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Uncovering Barriers and Enablers for Circular Economy Adoption in Romania

Abstract. *The adoption of the circular economy principles has been proven to reduce the pressure on the resource's conservation, which triggers economic growth and fosters social well-being. Considering the case of Romania, and comparing the indicators associated with the circular economy to the ones recorded at European Union (EU)'s level, it has been observed that some progress has been made, particularly in the waste reduction, but there is still an increased lag to EU in terms of other indicators. Furthermore, in order to have a successful transition to the circular economy, the participation of a country's citizens remains of utmost importance. In this context, the present paper analysis the determinants for circular economy adoption in Romania from the perspective of consumer. Based on the results, it has been observed that the main enablers are the consumers' intention to buy environmentally friendly products, the expectations one has related to the participation in the circular economy and the cognitive-behavioural control. Also, it has been observed that the determinants of the circular economy vary upon the on gender of the respondents.*

Keywords: *circular economy, structural equations modelling, confirmatory analysis, determinants, questionnaire, barriers.*

JEL Classification: E00, C52, C30.

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1. Introduction

The transition to the circular economy (CE) has become imperative in now-a-days times due to its important role in building a sustainable and resilient environment.

Thus, the CE is more than just a way of managing resources; it is an integrated approach that promotes sustainability by efficiently utilising resources and creating resilient value chains. It represents a fundamental pillar of modern economies, supporting the transition to a greener and more sustainable future.

Considering Romania's transition to CE, compared to the results obtain at the EU level, it has been observed that there are still areas of improvement. For example, while EU has maintained a stable material footprint around 15 tons per capita since the early 2000s, with fluctuations between 10-20%, in Romania, the footprint reached a high of 31 tons per capita in 2021, nearly double compared to the EU level (Eurostat, 2024). More, in terms of resource productivity, it has been observed that Romania is far behind the EU, with a 30% deficit in productivity, while the EU demonstrates a 20% surplus on average (Eurostat, 2024).

Nevertheless, it shall be mentioned that there are also areas in which Romania is doing better than EU, such as in the case of packaging waste and plastic packaging waste, where it has been observed that Romania's packaging waste per capita is lower than the EU average (Eurostat, 2024). On the other hand, it has been observed that both regions have seen increases, especially in the last five years, likely influenced by the COVID-19 pandemic and recent global conflicts. Furthermore, Romania generates an average of 304 kg of municipal waste per capita annually, compared to the EU's 482.92 kg, but there is still room for improvement (Eurostat, 2024).

In this context, the adoption of the principles of the CE are of utmost importance, while the participation of all the actors in the economy to the transition process is of utmost importance.

Therefore, in order to ensure a smooth path to the CE transition, it is imperative to know the barriers and the enables of this transition. In this context, the present paper aims to analyse the determinants to the adoption of CE from the perspective of the consumers in Romania, using a structural equations modelling (SEM) approach.

The organisation of our investigation is as follows: Section 2 is dedicated to literature review, while section 3 discusses the methodology considered in this paper. Section 4 provides the results of the structural equations modelling approach and highlights the differences in the adoption of the CE in terms of gender. The paper ends with concluding remarks and references.

2. Literature review

CE brings benefits not only for the environment but also for economic and social development (Nica et al., 2023). By promoting sustainable business practices and encouraging technological innovation, the CE creates new opportunities for

economic growth, helps reduce dependency on finite resources, and supports the transition to a green economy (Georgescu et al., 2024). Additionally, adopting circular models can stimulate job creation and the development of new skills needed to meet the demands of a sustainable future. Thus, finding the determinants of the CE adoption and tailoring specific policies for addressing them, can make a difference on the path to CE adoption.

Considering the scientific literature, it has been observed that a series of papers address the CE through the point of view of its determinants, as highlighted in the following.

Khan et al. (2020) analyse the determinants of CE adoption in the case of plastics industry, focusing on organisations' behaviour. The authors based their research on the theory of planned behaviour and identify three factors that affect the intentions (attitudes, subjective norms, perceived behavioural control) and five that affect behaviour related to CE, namely intentions, barriers, pressures, enablers and perceived behavioural control. As a result of the analysis, the authors conclude that attitude is a key determinant of behavioural intentions, being in line with other studies from the field. Furthermore, all the considered hypotheses have been validated, showing a positive relation between the determinants and the dependent variables, with except for the barriers which exhibit a negative relation with the behaviours associated with CE (Khan et al., 2020).

Moradnezhadi et al. (2023) discuss the determinants of CE in the case of farmers through the use of elements taken form the theory of planned behaviour. Based on their study, the authors have observed that there is a positive influence between attitudes, subjective norms, and perceived behavioural control armers' intention in the rice-fish farming systems for the better implementation of water recycling methods (Moradnezhadi et al., 2023). Furthermore, these factors along with the farmers' intentions, pressures, barriers and enables affect the adoption of a positive behaviour towards CE.

Furthermore, attitude, subjective norms, and perceived behavioural control are analysed by Alvarez-Risco et al. (2021) as determinant towards the intention to CE. The authors have observed that all the three-mentioned determinant exhibit a positive influence on the intention to adopt the CE. Also, the authors conclude that intention has a positive influence on the behaviour of CE, as well as pressure (Alvarez-Risco et al., 2021).

Centobelli et al. (2021) discuss the transition towards CE in small and medium enterprises. The authors use structural equations modelling for validating their hypotheses and observed that environmental commitment and green economic incentives have a significant positive impact on supply chain relationship management and sustainable supply chain design (Centobelli et al., 2021). Nevertheless, the authors highlight a positive effect of social pressure on environmental commitment (Centobelli et al., 2021).

Various other studies focus on determinants in the context of CE adoption such as, but not limited to the studies conducted by: El Chaarani and Raimi (2022), Singh

et al. (2018), Pisitsankkhakarn and Vassanadumrongdee (2020), Ofori and Opoku-Mensah (2022), etc.

3. Methodology

In order to achieve the results aimed at in this study, a series of steps have been considered, as highlighted in Figure 1.

The initial step consists in formulating the hypotheses related to the CE adoption by Romanian consumers, in which a series of determinants have been identified in connection with the scientific literature.

The second step, dedicated to building the model consists in the creation of the model through the use of specific structural equations modelling software – in our case, through the use of SmartPLS 4 – is conducted in parallel with the steps dedicated to the questionnaire development and data gathering through the dissemination of the questionnaire to the Romanian consumers in order to extract their opinions related to the identified factors.

Having the data and the structural equations model, the model is validated through the use of specific indicators – as highlighted in the following, while the testing of the hypotheses reveals the main factors that can affect the process of adopting the CE in Romania. The obtained results are interpreted, and some policy recommendations are formulated.

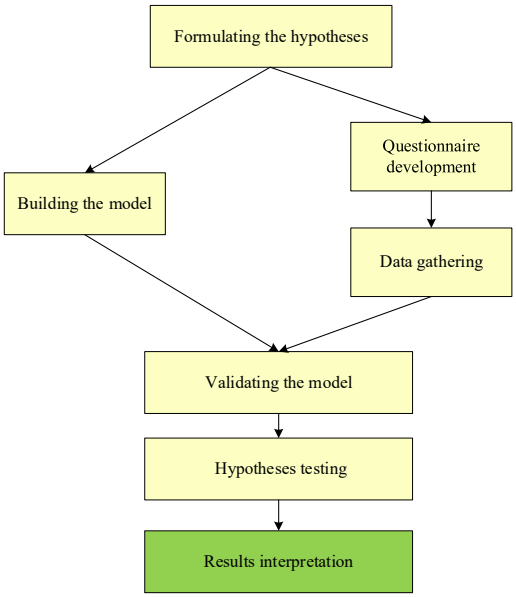

Figure 1. Methodological framework
Source: Authors' own creation.

In the present paper, the work conducted by Tran et al. (2022) has been considered as a benchmark for measuring the determinants of the adoption of CE in

Romania. The authors have used the scientific literature in order to determine the factors affecting the transition to the CE, and have stated the following five hypotheses (noted from H_1 to H_5) (Trần et al., 2022):

- H_1: ATE has a positive covariate relationship with IP;
- H_2: SJN has a positive relationship with IP;
- H_3: BOE has a positive relationship with IP;
- H_4: ATI has a positive relationship with IP;
- H_5: CBC has a positive relationship with IP.

where: ATE represents the intention to buy environmentally friendly products and measures the individual intention to purchase products that do not harm the environment; SJN represents the subjective norms and measures the degree to which the person to whom the respondent comes in contact with has the ability to influence his/her buying behaviour – this variable is in line with the assumptions made by the behavioural planning theory, which states that family members, friends, acquaintances, public persons have the possibility to influence buyers' decisions (Ajzen, 1991; Chan & Bishop, 2013; Coşkun & Yetkin Özbük, 2020; Jigani et al., 2020); BOE reflects the finances of the buyer, more specifically the degree to which the consumer is willing to pay in order to participate to the CE. Trần et al. (2022) show that the cost associated with the products that respect the CE might be misunderstood sometimes by the buyer as it is expected that the associated cost to be greater than the for other similar products, but which do not respect the CE principles, thus representing a barrier in the path towards the transition to CE; ATI measures the attitude of the respondents towards a certain situation and reflects the expectations a buyer has related to the result of a specific behaviour (Ajzen, 1985; Ma et al., 2018; Strydom, 2018)– this variable has also roots in the theory of planned behaviour and, in our case, will measure the expectations one has related to the participation in the CE (Trần et al., 2022); CBC variable refers to the cognitive-behavioural control and measures the degree to which a person is willing to perform a particular behaviour – in our case, the variable will measure the degree to which the respondent is willing to exhibit a positive behaviour towards the CE products; and IP is the dependent variable, which measures the integrated readiness to participate into the CE process when buying products.

As Trần et al. (2022) mentioned in their study, it is expected that all the five mentioned independent variables, namely ATE, SJN, BOE, ATI, and CBC to exhibit a positive influence over the dependent variable, IP.

The above-mentioned hypotheses will also be used in the present paper in order to test the CE determinants adoption in the case of Romania.

Furthermore, in order to provide consistency, the same questions used by Trần et al. (2022) will be addressed to the Romanian respondents – please consider the questions in Table 1. The evaluation of each question is made through the use of a Likert scale with 5 points, starting from 1 – strongly disagree to 5 – strongly agree.

Furthermore, after hypotheses testing, a comparison between the results obtained by Tran et al. (2022) and the current study will be put forward.

Table 1. The questionnaire used in analysis

Variable Acronym	Questions
ATE	I am willing to give up the products/services that I love to do if they harm the natural environment. (ATE1)
	I am willing to do good deeds for the environment without anyone knowing or thanking. (ATE2)
	I am willing to do things that are good for the environment even if it is inconvenient. (ATE3)
	I often buy eco-friendly products (ATE4)
	I will buy products/services that help reduce CO2 emissions (ATE5)
	I usually buy green products. (ATE6)
SJN	I will buy these products if my family members and relatives will also buy these products. (SJN1)
	Opinions of experts and celebrities may influence my choice to participate in the CE. (SJN2)
	I will buy these products if my friends buy these products. (SJN3)
BOE	I will stick with CE products/services if they regularly drop in price. (BOE1)
	I will buy CE products/services if they are cheaper than traditional products. (BOE2)
	I will support circular economies if they can help reduce costs and product costs. (BOE3)
ATI	I am very happy to be able to buy CE products/services. (ATI1)
	I am very proud to be able to buy products/services of the CE (ATI2)
	I feel satisfied when I can buy CE products/services. (ATI3)
CBC	I have enough money to use the products of the CE. (CBC1)
	I am knowledgeable enough to participate in the CE. (CBC2)
	I can overcome barriers and prioritise participation in CE products. (CBC3)
IP	I will join the CE. (IP1)
	I will support activities to develop a CE in Romania. (IP2)
	I will recommend others to join the CE. (IP3)

Source: Tran et al. (2022), adapted for Romanian respondents.

Additionally, some demographic variables have been used in the questionnaire for better shaping the profile of the respondents, such as: gender, education level, and expenditure level.

In terms of building the model, SmartPLS 4 has been used for creating the model and feeding it with data. The resulting model is depicted in Figure 2.

Despite the fact that Trần et al. (2022) have used IBM SPSS AMOS to assess the structural equations model, in this paper, we have decided to conduct the analysis through the use of SmartPLS due to its numerous advantages, such as the ease of use, focus on prediction by prioritising the predictive accuracy and variance

explained, bootstrapping and resampling techniques which are built-in and seamlessly integrated, robust validation of the results, capacity of handling complex models and small data samples, and appealing visualisation of the construction and results.

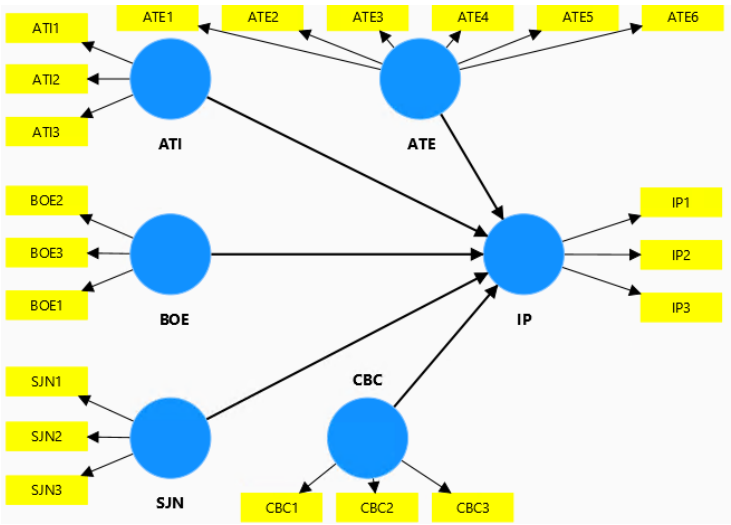

Figure 2. The model used in analysis

Source: Authors own computation using SmartPLS 4.

In terms of questionnaire validation, a series of variables and steps have been considered in accordance to the scientific literature, as highlighted in the following (Canguende-Valentim & Vale, 2021; Götz et al., 2010; Hair et al., 2009, 2022; Henseler et al., 2009).

First, a factor loading check is performed in order to determine if there are any values below the 0.7 threshold as suggested by (Canguende-Valentim & Vale, 2021; Hair et al., 2009). As the factor loadings have the role to determine to which extent each variable belongs to the construction it has been appointed to, a higher value is preferred in this case, while values above the 0.7 threshold are highly recommended.

After that, an analysis of the reliability of the internal consistency for the considered constructs is conducted through the use of the Cronbach's alpha, Composite reliability through rho_a and rho_c, and the average variance extracted (AVE). As a rule of thumb, it is recommended that the values for the four variables to be above the 0.7 threshold, a higher value being preferred (Canguende-Valentim & Vale, 2021; Götz et al., 2010; Hair et al., 2009, 2022; Henseler et al., 2009).

Fornell-Larcker criterion, cross loadings and the Heterotrait-monotrait ratio (HTMT) are used for checking the discriminant validity. According to the Fornell-Larcker criterion, the square root of the AVE for each construct must exceed its correlations with other constructs (Canguende-Valentim & Vale, 2021; Henseler et al., 2015). For cross-loadings, a variable should load higher on its associated construct than on others. Additionally, an HTMT ratio below 0.9 indicates good

discriminant validity (Canguende-Valentim & Vale, 2021; Henseler et al., 2015). Multicollinearity in the model is evaluated through the use of the variance inflation factor (VIF), with values below 5 indicating acceptable levels (Kumar, 2023).

Furthermore, the model strength is assessed using R-square, which should be at least 0.1 (Falk & Miller, 1992).

To evaluate the impact of individual variables, the f-square ratio is analysed. This measures the change in R-square when an exogenous variable is removed, with thresholds of ≥ 0.02 (small), ≥ 0.15 (medium), and ≥ 0.35 (large) as defined by Cohen (1988).

The model fit is assessed using the SRMR ratio, which should be below 0.10, or 0.08 for stricter criteria, to indicate a good fit (Canguende-Valentim & Vale, 2021; Hu & Bentler, 1998). After confirming predictive capability and an SRMR below 0.10, the Q^2predict value is used to evaluate the predictive relevance of endogenous constructs. A Q^2predict value above 0 indicates relevance and is calculated only for endogenous variables (Hair et al., 2022; Sarstedt et al., 2017).

As for testing the hypotheses, bootstrapping is used to assess the significance of the patch coefficients. Bootstrapping generates subsamples from the original dataset to estimate these coefficients.

As a rule, a hypothesis is supported if the p-value is below the threshold of 0.001 and the coefficient sign matches the hypothesis. The bootstrapping procedure also reports bias-corrected confidence intervals (based on 5000 resamples), with a 95% confidence interval excluding zero indicating a significant relationship.

4. Results

The questionnaire provided in Table 2 has been applied to the Romanian respondents in October 2024. As a result, a number of 221 valid answers have been recorded. In the following, a series of summary statistics are provided in connection with the questions used, followed by the questionnaire validation, hypotheses testing and comparison with the result obtained in the scientific literature.

4.1 Statistical analysis

Summary statistics on demographic variables are provided in Table 2.

Table 2. Summary statistics on demographic variables

Variable	Category	Answers	Percentage
Gender	Female	139	62.90%
	Male	80	36.20%
	Prefer not to say	2	0.90%
Education level	Elementary school	1	0.45%
	Highschool	85	38.46%
	Bachelor's degree	98	44.34%
	Post-graduate	37	16.74%
Expenditure level	< 2500 lei	130	58.82%

Variable	Category	Answers	Percentage
	2500 – 5000 lei	60	27.15%
	> 5000 lei	31	14.03%

Source: Authors' processing.

4.2 Model validation

The model presented in Figure 2 has been fed with the answers received from the respondents and has been analysed through the use of SmartPLS 4, by considering the imposed thresholds for the indicators discussed in the methodology section. As a result, it has been observed that the factor loadings for two variables, namely CBC3, and IP2, were below, but close to the 0.7 threshold, recording 0.695, respectively 0.687; while the value of Cronbach's alpha for IP was 0.624, lower than the imposed threshold. Furthermore, the HTMT indicator for IP and SJN was above the 0.9 threshold, recording 0.951, and respectively 0.907. As a result, the model has been further improved by a step-by-step approach in which we have first reduced the IP2 variable, followed by the reduction of the ATE2, and finally by the elimination of CBC3.

As a result, the model in Figure 3 has been obtained.

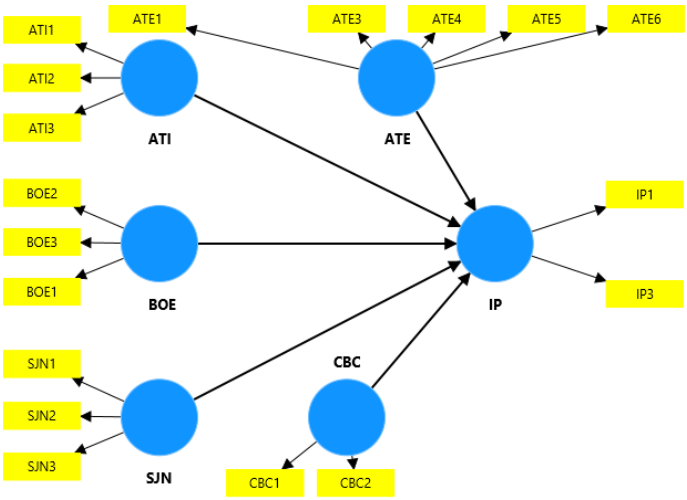

Figure 3. The model to be validated

Source: Authors own computation.

In the following, the validity of this model is discussed by providing evidence for the indicators included in the methodology section.

First, the factor loadings values have been considered. Based on the recorded results, it can be concluded that the model respects the imposed condition of having a higher value than 0.7, all the factor loadings being between 0.753 and 0.937.

Furthermore, in terms of construct validity and reliability, the indicators presented in Table 3 have been obtained. As in the previous case, we have marked in green the values that respect the imposed threshold and in red the values outside

the expected range. The values for each construction in the case of each of the four indicators are within the expected range, except for the value of Cronbach's alpha and Composite reliability (rho_a) in the case of IP construction, which are below, but very close, to the imposed threshold.

Table 3. Construct reliability and validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
ATE	0.884	0.894	0.915	0.683
ATI	0.791	0.798	0.877	0.704
CBC	0.830	0.848	0.921	0.854
IP	0.674	0.678	0.860	0.754
SJN	0.794	0.803	0.879	0.708
BOE	0.856	0.862	0.912	0.775

Source: Authors own computation.

In terms of the Fornell-Larcker criterion, the data in Table 4 have been obtained. According to this criterion, the values recorded on the diagonal – which are the squared root values of the AVE for each construction – should be greater than any of the values listed on the same column, below the diagonal. In our case, it can be observed that this criterion is passed for each variable.

Table 4. Fornell-Larcker criterion

	ATE	ATI	CBC	IP	SJN	BOE
ATE	0.827					
ATI	*0.290*	0.839				
CBC	*0.627*	*0.480*	0.924			
IP	*0.634*	*0.364*	*0.523*	0.868		
SJN	*0.742*	*0.382*	*0.685*	*0.484*	0.842	
BOE	*0.541*	*0.091*	*0.375*	*0.387*	*0.539*	0.880

Source: Authors own computation.

The cross-loadings criterion is also met for all the considered variables, while in the case of the Heterotrait-monotrait ratio (HTMT) ratio presented in Table 5, all the values obtained are below 0.9, which indicates a good discriminant validity.

Table 5. Heterotrait-monotrait ratio

	ATE	ATI	CBC	IP	SJN	BOE
ATE						
ATI	0.346					
CBC	0.729	0.592				
IP	0.813	0.499	0.693			
SJN	0.892	0.481	0.847	0.658		
BOE	0.618	0.113	0.442	0.505	0.653	

Source: Authors own computation.

R-square provides insights on the goodness of the model. Knowing that a value equal to or greater than 0.1 is advised, the values provided in Table 6 show that the model has a predictive capability, as required.

Table 6. R-square and R-square adjusted

	R-square	R-square adjusted
IP	0.458	0.445

Source: Authors own computation.

Collinearity statistics, measured through the use of the VIF indicator, highlight once more the validity of the model as all the values are below the imposed threshold of 5.0 – please consider the results in Table 7.

Table 7. VIF values

VIF					
ATE1	1.707	ATI2	1.622	SJN1	1.625
ATE3	2.247	ATI3	1.685	SJN2	1.925
ATE4	2.157	CBC1	2.013	SJN3	1.626
ATE5	2.806	CBC2	2.013	BOE1	2.281
ATE6	2.241	IP1	1.349	BOE2	2.563
ATI1	1.692	IP3	1.349	BOE3	1.865

Source: Authors own computation.

F-square, provided in Table 8, show a high effect exerted by the ATE variable on IP, followed by a medium effect offered by ATI and CBC. Also, the values below the threshold of 0.02 exerted by the SJN and BOE variables show that it is expected that their removal from the model to have a very low impact on the result.

Table 8. F-square

	ATE	ATI	CBC	IP	SJN	BOE
ATE				0.208		
ATI				0.043		
CBC				0.023		
IP						
SJN				0.014		
BOE				0.012		

Source: Authors own computation.

The model fit is further supported by the values of the SRMS and NFI indicators provided in Table 9. SRMR is lower than the imposed threshold of 0.1, while a value of the NFI approaching 1 is preferred.

Table 9. Model fit

	Saturated model	Estimated model
SRMR	0.069	0.069
d_ULS	0.819	0.819
d_G	0.506	0.506
Chi-square	655.745	655.745
NFI	0.731	0.731

Source: Authors own computation.

Lastly, the Q^2predict, which is determined only for the endogenous variables (in our case IF), as a result of running the Blindfold option in SmartPLS 4, is above the threshold of 0, highlighting the needed predictive relevance for the endogenous constructs. Please consider the values in Table 10.

As a result of all the elements presented in this section, we can conclude that the model is valid and can be used in the following for testing the hypotheses.

Table 10. Q^2predict

	Q^2predict	RMSE	MAE
IP	0.417	0.771	0.555

Source: Authors own computation.

4.3 Structural equations modelling results

Through the bootstrapping option, the significance of the path analysis is determined. The obtained results are presented in Table 11.

Table 11. Path coefficients - Bootstrapping

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
ATE -> IP	0.534	0.539	0.100	5.363	0.000
ATI -> IP	0.177	0.178	0.071	2.473	0.013
CBC -> IP	0.167	0.163	0.083	2.016	0.044
SJN -> IP	-0.148	-0.149	0.106	1.395	0.163
BOE -> IP	0.099	0.100	0.068	1.466	0.143

Source: Authors own computation.

Considering the values on the last column, it can be observed that only three of the four hypotheses are supported, namely that there is a significant positive impact between ATE and IP, ATI and IP, and CBC and IP.

In order to confirm the obtained results, biased corrected confidence intervals are determined. Based on the obtained values, it has been observed that on a 5000 resamples, with 95% confidence intervals, the results in Table 12 are confirmed.

By comparing the results with the ones obtained by Tran et al. (2022) for the case of Vietnam, it can be observed that the authors have also determined that both

ATE and ATI have a significant positive influence on IP, while the hypotheses related to SJN having a positive impact on IP have not been validated.

The only difference in the results between the two studies (the present one and the one conducted by Tran et al. (2022)) consists in the fact that Tran et al. (2022) have determined a significant positive relationship between BOE and IP, which is not confirmed in our case, showing that the Vietnamese respondents are more prone to looking at costs when deciding to participate in the CE.

On the other hand, in the case of Romanian respondents a positive relationship is determined between CBC and IP, unconfirmed in the case of the Vietnamese respondents, which show that the Romanian respondents are more prone to have a positive behaviour towards the CE products due to the fact that they are either knowledgeable or they have money that can be used to support this behaviour.

4.4 Nuanced analysis based on gender

In the following, we have used a nuanced analysis in order to observe whether the results we have obtained on the entire dataset remain when sub-groups are formed based on gender. The summary of the results we have obtained is provided and discussed in the following.

When the dataset is divided based on gender, the results in Table 12 are obtained through bootstrapping and reconfirmed through the analysis of the biased corrected confidence intervals for 5000 resamples, with 95% confidence intervals.

Table 12. Path coefficients based on gender - Bootstrapping

	Female respondents		**Male respondents**	
	Original sample (O)	**P values**	**Original sample (O)**	**P values**
ATE -> IP	0.625	0.000	0.313	0.095
ATI -> IP	0.215	0.014	0.063	0.625
CBC -> IP	0.082	0.480	0.280	0.012
SJN -> IP	-0.184	0.120	0.057	0.818
BOE -> IP	0.073	0.327	0.088	0.555

Source: Authors own computation.

As it can be observed from Table 12, there is a significant difference between the respondent of female and male gender. While the IP presents a positive relation with ATE and ATI in the case of female respondents, in the case of male respondents the only variable with a significant relationship with IP is CBC. This results can signify that the female respondents are more prone to be influenced by friends and family and can decide to participate in the CE if they have a certain expectation with respect to the obtained result, while male respondents are more prone to have a positive behaviour towards the CE products due to the fact that they are either knowledgeable or they have money that can be used to support this behaviour.

5. Conclusions

The present paper evaluates the main barriers and enables in the case of CE adoption for the Romanian citizens. Considering the scientific literature review, five hypotheses have been formulated and tested through the use of structural equations modelling.

As a result of the analysis, it has been observed that in the case of the Romanian consumers, only three of the hypotheses have been validated, namely: H_1 - ATE has a positive covariate relationship with IP; H_4 - ATI has a positive relationship with IP; and H_5 - CBC has a positive relationship with IP. It has been further observed that the results are partially consistent with the results obtained for the case of the Vietnamese respondents.

Furthermore, a difference in the determinants of the participation in the CE has been observed when sub-groups formed by male and female respondents have been formed. Therefore, it has been observed that the female respondents are more prone to participate in the CE when influenced by family and friends or when expecting a specific result, while male respondents are willing to participate due to their level of knowledge related to the subject and to the money they can allocate for supporting this behaviour.

Therefore, in order to address the individual and structural barriers on the way of adopting the CE, the policy makers could consider a series of policies. First, given the fact that the attitude towards the environment plays an important role, policies should emphasise the impact of individual actions on environmental protection, highlighting the importance of using eco-friendly products, or reducing CO_2 emissions. Also, as the positive attitude towards CE influence adoption, policymakers should create campaigns that make consumers feel proud and satisfied to buy CE products. Given the gender differences, these actions can be further oriented to the female gender consumers. As for the male gender consumers, who value knowledge and financial resources, the capacity-building efforts should be prioritised. Among the policies, one could consider educational programs that increase awareness about CE and the knowledge needed to participate effectively. Nevertheless, financial support mechanism could be considered for fostering the CE adoption in the case of male Romanian consumers.

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