Understanding Civic Engagement on Social Media Based on Users' Motivation to Contribute

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Abstract. Social media offer various opportunities for civic engagement by, e.g., liking, sharing, or posting relevant content. Users' motivation to contribute to relevant topics is quite divers and can stem from an intrinsic motivation to do good or external incentives such as being recognised and rewarded by other users. In our study, we adopt self-determination theory, which defines motivation as broad continuum ranging from intrinsic motivation to external regulation. We conducted a quantitative survey with 667 Facebook users to identify how the different kinds of motivation impact the users' behaviour in terms of reading, liking, sharing, commenting, and posting topics relevant to civic engagement. Our results suggest that social media users are mainly driven by intrinsic motivation while different forms of extrinsic motivation play a less important role.

Keywords: Civic engagement · Social media · Self-determination theory · Survey

1 Introduction

Civic engagement refers to "individual and collective actions designed to identify and address issues of public concern" [1]. These actions can take various forms, ranging from individual voluntarism to organisational involvement or participating in elections. Civic engagement involves working directly to solving an issue of public concern such as offering meals to homeless people, being organised in a group with others such as being part of a neighbourhood association or a political party, to interacting with political decision makers by e.g., writing them a letter.

With the rise of social media, taking part in civic engagement activities has become easier and more convenient. Social media enable simple and cheap opportunities to express opinions, organise actions or acquire knowledge about a topic of public concern [1–3].

While these technological affordances that social media offer for civic engagement have been well explored, people's motives for contributing to civic engagement activities on social media are still opaque. There are, for example, conflicting believes as to whether the driving force is to express oneself in terms of sharing opinions or whether the use

of social media is mainly seen as an instrument for reaching a higher civic engagement goal [1]. The individual motivation, which is the driving force for all kinds of action [4], has hardly been investigated when it comes to contributing to issues of public concern on social media. Therefore, the aim of our study is to answer the question:

RQ: What motivates users to contribute to civic engagement activities on social media?

To answer this question, we have conducted a survey that builds on the self-determination theory (SDT). SDT is a well-established theoretical approach to human motivation and differentiates motivation among a spectrum ranging from intrinsic motivation that is characterised by the will to do good to extrinsic motivation, where people are driven by external incentives such as receiving recognition from others [4, 5]. We have conceptualised civic engagement on social media using a multi-dimensional construct, consisting of reading, liking, sharing, commenting, and posting topics of civic engagement on social media. Our results suggest that social media users are mainly driven by intrinsic motivation while different forms of extrinsic motivation play a less important role.

The remainder of the paper is organised as follows. In the next section, we present related work on civic engagement on social media and self-determination theory and develop our research model. In Sect. 3, we describe our methodological approach. Afterwards in Sect. 4, we present our findings, which we discuss in Sect. 5. Finally, in Sect. 6, we conclude our paper, explain limitations, and point out directions for future research.

2 Related Work and Research Model

2.1 Civic Engagement on Social Media

There is no unified definition as to what civic engagement entails. Adler and Goggin have identified four different, partly contradicting perspectives on civic engagement in the literature [6]. First, civic engagement is understood as community service where citizens contribute alone or in cooperation with others to the wellbeing of their local community. Second, it refers to collective action, i.e., it only encompasses activities that are pursued jointly with other individuals. Third, civic engagement is seen as political involvement, which excludes all activities that are not explicitly targeted towards political processes. Finally, it is perceived as social change, i.e., not the activities but rather the goal of shaping the future and creating social change are in the focus of civic engagement. In this paper, we refer to the rather broad definition by the American Psychological Association (APA), which understands civic engagement as all "individual and collective actions designed to identify and address issues of public concern" [7]. Just like the forms of civic engagement, also the issues of public concern that are addressed by civic engagement cover a broad variety of different topics. They include, among many others, the areas of health (e.g., by donating blood), education and learning (e.g., by serving as a tutor or mentor for a young person), and politics (e.g., by voting or being member of a political party) [6]. Civic engagement activities can, on the one hand, be organised top-down where public institutions actively seek for citizen participation. On the other hand, they can be bottom-up initiatives that are organised by actors of the civil society [8].

The Internet is assumed to have promoted civic engagement since it offers convenient and manifold opportunities to gather up-to-date information, gain knowledge, connect with others and organise actions [3]. While the goals of traditional offline and online civic engagement are the same, expressing opinions and sharing believes can be done with little effort and at a low cost on the Internet, especially on social media [1, 9]. Civic engagement activities on social media such as liking a post that deals with a topic of public concern, require as little effort as one click [1, 2]. In addition, social media offers even individuals who are not members of a specific community the opportunity to engage in activities they deem important.

Social media offer different interaction functions for contributing to issues of public concern such as sharing information, exchanging views and opinions by liking, sharing, and commenting posts, becoming a fan, joining or following a profile or group, adding hashtags, posting status updates, or adding profile pictures [1]. Datyev et al. have developed a conceptual model for analysing civic engagement on social media [10]. They have identified five types of interaction, i.e., views, likes, comments, re-posts, and posts. These interaction types are the basis for our conceptualisation of civic engagement on social media in our study where we use the dependent variables (a) *reading*, (b) *liking*, (c) *sharing*, (d) *commenting*, and (e) *posting* civic engagement topics.

2.2 Motivation for Civic Engagement on Social Media: Self-determination Theory

Motivations to contribute to civic engagement activities online can differ from civic engagement in the offline world [11]. Hong et al. found that the motives for civic engagement on social media were first and foremost to express their opinion as well as to connect with other users that share similar viewpoints. The idea that their engagement would actually have an impact outside the world of social media seemed less important, though [1].

Motivation as such is no singular concept but can be differentiated according to different types of factors. These can range from being motivated because people value a certain activity to being externally pressured. The external pressure, in turn, can range from external incentives such as financial stimulation to being forced or bribed to perform a certain behaviour [4]. A renowned approach to human motivation is the self-determination theory (SDT). SDT offers a differentiated description of motivation and distinguishes between self-motivation or intrinsic motivation and differing degrees of extrinsic motivation [4, 5, 12]. Later on, SDT was expended by three basic psychological needs, i.e., the need for autonomy, relatedness, and competence, that moderate the motivation to perform a certain behaviour.

SDT distinguishes between the three basic types of motivation *amotivation*, *extrinsic motivation*, and *intrinsic motivation* (cf. Fig. 1). *Amotivation* refers to not being interested in performing an activity, not feeling competent enough, or not expecting a result. On the other side of the motivational spectrum, *intrinsic motivation* describes "the doing of an activity for its inherent satisfaction" [4]. Conducting an activity due to intrinsic motivation is a source of enjoyment and pleasure. According to SDT, intrinsic motivation is the prototypical form of self-determination. In between the continuum ranging

from amotivation to intrinsic motivation, *extrinsic motivation* is located. Extrinsic motivation can be further distinguished into four types, depending on how autonomous the regulation is. *External regulation* refers to the least autonomous behaviour and covers activities that are performed to satisfy an external demand or receive a reward. *Introjected regulation* takes in regulation to a higher degree but does not fully perceive it as one's own. People often perform activities to avoid feeling guilty or in order to feel proud. Actions that are characterised by *identified regulation*, which is a more autonomous form of extrinsic motivation, are accepted as personally important. The most self-determined or autonomous form of extrinsic motivation is represented by *integrated regulation*. Although activities characterised by this form of motivation are not pursued for inherent enjoyment, integrated regulation shares many characteristics with intrinsic motivation. Here the regulations have been fully assimilated and overlap with people's values and believes.
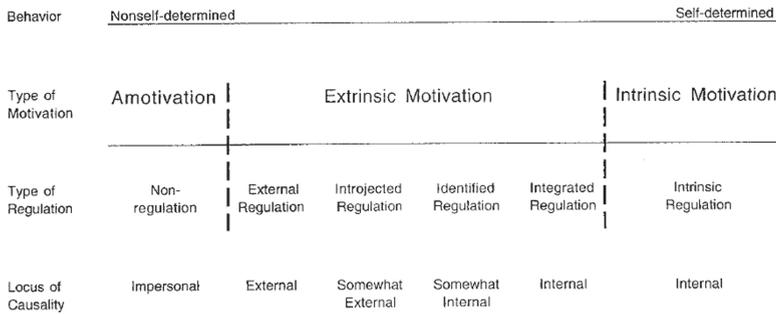

Fig. 1. The self-determination continuum [5]

SDT has been applied to a variety of contexts where motivation plays an important role such as work motivation [12], environmental-friendly behaviour [13], or dental treatment [14]. Recently, it has also found its way into understanding what motivates people's behaviour in civic engagement (cf. e.g. [11, 15]). Zhao and Zhu applied SDT to participation in crowdsourcing contests and hypothesise that both extrinsic and intrinsic motivation positively relate to participation efforts in crowdsourcing contests [16]. Schmidthuber et al. used SDT for analysing citizens' motivation to participate in ideation platforms initiated by government agencies [17]. They differentiated participation in terms of number of posted ideas, number of comments and responses, as well as number of likes and dislikes a user gave.

2.3   Research Model

Our aim in this study was to identify what motivates users to contribute to civic engagement activities on social media. We conceptualised civic engagement as a multidimensional construct consisting of (a) reading, (b) liking, (c) sharing, (d) commenting, (e) posting civic engagement topics on social media, in our case Facebook. Based on self-determination literature and its application to the context of political and civic participation, we developed the following research model and hypotheses (Fig. 2).

H1: External regulation positively influences the intention to (a) read, (b) like, (c) share, (d) comment, (e) post civic engagement activities on Facebook.

H2: Introjected regulation positively influences the intention to (a) read, (b) like, (c) share, (d) comment, (e) post civic engagement activities on Facebook.

H3: Identified regulation positively influences the intention to (a) read, (b) like, (c) share, (d) comment, (e) post civic engagement activities on Facebook.

H4: Integrated regulation positively influences the intention to (a) read, (b) like, (c) share, (d) comment, (e) post civic engagement activities on Facebook.

H5: Intrinsic regulation positively influences the intention to (a) read, (b) like, (c) share, (d) comment, (e) post civic engagement activities on Facebook.
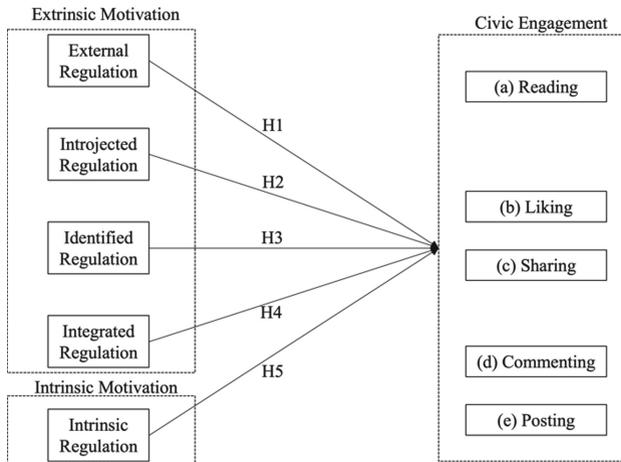

Fig. 2. Research model

3   Research Method

3.1   Sample

Our research model deals with experienced users in social media. The respondents were given a definition of social media, followed by a few examples, and they were asked to keep this in mind, while answering the questions based on their previous experience. We received 978 responses and we removed those who did not have experience with civic engagement activities on Facebook. This left us with a sample of 667 users of social media that had participated in civic engagement activities on Facebook. Participation in the survey was voluntary and no reward was given.

The sample is balanced in terms of gender and consists of 49% women and 51% of men. The average age for the respondents was 37 years, with a range between 16 to 69 years of age. The sample has a normal distribution with the majority being between 24–50 years old, while having representation in all age groups.

In terms of the educational status, the majority (31%) were university graduates, 30% were junior high school graduates, 26% were high school graduates, and 10% had left school after 9 years.

3.2 Measures

The questionnaire was divided into two parts. The first part included questions on the demographics of the sample (age, gender, education). The second part included measures of the constructs as they were identified in the literature review section. Table 1 lists the operational definitions of the constructs in our theoretical model along with their source in the literature. We employed a 7-point Likert scale anchored from 1 ("completely disagree") to 7 ("completely agree").

Table 1. Construct definition and instrument development

Construct	Definition	Source
1. External Regulation	Behaviours that are performed to satisfy an external demand or reward contingency	[4]
2. Introjected Regulation	Taking in a regulation but not fully accepting it as one's own	[4]
3. Identified Regulation	Conscious valuing of a behavioural goal or regulation, such that the action is accepted or owned as personally important	[4]
4. Integrated Regulation	Fully assimilating identified regulations to the self, i.e., having evaluated and brought into congruence with one's other values and needs	[4]
5. Intrinsic Regulation	Doing an activity for the inherent satisfaction of the activity itself	[4]
6. Reading/7. Liking/8. Sharing/9. Commenting/10. Posting	Reading, liking, sharing, commenting, or posting civic engagement topics on Facebook	[10]

4 Results

4.1 Measurements

To test our model, we applied partial least squares-based structural equation modeling (PLS-SEM), using SmartPLS version 3.0 software [18]. PLS-SEM allows to estimate multiple relations between multiple dependent and independent variables. First, a measurement model was created to test for construct reliability and validity, and then the structural model was built in order to test the hypothesised relationships.

The constructs are assessed for reliability based on the Cronbach alpha and Composite Reliability indicators, that show acceptable indices of internal consistency as all constructs exceed the cut-off threshold of .70. For validity, the average variance extracted (AVE) needs to be larger than .50, correlations among variables should be lower than .80 points, and the square root of each factor's AVE should be higher than its correlations with the other factors (Fornell-Larcker criterion) [19].

The AVE ranges between 0.74 and 0.88, all correlations are lower than 0.80, and square root AVEs are larger than corresponding correlations. The findings are presented in Table 2. Multicollinearity [20] is examined along with the potential common method bias by utilizing Harman's single factor test, an acceptable assessment tool for common methods variance [21]. Variance inflation factor (VIF) for all factors is lower than the recommended value (<5), thus multicollinearity is not an issue. Common method bias is not a problem, as variance of the first factor accounts for less than 50% of the variance among variables, based on Harman's single factor test.

Table 2. Descriptive statistics and correlations of latent variables

Construct	CR	AVE	1	2	3	4	5	6	7	8	9	10
1. External regulation	.96	.87	**.92**									
2. Introjected regulation	.96	.86	.69	**.87**								
3. Identified regulation	.89	.74	−.09	.19	**.91**							
4. Integrated regulation	.92	.75	.60	.65	.29	**.86**						
5. Intrinsic regulation	.93	.77	.38	.43	.45	.63	**.86**					
6. Reading	.94	.83	−.02	.11	.46	.21	.32	**.88**				
7. Liking	.93	.83	.23	.32	.33	.41	.45	.59	**.90**			
8. Sharing	.95	.88	.34	.42	.31	.49	.46	.48	.74	**.93**		
9. Commenting	.92	.79	.45	.43	.23	.48	.48	.40	.61	.69	**.93**	
10. Posting	.95	.87	.40	.42	.25	.50	.47	.41	.65	.80	.78	**.93**

Note: Diagonal elements (in bold) are the square root of the average variance extracted (AVE). Off-diagonal elements are the correlations among constructs. For discriminant validity, diagonal elements should be larger than off-diagonal elements

The estimated path coefficients of the structural model were examined in order to evaluate our hypotheses. Figure 3 presents the analysis of the research model.

Specifically, external regulation has a positive effect on commenting and posting, while it has no effect on reading, liking, and sharing. Thus, H1d-e are supported, while H1a-c are rejected. Next, regarding the dimensions of intrinsic motivation, introjected regulation has a positive effect on sharing, while it has no effect on reading, liking, commenting, and posting. Thus, H2c is supported, while H2a, b, d, e are rejected. Next, the results show that identified regulation has a positive effect on all dimensions of civic engagement, that are reading, liking, sharing, comment, posting, thus H3a–e are supported. Next, integrated regulation has a positive effect on liking, sharing, commenting, and posting, while it has no effect on reading. Thus, H4b–e are supported, while H4a is rejected. Finally, intrinsic regulation has a positive effect on all dimensions of civic engagement (i.e., reading, liking, sharing, comment, posting), thus H5a–e are supported.

Square multiple correlations (R^2) for the five dimensions of civic engagement are presented on Fig. 2 as well. The R^2 for reading is 0.24, for liking is 0.26, for sharing is 0.31, for commenting is 0.34, and for posting is 0.32. Values higher than 0.26 imply relatively high effects of the predictors of civic engagement.
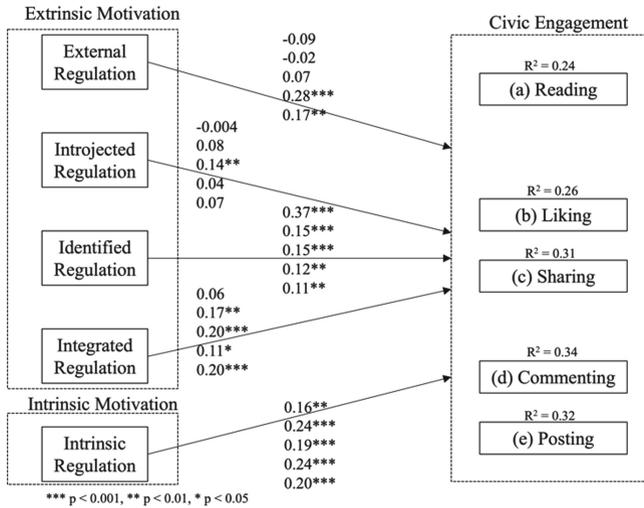

Fig. 3. SEM analysis of the research model

5 Discussion

Our study has shed light on civic engagement on social media and has analysed how different types of motivation influence people's civic engagement behaviour. We have based our study on the well-established SDT that differentiates between external, introjected, identified, integrated regulation, and intrinsic motivation.

We have developed a new construct for our dependent variable civic engagement. Civic engagement has been measured as a multi-dimensional construct, consisting of

reading, liking, sharing, commenting, and posting civic engagement topics on Facebook. In doing so, we built on the framework developed by [10]. To the best of our knowledge, we are the first ones to have conceptualised civic engagement on social media in such breadth. The results of the hypothesis testing reveal several significant relations.

First, *intrinsic regulation* has a significant positive influence on all five dimensions of civic engagement (5a–e). This indicates that contributing to issues of public concern on social media is driven by inherent satisfaction and joy of doing good for society. Our findings are in line with related studies that have also found a merely positive impact of intrinsic motivation on participation [16, 17].

Second, a different picture shows for the different types of extrinsic motivation. Only *identified regulation* has a significant positive influence on all dimensions of civic engagement (3a–e). This indicates that after consciously valuing the goal of civic engagement on social media, the actions are accepted as personally important [4]. In contrast to this, *integrated regulation*, which refers to having brought civic engagement on social media into congruence with one's own value system, has a significant positive impact on liking, sharing, commenting, and posting civic engagement activities on social media (4b–e), while it does not have a significant impact on reading. *Introjected regulation* only has a significant impact on sharing civic engagement topics on social media (2c). Since introjected regulation refers to conducting a behaviour but not fully accepting it as one's own, this result is not surprising. Still, it is in contrast to the findings by Zhao and Zhu [16], who have identified a significant impact on participation effort. *External regulation* has a positive impact on commenting and posting civic engagement activities on social media (1d–e). Since this type of motivation refers to behaviours that are performed to satisfy an external demand or reward contingency, it is understandable that this motivation triggers the two most 'visible' civic engagement activities on social media.

Regarding the different dimensions of civic engagement on social media, it is striking that four out of five hypotheses postulating an influence on commenting and posting were confirmed in contrast to only two hypotheses suggesting an impact on reading. This suggests that reading, which is a rather passive activity, often preferred by citizens when it comes to interacting with government on social media [22], is especially not important when the motivation is extrinsic, that is, to show others that one is contributing to issues of public concern.

6   Conclusions

In our study, we have raised the question "What motivates users to contribute to civic engagement activities on social media?" To answer this, we have conducted a quantitative survey with Facebook users, building on SDT. The findings suggest that especially intrinsic motivation is very important for civic engagement activities while different types of extrinsic motivation play a less important role. Our results are not totally congruent with previous findings from literature, which might be explained by our multi-dimensional conceptualisation of civic engagement.

Our findings have implications for both research and practice. As for the first, we have contributed to the research body of knowledge by applying SDT to the area of

civic engagement on social media. In addition, we have developed and applied a new, multi-dimensional construct of civic engagement on social media, consisting of reading, liking, sharing, commenting, and posting activities. As for implications for practice, our results suggest that, at least to a certain degree, civic organisations can strengthen people's motivation to contributing to issues of public concern on social media. This also applies for public sector organisations with the goal of reaching a higher level of participation.

Our research comes with several limitations and calls for further research. First, we have not differentiated between different topics of civic engagement such as political, environmental, or societal issues. Also, we did not distinguish between top-down initiatives (i.e., initiatives initiated by public organisations) and bottom-up actions. Further, future studies may examine how the required skills for citizen-public official interaction that changed due to digitalization [23] impact civic engagement. Second, the findings are based on self-reported data; other methods such as in-depth interviews could provide a complementary picture of the findings. Third, our data stem from a German-speaking context, thus probably including cultural biases. Therefore, our study should be extended to further national contexts. As a future step, we additionally plan to examine civic engagement as a third order construct, in which the related categories sharing/liking and commenting/posting are summarised as second-order construct. Finally, we plan to apply fuzzy-set Qualitative Comparative Analysis (fsQCA) [24], which enables us to identify the necessary and sufficient conditions for an outcome to occur [25, 26] and get more in-depth insights into the relationships between the concepts.

Appendix

Scale items with mean, standard deviation and standardized loading.

Construct and scale items	Mean	S.D	Loading
I read, like, share, comment, or post topics relevant to civic engagement on Facebook…			
Extrinsic Motivation: *External Regulation*			
1… because other people will be upset if I don't	2.50	1.75	0.918
2… because I get recognition from others in doing so	2.62	1.69	0.911
3… because my friends expect me to do so	2.49	1.73	0.944
4… to avoid being criticised	2.33	1.70	0.941
Extrinsic Motivation: *Introjected Regulation*			
1… because I feel bad about myself if I don't	2.70	1.78	0.856
2… because I feel dissatisfied with myself if I don't	3.11	1.79	0.883
3… because I feel internal pressure that compels me to	3.67	1.82	0.790
4… because I feel uncomfortable if I don't	3.14	1.84	0.915

(*continued*)

(*continued*)

Construct and scale items	Mean	S.D	Loading
5… because I regret it if I don't	2.98	1.77	0.899
6… to calm my consciousness	2.87	1.81	0.859
Extrinsic Motivation: *Identified Regulation*			
1… because I feel it is important for me personally to do it	5.18	1.48	0.914
2… because it has great personal significance for me	4.77	1.59	0.908
3… because I experience it as personally important	5.06	1.55	0.916
Extrinsic Motivation: *Integrated Regulation*			
1… because it is a well-established habit of mine	3.07	1.76	0.885
2… because it is now quite natural for me	4.08	1.76	0.801
3… because it is now an entrenched habit of mine	3.12	1.75	0.891
Intrinsic Motivation: *Intrinsic Regulation*			
1… because I enjoy doing it	3.78	1.76	0.865
2… because I find that it is a pleasurable experience	3.95	1.75	0.892
3… because I like the feeling when contributing to civic engagement	4.00	1.72	0.869
4… because I experience pleasure in contributing to civic engagement	4.43	1.66	0.835
Reading			
1 Whenever I see a post relevant to civic engagement on Facebook, I read it	5.32	1.21	0.927
2 It is likely that I read a post relevant to civic engagement when it is displayed in my newsfeed on Facebook	5.34	1.24	0.899
3 I read all posts relevant to civic engagement that I see on Facebook	4.68	1.53	0.833
Liking			
1 Whenever I see a post relevant to civic engagement on Facebook, I like it	4.54	1.30	0.926
2 It is likely that I like a post relevant to civic engagement when it is displayed in my newsfeed on Facebook	4.61	1.33	0.915
3 I like all posts relevant to civic engagement that I see on Facebook	3.86	1.73	0.883
Sharing			
1 Whenever I see a post relevant to civic engagement on Facebook, I share it	4.06	1.50	0.945
2 It is likely that I share a post relevant to civic engagement when it is displayed in my newsfeed on Facebook	4.03	1.52	0.945
3 I share all posts relevant to civic engagement that I see on Facebook	3.52	1.79	0.909

(*continued*)

(*continued*)

Construct and scale items	Mean	S.D	Loading
Commenting			
1 Whenever I see a post relevant to civic engagement on Facebook, I comment on it	3.75	1.47	0.942
2 It is likely that I comment on a post relevant to civic engagement when it is displayed in my newsfeed on Facebook	3.75	1.51	0.946
3 I comment on all posts relevant to civic engagement that I see on Facebook	3.30	1.73	0.919
Posting			
1 Whenever I see a contribution relevant to civic engagement on the Internet, I post it on Facebook	3.77	1.54	0.942
2 It is likely that I post a contribution relevant to civic engagement on Facebook when I see it on the Internet	3.72	1.56	0.954
3 I post all contributions relevant to civic engagement that I see on the Internet	3.25	1.78	0.915

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