Conceptualising and Measuring E-Participation:

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Abstract

This paper seeks to more clearly define and measure the phenomenon of e-participation, focusing specifically on the question of whether it is simply an extension of existing forms, differing only in mode, or whether it offers a new and qualitatively different form of political engagement. The analysis is timely since despite over a decades' worth of research being conducted into the topic of e-participation, a clear and commonly accepted definition of the activity itself remains elusive. After developing a typology of e-participation we test it using confirmatory factor analysis. The results indicate that different forms of e-participation can be identified, some of which are conventional and some of which are new. The implications of each for mobilization of citizens are discussed in a concluding section.

Introduction

This paper seeks to advance the burgeoning literature on online or 'e-participation' by developing a more sophisticated conceptual and empirical understanding of this new phenomenon within political science. Specifically we contend that the study of e-participation has been hampered by an unclear understanding within the literature of what the object of study precisely is, and a lack of a strong theoretical foundation with which to define it and its various forms. In the early days of study, there was a tendency to adopt blunt measures of basic internet 'use' or 'access'. However, as surveys have expanded their range of items measuring internet use, a more multi-faceted picture of online participation has emerged and the detection of mobilising effects increased. In this paper we seek to develop this trend to provide a more diverse and contextualised understanding of e-participation, by categorising the approaches taken to the topic within the existing literature, drawing upon the work on offline participation to develop a more clearly articulated definition of e-participation and its various modes and testing that conceptualisation with original survey data drawn from the UK General election of 2010.

The paper is organised into four basic sections. In the first section we outline the current state of research on e-participation by classifying studies into one of the main approaches. Arguing that very few studies have actually sought to define and differentiate e-participation we then introduce the offline participation literature and the central concepts it offers that help to develop our understanding. In a third section of the paper we outline our measurement model of e-participation and test it through simultaneous confirmatory factor analysis. In a final section of the paper we discuss the implications of the different modes of e-participation uncovered in terms of how far they are linked with mobilization of individuals.

The study of e-participation

The study of online or e-participation is a growing field of enquiry and studies placed under its 'banner' vary in scope, method and conclusions. Much of the early work was speculative and even visionary in nature with e-participation being understood from a wider holistic 'edemocracy' perspective, i.e. whether it promotes a communitarian or more direct model of democracy (Rheingold 1993; Negroponte 1996; Dahlberg 2001; Budge 1996). More empirical work began to emerge in the late 1990s, a strand of which focused primarily on the informal and radical nature of e-participation, with attention given to organisational uses of the internet as a means to coordinate protest

and collective action. This included case studies of anti-government protests in Mexico among the Zapatistas, anti-war movements in the countries comprising the 'coalition of the willing'. the global anti-capitalist protests in the famous 'Battle in Seattle' and anti-WTO protests, and collective action (Bennett 2003; Bonchek 1995; Capling and Nossal, 2001; Gillan and Pickerill 2007, Pickerill 2001; Rheingold 2002; Della Porta and Mosca 2005; Earl 2006; Mosca 2010), as well as more theoretical accounts of how the internet reduced problems of collective action Bimber et al. 2005.

A second empirical strand of research also emerged in the late 1990s looking more closely at the impact of the internet on individuals' political attitudes and behaviour within the representative sphere of politics. The focus was primarily on questions of mobilization and whether the internet increases individuals' involvement in politics. Seminal work was done in this area by Bimber (1999; 2001) who compared predictors of e-contact with government versus by phone and mail and concluded 'small but subtle' effects, in that similar resources mattered for each but that internet contacters were less politically connected and younger. He then followed this up with an examination of the effects of internet access and obtaining online campaign information on voting, donation, and other political acts such as attending a rally, contacting government officials, and working for a candidate. Again he concluded small but significant relationship of online information seeking with donations.

Following Bimber's analyses there has been an increasing volume of work on the topic of e-participation and particularly the question of whether internet is increasing participation. While the search for effects at the individual level is an important one, the rush to examine it causally we argue has led to an overlooking of more basic theoretical questions about the actual object of study i.e. the 'what' of e-participation with a variety of internet use and participation measures employed. This paper constitutes an attempt to address this deficit by profiling the literature on e-participation to date, identifying the gaps in our current understanding and positing and testing a new multi-dimensional model of e-participation that draws on classic theories of participation.

E-participation in the representative sphere
Studies placed in the 'e-participation' field that followed Bimber's work can be broadly divided into two approaches to the topic. While both look at the impact of the

net on political activities and attitudes, the first set take a more tangential or indirect approach and examine the impact of internet use, defined in general or more specific terms, on offline political behavior, attitudes and levels of civic engagement. A second body of work takes a more direct approach to the topic looking at a range of specifically online political activities, such as e-contact, e-petition. In a nutshell, the studies in the former camp look at participation and the internet whereas the latter are centered on participation on the internet, and define e-participation as an activity in its own right. Some studies cover both areas of enquiry. While the former studies are of interest in terms of building the picture of the internet as a mobilizing force, as sources for better definition and measurement of e-participation their value is quite limited. It is the latter set of studies that we argue are most relevant to the purposes of this paper. Below we briefly profile these literatures, focusing particular attention on the second and its attempts to define and differentiate forms of e-participation.

Participation and the Internet: E-participation studies in this category take a broad approach to the topic, relating internet use, understood in basic access or use terms (Shah et al. 2002; Norris 2004; Stoneman 2007; Sylvester and McGlynn 2010) or as more specific types of usage such as information seeking, recreational activities (game playing) or online skills (sending an email attachment, setting up a website) to changes in individuals' level of 'real world' political activity or civic attitudes (Jennings and Zeitner 2003; Kaye and Johnson 2002; Scheufele and Nisbet 2002; Tolbert and McNeal 2003; Tolbert and Mossberger 2003; Johnson and Kaye 2003; Hardy and Scheufele 2005; Moy et al. 2005; Krueger 2002; Best and Krueger 2005; Kenski and Stroud 2006; Xenos and Moy 2007; Mossberger et al. 2007; Quintelier and Vissers 2008). The focus is thus on internet use as a driver to real world participation, and the substantive findings have focused on how far radical or even subtle changes in citizen behavior can be detected in levels of engagement. The 'e' component is an independent variable sitting on the right side of the equation. In general, the work has pointed to the internet as having a positive if small effect on individuals' proclivity to engage in political activity (Boulianne 2009).

Participation on the internet Studies coming under this banner are those that conceptualize and operationalize e-participation as a dependent variable and see it as an activity in its own right, to be explained. The central focus has again been on detection of mobilization with e-participation regressed on a range of standard

predictors to see how far the usual suspects are supported. The types of activities studied have varied, however, with some studies focusing largely on existing or 'converted' forms of offline participation such as emailing government or online donation and petition signing (Bimber 1999; Krueger 2002; Anduiza et al. 2010; Saglie and Vabo 2009; Schlozman et al. 2010; Sylvester and McGlynn 2010) and others including activities with no obvious offline counterpart, such as blogging, following a politician on twitter, posting or commenting on online video (Rojas 2010; Leung 2009), while others have covered both types (Schlozman et al. 2010). Finally, there are studies that examine individuals' involvement in specific initiatives or experiments in online interaction/discussion consultation (Stanley and Weare 2004) Again while the results have been largely positive in arguing that e-participation is attracting some new faces to the political arena, the lack of a commonly shared or agreed on subject of study means that there is a lack of coherence or continuity in the findings.

In this vein, some studies have attempted to draw out or differentiate the 'what' of e-participation and particularly whether it constitutes a new and different form (independence thesis), or simply is an extension of existing types of participation, differing only in mode (convergence thesis). One of the first attempts to examine this was by Jensen et al. (2007) which used multi-dimensional scaling to test the independence of various online and offline participation items. The findings were seen as supporting the independence rather than convergence. However, there were some substantial differences between the online items measuring community involvement and those measuring offline related more to individuals civic skills. Subsequent work has moved more toward supporting the convergence model.

Saglie and Vabo (2009) employed an exploratory factor analysis to interrogate a series of conventional e-participation items, i.e. those with offline equivalents. The results revealed e-participation to be multi-dimensional phenomenon, breaking down into three factors corresponding to contact, information seeking on websites, and use of e-petitions. The authors then went on to use a uni-dimensional scale in the subsequent mobilization analyses. Adopting more advanced techniques, Hirzalla and Van Zoonen (2010) conducted a simultaneous confirmatory factor analysis (SCFA) on 14 items measuring both offline and online participation. Their results show a picture of differentiation but also of convergence between the different types of participation, with 4 separate factors emerging, three of which merge off and online

activities – 'politics' 'activism' and 'sharing'. For the first two factors it is visiting websites about politics and activist causes respectively that constitute the online participation component in amongst more traditional activities such as contacting a politician or joining a demonstration. The sharing factor is largely composed of online activities – forwarding an email, signing an e-petition and using a discussion forum – with offline discussion adding a fourth dimension. For the authors the findings show that online participation cannot be conceived of as a new and independent mode but is linked and blends with existing forms.

As one of the few attempts to test the differentiation and convergence propositions the paper clearly offers a step forward in the literature. However, the theoretical underpinnings to the expectations of differentiation and convergence are limited and the items confirming convergence are, according to much of the class participation literature, pre-participatory in that they focus on information seeking and discussion. We return to this argument below in our discussion participation studies more generally.

Other analyses of interest on this topic have taken the SCFA approach one step further and developed and tested full structural equation models to assess both the question of differentiation or dimensionality of e-participation and mobilization. Here the focus has been on positing a pathway effect of some kind, whereby different types of e-participation are linked to other types and ultimately to offline participation. Possibly the most advanced of these is the analysis of Rojas et al (2009) which models a three step causal path from online news consumption to an 'expressive' form of e-participation that centers on posting comments and opinion to various fora. This more passive form of participation is then seen to prompt more active effort via mobiles and social network sites to mobilize others, which ultimately leads to offline engagement. Similar conclusions are reached by Shah et al. (2005) in a two step SEM in which e-information seeking is confirmed as prompting civic emailing and offline talk which in turn prompts offline participation. Other analyses by Gil de Zuniga et al (2009) or Baumgartner and Morris (2010) have employed hierarchical and two stage least squares regression techniques to model the stages of engagement surrounding e-participation. Both connected online information seeking to more active forms of e-participation, the former study with an additional step of online discussion. In addition, both tested but found no support for the e-activities providing a stimulus to offline participation.

The attention given to e-participation, understood as a set of definable activities that take place or are largely reliant upon the internet, is clearly expanding. To date, however, much of the attention has focused on questions of causality, either in terms of direct analysis of who is engaging in e-participation activities, or how various types of online activity link together to produce offline or online participation. In the latter set of studies there has been some attempt to disaggregate the concept of e-participation as a distinct and definable set of activities. This work has pointed to a multi-stage process whereby an initial engagement in more passive and less costly forms of engagement such as reading and then forwarding or commenting on political information, leads onto a more pro-active attempt at mobilization of others or direct involvement in politics. In particular, the identification of a possibly new intervening form of 'expressive' e-participation development is an important development, in that it appears to challenge existing accounts of participation theory to argue for a new 'softer' form that acts as an important precursor to more active forms.

Within this literature a number of gaps and a significant degree of confusion remains, however. In particular while there is basic consensus that e-participation can be differentiated into different sub-types, the theoretical justification for this differentiation is missing in most accounts or quite limited. Particularly the question of what this new form of expressive or opinion sharing constitutes as a form of participation requires closer analysis. Furthermore, there appears to be disagreement on the extent to which the various forms of e-participation uncovered constitute a fundamentally new participatory repertoire, with little connection to existing forms, or whether they are simply translations of offline activities, differing only in mode.

Defining E-participation

This paper seeks to address two central research questions to advance the literature on e-participation. First we confront the basic question of differentiation of e-participation – what sub-forms can be identified and how far do they conform to existing participation theory in terms of their levels of activism and passivity? Secondly, if a distinctive set of internet-based participatory activities can be identified, to what extent do they constitute an extension or equivalent of existing forms of offline participation? Or, are they independent of established modes, requiring a new set of conceptual criteria to be fully understood? Perhaps both convergence and independence are occurring in that the online environment offers replication of existing modes like contact, petition or discussion. But the rise of the

social media has opened up new possibilities for activities such as blogging, tweeting and 'friending' that are wholly new means of political expression and engagement.

In order to investigate these questions we embark on a review of the classic studies of participation and the classificatory schemas that have been developed to understanding offline forms. To what extent can the internet-based types of participation so far identified be accommodated within these schemas?

Defining and measuring offline political participation

On the first question of what constitutes or comes within the rubric of participation, and particularly the degree of activity or passivity associated with it, this appears to be a movable feast with the boundaries changing and expanding over time. Overall the repertoire of activities considered political participation has grown dramatically since the first studies in the field where conducted focusing only on voting and behaviours connected to elections (Lazarsfeld et al. 1948; Berelson et al. 1954; Campbell et al. 1960). Political participation can take a variety of forms and the inclusion of new activities as objects of study during the past decades has been accompanied by a debate in the literature on how to categorize these into relatively homogeneous groups.

Verba and Nie (1972) conducted one of the first studies widening the range of activities beyond voting. They showed that individuals tend to specialise in homogeneous sets of activities, labelled as *modes of participation*. They identified four different modes: turnout, campaign activities, communal activities and parochial participation. What united these activities was they are activities that have "the intent or effect of influencing government action – either directly by affecting the making or implementation of public policy or indirectly by influencing the selection of people who make those policies' (Verba et al 1995: 38).

The multidimensional nature of participation has become something of a truism since the work of Verba and Nie.

> Different forms of participation vary so much in the concerns that motivate them, in their duration and intensity, in their target, and in their outcomes, that a complete analysis must go beyond uni-dimensional scales" (Brady, 1999: 741).

However the boundaries drawn by Verba and Nie have been questioned and particularly whether actions directed toward government – voting, campaigning, contacting – constitute the only legitimate forms of participation. Only a few years later, several authors incorporated to the repertoire a new set of actions such as attending a demonstration or a protest political meeting, boycotting products, taking part in a strike or in violent activities (Marsh 1977; Barnes, Kaase et al. 1979). Political protest emerged as a new cluster of participatory activities mainly characterized by their unorthodox nature, understood as a lack of adequacy with the normative rules and common practices in a society (Marsh and Kaase 1979: 41). These studies suggested a new theoretical conceptualization which distinguished between conventional and unconventional modes of political participation.

In recent years however, the spread of protest actions meant that the label of unconventional participation has become inappropriate. Except for violent actions, protest gradually has been seen to become a relatively common and legitimate form of participation (Parry et al. 1992; Verba et al. 1995; Dalton 2002; Norris 2002; Teorell, Torcal and Montero 2007; Rucht 2007). The rising acceptance of these methods paradoxically undermined a conceptualisation of these activities based on their "unorthodox" nature. In an attempt to bring this typology up to date, the authors of the study on "Citizenship, Involvement and Democracy" (CID) suggested a new conceptualisation of the classical distinction between conventional and unconventional participation (Teorell, Torcal and Montero 2007). Instead of clustering activities according to their orthodox/unorthodox nature, they applied a distinction based on the channel of expression being employed by participants. The activities formerly labelled as conventional which are developed within the framework of representation, like voting or party activities, were labelled as "representational participation". On the contrary, protest participation and consumerism were defined as belonging to a category called "extra-representational participation".

For the most part the traditional participation literature has tended to treat e-participation either as falling outside of the boundaries of 'true' participation, or if it is considered a legitimate form in its own right then this is generally view in terms of 'independence' rather than convergence. Certainly the work of Teorell et al (2007) forms a good example of the former approach and constitutes the most recent attempt at a post-internet classification of participation. The authors develop a five category

typology of participation that encompasses voting, consumer participation, party activity, protest activity and contacting. The approach thus follows the model of Verba et al but includes an extra-representational element in which the latter two elements fit. They then further divide the classification on whether it is exit or voice based, meaning a singular one-off act (voting and boycotting) versus a more directed, specific and ongoing form of input (party, protest, and contact). Despite extending out beyond the Verba et al (1972) scheme it is not clear how e-participation is accomodated. Speculation by other authors within this literature has been somewhat limited but in general authors have either proved sceptical about the extent to which e-participation constitutes a genuine form. For Verba et al (1995) for instance, a social networking site like Facebook is simply a forum for political talk among friends rather than a place for organized political effort directed toward influencing public officials. The political groups formed are more about affinity and shared interests than concerted political action. 'Friending' a candidate is not same as working in a campaign they argue. In more recent work, however they do appear more open to the idea of these interactive forms of political engagement serving as catalyst to more concerted political behaviour and are alert to the fact that these forums are changing so rapidly "….that they may well morph into new forms of activity aimed at political influence.' (Schlozman et al 2010: 501).

If we assume a convergence model then table 1 provides some indication of how the Teorell et al (2007) scheme could be adapted to fit some elements of e-participation that have been identified within the literature.

Table 1 about here

Here we can see that a limited range of activities are included, and a number of those identified in the e-participation literature are accounted for here, leaving out some of the more expressive forms identified by Rojas et al. (2009), relating to forwarding and posting content as well as tweeting and befriending a politician. Also some of the more passive precursory information seeking activities are missing. Reconfiguring table 1 to account for these additional activities produces table 2. Here we have introduced a divide in the representational category between use of formal or institutional channels and informal peer to peer networks. In addition we have

introduced a divide between active and passive forms of voice-based forms of participation.

Table 2 about here

This categorisation allows for the placement of older or 'converged' forms of participation as well as the newer 'softer' forms that the e-participation literature has focused on. Taking this broad classificatory scheme we move to a test of it using data drawn from the UK General election of 2010.

Data

The data used were from a post-election face-to-face survey by BMRB, a UK polling company. The survey was fielded in May 20th-26th and included a range of questions that measured engagement in 13 e-participation items. Nine were campaign-specific activities and were measured as binary variables. A further four were more general covering non-election related political behavior engaged in over the previous 12 months and also measured with binary responses. A full listing of the items used in the survey can be found in Appendix A. Before presenting the evidence concerning the measurement questions we pose, we first report some basic descriptives about levels of engagement in online politics and particularly the online election in the 2010 UK General election.

Overall levels of engagement with the online campaign

We provide some basic descriptive statistics on the levels of online and offline political engagement that are at the core of the paper. These include three items measuring engagement with the official e-campaign of the parties and six items that measure involvement in more informal and non-party based aspects of the e-campaign, and use of non-official sources of information. We also have four indicators that measure involvement in more general, non-campaign forms of online political activity (e-contacting, e-donating, signing an e-petition and discussing politics online). These last four items are also measured in their offline capacity and we present these results for comparison purposes. Table 3 reports the basic frequencies for each type of activity by internet users only (as appropriate) and for the sample as a whole (i.e. including non-internet users).

[Table 3 about here]

The results show that the most popular type of activity engaged in overall was consultation of mainstream news media content, with over one third of internet users turning to such sources during the election. This is followed by accessing party produced sites, which one fifth of internet users reported doing at some point in the campaign. Other more active types of involvement with the official campaigns such as signing up as a Twitter follower or Facebook fan of a party or candidate were less common, with only six percent of internet users engaging in such practices. Actually helping to promote the parties' message or online profile via various tools such as email or texts or posting supportive links and messages on Facebook or Twitter also attracted a more limited pool of individuals online (four percent). Beyond the official campaign, individuals displayed similarly lower levels of engagement in the more active types of e-participation, with posting general political content to social networks walls and blogs attracting four and six percent respectively. Watching non-official YouTube videos attracted just under one in ten of internet users. Notably, the more active forms of unofficial involvement (as with official campaign led initiatives) such as starting or joining a political social networking group or forwarding and reposting political material were less popular than more passive acquisition of online election material. Taking all these activities together we can see that fully one third of the UK population and just under half of internet users engaged in some form of online political activity during the election.

While these levels of participation do not quite match the levels engagement seen in the US during the Presidential election of 2008, which were estimated to be over half of population (Smith 2009), levels have clearly increased significantly in the UK since 2005. And while mainstream news sites remain among the most commonly accessed sources, one of the most striking increases from Ward and Lusoli's (2005) findings is the rise of those utilising official campaign sites, with up to seven times as many individuals reportedly having sought out party or candidate produced material this time around.

Differentiation and convergence within e-participation:
To test the extent to which our expectations about differentiation exhibited in table 2 were realized within the data we mapped our 13 e-participation items onto the

categories. It was clear that we did not have the capacity to test all the types set out. In particular we lacked items dealing with the extra-representational aspect of participation. However, mapping our items resulted in a substantial portion of the representational element being covered. This resulted in a fourfold typology (see Table 4) with a separate entry for targeted forms of communication. In addition because we had offline equivalents of some of the e-participation items we were also able to add them to the table as a test of the convergence theory. We did this in a second step after testing the e-participation model.

[Table 4 about here]

The table was converted in a SCFA model as show in Figure 1.

[Figure 1 about here]

Factor 1 'E-formal' captures active involvement in formal politics but in a specifically campaign related dimension, including signing up for party news feeds and actively using online tools to help campaign for the party or starting / joining an election related Facebook group. A cross-loading of e-donation was seen as possible here and so was included in the first instance. Factor 2 'E-targeted' captures the more active and targeted types of conventional online political activity such as donating to causes, contacting government and signing an online petition. Another cross-loading was possible here again by including starting/joining a social networking group. However, we opted for not including it limiting the number of cross-loadings in the model[i]. Factor 3 'E-expressive' contains the new items that have been identified in previous studies as important elements of e-participation. They constitute more active forms of involvement with the election than other activities involving information gathering in that are a public statement or expression of individuals' opinion on political matters, but they are done so on their own initiative (rather than pre-set party provided channels) and through informal and unofficial channels such as YouTube or Twitter and via forwarding and sharing links and new stories with others and reposting or embedding content into one's own site. Finally Factor 4 'E-communication' captures the more passive and less 'labor-intensive' types of political activity such as accessing news and campaign information and watching online video and online political talk or

discussion, i.e. this covers the reception of information and also talking about it as well.

Model Testing: Simultaneous Confirmatory Factor Analysis

Step (1) The measurement model outlined in figure 1 was tested using simultaneous confirmatory factor analysis (SCFA) to see how far it constituted a valid representation of the relationships between these variables within the population. The simultaneous estimation of the measurement model allows us to more explicitly test the strength of the relationships between the items and the constructs as well as between the constructs themselves. To investigate the question of whether underlying sub-dimensions of e-participation as specified in Table 2 can be found in our data we used Mplus version 6. The estimator used was weighted least squares with mean and variance adjustment (WLSMV) which is recommended when binary data are being analyzed. The data included internet users only.[ii]

Tests of the individual constructs revealed all items to have positive and significant loadings and where global fit measures were possible to specify, to indicate acceptance of the default model. As two of the constructs had only three indicators (e-targeted and e-expressive), single measurement models were only just identified (i.e. df = 0), making global fit tests not possible. The results of the full SCFA are reported in Figure 2.

[Figure 2 about here]

The results reflect a number of adjustments made to the 'baseline' model shown in Figure 1 based on the information obtained from the modification indices, regression loadings and standard errors. The key adjustments were deletion of the e-donation item on the e-formal factor which was found to be non significant. E-discussion was moved to be part of the e-expressive factor along with other items indicating public expression of opinions. After this change, the e-communication factor only includes activities related to accessing information or watching videos and so was renamed as "e-information" in order to better capture the passive characteristic of these items. After performing these modifications results show that the model had a good descriptive fit to the data based on the range of global fit measures reported (CMIN/DF=1.38, CFI=0.989, RMSEA=0.017). All the factor loadings were positive

and significant at the .001 level and the standardized values range from 0.64 to 0.88. The determinant of the covariance matrix did indicate a problem of multicollinearity in that it approached zero and two eigenvalues had values close to zero. However, further checks on the variables within the sample as a whole using multicollinearity diagnostics reveal that none displayed a tolerance less than 0.20 and VIF were below 1.5.

Step (2) After testing the four factor model using our e-participation items and finding support for the differentiation thesis and the multi-dimensionality of the process, we moved on to examine the question of convergence. Here we mapped the offline participation items onto figure 1 to produce a new model, as represented in figure 3.

[Figure 3 about here]

The initial results indicated a good fit of the data to the theoretical model. All regression weights are significant except the coefficient for one of our cross-loading items – edonate – in relation to E-formal. Inspection of the modification indices led to the introduction of a cross-loading for the e-petition item on e-expressive. The results are reported in Figure 4.

[Figure 4 about here]

Measures of fit indicated values within an acceptable range, CFI statistic is above the threshold and the standardized RMSEA is below the .05 cut off. The chi square test, as expected given the larger sample size proved to be significant but the CMIN/DF ratio was below 2, within the acceptable range. The key finding is that for those items where it was possible to test for convergence of online and offline participation, i.e. e-targeted and e-expression, it seems that there is a commonality present. Online donation, petition and contact can be seen as being part of a broader targeted type of participation that encompasses offline versions, rather than separate activities. This also applies to e-expression where offline discussion is linked with online discussion, along with forwarding or embedding unofficial campaign contents, posting comments, or signing e-petitions. The two other types of campaign involvement – e-formal and e-information – remain as clearly defined factors. However it is not

possible to test in this instance the extent of any convergence with any equivalent offline forms of involvement.

Conclusion

This paper has sought to examine the concept and measurement of e-participation. It has argued that greater rigour needs to be introduced to the study of the phenomenon. In particular, it should be restricted to apply to participatory activities that occur via online technologies, i.e. those taking place 'on' the internet. Moreover it argues that rather move straight to examining the mobilizing potential of this form of participation, closer attention should be paid to first specifying it as a dependent variable. In this regard two key questions need to be addressed. The first being the extent of sub-types of participation that exist within e-participation (differentiation hypothesis). Following the typologies developed to understand offline participation, to what extent can we observe different clusters or types of activities that form meaningful and distinct forms of participation? Secondly, within those sub-types of participation how far do we see any genuinely new forms emerging? Or, does online participation essentially mirror and replicate existing practices (convergence hypothesis)?

Having reviewed the extant e-participation literature and the classic studies of participation we have hypothesized a series of modes of e-participation. Of these types we were able to test four types – e-communication, e-expressive, e-formal, e-targeted. We then tested these existence of these types using SCFA. The four factors specified in table 4 were broadly confirmed through our SCFA with some minor adjustments.

In terms of our original research questions the results it seems that we can confirm both the differentiation and convergence theses. There are underlying clusters of participatory activities that can be differentiated into meaningful sub-types. In terms of the convergence question – a mixed picture emerges. Within the sub-types that emerge, where equivalent measures it appears that there is a convergence across the individual offline and online participatory acts. Given that we don't have equivalent offline measures for the types of activities included in our formal and e-expressive factors then it is not possible to fully explore this claim. We would suggest that e-formal is most likely to replicate or link to offline forms of campaign involvement. E-expressive participation on the other hand, appears to capture the

newest dimension of participation of all those identified here. This type of participation constitutes active engagement with representative electoral politics but not via institutional channels. Instead it occurs via peer networks and informal viral sharing software and is not necessarily targeted at government officials. Whether this is simply the continuation of 'interpersonal discussion' in campaigns, however, is a question for future research to explore. Also its claims to be influencing or seeking change at the policy level need to be further investigated. However, overall we would argue that the analysis presented has provided a stronger theoretical and empirical foundation to the assumptions that have thus formed informed the e-participation literature.

Tables and figures

Table 1: A typology of online participation

	REPRESENTATIONAL	EXTRA-REPRESENTATIONAL
Method of influence		
EXIT-BASED	eVoting	eBoycott/Buycott (CONSUMERISM)
VOICE-BASED	Non-targeted PARTY eJoin, edonate, esign up as volunteer/participate	Non-targeted PROTEST eJoin, edonate, esign up Promote /coordinate strike, demo, illegal protest Hacktivism, e-disturbance, electronic sit ins.
	TARGETED eContact email politican, org, party)	

Table 2: An expanded typology of online participation

Method of influence	REPRESENTATIONAL	EXTRA-REPRESENTATIONAL
EXIT-BASED	eVoting	eBoycott/Buycott
VOICE-BASED Active	*Non-targeted PARTY* **FORMAL/INSTIT CHANNELS** TRAD eJoin, eDonate, eVolunteer NEW Use party tools to 'friend-raise' forward, post, embed party messages, friend politician, sign up for RSS feed, retweet msg, join SNS group. **INFORMAL CHANNELS** NEW (Expressive) Forward, post, comment, embed unofficial content through 3rd party platform/peer2peer form/join SNS group.	*Non-targeted PROTEST* TRAD – eJoin, eDonate, esign up as volunteer/participate. ePetition, NEW (Expressive) forward, post, comment. embed. join/form SNS, use e-activist tools, NEW (Illegal) Hacktivism, eDisturbance, electronic sit ins.
VOICE –BASED Passive	**FORMAL/INSTIT** eInfo seeking - Party Candidate sites, Elec Commission, BBC news sites **INFORMAL** eInfo seeking Blogs, indymedia, Youtube, BBC news sites eDiscuss/political talk	eInfo seeking (websites) and discuss/talk
	TARGETED eContact (email politican, org, party)	

Table 3: Online election activities of UK voters in the 2010 General Election (weighted data)

Type Of Activity	Total Sample (%)	Internet users (%)	N
Official Campaign			
Read/accessed official sites	15.5	20.6	301
Signed up as supporter/for e-news	4.6	6.1	89
Used online tools to campaign /promote parties	3.3	4.3	63
Total official campaign engagement	18.6	24.8	363
Non-Official Campaign			
Read/accessed mainstream news sites	27.6	36.7	539
Viewed/accessed non-official online video	5.7	7.6	112
Joined/started political group on a SNS	3.2	4.2	62
Posted political comments to own/other blog/SNS	4.5	6.0	88
Forwarded non-official content (jokes, news items)	2.6	3.4	50
Embedded/reposted non-official content	1.1	1.4	21
Total non-official campaign engagement	31.4	41.7	613
Non-Campaign Online / Offline Activities			
Online contact with government official	6.8	9	132
Offline contact with government official	8.7	8.5	170
Online donation to political cause/organisation/party	1.1	1.5	22
Offline donation	3.3	3.5	64
Signed online petition	9.6	12.7	186
Signed offline petition	9.3	10.3	181
Discussed politics online	13.2	17.5	255
Discussed politics offline	54.7	59.1	1064
Total non-campaign political activities	65.5	71.4	1275

Source: BMRB National Face to Face Quota Survey of 1,960 UK adults May 20th-26th 2010.
Official Campaign Qu: Please could you tell me, whether you have done any of the following activities in relation to official parties or candidates online?
Non-official Campaign Qu:: Which, if any, of the following activities did you do online during the election campaign over the last month?
Non-campaign offline and online Qu: Here is a list of activities that some people do and others do not. For each one, please could you tell me if you have done this in the past 12 months or not. In the past 12 months have you.....?

Table 4: A Typology of Voice-based Representational eParticipation: UK 2010 13 E-participation items

	MODE	
CHANNEL	Active	Passive
Formal	**E-FORMAL** eDonate eCampaign - Sign up for party info - Use party tools - Join/start election sns group	**E-COMMUNICATION (formal)** eInfo gathering - Access party sites
Informal	**E-EXPRESSIVE** Forward jokes, links, stories Post comment to blog/sns wall Embed links, unofficial content Join/start election sns group	**E-COMMUNICATION (informal)** eDiscuss eInfo gathering - Read mainstream news - View unofficial online video
E-TARGETED	eContact ePetition eDonate	

Figure 1: SCFA Model of E-participation, online activities, internet users (Baseline)
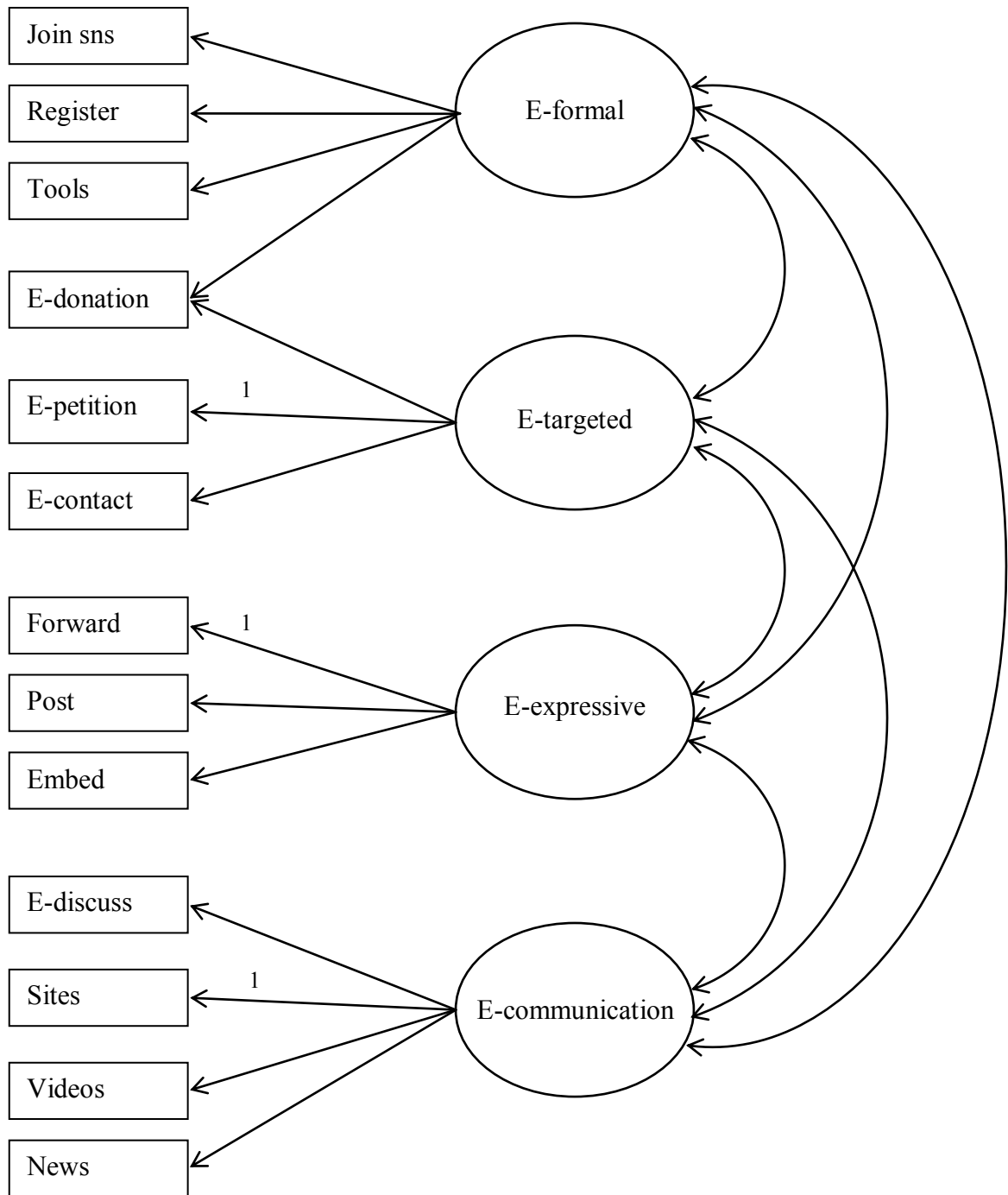
Figure 2: SCFA Model of E-participation, online activities, internet users (Results)
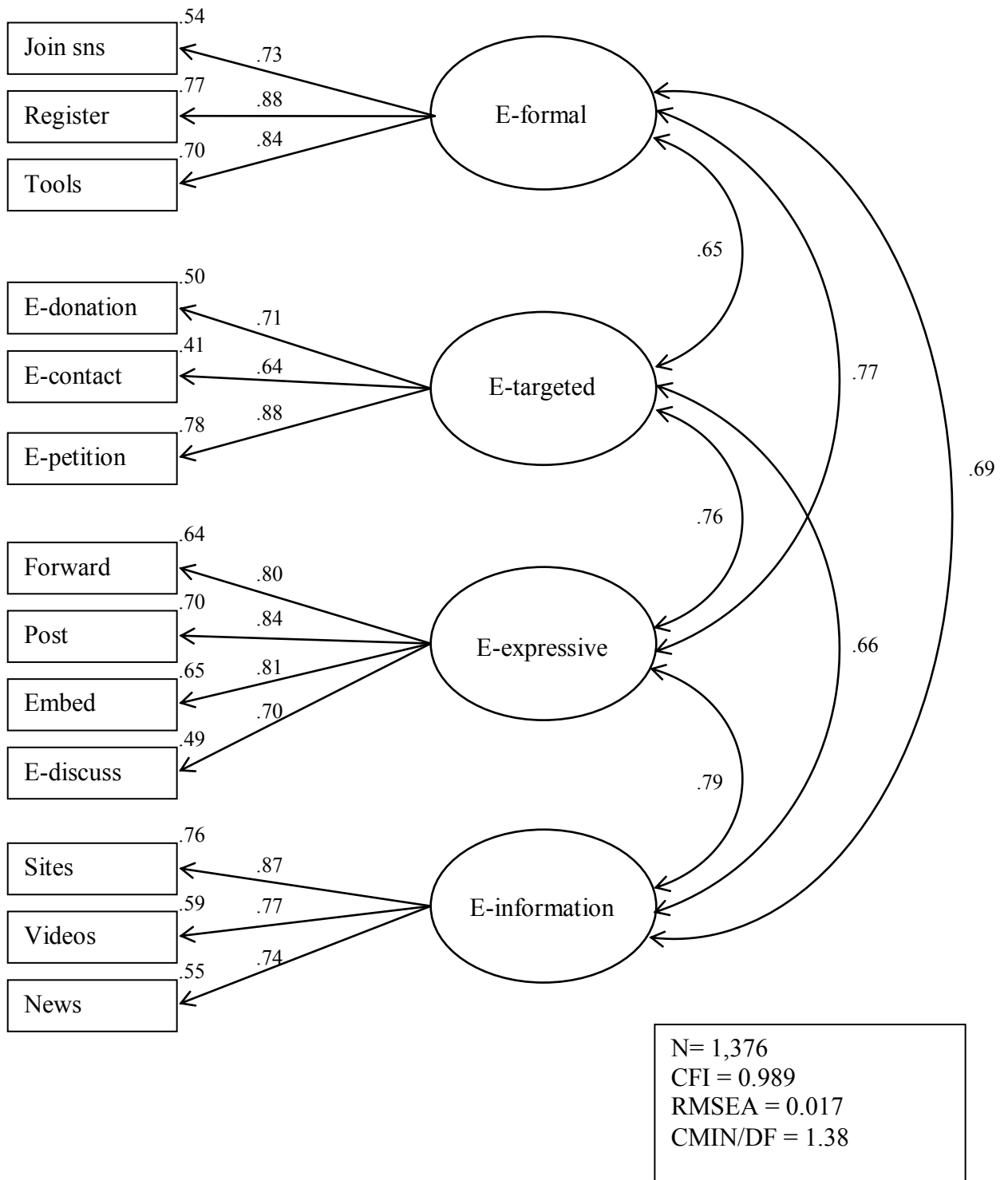
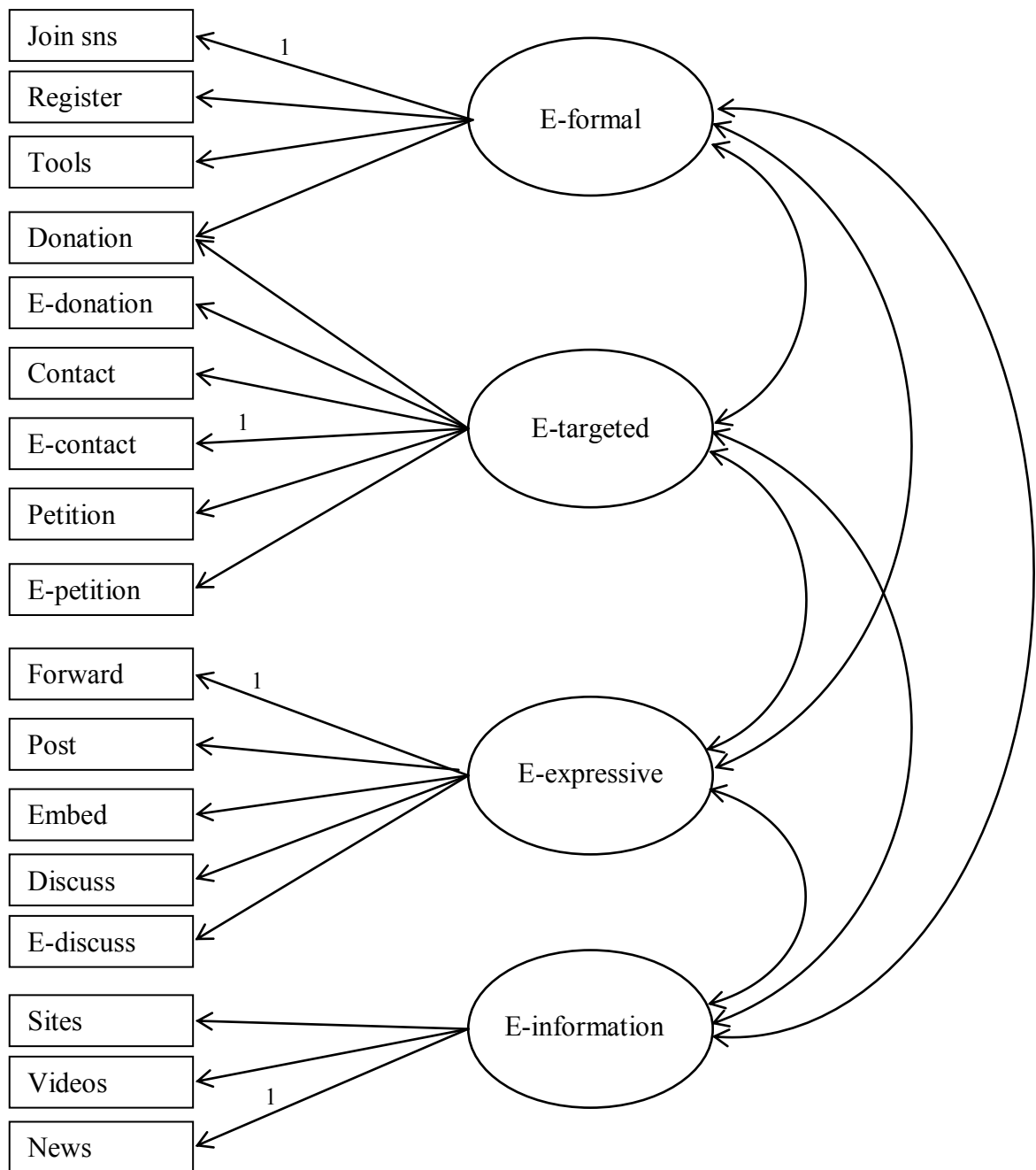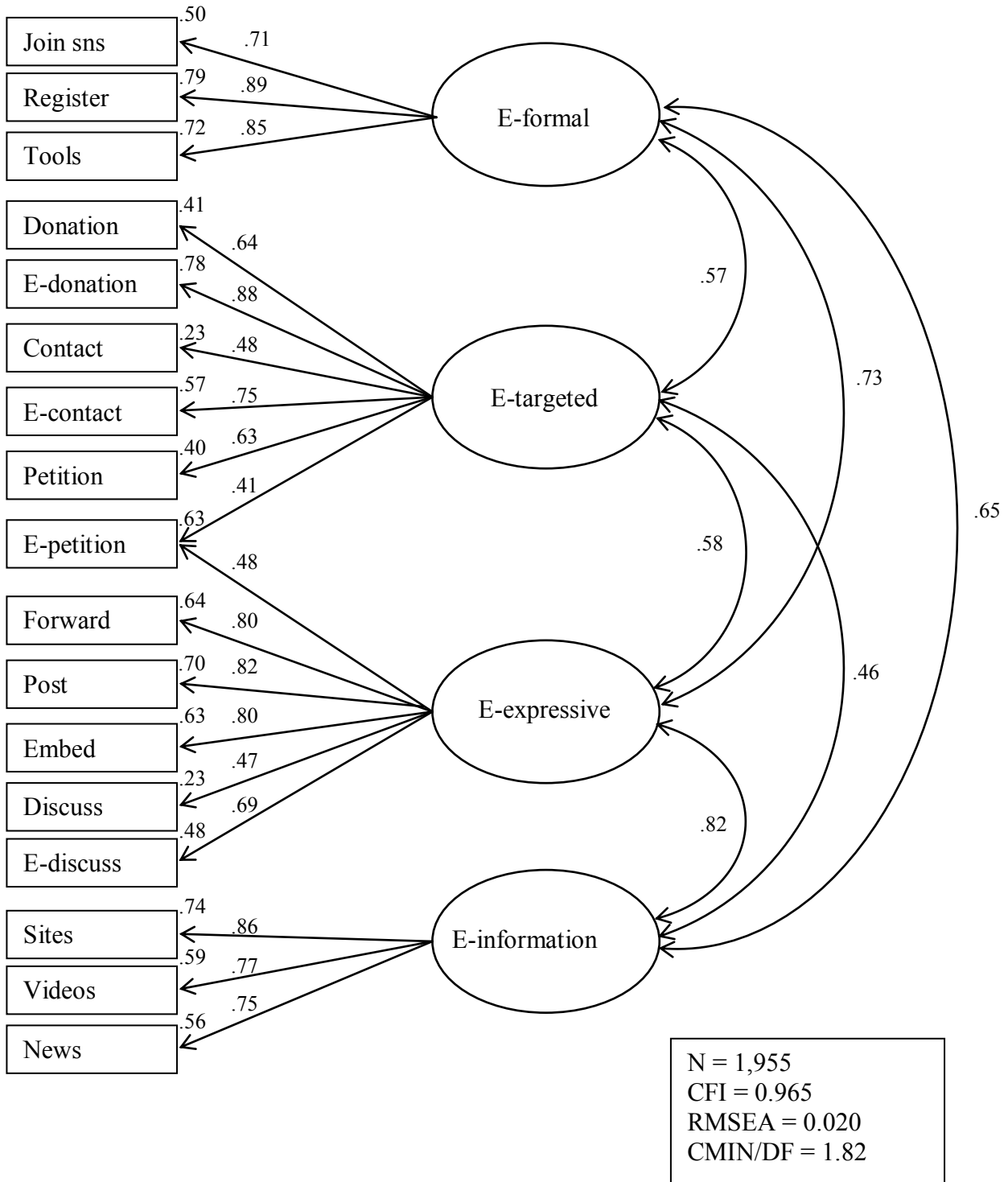**Figure 3: SCFA Model of E-participation, online and offline activities (Baseline)**

Figure 4: SCFA Model of E-participation, online and offline activities (Results)

The SCFA model displays four latent factors (E-formal, E-targeted, E-expressive, E-information) with their observed indicators and standardized loadings.

E-formal:
- Join sns .50 (.71)
- Register .79 (.89)
- Tools .72 (.85)

E-targeted:
- Donation .41 (.64)
- E-donation .78 (.88)
- Contact .23 (.48)
- E-contact .57 (.75)
- Petition .40 (.63)
- E-petition .63 (.41)

E-expressive:
- Forward .64 (.80)
- Post .70 (.82)
- Embed .63 (.80)
- Discuss .23 (.47)
- E-discuss .48 (.69)

E-information:
- Sites .74 (.86)
- Videos .59 (.77)
- News .56 (.75)

Factor correlations:
- E-formal ↔ E-targeted .57
- E-formal ↔ E-expressive .73
- E-formal ↔ E-information .65
- E-targeted ↔ E-expressive .58
- E-targeted ↔ E-information .46
- E-expressive ↔ E-information .82

N = 1,955
CFI = 0.965
RMSEA = 0.020
CMIN/DF = 1.82

References

Anduiza, E., Gallego, A. and Cantijoch, M. 2010. "Online resources and political participation", *Journal of Information, Technology & Politics*, 7 (4).

Barnes, S.H. & Kaase, M. et al. 1979. *Political Action: Mass participation in five Western democracies.* Beverly Hills, Calif.: Sage Publications.

Baumgartner, J. C., and J. S. Morris. 2010. MyFaceTube Politics Social Networking Web Sites and Political Engagement of Young Adults. *Social Science Computer Review* 28 (1): 24-44.

Bennett, L. 2003. 'New Media Power. The Internet and Global Activism'. In Couldry, N. and Curran, J. (Eds.) *Contesting Media Power*, Lanham, MD: Rowman and Littlefield: 17-37.

Berelson, B., Lazarsfeld, P.F. and McPhee, W.N. 1954. *Voting : a study of opinion formation in a presidential campaign*. Chicago: University of Chicago Press.

Best, S.J. and Krueger, B.S. (2005). "Analyzing the Representativeness of Internet Political Participation". *Political Behavior,* 27 (2): 183-216.

Bimber, B., Flanagin, A. and Stohl, C. 2005. 'Reconceptualizing collective action in the contemporary media environment', *Communication Theory*, 15(4), November: 365-378.

Bimber, B. 2001. 'Information and political engagement in America: The search for effects of information technology at the individual level.' *Political Research Quarterly* 54: 53-67.

Bimber, B. 1999. The Internet and citizen communication with government: Does the medium matter? *Political Communication*: 409-428.

Bonchek, M. (1995) 'Grassroots in Cyberspace: Recruiting Members on the Internet', paper for the Annual Meeting of the Midwest Political Science Association, Chicago.

Boulianne, S. 2009. 'Does Internet Use Affect Engagement?: A Meta-Analysis of Research.' *Political Communication.* 26(2): 193-211.

Brady, H.E. 1999. "Political participation" in Wrightsman, L.S., Robinson, J.P. and Shaver, P.R. (Eds.) *Measures of Political Attitudes* San Diego; London: Academic Press.

Budge, I. 1996. *The new challenge of direct democracy*. Cambridge: Polity Press.

Campbell, A., Converse, P., Miller, W. and Stokes, D. 1960. *The American voter*. Chicago: University of Chicago Press.

Capling, A. and K.R. Nossal. 2001. 'Death of Distance on Tyranny of Distance?: The Internet, Deterritorialization, and the Anti-Globalization Movement in Australia.' Paper presented at the 16th World Congress of the International Political Science Association, Quebec City.

Dahlberg, L. 2001. Computer-mediated communication and the public sphere: a critical analysis. *Journal of Computer-Mediated Communication*, 7, 1.

Dalton, R. (2002). *Citizen Politics. Public opinion and political parties in advanced industrial democracies.* NY; London: Chatham House Publishers.

Della Porta, D. & Mosca, L. (2005) 'Global-net for global movements? A network of networks for a movement of movements', *Journal of Public Policy*, 25 (1): 165–190.

Earl, J. (2006) 'Pursuing social change online: the use of four protest tactics on the internet', Social Science Computer Review, vol. 24, no. 3, pp. 362–377.

Gillan, K and Pickerill, J. (2008). 'Transnational anti-war activism: solidarity, diversity and the internet in Australia, Britain and the United States after 9/11' *Australian Journal of Political Science*, 43, 1: 59-78

Hardy, BW, and DA Scheufele. 2005. Examining differential gains from internet use: Comparing the moderating role of talk and online interactions. *Journal of Communication*: 71-84.

Hirzalla, F., and L. van Zoonen. 2010. Beyond the online/offline divide: Convergences of online and offline civic activities among youth. *Social Science Computer Review*, online access (before print published).

Jennings, M. K. and V. Zeitner. 2003. 'Internet Use and Civic Engagement: A Longitudinal Analysis.' *Public Opinion Quarterly* 67: 311-334.

Jensen, M. J., J. N. Danziger, and A. Venkatesh. 2007. Civil society and cyber society: The role of the internet in community associations and democratic politics. *Information Society* 23 (1): 39-50.

Johnson, T. and B. Kaye. 2003. 'A boost or bust for democracy? How the web influences political attitudes and behaviors in the 1996 and 2000 presidential elections.' *Press/Politics* 8: 9-34.

Kaye, B.K. and Johnson, T.J., 2002. Online and in the know: Uses and gratifications of the web for political information. *Journal of Broadcasting and Electronic Media,* **46,** 1: 54–71

Kenski, K., and N. J. Stroud. 2006. Connections between Internet use and political efficacy, knowledge, and participation. *Journal of Broadcasting & Electronic Media* 50 (2): 173-192.

Krueger, B. S. 2002. 'Assessing the potential of Internet political participation in the United States: A resource approach. *American Politics Research* 30(5): 476-98.

Lazarsfeld, P.F., Berelson, B. and Gaudet. H. 1948. *The people's choice: how the voter makes up his mind in a presidential campaign*. New York: Columbia University Press.

Leung, L. 2009. User-generated content on the internet: an examination of gratifications, civic engagement and psychological empowerment. *New Media & Society* 11 (8): 1327-1347.

Marsh, A. 1977. *Protest and Political Consciousness*. Beverly Hills: Sage.

Marsh, A. and Kaase, M. (1979) "Measuring political action" in Barnes, S. and Kaase et al., M. *Political Action. Mass participation in five western democracies.* Beverly Hills: Sage.

Mosca, L. 2010. 'From the streets to the net? The political use of the internet by social movements', *International Journal of E-politics*, 1(1): 1-21.

Mossberger, K., Tolbert, C., NcNeal, R. i McDonald, J. (2007). "The benefits of society online: civic engagement" a Mossberger, K., Tolbert, C. i NcNeal, R., *Digital Citizenship. The Internet, Society, and Participation.* Cambridge, MA: the MIT Press: 47-66.

Moy, P., E. Mamosevitch, K. Stamm and K. Dunsmore. 2005. 'Linking Dimensions of Internet Use and Civic Engagement.' Journalism and Mass Communication Quarterly 82(3): 571-

Negroponte, N. 1996. Being Digital, New York: Knopf.

Norris, P. 2004. 'Building Knowledge Societies: The renewal of democratic practices in knowledge societies.' UNESCO World Report. http://www.hks.harvard.edu/fs/pnorris/Acrobat/UNESCO%20Report%20Knowledge%20Societies.pdf

Norris, P. 2002. *Democratic Phoenix: Reinventing Political Activism*. Cambridge: Cambridge University Press.

Parry, G., Moyser, G. and Day, N. (1992). *Political Participation and Democracy in Britain.* Cambridge; New York: Cambridge University Press.

Pickerill, J. 2001. 'Environmental activism in Britain', *Peace Review*, 13, 3: 365–370.

Quintelier, E. and S. Vissers. 2008. 'The Effect of Internet Use on Political Participation: An Analysis of Survey Results for 16 year olds in Belgium.' *Social Science Computer Review* 28(4): 411-427.

Rheingold, H. 2002. *Smart Mobs: The Next Social Revolution* New York: Perseus Books

Rheingold, H. 1993. The virtual community. Homesteading on the electronic frontier.Reading, MA: Addison Wesley.

Rojas, H. 2010. "Corrective" Actions in the Public Sphere: how Perceptions of Media and Media Effects Shape Political Behavior. *International Journal of Public Opinion Research* 22 (3): 343-363.

Rojas, H., and E. Puig-i-Abril. 2009. Mobilizers Mobilized: Information, Expression, Mobilization and Participation in the Digital Age. *Journal of Computer-Mediated Communication* 14 (4): 902-927.

Saglie, J., and S. I. Vabo. 2009. Size and e-Democracy: Online Participation in Norwegian Local Politics. *Scandinavian Political Studies* 32 (4): 382-401.

Scheufele, D. and M. Nisbet. 2002. 'Being a citizen online: New opportunities and dead ends.' *Press/Politics* 7: 55-75.

Schlozman, K. L., S. Verba, and H. E. Brady. 2010. Weapon of the Strong? Participatory Inequality and the Internet. *Perspectives on Politics* 8 (2): 487-509.

Shah, D. V., Cho, J. C., Eveland, W. P. and N. Kwak. 2005. 'Information and expression in a digital age – Modeling internet effects on civic participation.' *Communication Research* 32(5): 531 – 565.

Shah, D.V., Schmierbach, M., Hawkins, J., Espino, R. and J..Donavan. 2002. 'Nonrecursive models of internet use and community engagement questioning whether time spent online erodes social capital.' *Journalism & Mass Communication Quarterly.* 79: 964-987.

Smith, A. (2009). 'The internet's Role in Campaign 2008' 15 April, Pew internet and American Life Project. Available at http://www.pewinternet.org/Reports/2009/6--The-internets-Role-in-Campaign-2008.aspx

Stanley, J. W., and C. Weare. 2004. The effects of internet use on political participation - Evidence from an agency online discussion forum. *Administration & Society* 36 (5): 503-527.

Stoneman, P. 2007. 'The Internet and Political Participation: lessons from time use' Chimera Working Paper Number: 2007-04. Ipswich: University of Essex www.essex.ac.ul/chimera

Sylvester, D. E., and A. J. McGlynn. 2010. The Digital Divide, Political Participation, and Place. *Social Science Computer Review* 28 (1): 64-74.

Teorell, J. Torcal, M. and Montero, J.R. (2007). "Political participation: mapping the terrain" in van Deth, J.W.; Montero, J.R and Westholm, A. *Citizenship and*

Involvement in European Democracies: A Comparative Analysis, London: Routledge.

Tolbert, C. and R. S. McNeal. 2003. 'Unravelling the effects of the Internet on political participation.' *Political Research Quarterly* 56(2): 175-85.

Tolbert, C. and Mossberger, K. 2003.

Verba, S. and Nie, N.H. 1972. *Participation in America: Political Democracy and Social Equality.* New York: Harper & Row.

Verba, S., Lehman Schlozman, K. and H. E. Brady. 1995. *Voice and Equality: Civic Voluntarism in American Politics.* Cambridge: Harvard University Press.

Ward, S. J. and W. Lusoli. (2005). 'Logging on or switching off? The public and the internet at the 2005 general election.' in S. Coleman and S. Ward (Eds.) *Spinning the Web.* London: The Hansard Society. Available at http://www.hansardsociety.org.uk/blogs/publications/archive/2007/09/27/Spinning-the-Web.aspx

Xenos, M., and Moy, P. 2007. 'Direct and differential effects of the Internet on political and civic engagement'. *Journal of Communication*, *57*, 704–718.

de Zuniga, H. G., E. Puig-I-Abril, and H. Rojas. 2009. Weblogs, traditional sources online and political participation: an assessment of how the internet is changing the political environment. *New Media & Society* 11 (4): 553-574.

Appendix A: variables coding

Variables	Coding
Online political participation, non-campaign	Did in the past 12 months. 0 No – 1 Yes - Contacted a politician or national/local government official by email - Discussed politics with family or friends online (i.e. through email or in a discussion group) - Signed an online or e-petition - Donated money offline to a political.
Online political participation, ecampaign	Did during the campaign. 0 No – 1 Yes - Read or accessed any party or candidate produced campaign sites (home pages, official Facebook profile, official Youtube channel, etc.). - Signed up to receive information from a party or candidate (a twitter feed, a news alert or e-newsletter) or registered online as a supporter or friend of a party or candidate on their website or social networking site (e.g. Facebook, MySpace etc.). - Used any of the online tools to help parties or candidates in their campaign (e.g. sent or posted official party material to other people by email or text, set up or got involved in a campaign meeting or event, downloaded a party logo or material to put on your own site or profile etc.). - Read or accessed any mainstream news websites or news blogs to get information about the campaign (e.g. BBC news online, The Guardian online, etc.). - Viewed or accessed videos with unofficial political or election related content. - Joined or started a political or election related group on a social networking site (e.g. Facebook, MySpace etc.). - Posted comments of a political nature, on your blog, or a wall of a social networking site (either yours or someone else's). - Forwarded unofficial campaign content (links to video, news stories, jokes etc.) to friends, family or colleagues via email, sms, twitter or through your facebook network. - Embedded or reposted unofficial campaign content (links to video, news stories, jokes etc.) on your own online pages (i.e. a social networking profile, blog or homepage).
Offline political participation	Did in the past 12 months. 0 No – 1 Yes - Contacted a politician or national/ local government official in person, by phone or by letter - Signed a paper petition - Donated money offline (e.g. by post or telephone) to a political party/ organisation/ cause - Discussed politics with family or friends in person (i.e. face to face or over the telephone

[i] We did test the model with this second cross-loading and it resulted in a non-significant regression weight in the e-expressive factor.

[ii] Including non-internet users was problematic in that it introduced a set of respondents that scored zero on all 13 items. While statistically the analysis could be conducted, conceptually, the inclusion of these non-responses was seen as problematic in that it changed the meaning of the zero score for the two groups. For internet users the score was an indication that that activity was possible for the respondent but had not been performed for whatever reason. For a non-internet user a zero meant the activity was not possible and we cannot know whether they would have not done it, had they had access. This confusion of meaning of the zero response meant that for purposes of maintaining a clear interpretation of the data and findings only internet users were included. The analyses shown in figures 2 and 4 were run using non-internet users and did not change the key substantive findings reported here.