

---

## FACTORIAL STRUCTURE DETERMINING THE INTENTION TO VOTE ECOLOGY

Cruz García Lirios <sup>1,\*</sup>

<sup>1</sup>(Universidad Autónoma Metropolitana, Mexico

Corresponding Author: [bundestrans@icloud.com](mailto:bundestrans@icloud.com)

---

### Abstract

The political system in which it is possible to observe the similarities and differences between groups for and against presidential candidates based on processes of negotiation, mediation, conciliation and arbitration around the management and administration of Information Technologies and Communication is known as governance. This is a growing phenomenon as local or federal elections approach and digital networks are exacerbated as instruments for the promotion or dissuasion of a candidate. In this sense, the objective of the study was to optimize the Governance instrument of the Cyber Political Culture of Carreón (2016) in order to pay the reliability and validity of it; explore the relationship between preferences and expectations regarding voting intentions in a non-probabilistic sample of students using digital networks. From a structural model it was found that the consensus expectation factor determined the intentions to vote. The scope and limits of the exploratory factor analysis of main axes with a simple and oblique promax rotation regarding the confirmation of an orthogonal structure are discussed.

Keywords: Internet, Representations, Preferences, Expectations, Intentions, Model

---

### Introduction

The objective of the research was to establish the reliability and validity of an instrument that measures expectations and intentions of voting in a sample of Internet students in order to establish the linear relationships that determine the decision to vote based on perceptions related to costs and benefits, as well as expectations of insecurity of citizens and distrust of their authorities regarding the management and administration of public safety. In the framework of presidential elections, the system of negotiation, mediation, conciliation and arbitration between actors involved in the management and administration of public resources and services is known as governance. In the case of an early electoral contest, governance is a phenomenon that reflects electoral preferences, perceptions of consensus and intentions to vote for parties, candidates and democratic systems.

In the case of the effects of the anticipated electoral contest in digital networks such as Facebook, Twitter, YouTube or Instagram, these are assumed as instruments for the promotion of candidates and political platforms. It is a proselytist that generates expectations and voting intentions based on electoral preferences, perhaps established in traditional media such as television, radio, newspapers or films, but when filtered through digital networks, they propitiate a scenario of electoral debate that, for the purposes of the present study allow a diagnosis of the relationship that these determining factors of the elections in the near future.

Social psychology, through the models of reasoned action and planned behaviour, has influenced the construction of an information psychology (Abu, Yunus, Majid, Jabar, Sakidin & Ahmad, 2014). Both models start from the assumption that behaviour is determined by the relationship between beliefs, attitudes, perceptions and intentions (García, 2007). It is a process that, in the context of the information generated on the Internet, explains consumer decisions based on rational, deliberate, planned and systematic processing.

However, psychosocial models have been modified to adjust their relationships to information processing on the Internet. These are the cases of the Technology Acceptance Model, the Trade Adoption Model and the Electronic Consumption Model (Gamal & Gebba, 2013). These models have incorporated the psychosocial variables of beliefs, attitudes, perceptions and intentions that were proposed to explain efficient, effective and effective behaviour (García, 2008).

Although Internet access is concomitant with the increase of users of social networks, these focus on Facebook and twitter not only for ease of use, but also for the usefulness of their protocols when it comes to disseminating personalized information (Sandoval & Saucedo, 2010). Social networks are personalized instances of information, but the information disseminated in them requires computational skills, search and information processing skills, as well as storage and dissemination capacities (Teh, Chong, Yong & Yew, 2010).

Consequently, the digital divide involves not only differences between those who access digital media and those who are marginalized or excluded, it connotes differences between Internet users seeking information for their entertainment and Internet users who process information for their knowledge and innovation (Fenoll, 2011).

Whereby Internet users are attached to a system of academic or professional training that forces them to seek

information and process it to show meaningful learning (Wong, Osman & Goh, 2013).

The relevance of beliefs understood as general categories of information extends to the formation of defined attitudes such as specific categories of information, perceptions of catastrophe risk or perceptions of usefulness of information assumed as expectations that allow to anticipate scenarios of uncertainty, as well as the intentions of using the Internet to most likely process the information that is generated.

It is the relationships between the psychosocial variables that make relevant their inclusion in the psychological informational models because they explain the information processing of events distant or close to the daily life of Internet users (Yaghoubi & Bahmani, 2010). In this way, the reception of real-time information is a major factor in planning strategies or lifestyles that lessen the impact of catastrophes.

However, the tendency of the informational psychological studies is to specify the psychosocial variables since the beliefs are very general categorizations and could not anticipate specific behaviours, although the attitudes are more delimited categorizations, they require of information perceived to activate decisions of immediate action (García, Carreón, Hernández, Bustos, Bautista, Méndez & Morales, 2013).

Precisely because the intentions are decisive probabilities of carrying out a rational, deliberate, planned and systematic action, they predict the emergence of behaviour, but the information generated on the Internet leads to a more emotional than rational process (García, Carreón, Hernández, Bustos, Morales & Limón, 2013).

It is for this reason that the study of intentions with emotional and rational dimensions seems to be more pertinent in an unpredictable and incommensurable scenario as would be the electoral contests (García, Carreón, Hernández, Limón, Montero & Bustos, 2013).

The measurement of political culture in areas such as electronic networks has been carried out by Carreón (2016) who proposed the Political Cyberculture Scale (ECP-21) to explain the linear relationship of three dimensions related to the expectations and intentions of I vote in scenarios of insecurity and before political contests in digital networks.

However, the reliability and validity of the general scale (alpha of, 680) and the subscales were low (alphas of 652, 690 and 670 respectively) so that adaptation to closer electoral scenarios can increase their properties psychometric (Dorantes, 2014). Precisely, in the process of building an electoral agenda, understood as a scenario in which expectations, dispositions and intentions of citizens converge with respect to the image, reputation and prestige of the authorities, a scenario is created that encompasses the effects of political campaigns in the preferences and suffrages of younger electorate and reliable user of electronic networks such as Facebook, Twitter, SnapChat, Instagram, YouTube and WhatsApp (Paniagua, 2007).

In this sense, the electorate that attends more to discourses than to images has been formed in a culture of reasoning rather than the political image, but in relation to its authorities, when this culture of information verification and the contrast of ideas is exacerbated, generates a symbolic process that justifies the implementation of resources external to the institutions (Chihú, 1997) In such a scenario corruption is processed as an inherent part of the political culture, which is why the campaigns of denunciation, confrontation and promotion of honesty have more effects than fear campaigns focused on economic security or the protection of integrity and the heritage (Dallorso & Seghezze, 2015). The mass media in general and the electronic networks in particular are sensitive to such an electoral crossroads that goes from fear to pacification, propitiating plausibility logics for the electorate more exposed to the diffusion of images and a logic of verifiability for the most enlightened electorate which seeks to contrast information from various sources to form a criterion (Delameza, Robles, Montecinos y Ochsenius, 2012).

Some studies show that the establishment of an agenda and its effect of framing the likelihood or verifiability are related to the electoral preferences, the intention to vote and effective suffrage, but do not delve into the analysis of the attributions in a consensus scenario. Other works have focused their interest on the effects of framing unfavourable news to a region when evidencing citizen insecurity, but have not considered the effects of these messages on citizen expectations of being harmed or benefited by "hard-line" or "hard-line" policies "zero tolerance". Some researchers have shown the associations between lifestyles and risky behaviours with scenarios of insecurity or corruption, but have not established the relationship between these expectations with their electoral preferences, voting decisions or effective suffrages.

Therefore, it is necessary to adapt the instrument that measures the cyber politic culture and adjust it to the theoretical relations between the expectations and the intentions of voting in electoral scenarios.

Therefore, there will be significant differences between the theoretical correlations of expectations and voting intentions with respect to the empirical correlations to be observed in the study sample.

## **Method**

The scenario in which it took place was the municipality of Huehuetoca, State of Mexico, prior to the elections of 2017, where the electoral preference was associated with the expectation that the electoral conjuncture implies with respect to migration, security and employment. A non-experimental, exploratory and cross-cut quantitative study was carried out. A non-probabilistic selection of 253 students from a public university of the State of Mexico was carried out. The criterion of inclusion-exclusion was to have been written in the computer lab, to belong to a social network and to seek information for the preparation of tasks, works, practices, expositions, dynamics, and thesis or research reports. 120 were women ( $M = 19.5$  years of age and  $SD = 3.15$  years) and 133 men ( $M = 22.5$  years of age and  $SD = 4.26$  years).

El instrumento que mide la cultura Ciber-Política de Carreón (2016) fue utilizado en el presente trabajo. Two subscales of perceptions and voting intention of Carreón (2016) were used. The Consensus Perceptions Scale included 14 items related to expected benefits and consensus expectations. The Voting Intentions Scale included 7 items related to the election probabilities based on an electoral preference.

The Delphi technique was used for the homogenization of the concepts: 1) informative synthesis, 2) contextualization; 3) comparison of concepts and 4) integration of elements. Next, expert judges evaluated the reagents, considering: -1 for unfavourable information, 0 for unlinked information, +1 for favourable data, suggesting the

modification or adjustment of the reagents. The instrument was piloted with a small sample of students before validation, protecting the dignity and integrity of the parties involved in writing.

The corresponding permission was requested for the application of the instrument in the classroom. Once the students were told that the study would not affect positively or negatively their partial or final scores, they proceeded to give them the survey advising that they had a maximum of 20 minutes to respond to it. Subsequently, the respondents signed their informed consent. The data were captured in the Statistical Package for Social Sciences (SPSS) and the Analysis of Moments Structures (AMOS) software in versions 10 and 6.0 respectively.

The multivariate analyses were carried out with previous requirements of normal distribution, reliability and validity for which the parameters of kurtosis, alpha and factorial weight were used. Once the psychometric properties were established, we proceeded to estimate the correlations between each of the eight factors with respect to themselves using the "phi" statistic. The dependency ratios were calculated with the parameter "beta" between the factor and the indicators, as well as the use of the "epsilon" statistic for the relations between estimation errors and the manifested variables. Finally, the contrast of the structural model was performed with the parameters chi square, goodness of fit and residual.

### Results

Table 1 shows alpha values above the minimum required to establish an internal consistency between the scales, which in the case of expectations (alpha of 0.893) includes two factors: expected benefits (alpha of 0.891 and 25% of the variance Total explained) and consensual expectations (alpha of 0.885 with 17% of the total variance explained). In the case of the intention to vote (alpha of 0.880 and 28% of the total variance explained).

Table 1.  
Descriptions, reliability and validity of the instrument

<b>R</b>	<b>M</b>	<b>S</b>	<b>K</b>	<b>A</b>	<b>F1</b>	<b>F2</b>	<b>F3</b>
<b>R1</b>	3,05	1,26	1,32	0,805	0,618		
<b>R2</b>	3,21	1,06	1,39	0,816	0,682		
<b>R3</b>	3,27	1,04	1,29	0,841	0,693		
<b>R4</b>	3,49	1,21	1,32	0,837	0,603		
<b>R5</b>	3,58	1,42	1,45	0,806	0,681		
<b>R6</b>	3,74	1,03	1,48	0,827	0,618		
<b>R7</b>	3,95	1,50	1,02	0,825	0,671		
<b>R8</b>	3,14	1,02	1,49	0,821	0,401		
<b>R9</b>	3,27	1,06	1,20	0,821		0,406	
<b>R10</b>	3,26	1,25	1,14	0,831		0,426	
<b>R11</b>	3,01	1,48	1,34	0,804		0,427	
<b>R12</b>	3,23	1,93	1,25	0,842		0,437	
<b>R13</b>	3,26	1,36	1,38	0,852		0,465	
<b>R14</b>	3,36	1,02	1,29	0,861		0,487	
<b>R15</b>	3,27	1,24	1,21	0,831		0,501	
<b>R16</b>	3,01	1,60	1,13	0,805		0,503	
<b>R17</b>	3,05	1,36	1,21	0,832			0,503
<b>R18</b>	3,27	1,04	1,14	0,861			0,503
<b>R19</b>	3,82	1,06	1,45	0,853			0,504
<b>R20</b>	3,54	1,57	1,59	0,831			0,523

<b>R21</b>	3,28	1,82	1,07	0,872			0,591
<b>R22</b>	3,56	1,54	1,09	0,884			0,673
<b>R23</b>	3,57	1,42	1,56	0,892			0,562
<b>R24</b>	3,32	1,13	1,15	0,886			0,641

R = Reactive, M = Mean, S = Standard Deviation, K = Kurtosis, A = Cronbach's alpha with values suppressing that of the item. Extraction method: main axes, rotation promax. Adequacy and Sphericity [ $\chi^2 = 324.25$  (45gl)  $p = 0.000$ ; KMO = 0.672] F1 = Expected Benefits of the Electoral Contest (25% of the total variance explained), F2 = Consensus Expectations (17% of the total variance explained). F3 = Intention to vote (28% of the total variance explained). Each item has response options such as: 0 = unlikely, 1 = very unlikely, 2 = unlikely, 3 = probable, 4 = very likely.

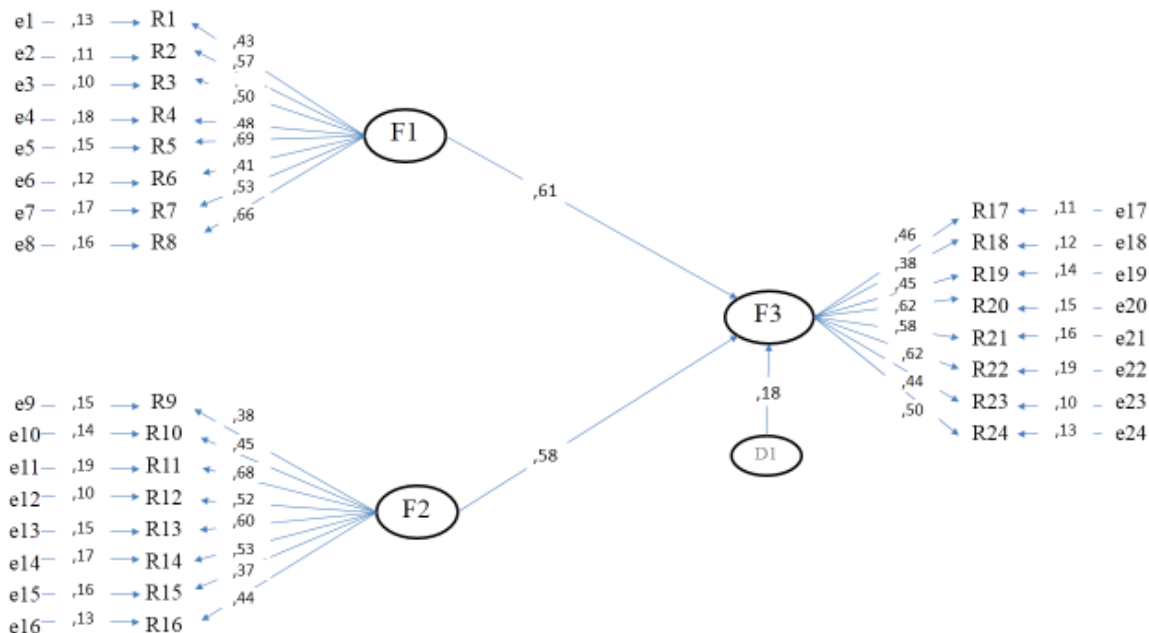
However, the low correlations between item and factor expressed in factorial weights indicate a simple factorial structure of oblique type (see Table 2).

Table 2.  
Correlations and covariations on the factors and indicators

	M	S	F1	F2	F3	F1	F2	F3
<b>F1</b>	34,56	13,24	1,00			1,73		
<b>F2</b>	45,12	15,49	,293*	1,00		,742	1,96	
<b>F3</b>	63,50	12,04	,354**	,381***	1,00	,813	,792	1,82

F1 = Expected Benefits of the Electoral Contest, F2 = Consensus Expectations. F3 = Intention to vote: \* $p < ,01$ ; \*\* $p < ,001$ ; \*\*\* $p < ,0001$ . The correlation between the factors or dimensions - expected benefits and consensus expectations of the Consensus Expectations Scale seems to indicate an association between the expected benefits of the electoral contests with respect to the consensus expectations. In this sense, electoral preferences would be the starting point to activate the voting intention process, since it is consensus expectations such as distrust, discontent, denunciation, responsibility and social division that determine the intention to vote (see Figure 1).

Figure 1.  
Structural equation modelling



F1 = Expected Benefits of the Electoral Contest, F2 = Consensus Expectations. F3 = Intention to vote: □ relation between errors and indicators; □ relations between factors and indicators

Finally, the adjustment and residual indicators [ $\chi^2 = 214.35$  (47gl)  $p = 0.007$ ; GFI = 0.990; CFI = 0.997; RMSSEA = 0.001] suggest the acceptance of the null hypothesis regarding the co-correspondence between the theoretical relations of the variables with respect to the findings.

### Discussion

From an exploratory factorial structure of main axes and with simple and oblique promax rotation in which the

correlations among the factors of the Consensus Expectation Scale stand out, the present work has provided a provisional model to the study of the electoral preferences and their Effects on the intention to vote.

Non-experimental design and non-probabilistic selection, however, limit the students' results to the public university of the State of Mexico. In this sense, it is expected to carry out the test of the model in a representative sample of students from the Mexican city in order to anticipate the results of the state elections to be held in 2017 and the federal elections of 2018.

However, digital networks as a framework of agendas, advertisements, opinions, preferences and intentions, represent a small percentage of the electorate that will participate in the aforementioned elections. This is because unlike traditional media, digital networks not only reproduce information but also produce expectations in potential voters.

Such a difference between the Internet, television, radio, the press or cinema makes it necessary to reflect on the studies of mass communication centred on the establishment of agenda, the framing effect and its consequences on the intentions to vote. That the study of the digital networks supposes a differentiation of sectors even among the users of Facebook, Twitter, YouTube and Instagram with respect to others of digital networks. Therefore, it is necessary to study in greater depth the study of the similarities and differences of internet users of digital networks with respect to potential voters of the elections in question.

From an approach of political culture, understood as the representations, dispositions, intentions and behavior of the governed to their rulers and given the context of the study scenario (Vieira, 2018), it is necessary to reorient the discussion of the findings regarding the citizen formation as perceptions of costs and benefits, as well as the construction of agreements in the prevention of crime, the procurement of justice and social rehabilitation, indicators of governance. That is, in a scenario in which the emergence of electronic networks have been instrumented to guide a certain political culture, indicated by the costs and benefits of voting for an option that is directly related to security, it is necessary to explore the dimensions of the formation of that political culture in order to anticipate scenarios of un-governability; conflicts between the parties involved and negotiation mechanisms.

### Conclusion

The structure of determining relationships of the intention to vote ecologist was the objective of the present work, but the research design limited the findings to the research scenario, suggesting the inclusion of other determining factors that the literature identifies as expectations of promises and fulfillments of campaign commitments. Including the factors will allow to increase the predictive power of the model, as well as the percentage of total variance explained

### References

- Abu, F., Yunus, A., Majid, I., Jabar, J., Sakidin, H. & Ahmad, A. (2014). *Technology Acceptance Model (TAM): Empowering smart customer to participate in electricity supply system*. Journal of Technology Management and Technopreneurship, 2 (1), 85-94
- Carreón, J. (2016). *Desarrollo humano: Gobernanza, Desarrollo Local y Emprendimiento Social*. México: UNAM
- Chihú, A. (1997). *El procesualismo simbólico: Una propuesta de análisis de la cultura política*. Polis, 97, 15-32
- Dallorso, N. y Seghezze, G. (2015). *Inseguridad política: El miedo como operador estratégico en las campañas electorales en Argentina*. Comunicación y Sociedad, 24, 47-70
- Delamaza, G., Robles, C., Montecinos, E. y Ochsenius, C. (2012). *Redes de política pública y agendas de participación ciudadana en el Chile postransicional*. Gestión y Política Pública, 21 (1), 45-86
- Dorantes, G. (2014). *Procesos electorales y democracia: la construcción de una agenda de campaña política*. Convergencia, 64, 143-168
- Fenoll, V. (2011). *Usuarios activos y pasivos. La interactividad de la audiencia en los medios digitales*. Revista de Ciencias Sociales. 51, 1-26
- Gamal, M. & Gebba, T. (2013). *Mobile banking adoption: an examination of Technology Acceptance Model and Theory of Planned Behavior*. International Journal of Business Research and Development, 2 (1), 35-50
- García, C. (2007). *La percepción de utilidad del comercio electrónico Enseñanza e Investigación en Psicología*, 12 (2), 409-420
- García, C. (2008). *La brecha digital de las generaciones futuras*. Entelequia, 8, 61-72
- García, C., Carreón, J., Hernández, J., Bustos, J., Bautista, M., Méndez, A. & Morales, M. (2013). *Confiabilidad y validez de un instrumento de medición de búsqueda en Internet*. Revista de Psicología de la Universidad de Antioquia, 5 (1), 27-34
- García, C., Carreón, J., Hernández, J., Bustos, J., Morales, M. & Limón, G. (2013). *Dimensiones utilitarista y eficientista del uso del uso de Internet*. Visión Gerencial, 12 (2), 281-292
- García, C., Carreón, J., Hernández, J., Limón, G., Montero, M. & Bustos, J. (2013). *Determinantes perceptuales de la intención de uso de Internet para el desarrollo del capital humano*. Forum Empresarial, 18 (1), 95-117
- Paniagua, F. (2007). *Agenda de medios ¿estrategia de partidos equivocada?* Hologramática, 4 (6), 53-72
- Sandoval, R. & Saucedo, N. (2010). *Grupos de interés en las redes sociales: el caso de Hi5 y Facebook en México*. Educación y Humanidades, 4, 132-142
- Teh, P., Chong, C., Yong, C. & Yew, S. (2010). *Internet self-efficacy, computer self-efficacy, and cultural factor on knowledge sharing behavior*. African Journal of Business Management, 4, 4086-4095
- Vieira, A. L. (2018). *Political culture and democracy in Latin America: Perspectives on Brazil and Colombia*. Encuentro Latinoamericano, 5 (1), 45-65
- Wong, K., Osman, R. & Goh, P. (2013). *Understanding student teacher's behavioral intention to use technology: Technology Acceptance Model (TAM) validation and testing*. International Journal of Instruction, 6 (1), 90-104
- Yaghoubi, N. & Bahmani, E. (2010). *Factors affecting adoption of online banking. An integration Technology Acceptance Model and Theory of Planned Behavior*. International Journal of Business and Management, 5 (9), 159-165

