Civic Engagement at the Crossroads of Online and Offline Spaces: A PLS-SEM Assessment

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Abstract

This study addresses citizen implication in societal issues, and analyzes it at the crossroads of online and offline spaces. It draws on previous literature to advance a research model which differentiates between online and offline forms of civic engagement, and tests their relationships with people's attitudes and behaviors. Results show that both attitudes and behaviors are influenced by offline and online engagement, pointing out the driving role of the online side in forming civic attitudes, and the powerful direct effect exerted by the offline side on civic behavior. The research findings explain attitudinal and behavioral outcomes of online and offline civic engagement. Indicating that people become more involved in civic issues due to the digital evolution, the study extends prior literature and proposes an inclusive framework for understanding online and offline civic engagement, from a theoretical, instrumental, and empirical point of view. Additionally, the paper offers an up-dated scale for measuring the online civic engagement, by adding a 6th item (crowdfunding) into existent scale.

Keywords: online civic engagement scale; civic behavior; civic attitude; online civism; offline civism; partial least squares structural equation modeling.

JEL classification: C51; D83; D91; I31.

1. INTRODUCTION

Considering civism as an important ingredient of a modern society and a governance based on transparency, resilience, accountability and effectiveness, the present study seeks to understand the role of cyberspace in augmenting citizens' implication in societal issues and it focuses on the differences between online and offline aspects of civic engagement.

The study aims to find out if there is a divide on the two axes – online and offline - in terms of civic attitude and behavior. To this end, the study rises two research questions - (1) Do people actually become more civic involved due to the digital evolution? (2) How much of the online-expressed civism translate into real life actions? - and tries to answer them.

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2. CONTEXT AND THEORETICAL BACKGROUND

The starting point of the study was the increasing importance of civic values and citizens' involvement in all aspects of economic and societal life (Lombardi *et al.*, 2012; Zait *et al.*, 2017a), including the continuous scrutiny of the various organizations as acknowledged by MacGregor *et al.* (2010) in their quadruple helix model which adds civil society beside industry, academic environment and government, as a fourth engine of innovation and growth.

Therefore, the civil society can act as a catalyst, an accelerator, a guardian and a helmsman, at the same time (Zait, 2017), leading to synergistic effects between all economic and social aspects (Andrei *et al.*, 2017a; Soto-Acosta *et al.*, 2016). The social capital generated by civic participation produces economic growth (Temple, 2001), increases future participation (Reddick, 2011), and fosters the development of varied civic services (Dekker, 2009), leading to the rise of a new type of economy, which can be labeled as an "economy of engagement" (Huddart, 2008).

In such "economy of engagement" (Huddart, 2008), new mechanisms of communication and participation can change the way in which the entire society functions. Although it might sound like a big word, this change can be dramatic, as noticed by Kleinhans *et al.* (2015), when they analyzed the power of ICTs and social media as tools for citizens' quick mobilization and community self-organization in the organized demonstrations in Egypt known as "the Arab Spring", or those of riots in London and Manchester from 2011.

In light of these transformations brought by ICTs and social media tools, a wider systemic perspective is needed, one in which online environments are fully considered for understanding and explaining civic behavior. That is why researchers should address the aspects related to civic engagement and community empowerment starting from a deep understanding of participatory social processes and taking into account how participants evaluate the derived benefits. We remind on this point that the derived benefits from community participation in online area might be differently evaluated by new and long-term users, as researchers examined the associative networks by levels of user familiarity, and explained how enduring social bonds are formed according to the individuals' decision-making processes (Sanchez-Franco *et al.*, 2017). Not least, the idea of offering full support for civic education and participation should be extended in the online area considering cyberspace more as a social experience in which individuals interact, exchange information and provide support (Morningstar and Farmer, 2003; Romanelli, 2016; Andrei *et al.*, 2019) rather than a simple sum of tools.

Civic engagement and education lead to youth empowerment and long term positive effects on various aspects, such as intelligence, creativity and innovation, democratic values and behavior, happiness – and all these contribute to personal growth, economic development and social welfare (Altman and Feighery, 2004; Astin *et al.*, 1999; Brennan and Barnett, 2009; Finley, 2012; Kahne and Sporte, 2008; Lenzi *et al.*, 2015).

Participation and civic engagement are associated with psycho-sociological well-being, social intelligence, social innovation, democracy supportive behaviors or happier societies (Finley, 2012, 2011; Huddart, 2008; Moore McBride and Mlyn, 2015; Quintelier and van Deth, 2014; Wallace and Pichler, 2009). Effects are found on various levels - academic, personal, social and citizenship level outcomes (Conway *et al.*, 2009). All these lead, in the

end, to a better quality of life, as a terminal or end value, through a simple mechanism similar to the one which was described by Zanoli and Naspetti (2002) in their analysis applied on a very pragmatic area such as organic food. For example, if we get involved in civic issues, we can fight for concrete attributes (i.e. school abandon), but the consequence is that we get to abstract attributes, such as better educated people or better democracy, and we acquire functional competences, such as the ability for continuous learning or the ability to understand societal issues. One step further, this leads us to attain psycho-social benefits, like feeling good, and instrumental gains (i.e. physical and mental health), which will finally translate into a higher quality of our life.

3. RESEARCH MODEL AND HYPOTHESES DEVELOPMENT

There are plenty of influences on civic engagement, at both individual and social group level. Some of the previous studies focused on personal factors of influence (Dawes et al., 2015; Mondak et al., 2010; Pancer, 2015), while the other analyzed educational or cultural ones (Brockner et al., 2000; Huddart, 2008; Pancer, 2015; Whitley and Yoder, 2015). Among all these factors, social media seem to have a significant impact on all aspects, including societal issues and civic participation (Andrei et al., 2017b; Carr et al., 2014; Jugert et al., 2013; Moy et al., 2005; Shah et al., 2002; Warren et al., 2014b; Zhang and Gearhart, 2015).

Although the effects of internet on civic participation are mostly positive, not all dimensions of internet use (Moy et al., 2005) are positively linked to civic engagement, Shah et al. (2002) indicating some disadvantages related to social capital erosion. In the same vein, Carr et al. (2014) deemed that social media plays a very important role for cynics and skeptics who rely more on citizen generated news distributed via social networks. Concluding that relationships between democracy and Internet are controversial Ceron (2015) highlighted that Internet could become a less coerced public sphere and a place for fruitful debates, despite the inherent risks of fake news or manipulation.

Discussing about the Internet use, Lenzi et al. (2015) indicated that social media should receive higher attention from public policy makers, since users collect, disseminate and share political information on their profile pages (Waite, 2008) and civic engagement is influenced by the use of technology and digital platforms (Bala, 2014; Warren et al., 2014a) which differs according to "website cultures" and user's level of political knowledge (Pasek et al., 2009).

Considering the known gap between attitude and behavior (Padel and Foster, 2005; Terlau and Hirsch, 2015) indicating that positive attitudes do not necessarily translate into real-life actions and positive behavior, the need to find effective ways of supporting civic behavior, appears as an indisputable desideratum.

Efforts for measuring both civic attitude and behavior were made all over the world, and sometimes large differences were found across countries (Hoskins et al., 2015; Marchenko, 2014), suggesting that situational factors, besides cultural ones, exert a substantial influence.

Resuming common ideas in few general words, the literature indicates that civic attitude and civic behavior represent important lines of the present research, because their effects on the various economic and social aspects are highly significant, and their influence factors should be better explored taking into account both cultural differences and the impact of

internet use. In the above described context, our study rises two research questions, and seeks the response - *(1) Do people actually become more civic minded due to the digital evolution? (2) How much of the online-expressed civism translate into real life actions?*

Drawing on civic engagement literature (Andrei *et al.*, 2019; Doolittle and Faul, 2013; Hoskins *et al.*, 2015; Jugert *et al.*, 2013; Zait *et al.*, 2017a), a research model (Figure no. 1) which differentiate between online and offline forms of expressing civism was developed to analyze the online and the offline civic engagement in relationship with civic attitude and civic behavior.

The research model (Figure no. 1) was developed considering that the attitudes a person might have influences the way she /he would behave, resulting a sum of actions that person decide to take. In their turn, these taken actions determine people to gain experiences which will transform person's attitude and behavior, either strengthening or modifying the old ones. In this logic, the study assumed that person's actions that would represent forms of expressing civism in offline (and/or online) environment are influencing the civic engagement of that person on both attitudinal and behavioral dimensions, and we hypothesized five relationships to be tested in our research model as follows:

H1*: There is a positive relationship between civic attitude (CEA) and civic behavior (CEB).*

H2*: There is a positive relationship between offline forms of expressing civism (offline_CE) and CEB.*

H3*: There are positive relationships between offline forms of expressing civism (offline_CE) and CEA.*

H4*: There are positive relationships between online forms of expressing civism (online_CE) and CEB.*

H5*: There are positive relationships between online forms of expressing civism (online_CE) and both civic engagement behavior CEA.*
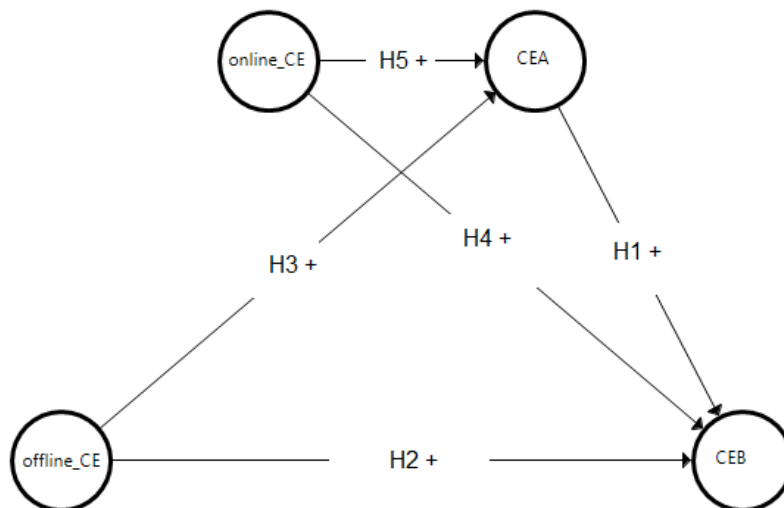

Figure no. 1 – Research model with hypotheses

The research model comprising the five hypotheses detailed before (Figure no. 1) was generated to be analyzed using partial least squares structural equation modeling (PLS-SEM method), a more and more recommended procedure for assessing the causal relationships in exploratory research (Henseler *et al.*, 2016) - a situation which fits our case.

4. DATA COLLECTION AND MEASUREMENT

Data collection was performed using an online questionnaire. Invitations to participate in the present study were distributed via e-mail to undergraduate and graduate students enrolled in the Romanian public universities, resulting 321 complete answers from participant students, with the following structure of respondents: 224   EU (Romanian nationality) and 96 non-EU (Moldavian nationality).

The questionnaire was applied in the Romanian language, following the recommendations of previous studies (Zait *et al.*, 2017a; Zait *et al.*, 2017b). The questionnaire comprised language adapted items developed from the existent scales of Doolittle and Faul (2013) and Jugert *et al.* (2013), respectively, for measuring the four dimensions of interest: (online_CE: 6 items; offline_CE: 7 items; CEB: 6 items; CEA: 8 items), as detailed below. It also included 2 controlling items (participant's affiliation to civic organizations - "*I am /I used to be an active member of a civic, non-profit organization",* and participant's preference for using online versus offline forms of civic engagement - *"In general, I consider that is easier to participate or support civic actions online than offline"),* and collected the socio-demographic data (country, town, gender, age, family income, work experience, education).

Therefore, the civic engagement scale of Doolittle and Faul (2013) was used to measure civic attitude (CEA) on 8 items, and civic behavior (CEB) on 6 items. All items were measured on Likert type scales with 5 steps. Given the PLS-SEM recommendations of dropping the items with lodgings lower than 0.7, we had either to consider CEA as a composite with one item representing the sum-scores of all 8 items, or to drop the last 3 items with loadings between 0.55 and 0.65. We preferred the first version. Therefore, all items of Doolittle and Faul (2013) scale were used in our questionnaire, but CEA was considered as a construct with a single item comprising the summed scores of all 8 items that were measured: CEA1 to CEA8, while CEB was considered in our model as a reflective 6-items construct.

According to the scale advanced by Jugert *et al.* (2013) to measure offline civic engagement, the study participants were asked to rate from 1 (not at all) to 5 (very much) "*to what extent they had done and would do again certain offline activities such as: volunteer work* (Offline_CE1*), wear bracelets as a symbol of support* (Offline_CE2), *donate money to a social or political cause* (Offline_CE3), *take part in a concert or fundraising event with a political or social cause* (Offline_CE4), *take part in a demonstration* (Offline_CE5), *distribute leaflets with a political content* (Offline_CE6), *buy or boycott certain products for political reasons"*(Offline_CE7). Only 6 items were retained in our study in the reflective construct Offline_CE as detailed in Table no. 1. The 4th item (Offline_CE4) was dropped during the analysis (loading lover than 0.4). We believe that both the young age and respondents' country of origin (students from ex-communist countries) might explain their lower participation in fundraising events. In this regard, we consider that the 6-items construct for measuring offline civic engagement represents a particularity of this study induced by sample characteristics.

Similarly, participants were asked to rate from 1 (not at all) to 5 (very much) their online civic engagement on the following items: *"link news, music or video with a social or political content to their contacts* (Online_CE1)*, discuss societal or political contents on the net* (Online_CE2)*, participate in an online based petition, protest or boycott* (Online_CE3)*, connect to a group in an online social network dealing with social or political issues* (Online_CE4)*, visit a website of a political or civic organization"* (Online_CE5),*"support social causes or projects via crowdfunding"*(Online_CE6). While the first 5 items were taken from the scale of Jugert *et al.* (2013), the 6th item (Online_CE6:*"support social causes or projects via crowdfunding"*) was added by the authors of the present study to reflect nowadays reality, when crowdfunding via online platforms became more and more popular.

Therefore, the online civic engagement was assessed as a 6-items reflective measurement in the present study, resulting the Online_CE construct which was found to comply with all methodological requirements ($\alpha > 0.7$; rho_A > 0.7; CR > 0.8; AVE > 0.5) as detailed in Table no. 1. Moreover, considering obtained results, the present paper recommends the use of the 6-items reflective construct described above for measuring the online civic engagement, offering in this way an updated scale to be used in future studies.

5. RESULTS AND DISCUSSIONS

Based on the literature indicating that PLS-SEM performs better than CB-SEM for exploratory purposes (Hair *et al.*, 2017; Henseler *et al.*, 2016), PLS algorithm was used for testing our research model assuming the positive impacts of both offline and online activities in driving civic attitudes and behaviors

Consequently, PLS_SEM methodological standards and tools (Hair *et al.*, 2017; Ringle *et al.*, 2015) were applied for assessing GoF - the overall goodness of model fit, the measurement model (see results in Table no. 1, Table no. 2 and Table no. 3) and the structural model (see results in Table no. 4, Table no. 5 and Figure no. 2).

Table no. 1 – Construct Reliability and Validity

Construct	α	rho_A	CR	AVE
CEA single-item: the summed scores of the 8-item index (CEA1; CEA2; CEA3; CEA4; CEA5; CEA6; CEA7; CEA8)	1.000	1.000	1.000	1.000
CEB reflective; 6 items: CEB1; CEB2; CEB3; CEB4; CEB5; CEB6	0.844	0.856	0.885	0.565
offline_CE reflective; 6 items: offline_CE1; offline_CE2; offline_CE3; offline_CE5; offline_CE6; offline_CE7	0.809	0.816	0.863	0.515
online_CE reflective; 6 items: online_CE1; online_CE2; online_CE3; online_CE4; online_CE5; crowdfunding	0.819	0.832	0.870	0.530

The evaluation indicated the goodness of model fit (GoF), since the value of standardised root mean square residual (SRMR= 0.076) was found to lie below the 0.08 limit of Hu and Bentler (1999), as recommended for PLS-SEM method.

Also, the measurement model and the four constructs considered (online_CE, offline_CE, CEA, CEB) were found to satisfy the reliability and validity criteria ($\alpha > 0.7$; rho_A > 0.7; CR > 0.8; AVE > 0.5 as detailed in Table no. 1).

The variance inflation VIF (under 3.3 limit indicated by Diamantopoulos and Siguaw, 2006) indicated no multicollinearity among constructs (VIF < 1.6) or among items (VIF < 2.5).

Discriminant validity criteria of Fornell and Larcker (1981) are fulfilled (diagonal AVE values are higher than squared correlations, as detailed in Table no. 2), and all HTMT values (Table no. 3) are below 0.85 limit recommended in Henseler *et al.* (2015) and Henseler *et al.* (2016).

Table no. 2 – Discriminant Validity: Fornell and Larcker criterion

Construct	CEA	CEB	offline_CE	online_CE
CEA	1.000	-	-	-
CEB	0.505	0.752	-	-
offline_CE	0.338	0.664	0.718	-
online_CE	0.368	0.592	0.592	0.73

Table no. 3. – Discriminant Validity: HTMT criterion

Construct	CEA	CEB	offline_CE	online_CE
CEA	-	-	-	-
CEB	0.556	-	-	-
offline_CE	0.373	0.784	-	-
online_CE	0.403	0.712	0.747	-

Since all measurement requirements are met, the hypothesized relationships between constructs are examined using bootstrapping procedure with 5000 re-samples (Hair *et al.*, 2017), and the results are reported in Table no. 4, Table no. 5 and Figure no. 2.
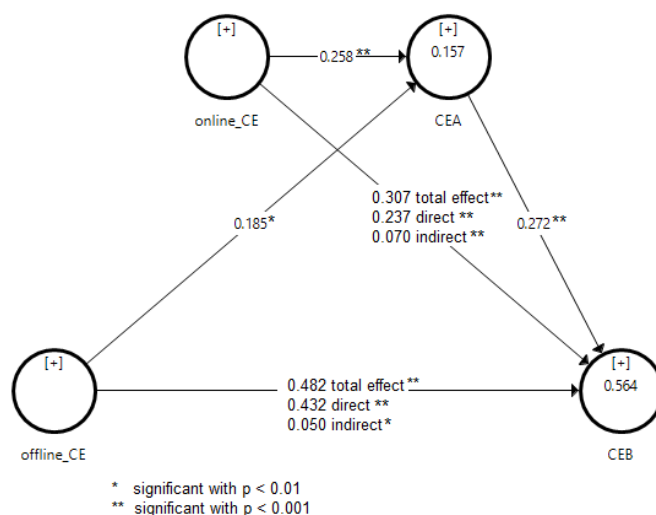

Figure no. 2 – Research model with R^2 values and path coefficients

As Table no. 4 shows, structural model evaluation indicates that relationships included in the model explain 56.4% of CEB variance (R^2=0.564), and 15.7% of CEA variance.

Table no. 4 – R Square

Constructs	R Square	R Square Adjusted
CEA	0.157	0.152
CEB	0.564	0.560

Table no. 5 – Direct and Indirect Effects

Effects	Effect type	β coeff	Mean	StDev	T	P	2.5% C.I.	97.5% C.I.
CEA→CEB	direct	0.272	0.270	0.045	6.021	0.000	0.178	0.358
offline_CEA→CEA	direct	0.185	0.185	0.060	3.102	0.002	0.069	0.299
offline_CEA→CEB	direct	0.432	0.434	0.055	7.906	0.000	0.323	0.539
offline_CE→CEA→CEB	indirect	0.050	0.050	0.019	2.709	0.007	0.017	0.089
online_CE→CEA	direct	0.258	0.261	0.058	4.470	0.000	0.143	0.374
online_CE→CEB	direct	0.237	0.238	0.053	4.458	0.000	0.133	0.343
online_CE→CEA→CEB	indirect	0.070	0.070	0.019	3.631	0.000	0.035	0.110

Bootstrapping results (Table no. 5) indicated the significance of the positive relationships that were hypothesized. Each of the five hypotheses (H1, H2, H3, H4, H5) confirm, results highlighting the significance of the five positive effects: CEA→CEB; offline_CE→CEB; offline_CE→CEA; online_CE→CEB; online_CE→CEA; and also the significance of two indirect effects offline_CE→CEA→CEB, and online_CE→CEA→CEB.

As expected, civic engagement attitude has a positive influence on civic engagement behavior (see CEA→CEB direct effect, β = 0.272, p < 0.001) and both attitude and behavior are positively influenced by offline and online activities.

The most powerful effect in the model resulted from the direct relationship between offline civic engagement and civic engagement behavior (f square=0.270; β = 0.432, p < 0.001). Besides the powerful direct effect we can observe an additional indirect effect via attitude (offline_CE→CEA→CEB: β = 0.050, p < 0.001) which adds to the impact of offline_CE on CEB, resulting a total effect β = 0.482.

Still, the relationship between offline_CE and CEA (β = 0.185, p < 0.001) is weaker that the relationship between online_CE and CEA (β = 0.258, p < 0.001) indicating that online environments have the most important role in forming and transforming the civic engagement attitude (CEA) of the young educated people (i.e. students in our sample).

Confirming the importance of online medium in driving civic behavior via attitude, the results shows a higher indirect effect (online_CE→CEA→CEB: β = 0.070, p < 0.001) which adds to the positive direct effect of online_CE→CEB (β = 0.237, p < 0.001), resulting a considerable total effect (β = 0.307) of online civic engagement on the overall civic engagement behavior, as observable in the detailed results reported on Figure no. 2 and Table no. 5.

Proposed model was tested via PLS-MGA analysis to check the potential differences between the groups formed according to participants answers on the 2 control items used in our questionnaire: (1) participant's affiliation to civic organizations (*I am (or I used to be) an active member of a civic, non-profit organization)* and (2) participant's preference for

using online versus offline forms of civic engagement *("In general, I consider that is easier to participate or support civic actions online than offline").*

Only the control variable referring to participant's preference for using online versus offline forms of civic engagement *("In general, I consider that is easier to participate or support civic actions online than offline")* produced statistically significant differences between groups.

The significant differences between groups were found in the relationship offline_CE→CEB ($\beta = 0.359$ in one group vs. $\beta = 0.541$ in the other group, with a path coefficients difference between groups statistically significant at $p = 0.035$), and also in the relationship CEA→CEB ($\beta = 0.357$ in one group vs. $\beta = 0.140$ in the other group, with a path coefficients difference between groups statistically significant at $p = 0.005$). As we can observe, between groups differences in offline_CE→CEB relationship, respectively in CEA→CEB relationship, highlight the fact that the civic behavior (CEB) depends on a greater extent on either offline implication (offline_CE) or civic attitude (CEA), according to person's preference for online versus offline forms of civic implication. Since the online forms of civic implication (online_CE) were found to have higher impact on civic attitude (CEA), and higher indirect effect on civic behavior (CEB) than offline forms of implication (offline_CE), between groups differences we have found strengthen the findings regarding the importance of online medium in forming civic attitudes which will further enhance civic behavior, as it was already indicated in our model.

Finally, a multi-group analysis employed to control for potential differences that might appear due to participant's demographics (especially EU vs. non-EU country of origin) indicated no significant influences, highlighting that the presented model holds.

6. CONCLUSION, LIMITS AND FURTHER RESEARCH

The present paper contributes to the body of civic engagement literature, pointing out the driving role of online environments in forming civic attitudes.

Aside the valuable findings regarding investigated relationships between attitudinal and behavioral outcomes of online and offline civic engagement, discussed in detail below, the paper has also a merit of instrumental nature. The paper finds a 6-items reflective construct for measuring online civic engagement, which adds the item "support social causes or projects via crowdfunding" into the original Online Civic Engagement scale with 5 items proposed by Jugert *et al.* (2013), offering in this way an updated instrument to be used in future studies.

Coming back to investigated relationships, based on the results of the study we can conclude that people become more civic minded due to the digital evolution. The results have shown that civic engagement behavior increases simultaneously with civic engagement attitude and both behavior and attitude are positively influenced by offline and online activities. Although offline engagement remains the main direct driver of civic behavior, the relationship between offline engagement and civic attitude was found to be weaker that the relationship between online engagement and civic attitude, indicating that online environments have the most important role in forming and transforming the civic attitude of the young educated people examined in our study (i.e. students). Confirming the importance of online medium in driving civic behavior via attitude, the results highlighted that the indirect effect of online engagement on civic behavior (the highest indirect effect in the

model) adds to the positive direct effect, resulting a considerable total influence exerted by online engagement on civic behavior.

Therefore, the research results offer empirical evidence regarding the direct and indirect influences of online engagement on civic behavior, pointing out the important role of social media and digital instruments in driving civic behavior in a direct way, but also indirectly, by strengthening civic attitudes which will further enhance civic behavior.

Beyond their relevance in the current framework, these findings make a step forward towards reinterpreting the civism configuration in today's social environment. Emerged as a prominent expression of the modern society in terms of resilience, accountability and effectiveness, civic engagement is nowadays placed at the crossroads of online and offline spaces understood as key activators. Progressively, the focus has shifted from the offline setting towards the cyberspace which is invested with a higher impact on eliciting citizens' implication in societal challenges.

The situation brings about novel conceptual approaches as a reflection of new unfolding phenomena. Firstly, the digital evolution is liable to potentiate the occurrence and the enhancement of civic attitude and behavior. Secondly, the online-centric civism is prone to objectivize in real life undertakings, a fact which may account for a higher permeability between the two axes: online and offline. As a consequence, the evidence underpinned by the present study could be deemed as an inclusive framework for the difference between attitudinal and behavioral outcomes of online and offline civic engagement, from a theoretical, instrumental – methodological and empirical point of view.

Regarding the research limits, we mention the sample, consisting of students. However, the analysis employed to control for potential differences between EU and non-EU participant students indicated no significant differences, highlighting that results hold. Moreover, previous studies have shown that youth civic engagement is a good predictor for future engagement of the adult population, and although the present data are not enough to fully describe the situation for other categories of age and education, the findings are reliable and encouraging for an exploratory research.

Future research could address other segments of age and education, as well as the nature of the social capital created through civic engagement – between socially homogeneous or heterogeneous groups of people, as defined by Geys and Murdoch (2010). This would be important because bonding and bridging ties can lead to different types of social capital, some positive and some negative, and the desired result of stimulating civic participation is to obtain positive civic values.

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