: Authors' own results.

An independent sample t-test was utilized to determine the difference in cultural and emotional intelligence among the leaders of the USA and Romania. Additionally, linear regression was analysed in order to check the impact of an independent variable (EQ) on the dependent variable (CQ).

Results and discussion

Bibliometric analysis results

We have driven our VOSviewer analysis by firstly identifying how many papers containing CQ, EQ and CQ+EQ related topics were published in the USA on one side and in Romania on the other side (Scopus based) – with a focus on the keyword's interconnections.

Figure 1 shows the general bibliometric map of EQ in the USA (*).while Figure 2, shows a zooming area of the same map (*) in order to enhance the direct visual of the main connection EQ – Leadership and the secondary one EQ – CQ.

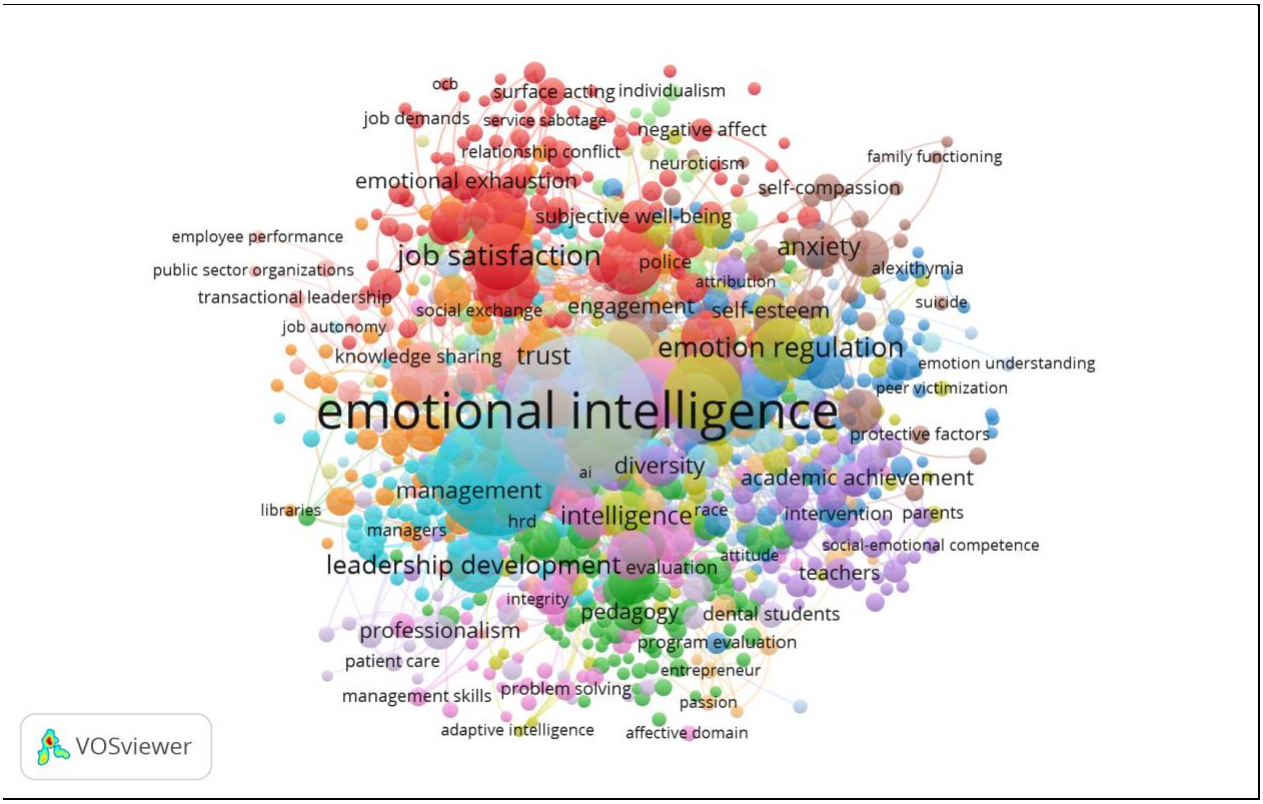


Figure 1. EQ map in the USA (for 10573 results from Scopus)

Source: Authors' own results.

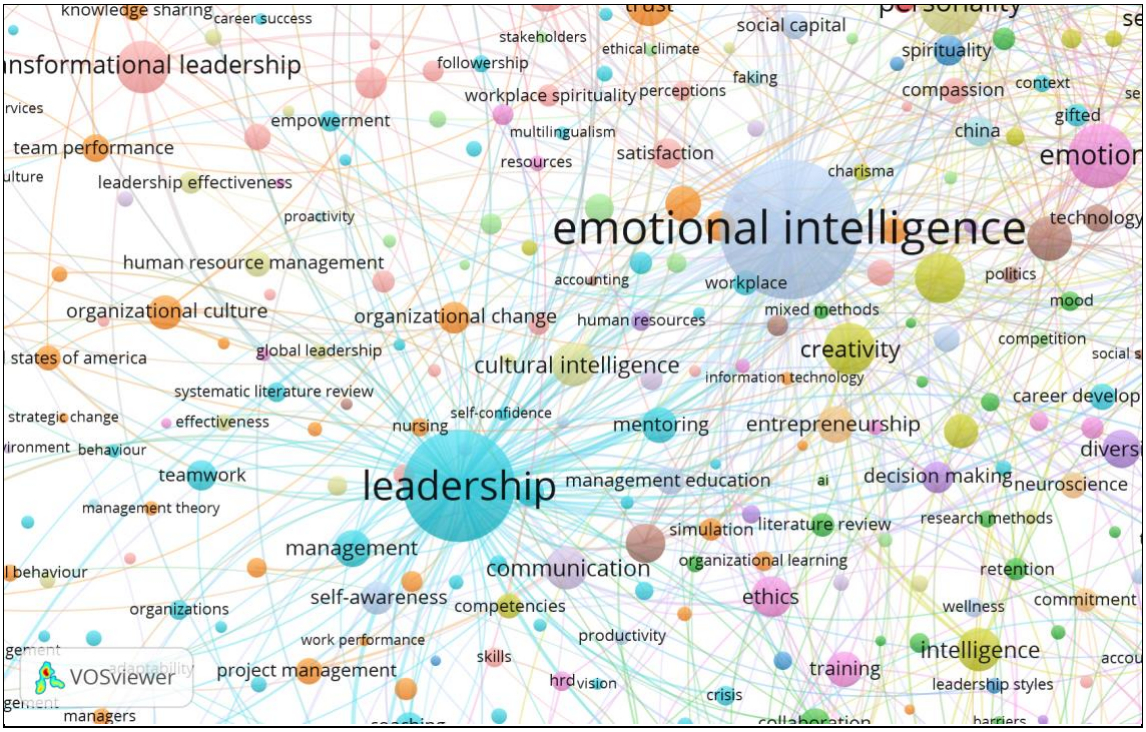


Figure 2. EQ map in the USA: focused plan (for 10573 results from Scopus)

Source: Authors' own results.

The same analysis was targeted in Figure 3 for EQ in Romania, also underlining the direct link: EQ-Leadership:

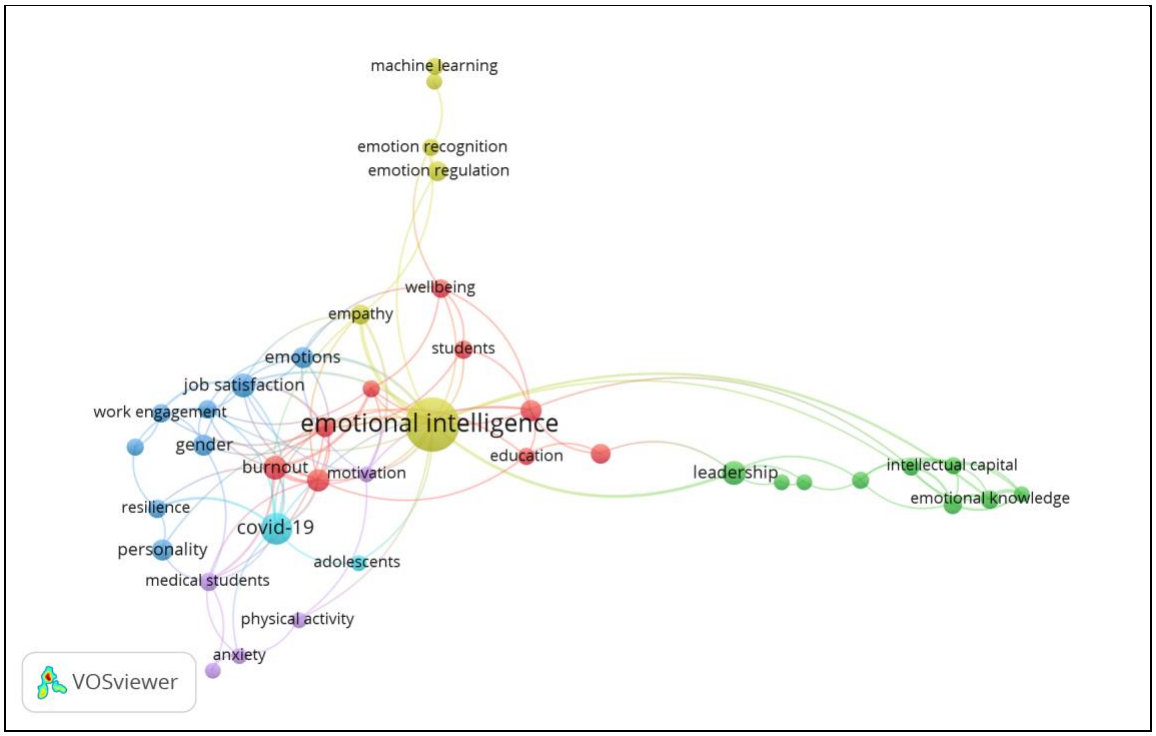


Figure 3. EQ map in Romania (for 499 results from Scopus)

Source: Authors' own results.

Backed by Figures 1, 2 and 3 and the bellow bibliometric analysis, synthesized in Table 3, we can conclude that EQ is an important component of *leadership* and *management* in both countries - with a total link strength in the USA of 3044 – 16.2 % share of total link strength of 19079; and a total link strength in Romania of 12 – equivalent with an 8 % share of total link strength of 143. The above idea is also backed by the EQ's direct link with "performance" (4 % share in total link strength in the USA and 2 % in Romania), a predictor of efficient multicultural leadership (Gabel-Shemueli et al., 2005).

The direct connection EQ-CQ is also underlined by the 5 % CQ share within total link strength of EQ in the USA and 2 % in Romania.

Table 4. Total link strength of main EQ connections in the USA and Romania – as per VOSviewer analysis

USA	Second item/s (minimum number of occurrences of keywords: 5)			
First Item	**Names**	**Category**	**Total link strength**	**Share in total link strength of 19079 (%)**
EQ	30 items related to and containing "leadership"	Leadership	2046	11
	29 items related to and containing "management"	Management	998	5.2
	16 items related to and containing "performance"	Performance	719	4
	Cultural intelligence	CQ	124	1
	19 items related to and containing "culture"		803	4

ROM	Second item/s (minimum number of occurrences of keywords: 5)			
First Item	**Names**	**Category**	**Total link strength**	**Share in total link strength of 143 (%)**
EQ	Leadership	Leadership	7	5
	1 item related to and containing "management"	Management	5	3
	Performance	Performance	3	2
	1 item related to and containing "culture"	CQ	3	2

Source: Authors' own results.

In Figure 4, we expose the general bibliometric map of CQ in the USA, and in Figure 5, we present the same above research based this time on Romanian items.

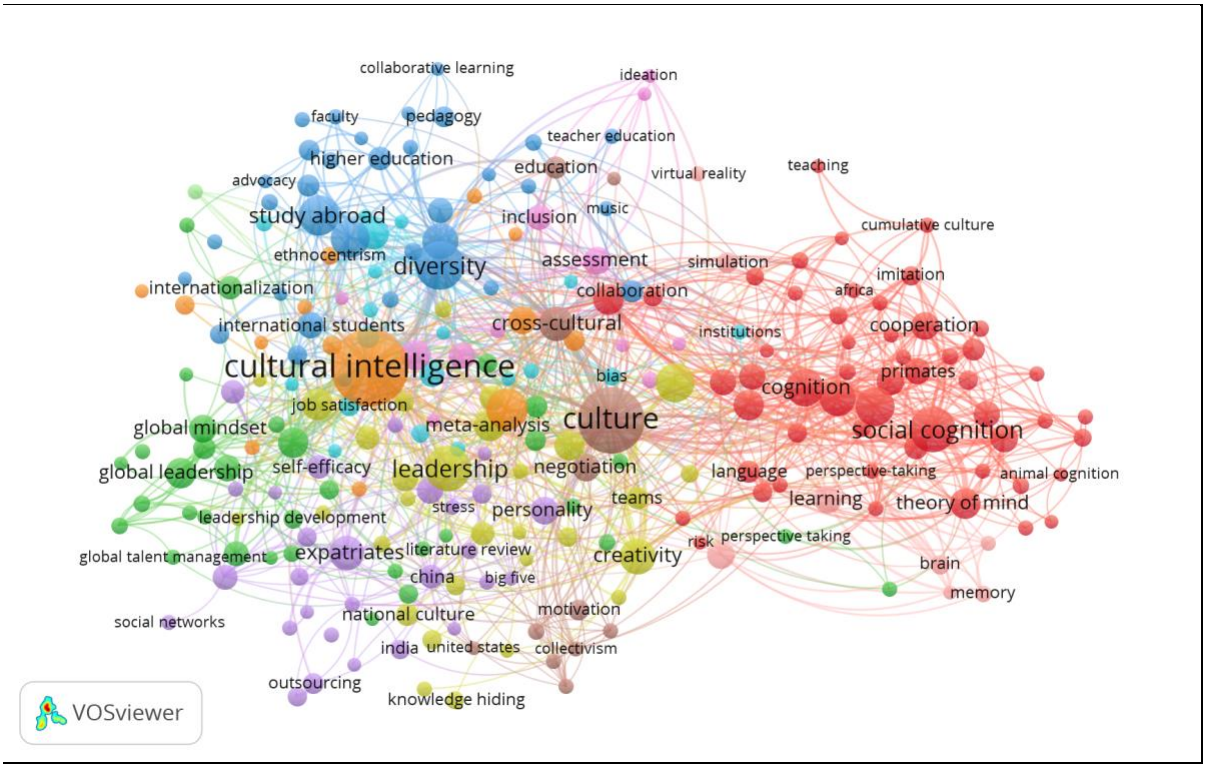


Figure 4. CQ map in USA (for 2628 results from Scopus)

Source: Authors' own results.

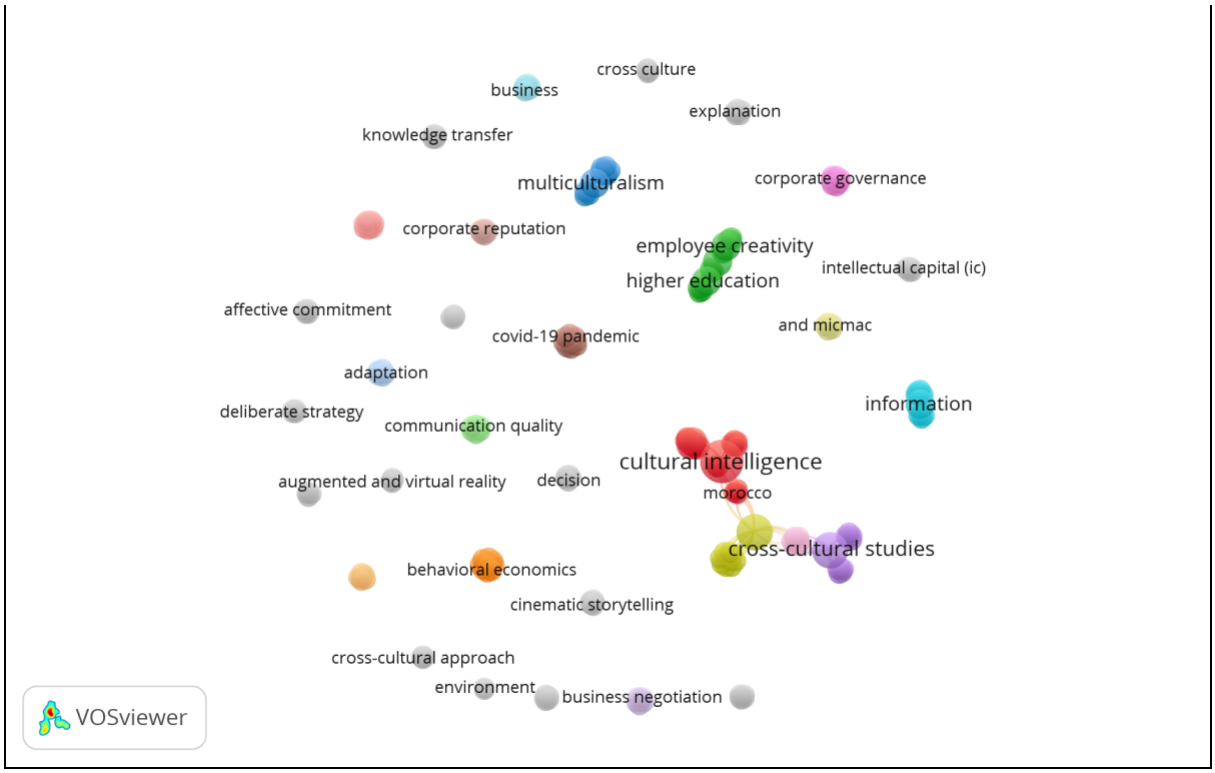


Figure 5. CQ map in Romania (for 46 results from Scopus) – minimum number of occurrences of keywords: 1

Source: Authors' own results.

Backed by the research presented in Table 5, we can summarize that CQ is also a main driver for *leadership* and *management* in both countries -with a total link strength in the USA of 370 – 12 % share of total link strength of 2823; and a total link strength in Romania of 57 – equivalent with a 9 % share of total link strength of 631. As in the EQ-driven analysis, *performance* is a significant link to CQ (2 % share in total link strength in the USA and 1 % in Romania). CQ has also built a link with EQ (EQ being linked to a 7 % share in total link CQ strength in the USA and 0.1 % in Romania).

Table 5. Total link strength of main CQ connections in the USA and Romania – as per VOSviewer analysis

USA	Second item/s (minimum number of occurrences of keywords: 5)			
First Item	**Names**	**Category**	**Total link strength**	**Share in total link strength of 2823 (%)**
CQ	8 items related to and containing "leadership"	Leadership	234	8
	7 items related to and containing "management"	Management	136	5
	5 items related to and containing "performance"	Performance	67	2
	Emotional intelligence	EQ	75	3
	4 items related to and containing "emotion/s" and "empathy"		119	4

ROM	Second item/s (minimum number of occurrences of keywords: 1)			
First Item	**Names**	**Category**	**Total link strength**	**Share in total link strength of 631 (%)**
CQ	4 items related to and containing "leader/ leadership"	Leadership	19	3
	8 items related to and containing "management"	Management	38	6
	Performance	Performance	7	1
	4 items related to and containing "emotion/s" and "empathy"	EQ	3	0.1

Source: Authors' own results.

At this stage, we have tacked our first research hypothesis, and we can state that *emotional intelligence* is linked to *cultural intelligence* in the USA and Romania and have confirmed our second hypothesis that *emotional intelligence* and *cultural intelligence* are main vectors of multicultural leadership and management in the USA and Romania.

Quantitative study results

The Pearson correlation test was applied to identify the correlation between the studied scales, where the correlation was significant at one level ($p = 0.000$, $p < 0.01$). According to the results shown in Table 6, all scales and subscales of cultural and emotional intelligence had a positive relationship. Additionally, positive relations mean that high emotional intelligence is associated with higher cultural intelligence. All of the relationships were

significant because p-values were lower than 0.01. Hence, our first hypothesis is backed, meaning that cultural and emotional intelligence are highly correlated.

Table 6. Relationship between the scales and subscales of cultural intelligence and emotional intelligence

	Met-CQ	**Cog-CQ**	**Mot-CQ**	**Beh-CQ**	**SEA**	**OEA**	**UOE**	**ROE**	**CQ**	**EQ**
Metacognitive-CQ (Met-CQ)	1									
Cognitive-CQ (Cog-CQ)	.028	1								
Motivational-CQ (Mot-CQ)	.248**	.207**	1							
Behavioural-CQ (Beh-CQ)	.281**	.269**	.337**	1						
Self-Emotional Appraisal (SEA)	.224**	.239**	.332**	.356**	1					
Other's Emotional Appraisal (OEA)	.178**	.153**	.349**	.301**	.206**	1				
Use of Emotions (UOE)	.243**	.169**	.353**	.370**	.324**	.268**	1			
Regulation of Emotions (ROE)	.151**	.255**	.314**	.364**	.299**	.307**	.326**	1	.	
Cultural Intelligence (CQ)	.439**	.791**	.614**	.639**	.419**	.342**	.390**	.407**	1	
Emotional Intelligence (EQ)	.287**	.297**	.491**	.508**	.630**	.658**	.705**	.733**	.568**	1

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Authors' own results.

The Pearson correlation test was applied now on both scales in the USA and Romania. Correspondingly, the correlation was significant at two levels ($p < 0.05$ and 0.01). Similarly, positive relations mean that high emotional intelligence is associated with higher cultural intelligence. Meanwhile, negative relation means higher emotional intelligence is associated with lower cultural intelligence. According to the results shown in Table 6, most scales plus subscales of cultural intelligence and emotional intelligence had a positive relationship with each other in both countries. Although, most of the relationships were significant because p-values were lower than 0.01 and 0.05. At the same time, *Cognitive cultural intelligence* had a negative insignificant ($p > 0.05$) relation with *Metacognitive-CQ* ($r = -.022$) in the USA. On the other hand, these traits were positively but insignificantly ($r = .049$, $P > 0.05$) related to each other in Romania. Similarly, *Others' Emotional Appraisal (OEA)* ($r = .060$) and *Use of Emotions (UOE)* ($r = .061$) were positively but again insignificantly ($p > 0.05$) related to *cognitive CQ* in the USA. Furthermore, *Others' Emotional Appraisal* was insignificantly ($p > 0.05$) but positively related to *metacognitive-CQ* ($r = .078$) in Romania. Hereafter, it was clear that emotional and cultural intelligence are highly and positively correlated in Romania compared to the USA.

Table 7. Relationship between the scales and subscales of cultural intelligence and emotional intelligence in the USA and Romania

Group		**Met-CQ**	**Cog-CQ**	**Mot-CQ**	**Beh-CQ**	**SEA**	**OEA**	**UOE**	**ROE**	**CQ**	**EQ**
USA	Metacognitive-CQ (Met-CQ)	1									
	Cognitive-CQ (Cog-CQ)	-.022	1								
	Motivational-CQ (Mot-CQ)	.235**	.135*	1							
	Behavioral-CQ (Beh-CQ)	.334**	.243**	.313**	1						
	Self-Emotional Appraisal (SEA)	.246**	.185**	.321**	.372**	1					

Group		Met-CQ	Cog-CQ	Mot-CQ	Beh-CQ	SEA	OEA	UOE	ROE	CQ	EQ
	Other's Emotional Appraisal (OEA)	.226**	.060	.347**	.281**	.236**	1				
	Use of Emotions (UOE)	.220**	.061	.314**	.345**	.293**	.299**	1			
	Regulation of Emotions (ROE)	.147*	.205**	.320**	.400**	.283**	.360**	.350**	1		
	Cultural Intelligence (CQ)	.413**	.789**	.558**	.631**	.396**	.288**	.295**	.391**	1	
	Emotional Intelligence (EQ)	.300**	.183**	.469**	.504**	.625**	.686**	.712**	.738**	.493**	1
Romania	Metacognitive-CQ (Met-CQ)	1									
	Cognitive-CQ (Cog-CQ)	.049	1								
	Motivational-CQ (Mot-CQ)	.231**	.151**	1							
	Behavioral-CQ (Beh-CQ)	.168**	.160**	.274**	1						
	Self-Emotional Appraisal (SEA)	.165**	.256**	.285**	.278**	1					
	Other's Emotional Appraisal (OEA)	.078	.174**	.268**	.251**	.106	1				
	Use of Emotions (UOE)	.239**	.151**	.285**	.302**	.301**	.120*	1			
	Regulation of Emotions (ROE)	.122*	.227**	.222**	.251**	.272**	.180**	.204**	1		
	Cultural Intelligence (CQ)	.494**	.702**	.627**	.592**	.402**	.311**	.374**	.339**	1	
	Emotional Intelligence (EQ)	.233**	.319**	.415**	.426**	.614**	.576**	.621**	.703**	.559**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Authors' own results.

In order to dive deep into the analysis, the following Table 8 focuses on *cultural intelligence* differences between the USA and Romania. Below, we present the mean differences in cultural intelligence in the two countries.

Table 8. Mean difference of cultural intelligence in the USA and Romania

	Group	N	Mean	Std. Deviation	Std. Error Mean
Metacognitive-CQ	USA	302	22.40	2.832	.163
	ROM	302	22.50	2.269	.131
Cognitive-CQ	USA	302	33.08	7.433	.428
	ROM	302	33.08	4.047	.233
Motivational-CQ	USA	302	26.65	3.449	.198
	ROM	302	28.25	2.613	.150
Behavioural-CQ	USA	302	27.20	3.034	.175
	ROM	302	28.44	2.423	.139

Source: Authors' own results.

To check the difference in CQ among the leaders of the USA and Romania, an independent sample t-test was applied. According to the independent sample t-test analysis, cultural intelligence difference was identified in both the leaders of the USA and Romania. As per mean values and Std. deviation, the mean values of *metacognitive cultural intelligence*, *cognitive cultural intelligence*, *motivational cultural intelligence*, *behavioral cultural intelligence*, and overall cultural intelligence were identified as higher among Romanian leaders (M = 22.50, 33.08, 28.25, 28.44, and 5.6134 accordingly) compared to the USA leaders (M = 22.04, 29.07, 26.65, 27.20, and 5.2475 accordingly). Additionally, the p-value was less than the significance level (i.e., 0.05). So, the difference between the two means of all cultural intelligence traits was statistically significant. Again, the selected sample provides strong enough evidence to conclude that the two-population means were not equal in cultural intelligence.

The results of Levene's Test for Equality of Variances indicate whether the assumption of equal variances holds for each case. Our first Levene test compares the variances of Cultural Intelligence scores between the USA and Romania groups for each sub-scale, including Metacognitive-CQ, Cognitive-CQ, Motivational-CQ, Behavioral-CQ, and Cultural Intelligence. For the Metacognitive-CQ sub-scale, assuming equal variances, Levene's test statistic is 3.730 with a significance level of .054. This suggests that there is no statistically significant difference in variances between the USA and Romania groups. When equal variances are not assumed, the results remain the same, with a test statistic of 3.730 and a significance level of .054. However, for the other sub-scales (Cognitive-CQ, Motivational-CQ, Behavioral-CQ), Levene's test indicates significant differences in variances between the two groups, with all significance levels reported as close to .000/.008 (see Table 9).

Table 9. Independent sample t-test to check the difference in cultural intelligence in the USA and Romania

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Metacognitive-CQ	EVA	3.730	.054	-2.220	602	.027	-.464	.209	-.874	-.053
	EVNA			-2.220	574.633	.027	-.464	.209	-.874	-.053
Cognitive-CQ	EVA	79.413	.000	-8.241	602	.000	-4.013	.487	-4.970	-3.057
	EVNA			-8.241	465.061	.000	-4.013	.487	-4.970	-3.056
Motivational-CQ	EVA	12.992	.000	-6.424	602	.000	-1.599	.249	-2.088	-1.110
	EVNA			-6.424	560.849	.000	-1.599	.249	-2.088	-1.110
Behavioural-CQ	EVA	7.121	.008	-5.558	602	.000	-1.242	.223	-1.680	-.803
	EVNA			-5.558	573.909	.000	-1.242	.223	-1.680	-.803
Cultural Intelligence	EVA	29.825	.000	-9.821	602	.000	-.36589	.03726	-.43906	-.29272
	EVNA			-9.821	515.513	.000	-.36589	.03726	-.43909	-.29270

Legend: EVA - Equal variances assumed; EVNA - Equal variances not assumed.

Source: Authors' own results.

The same approach and analysis are now applied to *emotional intelligence* differences between the USA and Romania.

Table 10. Mean difference of emotional intelligence in the USA and Romania

	Group	N	Mean	Std. Deviation	Std. Error Mean
Self-Emotional Appraisal	USA	302	22.23	1.833	.105
	ROM	302	22.74	1.486	.086
Other's Emotional Appraisal	USA	302	21.92	2.053	.118
	ROM	302	22.74	1.851	.106
Use of Emotions	USA	302	21.80	2.147	.124
	ROM	302	22.94	1.694	.097
Regulation of Emotions	USA	302	21.40	2.212	.127
	ROM	302	22.27	2.074	.119
Emotional Intelligence	USA	302	54.592	.35732	.02056
	ROM	302	56.676	.28056	.01614

Source: Authors' own results.

To analyze and classify the difference in emotional intelligence among the leaders of the USA and Romania, an independent sample t-test was applied. So, the research found that the leaders of the USA and Romania differed in their emotional intelligence. The mean values of *self-emotional appraisal*, *others' emotional appraisal*, *use of emotions*, *regulation of emotions*, and total emotional intelligence were found to be greater among Romanian leaders (M = 22.74, 22.74, 22.94, 22.27, and 5.6676 consequently) as compared to the USA leaders (M = 22.23, 21.92, 21.80, 21.40, and 5.4592 consequently) (See Table 10 and 11). Moreover, the p-value was lower than the level of significance (P = 0.000, P > 0.01). In every attribute, the difference between the two means was statistically significant. Therefore, the chosen sample offers convincing enough evidence to conclude that the two populations' means for emotional intelligence were not equal.

Table 11. Independent sample t-test to check the difference in emotional intelligence among the USA and Romania leaders

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Self-Emotional Appraisal	EVA	9.463	.002	-3.731	602	.000	-.507	.136	-.773	-.240
	EVNA			-3.731	577.335	.000	-.507	.136	-.773	-.240
Other's Emotional Appraisal	EVA	3.615	.058	-5.142	602	.000	-.818	.159	-1.130	-.506
	EVNA			-5.142	595.614	.000	-.818	.159	-1.130	-.506
Use of Emotions	EVA	10.318	.001	-7.238	602	.000	-1.139	.157	-1.448	-.830
	EVNA			-7.238	571.132	.000	-1.139	.157	-1.448	-.830
Regulation of Emotions	EVA	1.345	.247	-4.991	602	.000	-.871	.174	-1.214	-.528
	EVNA			-4.991	599.547	.000	-.871	.174	-1.214	-.528
Emotional Intelligence	EVA	9.590	.002	-7.972	602	.000	-.20840	.02614	-.25974	-.15706
	EVNA			-7.972	569.924	.000	-.20840	.02614	-.25975	-.15706

Legend: EVA - Equal variances assumed; EVNA - Equal variances not assumed.

Source: Authors' own results.

We have utilized the linear regression analysis, as described in Table 12, to indicate the impact of emotional intelligence on cultural intelligence:

Table 12. Linear regression analysis to check the impact of emotional intelligence on cultural intelligence

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.568[a]	.322	.321	.40591

a. Predictors: (Constant), Emotional intelligence

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.208	1	47.208	286.527	.000[b]
	Residual	99.186	602	.165		
	Total	146.394	603			

a. Dependent Variable: Cultural Intelligence
b. Predictors: (Constant), Emotional Intelligence

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.818	.273		2.997	.003
	Emotional Intelligence	.829	.049	.568	16.927	.000

a. Dependent Variable: Cultural Intelligence

Source: Source: Authors' own results.

The findings above revealed that emotional intelligence completely regressed upon cultural intelligence. The R^2 value was .322, which indicates emotional intelligence significantly ($p < 0.01$) predicted the cultural intelligence of 32 %.

The impact of emotional intelligence on cultural intelligence among the leaders of the USA and Romania was shown in Table 12 based on a linear regression analysis. The results showed that in the USA, the emotional intelligence score significantly ($p < 0.01$) predicts the cultural intelligence score of 24 %, as indicated by the R2 value of .243. Similarly, in Romania, the R2 value was .313, indicating that emotional intelligence substantially ($p < 0.01$) predicts the 31 % level of cultural intelligence.

Despite the mentioned differences between the two countries, our first research hypothesis is fully confirmed, and we can state that *emotional intelligence* could be considered a predictor for *cultural intelligence* in the USA and Romania.

Table 13. Linear regression analysis to check the impact of emotional intelligence on cultural intelligence among leaders in the USA and Romania

Model Summary

Group	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
USA	1	.493[a]	.243	.240	.47376
ROM	1	.559[a]	.313	.311	.29208

a. Predictors: (Constant), Emotional intelligence

ANOVA[a]

Group	Model		Sum of Squares	df	Mean Square	F	Sig.
USA	1	Regression	21.597	1	21.597	96.226	.000[b]
		Residual	67.333	300	.224		
		Total	88.931	301			
ROM	1	Regression	11.655	1	11.655	136.627	.000[b]
		Residual	25.593	300	.085		
		Total	37.248	301			

a. Dependent Variable: Cultural Intelligence
b. Predictors: (Constant), Emotional Intelligence

Coefficients[a]

			Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Group	Model		B	Std. Error	Beta		
USA	1	(Constant)	1.155	.418		2.763	.006
		Emotional Intelligence	.750	.076	.493	9.809	.000
ROM	1	(Constant)	1.638	.340		4.811	.000
		Emotional Intelligence	.701	.060	.559	11.689	.000

a. Dependent Variable: Cultural Intelligence

Source: Authors' own results.

Moving towards our third hypothesis below, we present the two countries' synthetic comparative tables for CQ and EQ. To highlight the difference in cultural intelligence between the leaders of the USA and Romania, a comparative table was created to identify which country excelled the other one in CQ and sub-categories of CQ (Table 14). According to that, cultural intelligence difference was identified in the leaders of the USA and Romania. As per results, *metacognitive cultural intelligence*, *cognitive cultural intelligence*, *motivational cultural intelligence*, *behavioral cultural intelligence*, and overall cultural intelligence were identified as higher among Romanian leaders than the USA leaders.

Table 14. Highlighted country that excels in CQ and its sub-categories

Category and Sub-categories of CQ	Countries with Mean Values			
Metacognitive-CQ	USA	22.04	ROM	22.50
Metacognitive-CQ, 1st Item	USA	5.11	ROM	4.89
Cognitive-CQ	USA	29.07	ROM	33.08
Motivational-CQ	USA	26.65	ROM	28.25
Behavioral-CQ	USA	27.20	ROM	28.44
Cultural Intelligence (CQ)	USA	5.24	ROM	5,61

Source: Authors' own results.

To classify the difference in emotional intelligence among the leaders of the USA and Romania, a comparative table (Table 15) was created to identify which country excels the other in EQ and sub-categories of EQ. So, the research found that the leaders of the USA and Romania differed in their emotional intelligence. Accordingly, self-emotional evaluation, others' emotional appraisal, use of emotions, regulation of emotions, and total emotional intelligence were found to be greater among Romanian leaders than among the USA leaders.

Table 15. Highlighted country that excels in EQ and its sub-categories

Category and Sub-categories of EQ	**Countries with Mean Values**			
Self-Emotional Appraisal	USA	22.23	ROM	22.74
Other's Emotional Appraisal	USA	21.92	ROM	22.74
Use of Emotions	USA	21.80	ROM	22.94
Regulation of Emotions	USA	21.40	ROM	22.27
Emotional Intelligence (EQ)	USA	5.45	ROM	5.66

Source: Authors' own results.

These results are supported by similar research performed to reveal the connection between EQ and CQ (Barron & Hurley, 2018; Gabel-Shemueli et al., 2005; Nightingale et al., 2018; Suhaimi et al., 2014). Synthetically, the qualitative and quantitative results show that EQ can be considered as a predictor for CQ in both countries, offering this way a positive answer to the first research question. Also, EQ and CQ represent the main vectors of multicultural leadership for both the USA and Romania. Finally, the findings show a slightly higher level of emotional intelligence in Romania than in the USA. This might be explained considering that business education in the USA focuses almost entirely on rationality and on achieving competitive advantage for a company than creating a higher level of well-being from emotional and spiritual perspectives (Gill, 2022; Mintzberg, 2004; Zohar & Marshall, 2004).

Conclusions, limitations and future research

The first part of the present research was focused on the reflection of emotional intelligence (EQ) and cultural intelligence (CQ) concepts in the literature, in USA and in Romania. As a result of the bibliometric analysis performed with VOSviewer, CQ and EQ were found as core competencies of leadership and management, both in the USA and Romania. The cluster analysis shows that there is clear evidence that between EQ and CQ there are significant links which prove their reciprocal influence, answering positively to the first two research questions.

The second part of the present research was based on a questionnaire investigation oh how the business leaders in the USA and Romania reacted to emotional intelligence and cultural intelligence. According to the study, EQ was found as being a strong predictor for CQ in a multicultural business environment. The findings confirmed the original assumptions and our first hypothesis and showed substantial correlations among its key variables. Statistical tests, such as the t-test, regression analysis, and Pearson correlation, further supported these relationships. We found that the correlation was significant at one level ($p < 0.01$), and that cultural intelligence and emotional intelligence have a positive and

significant relationship with each other in both countries (USA and Romania). Furthermore, it was shown that emotional and cultural intelligences were highly and positively correlated in Romania compared to USA. We interpret this result as an outcome of the educational business system that stresses rationality and maximizing the profit philosophy in USA. According to the independent sample t-test analysis, cultural intelligence differences were identified in the business leadership, in USA and Romania. The selected sample provided strong enough evidence to conclude that the two-population means were not equal in cultural intelligence. Other academic studies (Lovin et al., 2021; Paiuc, 2021b), also found that individuals with higher cultural intelligence tended to demonstrate cross-cultural leadership success. In this context, backed by knowledge dynamics, people with high CQ tended to have good intercultural negotiation skills.

In recent years, the topic of cultural and emotional intelligence has received considerable attention in the literature, with a particular focus on cross-cultural variations among leaders. A study comparing Romanian and American leaders' emotional and cultural intelligence scores shares light on potential differences in these dimensions. Meanwhile, the emotional intelligence among the leaders of the USA and Romania was also identified through an independent sample t-test. Our research found that the leaders of the USA and Romania differed in their emotional intelligence. Similarly, emotional intelligence and its components were found to be greater among Romanian leaders than the USA leaders.

As a future project, doing a similar study with a more significant sample of participants from various worldwide multicultural companies - could offer a chance for the results to be generalized. Also, according to Gulley's forecast for 2030, Artificial Intelligence (AI) is expected to be a major technology trend globally, with an estimated impact of increasing the global GDP by $ 15.7 trillion (Gulley, 2023). From this perspective, a linked analysis of the correlation between EQ, CQ and AI and their impact on multicultural leadership will be another axis of study for the near future.

As a limitation, we did not consider the indirect impact of mediators or moderators. In the following research, we will conduct a further study that "opens the black box" by focusing on the mediating influence that connects competencies with global leaders' intelligence, awareness, and effectiveness.

The research confirmed the main hypothesis and demonstrated that EQ is a predictor for CQ in the USA and Romania and that EQ and CQ are the main vectors for leadership and management in the two studied countries. Also, we have demonstrated that Romania possesses higher CQ and EQ levels than the USA. Our results could be leveraged by practitioners and researchers who want to understand and build on their teams' cultural and emotional sides to maximize cohesion and results and who want to create the right company culture and not get left behind.

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