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**Alternative measurement procedures and models for  
Political Efficacy**

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## **Alternative measurement procedures and models Political Efficacy**

### **Abstract**

*Through the years many different approaches to measure political efficacy have been proposed. Alternatives were proposed based on different numbers of items, alternative items, alternative measurement models and alternative response scales. Going back to the original theory alternative measurement models have been formulated for the two concepts distinguished in the Political Efficacy literature. These new models have been tested on the most complete data sets that exist for these concepts. It turned out that the new models fit better to the data than the commonly used one factor models.*

*Next it is shown that for the measurement of concepts of political efficacy by direct questions is much better than by batteries with agree/disagree items.*

*Based on these results alternative measures for the concepts of political efficacy have been formulated.*

Already in 1954 the concept "Political efficacy" has been proposed as a variable that should strongly determine whether people will participate in the political processes (Campbell, Gurin and Miller, 1954). Political efficacy was described as a "feeling that political and social change is possible, and that the individual citizen can play a part in bringing about this change" (Campbell et al (1954). The authors realized that "in any one election political interest and participation may be largely explained in terms of such factors as the attractiveness of one or both candidates and the perceived importance of the campaign issues." On the other hand they argue that for the explanation of long-range trends in level of electoral participation one requires in addition to the above mentioned factors "the consideration of broader and more enduring political values and attitudes... Sense of political efficacy .. represents an attempt to investigate one of these broader political attitudes".

For Lane (1959:150)) it was self evident that this concept has two components: the image of the self and the image of democratic government. This suggests that people should believe that they can play an active role in changing society and that they should also believe that the system reacts on these actions in a positive way. If these two requirements are not satisfied people will not actively participate in political processes, was his suggestion. On the other hand he argues that "people endowed with a feeling of political effectiveness of this kind are more likely to engage in politics: they are more concerned about the outcome of elections, they learn more about the political situation, and are more consistent in their support of their party's stands on various issues. They know how to get things done in political life, and they are more likely to demand a greater role in government affairs (1959: 152).

Originally a limited number of items for both aspects were used. Balch (1974) was the first who showed that two concepts can be distinguished empirically. The first was referred to as “internal efficacy” or “subjective competence” while the second was referred to as “external efficacy” or “system responsiveness”. The idea that these items represent two concepts has now been accepted in general because several studies have shown that the suggested two factor structure can be found (Craig 1979, Craig and Maggloito 1982, Acock, Clark and Stewart 1985, Finkel 1985, Miller and Traugott 1989, Aish, and Jöreskog 1989a,b, Jöreskog and Sörbom 1993 and Saris and Gallhofer 2007. For a detailed discussion of these earlier models we refer to Vetter (1997).

In the later discussions of these issues Gamson (1968, 1971) argues that Political trust also plays an important role. It will be clear that people without the idea that they can have any influence do not have an argument to participate. But also the people who are confident that they can have influence may not participate if they trust very much the political system in the sense that it will produce the results that the person likes to have. In that case there is no reason at all to participate. So the conclusion should be that only in case of political efficacy and lack of trust in the system one can expect participation of the citizens. This suggests that political trust is a conditional variable for the relationship between political efficacy and political participation.

Based on their empirical study of these relationships Sigelman and Feldman (1983) concluded that the conditional relationship is not so strong as expected but both variables had independently effect on participation. They also discovered that “policy dissatisfaction” is a more important determinant of political mobilization than political trust although they also found conditional effects of Political Trust in more complex models than the simple three variable model of Gamson.

It is also relevant to mention that several studies showed that measures for “Subjective competence” correlated much stronger than measures for System Responsiveness” with measures of “political participation” while the latter correlate much higher than the former with measures for “Political Trust” and “Satisfaction with political policies” (Vetter 1997, Niemi et al. 1991, Craig and Maggloito, 1982, Sigelman and Feldman, 1983). These findings suggest that “Subjective Competence” and “System Responsiveness” are really different variables which should be measured separately. Saris and Gallhofer (2007) have made the same remark but using also an extra argument. They found that the two concepts were not significantly correlated after correction for spurious relationships due to systematic method effects.

This historical perspective indicates clearly the importance the early users of the concept “political efficacy” attached to it for the political processes in democratic societies. Still today questions concerning political efficacy are asked in nearly all National Election studies. In this context political participation, political trust and dissatisfaction play an important role. However in this paper we concentrate on the concept Political Efficacy. Because we think that not enough attention has been given to the measurement of political efficacy, we will try first to give a general analysis of the concept. On the basis of this analysis we will formulate new measurement models and then we will test these models on the most complete data sets which are available to test these models. After that we will discuss a study that suggests an alternative formulation of the questions. Then we will make a proposal for new measures for Subjective competence and System responsiveness and finally we formulate our conclusions

## **1.Measurement models for Subjective competence and system responsiveness**

The argument of Lane that Political efficacy consists of two components: the believe that one can play an active role in changing society and the believe that the system allows these influences, suggests that Political efficacy in fact consist of two very different variables. The first could be interpreted as a personal competence or a believe about the own competences. The second is just a believe about the way the political system functions. The first concept has been called in the literature “Subjective competence” or “internal efficacy”. The second concept has been called “System Responsiveness” or “external efficacy”.

As we have mentioned above, we think that these two variables are so different that we can not speak of one variable Political Efficacy but rather of two different variables. So we see Political Efficacy only as a term for a field of research and not as a concept or variable it self.

We make a distinction between concepts by postulation and concepts by intuition as suggested by Northrop (1947), Blalock(1990) Hox (1997) and Saris and Gallhofer (2007). The concepts-by-intuition are simple concepts whose meaning is immediately obvious while concepts-by-postulation are less obvious concepts which require explicit definitions. Concepts-by-postulation are also called constructs. Examples of concepts-by-intuition include believes, feelings, evaluations, norms and behaviors. Examples of concepts-by-postulation might include “ethnocentrism”, different forms of “racism” and “attitudes toward different objects”. One item in a survey can not present an attitude or racism. For such concepts more items are necessary and, therefore, these concepts need to be defined. This is usually done using a set of items that represent concepts-by-intuition.

The concepts “Subjective competence” and “System responsiveness” are concepts by postulation and therefore they have to be operationalized which means that we have to indicate what concepts by postulation or intuition can be used to measure these higher order concepts. We will discuss these two concepts separately. We start with the operationalization of the concept “Subjective competence”

### **1.1. Operationalization of the concept “Subjective competence”**

It is interesting to see that in the first discussions about political efficacy people spoke about feelings of citizens (Campbel et al. 1954). Lane is not clear about the concept. Some times he argues that it is a believe of the people that they can influence the system. But Lane also quotes from an interview where one person said “ Since I don’t understand too much about politics I just keep my mouth closed...” (152). He also mentions “ the reverse; this is seen in a study of letter writing to Congress, where some of the participants seemed to enjoy writing letters because it was a social skill which they felt they had and others did not”. Here he suggests that “Subjective competence” requires certain skills. In fact he argues that different skills are required for different actions.

Based on this idea one could imagine that this concept can be operationalized using measures of abilities which allow people to be political active. Following Lane we could say that one should be able to understand political processes, that one should have sufficient knowledge of these processes, while certain activities, like writing letters or participating in action committees, require also some rhetoric ability. Based on this point of departure one could say that “Subjective competence” exists if at least some of these abilities are above a sufficient level. This suggests that the different abilities are formative indicators for “subjective competence”. This leads to the basic measurement model presented in Figure 1.

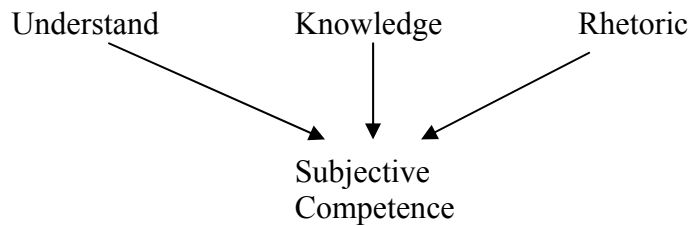


Figure 1. The basic measurement model for Subjective competence

However one can also argue that not the abilities themselves make a person believe that he can influence the political process but rather his believes in his own abilities no matter whether the person really has the skills or not. That would mean that the model would remain the same but the different causal variables would not be real abilities but believes about these abilities. We think that the latter approach is the more realistic one and also the more efficient<sup>1</sup> one for survey research.

Because the variable “subjective competence” is unmeasured this model can not be tested without an extension of the model with one or more effect variables. This could be direct measures of this variable i.e the believe that he/she can play a role in political processes. Taking the latter extension of the model into account we can formulate the model in Figure 2.

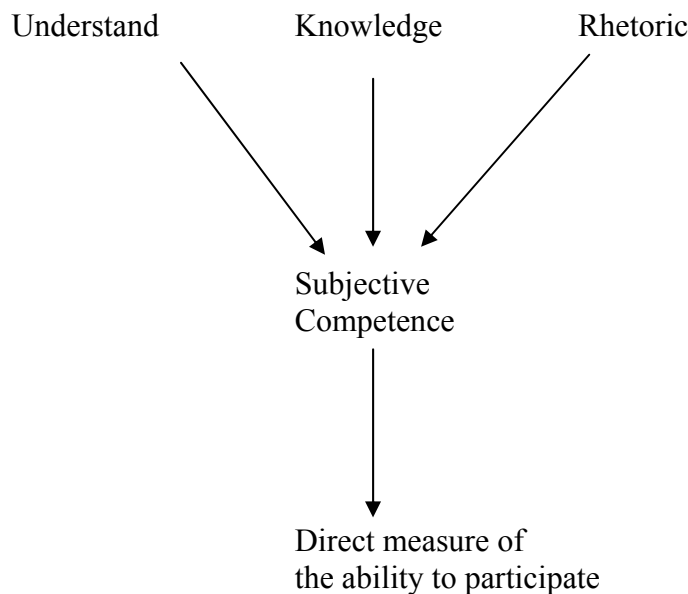


Figure 2. The extended measurement model for Subjective competence

Where Subjective competence is a concept by postulation the other variables indicated in this model can be seen as concepts by intuition and can be observed directly.

Taking into account that we do not want to measure abilities directly but rather believes about abilities, we can imagine that the following requests for an answer could be used to collect information about the different concepts by intuition:

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<sup>1</sup> We called it more efficient because for tests of abilities much more space is required than is possible in a short survey.

For “Understand”:

*Do you think that you have sufficient understanding of politics to participate in political activities ?*

For “Knowledge”:

*Do you think that you have enough information about politics to participate in political activities ?*

For “Rhetoric”

*Do you think that you have sufficient verbal abilities to participate in political activities?*

For “Direct measure”:

*Do you think that you can play a role in political activities ?*

Of course alternative questions could be formulated. Alternatives could also be created by specifying different response scales but we think that there is no doubt that these questions measure the different concepts by intuition which they should measure and that the concepts by intuition can be used to define Subjective competence. However the most commonly used questions deviate quite a bit from these questions as we will now illustrate.

### **1.1.1 Commonly used items**

Questions for Political efficacy concepts have been specified for the first time in the US election study (Campbell et al 1954). After that similar requests for answers<sup>2</sup> have been asked in most National election studies. Normally people are asked to agree or disagree with statements that describe different abilities. The most commonly used items for “Subjective Competence” are presented below with , in sequence, the name of the item and concept it may belongs to mentioned in brackets.

*“Sometimes politics and government seem so complicated that I can’t really understand what is going on.” (Complex/understand)*

*“I understand and judge important political questions very well.” (Understand/Understand)*

*“ Other people seem to have an easier time understanding complicated issues than I do” (Others/Understand)*

*“I think that I am as well-informed about politics and government as most people” (Informed/Knowledge)*

*“I often don’t feel sure of myself when talking with other people about politics and Government” (Nosure/Rhetoric)*

*“I consider myself well-qualified to participate in politics “ (selfqual/Direct)*

*“I think I can take an active role in a group that is focused on political issues.” (Active/Direct)*

*“ I feel that I could do as good a job in public office as most other people” (Puboff/Direct?)*

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<sup>2</sup> We speak here about requests for answers because not always questions are used. Sometimes imperatives or even just statements have been used but it is always clear to the respondent that an answer is expected from him or her (Sarıs and Gallhofer 2007)

We see that the responses to these questions, represent believes of the respondents about different abilities. The items “Complex”, “Understand” and “Others” can be seen as direct measures of the concept “Understand” mentioned above. The item “Informed” is a direct measure for the concept “Knowledge”. The item “Nosure” refer to the latent factor concerning Rhetoric skills. The last three measures represent alternative direct measures of the believe people have about their own ability to participate in political activities (Direct measure).

When we add these indicators to the model in Figure 2 we get Figure 3.

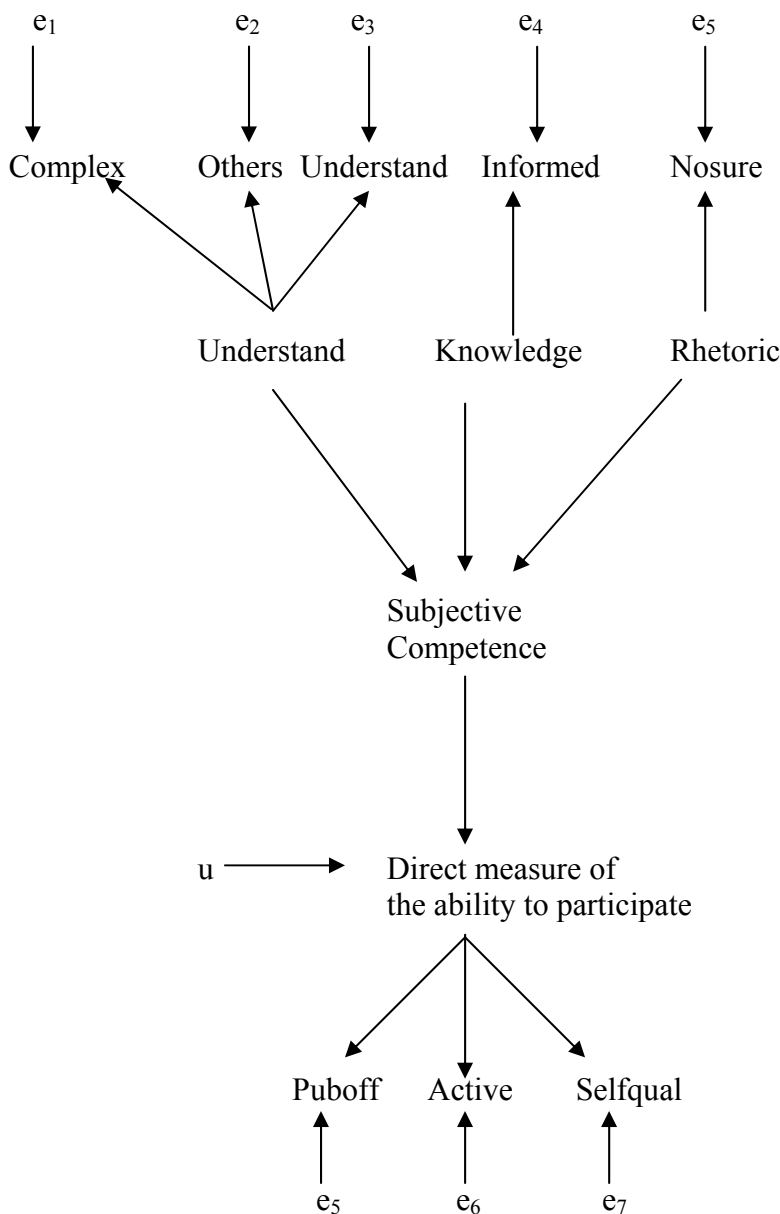


Figure 3. The final measurement model for Subjective competence

The difference between the requests for an answer in the previous section and these ones is that the latter are asked in batteries of agree/disagree items while some extra components are introduced in the requests like “complexity”, “judge”, “most people” “feeling unsure”, “Active” and “Public office”. The requests suggested in the previous section are more direct translations of the concepts by intuition into requests.



Another difference is that our requests ask directly if the people “think that they have enough of an ability to participate in political activities”. This link has not been made in the commonly used questions except in the last three items which are direct questions for the concept of interest. We think that our questions of the previous section represent the different concepts by intuition better than the commonly used questions. However in order to test our measurement model we have to use the questions commonly used.

In contrast with the standard measurement models, this model is not a factor analysis model. The indicators at the top of the model are the formative indicators that determine the subjective competence. The indicators at the bottom are reflective indicators that represents the reported ability of interest (Edwards and Bagozzi 2000). It should be realized that the abilities at the top of the model do not have to correlate with each other which would have been the case if they represented reflective indicators as normally assumed (Bollen and Lennox 1991). If our model is the correct model, analyzing the data for these variables with a one factor model would lead to the rejection of the model. The reason is that correlated errors are needed for the latent variable with more than one indicator.

### 1.2. Operationalization of the concept “System responsiveness”

Our operationalization of “system responsiveness” is more in line with previous studies. The system can be seen as more or less responsive and that can be specified in different ways. So we suppose that “system responsiveness” can be operationalized by several reflective indicators. Based on the previous studies we suggest four indicators: The idea that people have no influence at all ( “no influence”), that people have only influence by voting ( “only voting”) , that politicians take the opinion of people into account ( “opinion”) and finally that the people have the final say in political decisions (“Final Say”). This leads to the basic model presented in Figure 4.

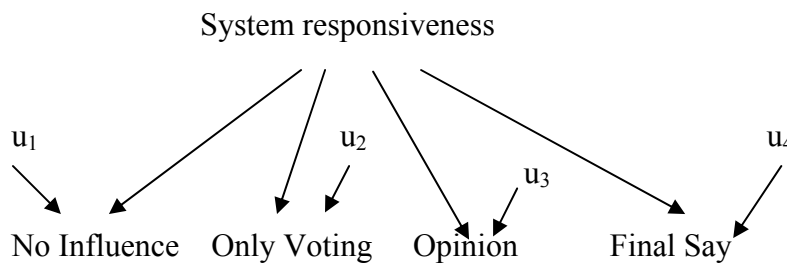


Figure 4 The basic measurement model for “system responsiveness”

This model suggests that the correlation between the four indicators would be due to the believes of the respondents with respect to the “responsiveness of the system” to activities of its citizens. The variables  $u_1$  till  $u_4$  represent the unique components that each of these indicators will have.

Below we will suggest some questions for the concepts by intuition that could be used as indicators for the concept by postulation “System responsiveness”.

For “No Influence”:

*Do you think that the political system allows you to have influence on political processes?*

For “Only Voting”:

*Do you think that the political system allows you any more influence on political processes than by voting?*

For “Opinion”:

*Do you think that opinions of the citizens have influence on political processes?*

For “Final Say”:

*Do you think that in the end the opinions of the people determine the final decision in political processes?*

Alternative formulations of the questions are possible. However we have no doubt that these questions represent the concepts by intuition that they should measure and that these concepts by postulation can be used to define the concept by postulation System responsiveness.

### **1.2.1. Commonly used items**

In the national election studies “System Responsiveness” is normally measured in a battery together with Subjective Competence. Several items have been developed that describe perceptions of the political system and the respondents are asked to indicate in how far they agree or disagree with these statements, Examples of such statements for “System responsiveness are given below. The name of the item and the concept by intuition for which it may be used has been mentioned in brackets.

*“People like me don’t have any say about what the government does.”*  
(Nosay/ No influence)

*“ People have hardly any possibilities to influence the Politics*  
(Noinfl/No influence)

*“Voting is the only way that people like me can have any say about how government runs things”* (Voting/OnlyVoting))

*“Parties are only interested in people’s votes but not in their opinions”*  
(Parties/Opinions)

*“I don’t think public officials care much what people like me think “*  
(Nocare/ Opinions)

*“In our country the people decide in the end how the country will be governed”*  
(Finalsay/Final Say)

The first two items “nosay” and “Noinfl” are alternative measures for the latent variable “No Influence”. The item “Voting” indicates that voting is the only way by which people can influence politics and is clearly the direct measure for the latent variable “Only Voting”. The items “Parties” and “Nocare” without the negation would

suggest that parties and public officials are interested in more than only the vote, they are also interested in the opinions of the public. Therefore they are seen as indicators for the latent variable “Opinion”. Finally the items “Finalsay” is a direct measure for the latent variable “Finalsay”

As was shown for “Subjective Competence”, also here a major difference between our operationalization and the commonly used one is that the latter uses a battery of agree/disagree format with statements while the former uses questions. The other difference is that other concepts are introduced like “people like me”, “Parties” and “Political officials”, but in this set of questions this phenomenon makes the questions less deviant from the concepts by intuition they should measure.

Adding the observable variables that represent the responses to the questions we have mentioned above, we get the final model presented in Figure 5. In this model all  $e_i$  represent the measurement error variables. This model is more in line with the previous operationalizations. Normally System Responsiveness is formulated as a one factor model. We have specified a second order factor model to indicate that we think that certain items represent the same latent variable. This has happened for Noinfluence and Opinion. Analyzing data for these variables with a one factor model would lead to the rejection of the model because correlated errors are needed for the indicators for these two latent variables.

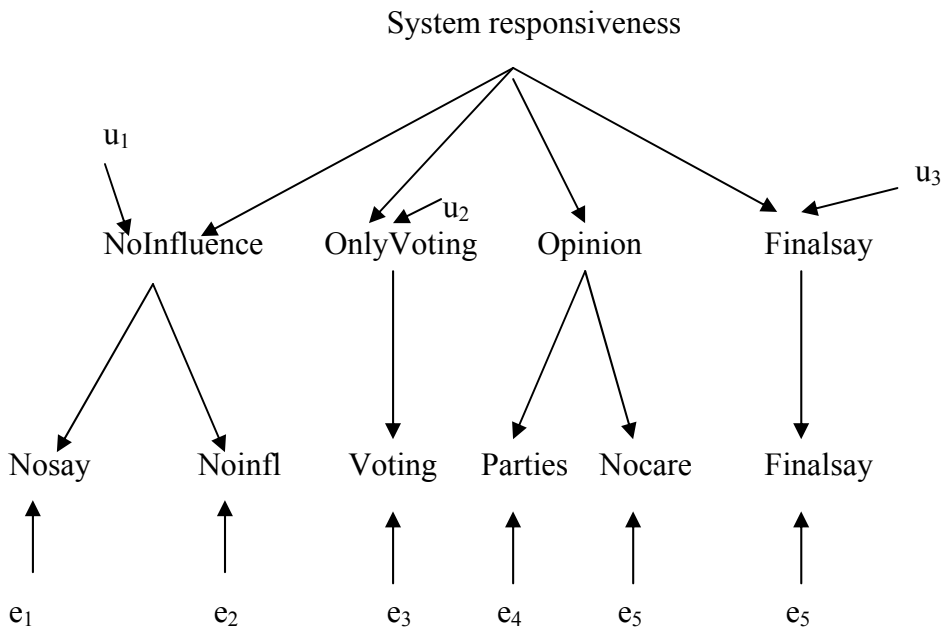


Figure 5 The final measurement model for “system responsiveness”

## 2. Data for the tests

The most complete data to test this model for Subjective competence has been found in a paper of Craig, Niemi and Silver (1990). The only variable missing in their data is the variable active. However this will not harm the possibility to test the model.

They collected their data in the US for the NES pilot of 1987. In total 355 respondents participated in this study. The correlations between the variables are presented in Table 1.

Table 1 The data for Subjective competence indicators collected by Craig, Niemi and Silver (1990)

	puboff	selfqual	understnd	informed	notsure	others	complex
Puboff	1.00						
Selfqual	.56	1.00					
Understand	.44	.55	1.00				
Informed	.40	.39	.48	1.00			
Notsure	.39	.38	.31	.35	1.00		
Others	.31	.24	.19	.24	.45	1.00	
Complex	.32	.36	.29	.31	.39	.33	1.00

The data set that covers the largest number of variables of the set mentioned above as indicators for “System Responsiveness” has been found in the study of Vetter (1997). The data were collected in Germany. The sample size was 1741 respondents. The correlations between the variables she has measures are presented in Table 2.

Table 2 The data for System responsiveness indicators collected by Vetter (1997)

	Nosay	care	touch	parties	noinfl	finalsay
Nosay	1.00					
Care	.28	1.00				
Touch	.23	.45	1.00			
Parties	.27	.36	.34	1.00		
Noinfl	.54	.28	.29	.34	1.00	
Finalsay	.25	.28	.35	.30	.27	1.00

### 3. Testing the two models

If our hypothesized models are correct for these data, analyzing the data for these variables with a one factor model should lead to the rejection of the model because correlated errors are needed for the indicators which represent the same latent variable. Given this argument we will first test the one factor model on these data and after that the new models. The test will be done with ML estimation procedure available in LISREL8. This program provides a chi2 test of the fit of the models but besides that we will use a procedure suggested by Saris, Satorra and Van der Veld (2008) which evaluates whether misspecifications are present in the model.

#### 3.1 The test of the model for Subjective competence

Craig, Niemi and Silver (1990). had all the above mentioned variables for Subjective competence included in a data set with many more variables. They found that all the items for “Subjective Competence” loaded on one factor. This result was found with exploratory factor analysis but it is in disagreement with our expectations. Therefore we estimated their one factor model again on their own data using only the 7 variables which are assumed to measure “Subjective Competence” (see Table 1).

The analysis of the data with a one factor model shows that the model has to be rejected given that the  $\chi^2 = 83$  with  $DF=14$ . Because the variable “understand” caused most of the problems<sup>3</sup> we omitted this variable and tested the one factor model again.

<sup>3</sup> One of the problems was that in the US data the variable understand has a higher correlation with Selfqual than with variables like Complex. This is not the case in most European countries as we will discuss below.

The model was again rejected given the  $\chi^2 = 47$  with  $DF=9$ . The test of the misspecifications in the model suggested that this model could be improved by introduction of correlated errors for those variables which we have specified that they should measure the same concept like Puboff and Selfqual. This suggest that our model may provide a better description of the data and therefore a better fit.

Testing our model (see appendix 1) the model is indeed not rejected by the  $\chi^2$  test given that the  $\chi^2 = 8.8$  with  $DF=5$ . However the test on misspecifications still indicates that some correlated errors could be introduced especially between the variables related to questions which refer to other people such as the variable “other”, ”informed” and “nosure”. This shows that one has to be careful with such unnecessary terms in a question or statement.

The standardized effects of the formative indicators on Subjective competence were for the latent variable “Understand” .61, for the variable “knowledge” .24 and the effect of the latent variable “Rhetoric” was -.02 and was not significant<sup>4</sup>. This would suggest that the last component is not needed for the definition of Subjective competence. However, these estimates should not be taken for granted because in this analysis we could not correct for measurement error in the variables “informed” and “nosure”. Normally one can expect that these effects will increase by correction for measurement errors. Besides that, we will show in the next section that much better data can be obtained. This would also change the estimates considerably.

Our purpose here was only to show that the most commonly used model has to be rejected while our new model does not have to be rejected, tested on the same data.

### **3.2 The test of the model for System responsiveness**

Vetter measured all variables for system responsiveness which we have mentioned above except the variable “Voting”. She introduced one extra variable “Touch” which reads “The politicians try to stay in contact with the people”. We think that this variable really measures something different then system responsiveness. This is also shown in the analysis.

If the one factor model is tested on the data of Vetter, including the variable “Touch” the model has to be rejected because the  $\chi^2 = 307$  with  $DF=9$ . If the variable Touch is omitted the model fits much better but the one factor model should still be rejected because the  $\chi^2 = 158$  with  $DF=5$ . The tests on misspecifications suggests that correlated error have to be introduced between the indicators which are alternative indicators for a concept by intuition. Only by introducing these correlated errors a fitting model can be obtained. That suggests that our own model has a good chance not to be rejected.

If we test our model (see appendix 2) without the variable “voting” and “Touch” on the data of Vetter the model can indeed not be rejected because the  $\chi^2 = 7.0$  with  $DF=3$ . The test of misspecifications did not indicate any misspecification in the model anymore. This suggests, as we mentioned before, that these questions are better formulated than the questions for Subjective competence i.e. without too many nonnecessary components in the questions.

Interesting is that the correlations between the three latent variables is .66 for Noinfluence and opinion , .48 between opinion and final say and .38 between Noinfluence and finalsay . This correlational structure suggests a simplex like structure which was also suggested using a different analysis method by Mokken (1969, 1971). This issue is, however less important .

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<sup>4</sup> In total these three latent variables explained 56% of “Subjective Competence”

The most important issue is that it seems that our model gives a good description of the data from another study on which the one factor model had to be rejected. So it seems that our model, also for this data set, gives an acceptable description.

#### 4. Use of batteries of statements or questions

Above we have illustrated that the different concepts by intuition can be operationalized by questions or by batteries with agree disagree statements. In the pilot study of the first round of the ESS the quality of these two types of requests for answers were compared using standard items from the political efficacy measurement. Table 3 presents the formulation of the items presented in the battery form and in direct questions.

**Table 3. Two different procedure to measure “Subjective competence”used in the pilot study of the first wave of the ESS**

##### A.Measurement by a battery of agree/disagree items

*CARD C1: Using this card, how much do you agree or disagree with each of the following statements? Firstly ... READ OUT*

	Agree strongly	Agree	Neither agree nor disagree	Disagree	Disagree strongly	(Don't know)
“Sometimes politics and government seem so complicated that I can't really understand what is going on.”	1	2	3	4	5	8
“I think I can take an active role in a group that is focused on political issues.”	1	2	3	4	5	8
“I understand and judge important political questions very well.”	1	2	3	4	5	8

##### B.Measurement by direct questions

*CARD 6 How often does politics seem so complicated that you can't really understand what is going on? Please use this card.*

<i>Never</i>	<i>1</i>
<i>Seldom</i>	<i>2</i>
<i>Occasionally</i>	<i>3</i>
<i>Regularly</i>	<i>4</i>
<i>Frequently</i>	<i>5</i>
<i>(Don't know)</i>	<i>8</i>

*CARD 7 Do you think that you could take an active role in a group involved with political issues? Please use this card.*

<i>Definitely not</i>	<i>1</i>
<i>Probably not</i>	<i>2</i>
<i>Not sure either way</i>	<i>3</i>
<i>Probably</i>	<i>4</i>
<i>Definitely</i>	<i>5</i>
<i>(Don't know)</i>	<i>8</i>

*CARD 8 How difficult or easy do you find it to make*

*your mind up about political issues ? Please use this card.*

<i>Very difficult</i>	1
<i>Difficult</i>	2
<i>Neither difficult nor easy</i>	3
<i>Easy</i>	4
<i>Very easy</i>	5
<i>(Don't know)</i>	8

Although the questions are formulated a bit differently from the ones presented above, one can recognize the following items in them in sequence: Complex, Active and Understand.

Using the model for Split Ballot Multitrait Multimethod or SBMTMM design (Saris et al 2004) the above mentioned questions for “Subjective competence” have been evaluated with respect to reliability, validity and total quality<sup>5</sup>. Total quality is the product of reliability and validity. For details of this study we refer to Saris and Gallhofer (2007). For the questions specified in Table 3 the quality estimates are presented in Table 4.

**Table 4 The quality estimates for the questions presented in Table 3**

**A.Measurement by a battery of agree/disagree items**

<b>Question</b>	<b>reliability</b>	<b>validity</b>	<b>total quality</b>
<b>Complex</b>	.42	.96	.40
<b>Active</b>	.44	.96	.42
<b>Understand</b>	.48	.96	.46

**B.Measurement by direct questions Question**

	<b>reliability</b>	<b>validity</b>	<b>total quality</b>
<b>Complex</b>	.77	.92	.71
<b>Active</b>	.88	.92	.81
<b>Understand</b>	.74	.92	.68

The reliability of the measures using a battery of agree/disagree items is rather low. Therefore the total quality of the questions is also rather low even though the validity is very high (minimal method effects). This result indicates that the latent variable presenting the concept by intuition explains only between 40% to 46% of the variance of the observed scores for these variables.

The quality of the direct questions formulated with so called “trait specific scales” (Saris and Krosnick 2008) is much better. The change in format improved the explained variance with minimally 22% but for the variable “Active” the improvement was even 39% .

Since this result was obtained in only two countries the quality of the latter form was again tested in the main study of the ESS. In table 5 the results with respect to quality of the different variables in 18 countries is presented. This table shows that the

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<sup>5</sup> This study was done in the Netherlands and Great Britain. Here we report the results of the Dutch study based on 409 cases (see Saris and Gallhofer 2003)

quality of the requests for an answer formulated in the way it is done in table 3B is in all countries quite comparable with the quality we obtained in the pilot study in the Netherlands and the UK. This result suggests that the form of these questions mentioned in table 3b is much better than the one presented in table 3a.

**Table 5 The quality of the three indicators of Subjective competence**

	Complex	Active	Understand
Austria	.81	.84	.81
Belgium	.83	.92	.86
Czech R.	.79	.91	.84
Finland	.76	.83	.77
France	.72	.70	.69
Germany	.78	.73	.76
Greece	.81	.86	.90
Ireland	.80	.84	.78
Israel	.72	.81	.79
Netherlands	.80	.84	.78
Norway	.70	.87	.70
Poland	.78	.89	.82
Portugal	.82	.84	.83
Slovenia	.79	.82	.75
Spain	.74	.86	.80
Sweden	.80	.80	.76
Switzerland	.70	.90	.71
UK	.75	.81	.71

## 5. Conclusions and a proposal

This study leads to the following conclusions with respect to the operationalization of the two concepts discussed under the heading of Political efficacy:

1. On the basis of theoretical arguments and the empirical finding we conclude that there is not a concept political efficacy but that under this heading two concepts are discussed: Subjective Competence and System Responsiveness. These concepts are not only theoretically different but have also very different relationships with other variables and should therefore be treated as different variables.
2. Both should be measures as believes; Subjective competence should be measured by believes about personal abilities to participate in political activities while System responsiveness should be measured by believes about the systems reaction to political activities of citizens.
3. The two measurement models we have developed for the two concepts turned out to fit well to data from earlier studies while earlier specified factor models did not fit to the same data. Therefore we conclude that our models are better than the earlier models.
4. This means that Subjective competence is a latent variable which is determined by some variables which could be used as formative indicators for the concept but there are also indicators that are direct measures of the concept and therefore could also be use as reflective indicators.
5. For System responsiveness there are several reflective indicators which could be used to measure this concept.



6. The use of questions in stead of a battery of statements seems to lead to much better quality of the data and should be recommended.

Given these results we would recommend for measurement of Subjective competence the use of two reflective indicators. If one chooses for the formative indicators one needs three items otherwise the measurement is not complete. Besides that these items have a relative weak predictive power with respect Subjective competence (56%). The reflective indicators have a much stronger relationship. We have seen that in the past three reflective indicators have been formulated. However these items were formulated as statements for a battery. We suggest to use two direct questions omitting all unnecessary words and formulating them in question form. We suggest to use the questions : Selfqual evaluated in this study and Active evaluated in the ESS. The following formulation of these questions is suggested based on the previous analyses:

1. In how far do you think that you are able to participate in political activities?  
Please use this card. (*Selfqual*)

- Definitely not 1
- Probably not 2
- Not sure either way 3
- Probably 4
- Definitely 5
- (Don't know) 8

2. In how far do you think that you could take an active role in a group involved with political issues? Please use this card.( *Active*)

- Definitely not 1
- Probably not 2
- Not sure either way 3
- Probably 4
- Definitely 5
- (Don't know) 8

The reason for the use of two questions is that one can correct for measurement error and that one can test for cross cultural equivalence, a requirement for comparative research.

With respect to System responsiveness the choice of questions is more difficult. There are several possible indicators. We think that it is the best to choose two items that are strongly related and which provide a natural form for a scale with multiple categories i.e. allowing for more precision. Based on these criteria we would suggest to use the two questions “Noinfluence” and “Nosay” for the concepts by intuition “no influence” . Table 2 shows that these two items have the highest correlation even in the form of a battery of statements. The disadvantage is that they come from one sub-dimension.

However by formulating them as questions allowing for responses that indicate that people can have more or less influence they can represent the concept by postulation quite well. Therefore we suggest the use of the following formulation for these two questions:

1. In how far do you think that the political system does allow people like you to have a say about what the government does.? (Nosay)

Not at all	1
Very little	2
Not much	3
Much	4
Very much	5
(Don't know)	8

2. In how far do you think that the political system allows people like you to have influence in Politics ?  
(Noinfl)

Not at all	1
Very little	2
Not much	3
Much	4
Very much	5
(Don't know)	8

The commonly used items specific very specific activities representing increasing influence such as No influence, only voting, effect of opinions, final say. The above two questions are not so specific. They allow the people to indicate the gradation of influence they perceive the political system allows them to have. In this way these questions can be a substitute for the set of questions used normally.

As for Subjective competence we suggest to use two questions because in this way one can correct for measurement error and check for equivalence of the questions for comparative research

## Appendix 1 Input for the analysis of Subjective Competence on data of Craig et al.

```
Craig data
data ni=7 no=355 ma=km
km
1.00
.56 1.00
.44 .55 1.00
.40 .39 .48 1.00
.39 .38 .31 .35 1.00
.31 .24 .19 .24 .45 1.00
.32 .36 .29 .31 .39 .33 1.00
labels
puboff selfqual understnd informed notsure others complex
select
puboff selfqual complex others informed notsure/
model ny=6 ne=4 te=sy,fi ly=fu,fi be=fu,fi ps=sy,fi
value 1 ly 1 1 ly 3 2 ly 5 3 ly 6 4
free ly 2 1 ly 4 2
free be 1 2 be 1 3 be 1 4
free ps 1 1 ps 2 2 ps 3 3 ps 4 4
free ps 3 2 ps 4 2 ps 4 3
value 0 te 6 6 te 5 5
free te 1 1 te 2 2 te 3 3 te 4 4

out mi sc
```

## Appendix 2 Input for the análisis of System Responsiveness on data of Vetter

```
system resp
data ni=6 no=1741 ma=km
km
1.00
.28 1.00
.23 .45 1.00
.27 .36 .34 1.00
.54 .28 .29 .34 1.00
.25 .28 .35 .30 .27 1.00
Labels
nosay care touch parties noinfl finalsay
select
nosay noinfl care parties finalsay /

model ny=5 ne=3 te=di,fr ly=fu,fi ps=sy,fi
free ly 1 1 ly 3 2
free ly 2 1 ly 4 2 ly 5 3
fixed te 5 5
value 1 ps 1 1 ps 2 2 ps 3 3
free ps 2 1 ps 3 1 ps 3 2
out mi
```

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