



## **Governance of perception of risk-benefit and intention to vote in favor of bikeways**

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### **Abstract**

In the framework of policies against the effects of climate change on public health, mobility policies based on zero carbon dioxide emissions have focused their interest on the implementation of bicycle lanes, the bicycle motor subsidy and restriction of automobiles. In this sense, the objective of this paper has been to establish the reliability and validity of an instrument that measures the perceptions of risk and utility, as well as the intentions of voting in favor of electoral proposals and candidates that support the urban sustainability policy. A non-experimental, cross-sectional and exploratory study was carried out with a non-probabilistic sample selection of 250 residents of the metropolitan area of Mexico City. From a structural model. The factors cited were found to correlate positively and significantly, but it is recommended to extend the study to the contrast of the model in other scenarios with local elections and mobility policy based on the use of the bicycle.

**Key words:** Local development, sustainability, co-governance, model, Delphi.

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## *Gobernanza de la percepción del riesgo-beneficio y la intención de votar a favor de los caminos para bicicletas*

### **Resumen**

En el marco de las políticas contra los efectos del cambio climático en la salud pública, las políticas de movilidad basadas en cero emisiones de dióxido de carbono han centrado su interés en la implementación de carriles para bicicletas, el subsidio a los motores de bicicletas y la restricción de automóviles. En este sentido, el objetivo de este documento ha sido establecer la confiabilidad y la validez de un instrumento que mide las percepciones de riesgo y utilidad, así como las intenciones de votar a favor de las propuestas electorales y los candidatos que apoyan la política de sostenibilidad urbana. Se realizó un estudio no experimental, transversal y exploratorio con una selección de muestras no probabilística de 250 residentes del área metropolitana de la Ciudad de México. Se encontró que los factores citados se correlacionaron positiva y significativamente, pero se recomienda extender el estudio al contraste del modelo en otros escenarios con elecciones locales y políticas de movilidad basadas en el uso de la bicicleta.

**Palabras clave:** Desarrollo local, sostenibilidad, co-gobierno, modelo, Delphi.

### **Introduction**

The project is part of the discipline of Social Work, an area of documentary studies and complexity, but includes concepts from social psychology, environmental sociology and solidarity economy.

This is how the perception of risk-benefits and voting intentions are, from the perspective of social psychology, the result of the interrelation between groups, as is the case of those who favor zero-emission mobility policies. carbon to the atmosphere. The decisions to use an ecological transport are due to the intensive use of a technology that makes zero emissions possible, but above all to the meaning of these technologies.

In this way, positive attributions to the science produced by zero-emission technologies favor a trend in favor of bicycle lane policies, shared mobility strategies or subsidies in the installation of bicycle engines, but this social construction of the zero emissions must be complemented by the meaning of the environmental and atmospheric footprint of transport users that emit carbon dioxide into the atmosphere.

From the environmental sociological approach, the social construction of nature is different from the social construction of the ecological balance since, the first one supposes a means or instrument of domain of the humanity, while the second implies the care of the environment for the future generations of humans, descendants of those who today make the decision to reduce their emission of carbon dioxide and the atmospheric footprint

However, both the social construction of the environment and the meaning of the use of zero-emission transport, as in the case of cycle paths, imply a logic of cost-benefit without which the advance of science and humanity could not be explained. that supposes greater and better options of protection and conservation of the environment.

This is an economic environmental logic of cost and benefit that conditions the viability of environmental policies, prevention strategies and self-care promotion programs through the intensive use of bicycles.

Well, the Social Work approach takes up the contributions of the three disciplines and integrates them into an intervention model with the aim of articulating civil demands in state institutions and translating government policies into civil organizations charged with incentivizing subsidies and condonations aimed at reducing the atmospheric footprint such as the use of bicycle lanes.

Governance human development, understood as a process of co-government, co-management and co-responsibility that considers resources and services as common, is the object of study and research of this work.

The governance of human development supposes a scenario of co-government of conflicts, freedoms, opportunities, capacities and responsibilities of management as self - management oriented towards the conservation of spaces and species (Carreón et al., 2016).

In the context of the effects of climate change on public environmental health, local governments have implemented policies and strategies to reduce such effects, but the management and administration has been predominantly state, excluding citizens or at best confining them to participate in the evaluation of the performance of institutions or officials, bypassing the rights that guarantee and compel civil society to propose and discuss a common future with their authorities (García, 2013).

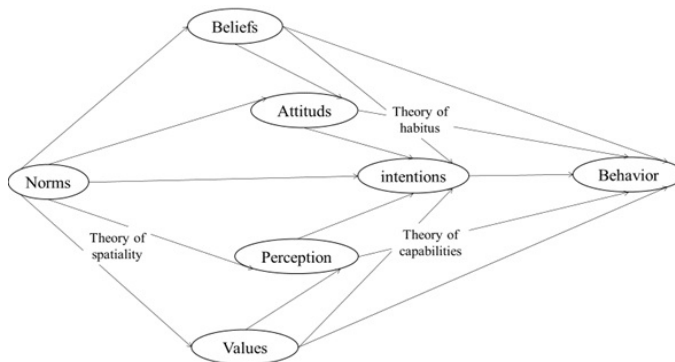
As a result, the proposals for self-government, self-management and self-administration of natural resources and public services have been built in opposition to the laws, institutions and state decisions, even though the media have spread political corruption as the obstacle to the sustainable local development (García, Carreón & Hernández, 2016a).

Therefore, from the academy is necessary the integration of self-government with the rectoría of the State in matters of co-government, co-management and co-management of natural resources and public services in order to reduce the impact of climate change on environmental public health (García et al. al., 2012).

### Theory of sustainable local development

The theoretical and conceptual frameworks that explain the governance of human development are: 1) theory of spatiality, 2) theory of habitus and 3) theory of capabilities (see Figure 1).

**Figure 1. Theory of sustainable local development**



Source: García (2018)

The theory of spatialities, for the purposes of this writing, refers to the explanation of the fetishization of spaces to which they are attributed a power that differentiates them as is the case of residing or aspiring to reside in the city with respect to the periphery or the field (Lefébvre, 1974).

This is how a spatiality supposes an excessive attribution of privileges with respect to processes, things, objects or people. In this way, the fetishization of spaces generates the exclusion of people, although they also exclude species, spaces, things, processes or objects by the simple fact of attributing them a place outside a city (García, Carreón & Hernández, 2016b).

However, the theory of *espacialidad* does not realize that such power attributions urban spaces becomes *habitus* both inherited and learned. This is so because the dispositions of those who reside in cities are transferred from generation to generation and are molded in the family, school or work relationship (Bourdieu, 2002).

In this way, the exclusion from the attribution of a superiority to the cities, synthesized in the perceptions of the quality of life or the residential aesthetics, is a negative disposition toward everything that is not in the city, but it is also a disposition that is learned (García et al., 2013).

By interacting, residents of a city develop skills and knowledge about what they consider security services and comfort that lead them to ennoble their choice of residence with respect to those living in areas without services considered essential as paving, sewers, drainage or potabilization (García et al., 2014).

Both *habitus*, inherited and learned explain the choice of a habitat, a stay of residence, as well as a journey towards comfort and a return to the place of first residence, but do not explain the use of opportunities to buy or sell residence, nor the entertainment or entertainment that involves solidarity tourism or the search for employment or studies in cities (García et al., 2016).

The theory of capabilities warns that public services; health, education, employment, housing or entertainment, apparently distinctive of a city with respect to the periphery or the countryside, are products of the skills and

knowledge that a resident develops from a logic of scarcity or abundance (Sen, 2011).

The logic of scarcity not only explains the inefficiency and inefficiency of the State's rector, the illegitimacy of its urban policies or the ineffectiveness of its strategies, but also warns that , in a context of austerity or contingency, residents organize themselves to do in the face of the shortage crisis, although animated by the idea that they will conserve natural resources to survive the growing ungovernability(García et al., 2017) .

In contrast, the logic of abundance, although it refers to a series of beliefs that the natural environment is abundant and that residents must optimize such resources, raises the development of skills and knowledge necessary to import resources from other places. sue (García, Valdés & Sandoval, 2016).

The logic of scarcity supposes a cooperation in solidarity while the logic of abundance suggests a competition for the resources of the immediate and surrounding environment (Hernández et al., 2014).

Therefore, the governance of human development, from the reviewed approaches, refers to perceptions of scarcity or abundance of resources and their reflection on the quality of local services.

### **Studies of sustainable local development**

The studies of sustainable local development warn the emergence of relations between habitus, capacities and spatialities (see Table 1).

**Table 1.**

#### **Studies of sustainable local development**

Year	Author	Find
1987	Corral, Garibaldi & Encinas	They found, in an exploratory study of frequencies of domestic water use, around the use of the shower, the main activity of domestic water consumption. In contrast, the use of the refrigerant was the domestic device with less frequency of use in both samples of the study

1992	Corral & Obregón	They carried out a systematic review of the variables included in the models of pro-environmental behavior. They proposed factors, situations, pro-environmental competences, styles and ecological reasons as the determinants of Pro-environmental behavior.
2000	Corral & Zaragoza	They demonstrated, through a system of structural equations, four dimensions of recycling behavior which was determined by the reasons for reuse. In this model, the size of the house and economic status also affected the behavior. However, beliefs through motives influenced reuse behavior. They established significant differences between men and women with respect to their knowledge of reusing and recycling products. These significant differences were also observed around reuse beliefs and recycling beliefs.
2000	Hernández & Landázuri	They established a difference between proportions of nonparametric data, six categories: (1) image and institutional identity, (2) physical and built environment, (3) solid waste, (4) hazardous waste, (5) electric power management and (6) environmental training. Later, in 1998, with another stratified sample of 466, the image of the campus, solid waste and environmental training remained the main problems.
2001	Acosta & Montero	They demonstrated significant associations between responsible environmental behavior and locus of control, knowledge of environmental action, environmental skills and coping styles. They established the associative, positive and significant relationship between knowledge of environmental action and responsible environmental behavior. As the values of one variable increased, the values of the other variable increased. They demonstrated that responsible environmental behavior is associated ( $r = .45$ ; $p < .05$ ) with the skills and knowledge index of environmental action.

2001	Oceja & Jiménez	They made three studies. They evaluated a group of norms, analyzed their degree of compliance and established the classification of a set of norms. They demonstrated in the first study that the typology is pertinent based on three criteria (personal agreement, formal sanction and social disapproval). In the second, they established differences between the norms (legitimate laws and prescriptions are fulfilled to a greater extent than illegitimate laws and convictions) using the criterion of informed and perceived compliance. In the third, they established significant differences between the attitudes toward each type of norm.
2002	Barreiro, López, Losada & Ruzo	They established, by means of a discriminating cluster analysis and Euclidean distance clusters, six groups differentiated by type of ecological consumption; skeptics, carefree, institutional, pastas, social and clueless.
2002	Guevara & Rodríguez	They demonstrated a tendency to respond positively and homogeneously to garbage separation and collection services.
2002	Negrón, Arias & Delbrey	They showed significant differences between men and women regarding the change of their knowledge after information related to their knowledge about their health and the environment.
2003	Corral	He showed, through a structural model, the incidence of domestic utensils on water consumption. In this model, the reasons, scarcity and skills, had a negative effect on water consumption.
2003	Frías, López & Díaz	They demonstrated the indirect effect of the macro-system on antisocial behavior through the micro-system. In the structural model, the exo-system was indicated by three indicators and the micro-system by five manifest variables.



2004	Busts, flowers & Andrade	<p>They demonstrated the direct, positive and significant relationship between three pro-environmental behavioral variables; washing of bathrooms with personal hygiene (<math>r = .17</math>; <math>p &lt; .01</math>), cleaning of teeth with personal bath (<math>r = .18</math>; <math>p &lt; .01</math>). The relationship between four conservation variables; beliefs of obligation to take care of water with instrumental saving skills (<math>r = .24</math>; <math>p = .01</math>), knowledge on water management with socio-environmental protection = <math>.42</math>; <math>p &lt; .01</math>) and instrumental skills of savings with socio-environmental protection reasons (<math>r = .27</math>; <math>p &lt; .01</math>). the relationship between seven pro-environmental factors; beliefs of obligation to take care of the water with locus of internal control (<math>r = .43</math>; <math>p &lt; .01</math>), with the water saving (<math>r = .45</math>; <math>p &lt; .01</math>), with the reasons of environmental protection (<math>r = .24</math>; <math>p &lt; .01</math>), with the perception of health risks (<math>r = .26</math>; <math>p &lt; .01</math>), in turn perception is related to the internal control locus (<math>r = .30</math>; <math>p &lt; .01</math>), with the pro-environmental behavior (<math>r = .23</math>; <math>p &lt; .01</math>) and with environmental protection reasons (<math>r = .27</math>) which in turn are related to the locus of control (<math>r = .28</math>; <math>p &lt; .01</math>), with water savings (<math>r = .12</math>; <math>p &lt; .01</math>) and instrumental skills (<math>r = .42</math>) which in turn are related to the locus of control (<math>r = .38</math>; <math>p &lt; .01</math>) and water saving (<math>r = .33</math>; <math>p &lt; .01</math>). Finally, knowledge of water management is associated with the locus of control (<math>r = .16</math>; <math>p &lt; .01</math>) and with pro-environmental behavior (<math>r = .47</math>; <math>p &lt; .01</math>). They demonstrated the indirect effect of internal control beliefs and knowledge about Pro-environmental behavior. In this trajectory of prediction, the beliefs of the obligation to take care of water, the perception of risk, the reasons for socio-environmental protection and the instrumental skills transferred that impact</p>
2004	Corral & Pinheiro	<p>They established six dimensions of sustainable behavior related to austerity, anticipation, altruism, effectiveness, deliberation and saving. They demonstrated positive and significant associations between the dimensions.</p>

		Later, in a structural model, they demonstrated the reflectivity of the sustainable behavior around the six dimensions referred to.
2004	Urbina	He demonstrated that both water pollution and water scarcity are perceived as risks both by non-experts and by experts who objectively assess risks.
2005	Fraj & Martínez	They demonstrated the moderating effect of environmental knowledge on the causal relationship between affective, verbal and real commitment. To the extent that environmental knowledge was minimal, the causal relationship and the percentage of variance were low. In contrast, when the level of environmental knowledge was specialized, the causal relationships and the variance explained increased significantly.
2005	Meinhold & Malkus	They correlated self-efficacy with environmental attitudes ( $r = .23$ ), with environmental knowledge ( $r = .16$ ) and with environmental behavior ( $r = .30$ ), environmental attitudes with environmental knowledge ( $r = .18$ ) and with pro-environmental behavior ( $r = .45$ ), environmental knowledge with pro environmental behavior ( $r = .34$ ) all with a significance less than .001
2006	Aguilar	Established, through a structural model, the indirect effect of attitude, past behavior, control and personal norm on pro-environmental behavior through intention. In this structure, past behavior was the main determinant of ecological behavior.
2006	Corral, Frías, Fraijo & Tapia	They found significant differences between sex and age with respect to the propensity to risk, between sex, age and schooling with respect to lack of self-control, between sex and age with respect to antisocial behavior and between sex and age with respect to the anti-environmental behavior. They established positive and significant associations between the propensity to risk and the lack of self-control, antisocial behavior, anti-environmental behavior, between the lack of self-control

		and antisocial and anti-environmental behavior, between antisocial behavior and anti-environmental behavior. They showed negative associations between Pro-environmental behavior and the tendency to risk and lack of self-control.
2007	Cerda, García, Díaz & Núñez	They demonstrated the direct effect between environmental protection on the environmental behavior of the consumer of organic products and the promoter of environmental culture, the causal relationship between the promotion of environmental protection over the environmental behavior of the environmental monitor and the environmental cultural promoter.
2008	Bolzan	He found significant differences between the dimensions of Pro-environmental behavior; recycling, saving, cleaning, activism, consumption and desirability with respect to the type of company. He showed that the values of self-transcendence are the essential determinants of the pro-environmental dimensions of behavior.
2008	Corral, Fraijo & Tapia	They demonstrated five dimensions of water consumption related to the use of basins, showers, irrigation and cleaning. Later, they established through a structural model, the incidence of ecological and utilitarian beliefs about water consumption. Both beliefs correlated negatively.
2008	Milfont, Andrade, Belo & Pessoa	They established positive associations between the negative past with the hedonistic present, the positive past and the fatalistic present. The hedonistic present with the positive past and the fatalistic present. The positive past with the fatalistic present. In contrast, the present hedonist correlated negatively with the future and this one with the fatalistic present.

2009	Arreguín, Román, Laborin, Moreno, Abril & Valenzuela	They established significant differences between wasteful and water-saving groups with respect to knowledge, beliefs, norms, attitudes, intentions and abilities.
2009	Corral, Tapia, Fraijó & González	They established ten dimensions of sustainable behavior related to the perception of environmental norms, appreciation for the natural, pro-environmental indignation, affinity for diversity, deliberation, fairness, altruism, proecologism, austerity and self-presentation.
2009	Frías, Rodríguez & Corral	They demonstrated, through a structural model, the effect of the social norm on anti-environmental behavior. In this system of equations, deterrence and the personal norm had a lower or no incidence on the behavior unfavorable to the environment.
2009	Harranz, Proy & Eguiguren	Through a trail model, they established the intention as the main determinant of recycling behavior. In the system of equations, beliefs indirectly influenced recycling and intention was the transmitting variable.
2009	Orostegui & Matos	The high stratum (62 kg / inhabitant / day) generated less waste than the medium (74 kg / inhabitant / day) and low (77 kg / inhabitant / day) strata and with respect to the district average (71 kg / inhabitant / day). The organic matter, followed by paper and cardboard, was the prevailing municipal waste. In this sense, the high stratum generated recycling waste.
2010	Acebal	Found that the media are the main source of information and knowledge of environmental issues. Also established as knowledge synonym awareness and knowledge of the environment. Regarding teacher training, knowledge was the main lack of ecological problems.

2010	Brenner	The actors involved in environmental governance generate contradictory information, since it is their actions that contravene the agreements implied by the administration of common natural resources.
2010	Fernández, Porter & Neyra	They found differences between teachers and students regarding their learning environment. While the students considered that their environment had a social relevance, the teachers assumed the natural environment as the most important development factor for their community.
2010	Gissi & Soto	The appropriation of the space is made from the tequio that is the personal work done by a member before entering the guatza or community work.
2010	Hidalgo & Pisano	Attitude was related to knowledge ( $r = 0.454$ , $p = 0.001$ ), self-efficacy with knowledge and attitudes ( $r = 0.303$ and $r = 0.882$ , $p = 0.001$ respectively), perception of risk with knowledge, attitude and self-efficacy ( $r = 0,475$ , $r = 0,589$ , $r = 0,547$ , $p = 0,001$ respectively), the intention with knowledge, attitude, self-efficacy, perception and intention ( $r = 0,206$ , $r = 0,317$ , $r = 0,390$ , $r = 0.382$ , $p = 0.001$ respectively). The perception of risk was determined by attitude ( $\beta = 0.305$ , $p = 0.000$ ) and the intention was influenced by self-efficacy ( $\beta = 0.259$ , $p = 0.001$ ).
2010	Jiménez	They established three factors of the four possible dimensions. The first factor explained 46.4% of the variance while the second factor explained 28.6% of the variance and the third factor explained 25.15 of the variance. They established differences between men and women [ $X^2 = 10.088$ (2gl) $p = 0.007$ ], for years [ $X^2 = 176.77$ (8gl) $p = 0.000$ ] and habitat [ $X^2 = 21.657$ (6gl) $p = 0.001$ ]
2010	Mariby	62% agreed on a definition of cooperatives, 32% have an attitude favorable to collective work, but 35% disagreed to transform their company into a cooperative.

2010	McCright	The political ideology and perception of understanding negatively determined knowledge about climate change and concern about its consequences in gender ( $\beta = -0.372$ and $\beta = 0.336$ , respectively).
2010	Molini & Salgado	Regarding the discussion of the differences between compact and dispersed cities, population density is a relevant factor since the low concentration in compact cities makes it more sustainable than dispersed cities, but its high density increases the costs to the government entity responsible for regulating it. Such a scenario affects the creation of single-family homes because they are produced in communities with more than 500,000 inhabitants and pressure the availability of resources.
2010	Montilla, Pernía & Rodríguez	Cooperatives supposes a human and social system indicated by processes of self-construction, self-production, self-organization and self-poiesis.
2010	Pasco, Villafuerte & Neyra	They demonstrated that the level of technical-normative knowledge about the National Program on Climate Change was minimal among those in charge of making decisions and training volunteers to carry out environmental preservation actions.
2010	Schoon, Cheng, Gale, Batty & Deary,	Attitudes towards social liberalism were determined by education ( $\beta = .25$ ). At the same time, the attitude factor was composed of overt variables of anti-racism, social liberalism and gender equality (.45, .57 and .47 respectively).
2010	Sharples	The main source of information on climate change were television news (23.9%), food and beverages with the most consumed by the sample (83.8%), the focus was the most used object to combat the change climatic (88.7%).
2011	Flowers & Vine	Established the significant differences between density, activity, studies, income and water use with respect to occasional, systematic and absent water savings.

2011	Gaxiola, Frías & Figuerero	They established by means of a structural model [ $\chi^2 = 14.6$ (5gl) $p \ll 0.01$ ; BBNFI 0.90; BBNNFI = 0.86; CFI = 0.96; RMSEA = 0.04; $R^2 = 0.05$ ] five reflective factors of protective factors. The latent variable included the factor k (0.65), exosystem (0.27), microsystem (0.79), ontosystem (0.64), aging (0.22).
2011	Malmod	It systematized the reordering plans based on a logic of exclusion and inclusion. The first consisted in differentiating the spaces; privatization of goods and services. In contrast, the second proposal consisted of establishing connections between sectors, spaces and services to reduce spatial segregation. The logic of inclusion implies a design of networks in which each node is interconnected with one another and allows the interrelation between spatial elements, as well as the construction of an urban identity that favors tolerance to diversity.
2011	Marqués, Salavarría, Eastmond, Ayala, Arteaga, Marqués, Valladares & Manzanero	They found a medium level of knowledge regarding general and specific environmental problems in reference to their attitudes and behaviors.
2011	McCright & Dunlap	Beliefs about the null effects of climate change determined confidence in white men with a conservative ideology ( $\gamma = 0.82$ , $p = 0.000$ ). For its part, the basic political ideology determined the negation of the effects of climate change ( $\gamma = 0.47$ , $p = 0.000$ ), the race determined the belief about the lack of consensus on the effects of climate change for conservative targets ( $\gamma = 0.38$ , $p = 0.000$ ), however, sex negatively affected the beliefs of the null effects of

		<p>climate change on the base respondents (<math>\gamma = -0.67</math>, <math>p = 0.000</math>) as well as the identification with the environmentalism on the same belief in the same group (<math>\gamma = -0.81</math>, <math>p = 0.000</math>).</p>
2011	Nacif & Espinosa	<p>They found a relationship between national identity and urban planning pragmatism of central spatial rearrangement and architectural designs. The buildings represented symbols of national reconstruction that would extend to other Pampean and South American cities; Brazil, Peru, Colombia and Venezuela. The architectural proposals of the time proposed a greater mobility from east to west trying to integrate the periphery with the center. In this way, the countryside would be linked to the city and the water systems could have a better use, although the mining region was moving away more and more from public services. In such a scheme, the railroads were fundamental to incorporate the primary, secondary and tertiary sectors.</p> <p>Therefore, the wineries had to be moved to the agro-industrial zones. Due to the fact that the city was devastated by an earthquake and the shelter spaces were null or insufficient, recreational parks were projected that fulfilled the seismic and recreational space function. To avoid the agglutination of transport, the construction of an arch was proposed. Regarding the neighborhood reorganization, the creation of neighborhoods of 15 blocks in leased spaces guaranteed the socio-spatial control of the State. Other proposals consisted in concentrating citizens in multicultural areas to avoid segregation. Two issues were fundamental: environmental conservation and the privatization of the territory.</p>



2011	Nozica	The tourism policy will encourage the connection between bioceanic and periurban corridors. For this purpose, the desirable scenario will consist of a road network that articulates both areas. Such strategy will allow to increase the competitive advantages in terms of tourism, technological and commercial services in the region.
2011	Puntriano	The bankruptcy of the mill generated entrepreneurialism in the peasants and employees who decided to administer the company after the conflicts between the actors were resolved with the expropriation in the framework of neoliberalism.
2011	Solis	The sense of environmental responsibility directly, positively and significantly determined the saving of domestic and residential water. The emotional affinity towards the environment affected the residential management of municipal solid waste.
2011	Spence, Portinga, Butler & Pidgeon	The prevention of perceived disasters influenced the reduction of energy consumption ( $\beta = 0.371$ ) as well as the flood experience determined the perceived local vulnerability ( $\beta = 0.421$ ).
2011	Touginha & Pato	Ecological behavior correlated with age ( $r = 0.30$ ) while ecocentric beliefs were related to universal values ( $r = 0.20$ ).. On the other hand, age and universal values determined the ecological behavior ( $\beta = 0.24$ , $\beta = 0.21$ , $p = 0.001$ respectively).
2011	Zapata & Castrechini	They found significant differences among residents of nearby areas regarding neuroticism, extraversion and recycling. In this study, personality traits were not significantly associated with pro-environmental recycling behavior.

2012	Carr, Patterson, Yung & Spencer	The interviewees agreed that their religious beliefs are closely related to the effects of climate change, while the skeptics expressed their confidence in scientific and technological advances rather than religious solidarity in the face of the problem of global warming.
2012	Corral, García, Tapia & Fraijo	They established by means of a structural model [ $\chi^2 = 540.80$ (243 gl) $p < 0.001$ ; BBNNFI = 0.93; CFI = 0.94; RMSEA = 0.06; $R^2 = 0.35$ ]. The sustainable behavior factor included four factors; altruism, proecologism, frugality and equity (0.74, 0.75, 0.64, 0.74 respectively) while the restoration factor included well-being, fascination, extension and compatibility (0.61; 99, 0.94, 0.99 respectively).
2012	Cravino	<p>He found a degree of perception of risk in Buenos Aires residents at the time of migrating to the periphery. In this sense, the perception of the habitat is related to the services and investments that the State has oriented towards centrality. Another factor of perception of housing is the spatial socialization since a change of neighborhood implies the loss of social capital. The rent is a phenomenon closely related to the expectations of appropriation of the space since a good root guarantees the permanence in the neighborhood and the establishments of a higher quality of life.</p> <p>The proximity between the houses has led to the development of a spatial identity that increases reciprocity and even the transformation of the environment.</p>
2012	Cave	Four indicators of the symbiotic were; accessibility, mobilization, exchange and appropriation. In the first, pedestrianization is the public strategy to dilute segregation and encourage the inclusion of visitors in the events of public places. In the second, the spaces are equipped with furniture that allows coexistence and the exchange of ideas for the symbolic appropriation of space.

		The collective transport has its base in said spaces and this facilitates the transition from passage to pedestrian or to recreation. In the third, the building of church, town hall, banks, restaurants and other businesses facilitate social exchange. Finally, the appropriation of space is the result of accessibility, mobilization and exchange. The public squares are meeting, coexistence, commerce, transport and recreation centers.
2012	Fraijo, Corral, Tapia & García	They established the correlations between environmental psychological factors. Austerity correlated with deliberation ( $r = 0.311$ , $p = 0.001$ ) and skills ( $r = 0.382$ , $p = 0.001$ ). Deliberation with altruism ( $r = 0.415$ , $p = 0.001$ ), with the propensity to the future ( $r = 0.390$ , $p = 0.001$ ), with beliefs ( $r = 0.336$ , $p = 0.001$ ) and with equity ( $r = 0.302$ ); $p = 0.001$ ). Altruism with beliefs ( $r = 0.279$ , $p = 0.001$ ). The pro-environmental behavior with the skills ( $r = 0.291$ , $p = 0.001$ ). The propensity to the future with beliefs ( $r = 0.323$ , $p = 0.001$ ) and with the skills ( $r = 0.321$ , $p = 0.001$ ). The reasons with the beliefs ( $r = 0.207$ , $p = 0.001$ ).
2012	Markowitz	They established differences between ethical, unethical and undecided regarding their concern ( $F = 102.52$ , $p = 0.000$ ), risks ( $F = 51.68$ , $p = 0.000$ ), consensus ( $F = 26.83$ , $p = 0.000$ ), efficacy ( $F = 34.67$ , $p = 0.000$ ), responsibility ( $F = 69.41$ , $p = 0.000$ ). The environmental intentions were determined by beliefs ( $\beta = 0.506$ ).
2012	Moyo, Mvupm, Mazvipavf, Crawford, Dorward & Kunzekweguta	The perceived cycle of rain was the phenomenon most remembered by farmers (72%), while winter (1%) was the least remembered event. The four seasons were remembered as the phenomena of greatest change (23%), finally climate change was identified as the main cause of the changes perceived (53%).

2012	Poortinga, Spence, Demski & Pidgeon	Personal norms determined the size of carbon demand and the supply of alternative technologies ( $\beta = .51$ and $\beta = .41$ respectively). In turn, beliefs about climate change affected personal norms ( $\beta = .59$ ). On the other hand, the environmental identity determined the climate change beliefs ( $\beta = .55$ )
2012	Sahin, Hamide & Teksoz	The favorable behavior to the environment was explained by the attitudes toward it ( $\beta = .67$ ). In their case, the dispositions towards behaviors in favor of sustainability were determined by the tendency to follow the means of communication ( $\beta = .12$ ), although they were also explained by age ( $\beta = -.65$ ).
2012	Urquieta & Campillo	They established a relationship between economic resources and social stratification with respect to the representation of the city. The lower classes perceived centrality as an insecure area. The middle classes were concerned about the expansion of the city and its effects on the environment. Regarding expectations, they expressed an ideal of a city in which spaces would allow coexistence as an element of inclusion; recovery of space, tranquility and enjoyment. Regarding the right to the city, it was represented as a scenario of freedoms in which universal access to employment, education and health are indispensable.
2012	Yahya, Hashemnia & Rouhi	The attitude correlated with the consumption of green products ( $R^2 = 0.457$ ). The norm was related to attitudes ( $R^2 = 0.48$ ) perceptions with attitudes ( $R^2 = 0.43$ ) and consumption with attitudes ( $R^2 = 0.54$ )
2013	Beck, Sinatra & Lombardi	Knowledge perception correlated with concern ( $r = 0.556$ ), responsibility ( $r = 0.443$ , $p = 0.000$ ), concern with responsibility ( $r = 0.528$ , $p = 0.000$ ) and responsibility for dissemination ( $r = 0.228$ , $p = 0.000$ ), personal responsibility with teaching ( $r = 0.290$ , $p = 0.000$ ), predictions of students with their knowledge ( $r = 0.496$ , $p = 0.000$ ), the responsibility of teaching with feelings

		of comfort ( $r = 0.529$ , $p = 0.000$ ). They established differences between students of science, engineering, business, health, arts, and education ( $v$ Cramer = 0.0001), responsibility ( $v = 0.000$ ), feelings of comfort ( $v = 0.000$ ) and teaching ( $v = 0.000$ ).
2013	Corral et al.	The virtues were shaped by the factors of humanism, justice and valuation (0.97, 0.98 and 0.94), while the sustainable behavior included the factors of altruism, pro-environmentalism, frugality and equity (0.63, 0.62, 0.79 and 0.74). The virtues of humanity determined the sustainable behavior ( $\beta = 0.67$ ).
2013	Corral, Tapia, Ortiz & Fraijo	They established by means of a structural model [ $\chi^2 = 641.82$ (201gl) $p < 0.0001$ ; BBNFI = 0.91; CFI = 0.92; RMSEA = 0.06] two factors of first order virtues and sustainable behavior, which had a positive correlation (0.67), included three factors (humanity, justice and moderation) of second order for the case of virtues (0.97, 0.97, 0.94 respectively) and four (altruism, pro-ecology, frugality and equity) of second order for the case of sustainable behavior (0.63, 0.69, 0.79, 0.74) .
2013	Cunsolo, Harper, Ford, Edge, Ladman, Houle, Blake, & Wolfrey	Climate change is intuitively related to well-being and community identity. In this sense, the interviewees attribute spiritual relationships to their environment. Welfare is linked to the relationships that the interviewees establish with their environment and the attributions to the surrounding elements. Health is represented by the identity and attribution that the environment generates. The emotions that emerge from climate change are depression, fear, frustration, devastation and stress in the face of threats to the ecological balance of the environment and the community. In the case of depression, the community reported a high incidence in the consumption of addictive substances and suicidal ideation. In addition, the impact is magnified when

		considering that future generations will suffer even more the harmful effects of climate change in their community environment. However, the community also began to develop cooperation strategies aimed at prevention and civil protection. Resilient actions of self-care and self-management of public health were observed.
2013	Dasaklis & Pappis	The literature reviewed attributes greater relevance to climate change in productive and administrative processes. Mainly in the design of processes and operations that reduce the impact of climate change on the environment. It is an environmental responsibility generated from a green agenda but established from the minimization of operating costs.
2013	Fernandez	The competitiveness monitoring was positively associated with the cluster number ( $r = 0.62$ ).
2013	Cold & Corral	They established by means of a structural model [ $\chi^2 = 197.15$ (71gl) $p < 0.001$ ; BBNFI = 0.90; BBNNFI = 0.91; CFI = 0.93; RMSEA = 0.007; $R^2 = 0.67$ ] to the individual characteristics of offenders as the determinants of anti-social behavior (0.62). In turn, the latter were determined by family violence (0.42) and the social environment (0.41). The individual characteristics were confirmed by anxiety (0.84), opposite behavior (0.68), ADHD (0.85), depression (0.67), inattention (0.84), low empathy (0.47) and under self-control (0.53) and anti-social behavior included anti-socialization (0.76), aggression (0.99) and deviation (0.98)
2013	Orgas	Community tourism, unlike other types of tourism, is sustainable, since it meets present needs while protecting the environment without compromising the capabilities of future generations.
2013	Tapia, Corral, Fraijo & Durón	They established by means of a structural model [ $\chi^2 = 382.3$ (243gl) $p < 0.0001$ ; NNFI = 0.93; RMSEA = 0.003; $R^2 = 0.57$ ] the prediction of happiness based on sustainable behavior (0.17) and this one based on

		sustainable behavioral intention (0.76). In turn, the sustainable behavior was determined by pro-ecological behavior (0.80), frugality (0.66), equity (0.45) and altruism (0.41). Finally, the intention was influenced by indignation (0.26) and affinity (0.34).
2013	Vinneta & Maharaj	Self-trance was positively and significantly related to attitudes toward oneself (0.73).
2013	Wendling, Attari, Carley, Krause, Warren, Rupp & Graham	The income determined the preferences for action in the face of climate change ( $\beta = 0.977$ , $p = 0.000$ ).
Source: García (2018)		

The work is inscribed in developmental humanism (freedoms, capacities and responsibilities), structuralist constructivism (habitus, capitals and fields) and Marxist urbanism (spatiality).

- Freedoms, capacities and responsibilities for the appropriation of the city (spaces and water resources).
- Habitus, capitals and fields where conflicts are generated by the redistribution of resources and spaces in the city (aquifers, networks and pipes).
- Spatialities for the governance of the local resources of the city (awareness for the equitable distribution of water).

The proximity of the concepts to the everyday styles will allow to discuss the importance of the political system of governance about the eco-city economic system. In this sense, it is necessary to open the debate on social inclusion through the right to a city, mainly to natural resources and essentially to water resources as elements of local sustainable development (Brites, 2012).

The city as a scenario of symbols, meanings and meanings around which the asymmetries between public policies and urban lifestyles are represented. The city is a scenario of resources that increase capacities, but also increase responsibilities (Cravino, 2012).

Studies related to real estate services; spatial and technological indicate that the size of the houses and the technology of their facilities, to be increasingly reduced the first and more automated the second, facilitate fluvial catchment and recycling, but inhibit the storage and reuse of water. Provision capacity seems to encourage the irresponsibility of waste of water (Cueva, 2012).

The interrelation between resources, services, scenarios, skills, knowledge and responsibilities that would make a governance system necessary suppose a balance between the mentioned factors is regulated by the State, supervised by the citizens and financed by the market (Guillén, 2010).

However, from a developmental policy framework in which freedoms will give way to capabilities and responsibilities. This process seems to be inhibited given the scarcity of natural resources in cities. That is, the availability of resources, being an objective fact rather than a subjective one, influences the lifestyles of the users who inhabit the cities. Such scarcity phenomenon activates public policies that seek to supply resources to one social sector to the detriment of another (Gissi & Soto, 2010).

In response to the exclusion or marginalization of public services, the segregated population constructs habitus intuitivo, adopts lifestyles from which they will confront symbolically and actively with the authorities. Protests, closures, rallies, demonstrations, marches, physical or verbal confrontations are the result of scarce resources, public policies and lifestyles or habitus of citizens (Iglesias, 2010).

Studies on life styles in cities in terms of shortage, saving and water reuse show that availability of less than 50 liters per person per day increases austerity, but increases confrontations with local authorities; kidnappings of pipes, closures of avenues, boycotts to networks and clandestine takes. Citizens segregated from water spaces and public services, develop skills



and strategies to demonstrate the situation in which they find themselves, express their outrage and appropriate spaces (Loyola & Rivas, 2010).

Within the framework of water conflicts between authorities and users, citizens' lifestyles in a situation of scarcity are a consequence of public policies. The city is a field of interrelation between capitals and socially constituted habits. In this way, economic and political capitals are confronted with natural and citizen capitals. That is, the market and the State require aquifers that supply the industry and private services as publics of the city, but the availability of water, through the recharge of aquifers, is increasingly lower than international standards or registries. national historical Such a scenario explains the emergence of habitus or lifestyles in vulnerable, marginalized or excluded sectors (Malmod, 2011).

However, lifestyles are conjunctural, emerging and inherent to a group or social agent. In other words, in a situation of scarcity and shortage, austerity underlies and similarly disappears in a situation of water sustainability in which the recharge of aquifers would guarantee the human and local development of the demarcations of a city. Such an approach is insufficient if it is necessary to understand the historical process that led cities to concentrate resources, services, lifestyles and capacities (Molini & Salgado, 2010).

The city as a symbolic scenario in which the relations of production materialize. The city concentrated the asymmetric economic relations between the classes that own the means of production and the labor force. In this sense, the city is a scenario of industrial production rather than services since the asymmetric relations between the bourgeoisie and the proletariat prevail over other asymmetric relations. Therefore, the awareness of space is no longer necessary to appropriate the factory, but the city that houses it. The right to the city would be the extension of the right to a symmetrical production relationship (Nozica, 2011).

If the labor force only appropriates the means of production, the spaces would be only an accessory to the class struggle rather than a constitutive element of the differences between these classes (Nacif, Martinet & Espinosa, 2011).

The redistribution of resources and their impact on human, local and sustainable development is explained from differences between individuals (sex, age, abilities, education, locality) determine the freedoms that individuals require to develop sustainably. In this sense, capacities are knowledge and experiences derived from the interrelation between individual characteristics, resources and spaces. As resources are scarce, capacities are decimated, and spaces are conflict scenarios since the State limits freedoms to guarantee a proportional distribution of resources (Pallares, 2012).

In the case of water, the capacities play a fundamental role since the daily use of water implies the development of life styles or habitus that can help to counteract the situation of scarcity and shortage. In this sense, the explanation of the discrepancies between local water supply policies and self-management actions, closure of floods, network intervention, sequestration of pipes and boycotts to the system are the result of transformations of resources and spaces to the that a sector of the citizenry does not have access (Oorostegui & Matos, 2009).

If capacities and habitus are indicators of the conflicts between citizens' expectations and public decisions, then reappropriation of spaces for the debate on the right to the city, its resources and water supply systems as well as water distribution is fundamental. (Pérez, 2010).

In this sense, the category of power to explain the differences between the relations of symbolic and material production. The city stands as a symbol of power that homogenizes the relations of production because the material conditions for it are already spatially pre-established. That is, spatial relationships are relations of power, but not communicative or discursive relationships, but material, although their fetishization makes them appear as tangible objects, but only at a discursive level, such relationships could be transmuted (Paniagua, 2012).

The fetishism of space as a commodity undermines the principle according to which the material conditions of existence determine the ideological superstructure. This is so since the exaltation of objects is inherent in the value of their use. The space, real or symbolic would have a use value, but not of change, although the interesting thing about its fetishization is that it indicates the degree of alignment to the relations of capitalist production

over any other type of relations in which the spaces were not transformed into merchandise (Santamaría, 2012).

In a certain way, the capacities and the habitus would be precedents to the alignment and would be indicated by their degree of fetishistic representation of space. If capacities and habitus are skills circumscribed to resources and spaces, then the alignment would be the result of the scarcity of resources and the asymmetric distribution of resources. The scarcity of fetishized water in short supply would mean the emergence of saving skills or dosage habitus, but such a process would inhibit the representation of conflict and social change. that is, scarcity, shortage, confrontation or boycott indicate a pseudo-conflict as it is resolved by supplying pipes, the distribution of jugs, the regular provision of water or the granting of vouchers for the purchase of water. The contradictions between public policies and lifestyles, derived from the demand of the pharmaceutical, soft drink or beer market, are reduced to distribution relationships rather than production or space allocation (Verissimo, 2012).

The fetishization of space prevents observing the differences between social relations and their stratification based on spatial and economic segregation mechanisms. Therefore it is necessary to consider as a socio-historical complement to the categories of habitus and capacities which are a-historical considering them emerging or underlying to the absence of freedoms or the generation of abstract conflicts between the structure (public policies) and the agency (Urquieta & Campillo, 2012).

The systems of governance of natural resources, mainly water, to the lifestyles of the users in reference to the public policies of water supply and irregular supply. In this regard, the reconceptualization of local governance systems will allow greater equity between the sectors through a normative legal framework of the right to the city in general, natural resources and public services at the local level and the comfort of water in the particular (Vieira, 2012).

However, the urgency of a fairer political system around the citizenship of the cities, ecocity projects are multidimensional and, in this diversity, lies its complexity (García et al., 2017).

The ecocity concept is multidimensional. It has been understood as an economic, political and social system to reduce the ecological footprint of previous generations in reference to the capacities of previous generations, a space limited to one million inhabitants, whose activities are agriculture and industry as a function of water availability, although conflict scenario, recycling is considered as its main development tool (García et al., 2013).

The eco-city concept is related to others of a socio-historical nature. Together with the categories of freedoms, capacities, responsibilities, habitus, capitals, fields and spatialities, the concepts of governance, segregation, sustainability, centrality, inclusion, periphery and surplus value will make it possible to conceptualize the problem of scarcity, marketocracy and shortage in the demarcation of study (García et al., 2014).

If the concepts used are considered, a governance system oriented towards the eco-city is opposed to segregation via the relocation of social sectors from the naturalization of their exclusion but is closer to local development since the term sustainability incorporates the system of government as rector of the resources and services of the ecocity. Rather, a governance system is developed in small localities such as the neighborhood or the periphery to extend to the center of the city. This is how the ecocity indicators would be those related to sustainability and inclusion. In this sense, studies on sustainability and eco-city projects seem to demonstrate the viability of the terms based on heterogeneous indicators (García et al., 2016).

Latin American studies on scarcity, marketocracy and public policies on water resources in cities have used various instruments to measure indicators of local water sustainability. The management of water resources; the ethnic appropriation of the urban space; population density as a factor of residential sustainability; national identity as an argument for the design of buildings; the reordering from the inclusion and spatial exclusion, the bi-oceanic peri-urban tourism policies; the perception of peri-urban risk; The segregation of public squares and the representation of the city according to social strata are examples of the empirical relevance of studying scarcity, marketocracy and public policies around the water resources of Mexico City (García et al., 2014).

Empirical studies on sustainability and eco-city have incorporated the symbolic and representational dimension of those who consume resources

and therefore evaluate public services. In this way, studies have focused on the impact of public policies on the lifestyles of indigenous peoples, communities, neighborhoods and peri-urban localities in reference to centrality and territorial ordering. In this process, qualitative studies have replaced the quantification of spaces, instruments such as plans, records and maps have been replaced by in-depth interviews. The investigation of spatial relationships and natural resources has now incorporated representations of public services as a fundamental element of the governance system through the establishment of tariffs for urban services (Carreón et al., 2016).

The relations of appropriation, transformation and distribution of resources and spaces in their development process encouraged the differentiation of social classes. As the differences were exacerbated, the segregation of the spaces protected the appropriate and transformative differences at the same time as it enhanced the distributive differences of the resources, mainly the water ones. This process confronted public policies against lifestyles privileging market demands (Hernández, et al., 2014).

Regarding the situation of scarcity and shortage generated by public policies that adjusted to market demands, marginalized, excluded and vulnerable sectors developed skills, knowledge and strategies for appropriating spaces (aquifers, facilities, networks) to supply and confront the authorities for the regularization of the service. In this framework, the transformation of water resources was delegated to the federal government and the collection of the service from the local government (García et al., 2012).

In this sense, the shortage of water and the increase in tariffs oriented the water conflicts towards the forgiveness of debts, the implementation of meters, the repair of visible leaks, the protection of facilities, the control of demonstrations and agreements between authorities delegacionales with representatives of the users. In contrast, aquifer concessions, river recycling and collection technology, investment in infrastructure, detection of imperceptible leaks, contamination and overexploitation of aquifers, water cultures and real estate deregulation were ignored as problems that impede the sustainability of the city (García et al., 2014).

Within the framework of eco-city projects and the evaluation of their governance systems, mainly public policies on natural resources, essentially

water resources, the Human Development Index aims to observe, measure and compare freedoms, capacities and responsibilities, but in the best of cases it only records the amount of public goods that would demonstrate local sustainability. Therefore, an index describing sustainability with emphasis on water resources is required, referring to its availability, extraction, distribution, consumption, reuse, recycling and tariff as constitutive elements of a local governance system (García et al., 2016).

A model is a representation of the trajectories of relationships between the factors used in the state of the art.

The governance of human development, indicated by the fields of capacity of liberties, is a capacity for opportunities, fields of fetishization of capacities and spaces of responsibility capacity implies the construction of a system of co-government, co-management and co-administration.

The fields of capacity for freedom suggest that, in sustainable local development, governments promote and guarantee economic, political, social, labor or sexual rights according to the abilities and knowledge of their governed. In this sense, the relationship between governors and the governed is established in power fields in which both actors influence each other.

Therefore, opportunities for generating opportunities are gestated to the extent that the political and social actors resolve their asymmetries based on the establishment of a public agenda in which the issues to be managed and managed are shared.

However, the fields of fetishization of capabilities warn that although freedoms and opportunities are more widespread and protected in cities, this does not explain the differences between centrality and the periphery or semiperiphery. As a result, an attachment to urban resources and services develops.

The spaces of responsibility capacities are the result of co-government. That is, the conciliation of interests between the parties to the conflict. Therefore, they indicate co-management and co-administration as co-responsibility is a symptom of governance.

The relationship between pro-environmental behavior and voting intention in favor of sustainable proposals has been addressed from the

attachment to the place and the quality of life, indicated by environmental satisfaction. In this sense, those who have a greater attachment to the place not only carry out low intensity pro-environmental behaviors such as the separation of waste, but also involve themselves in civil organizations that influence the conservation policies of public places (Ramkinsson & Mavondo, 2017).

Lincolnd, Lindsay and Tara (2017) compared groups of surfers with non-surfers and found significant differences with respect to low effort (waste separation) as a high effort (activism) around conservation, concluded that recreational groups are more prone to environmental conservation, achieving high levels of satisfaction with the surfer experience.

The recreational and conservationist groups that supported candidates promoting the vote, influenced the intentions of local voters.

To the extent that the image of the candidate is close to recreational and conservationist groups, the intentions of voting in favor of their proposals increase (Warner and Banwart, 2017).

The image of candidates that determines the electoral preferences and intentions lies in a) promises of conservation of recreational and tourist spaces; b) moral support to recreationalist and conservationist movements; c) management of spaces for recreation and recreation; d) experience in the administration of protected areas.

Since the image of the candidate is the predictor of the intention to vote, consensus expectations about its performance and the expected benefits of such performance suppose predictors of voting intention and pro-environmental behavior.

Pérez et al., (2017) established a direct relationship between the intention to vote with respect to the expected benefits and expectations of consensus around the image of candidates as responsible and environmental leaders in social networks. The incidence of the expected benefits on the intention to vote implies the use of the bicycle as a prediction of the intention to vote. The use of the bicycle when being linked to a recreation determines the support to candidates with experience in management and administration of spaces and systems of sustainable transport or of zero emissions, as well as of politicians with an image of cycle path users.

The differences between the expectations of a sample of voters of a municipality without and with cycle-track in comparison to the observations of a locality in relation to the image of candidates and intention to vote in the presidential elections to be held in 2018.

The voters who reside in the municipality without and with cycle-track have a positive image of the candidates and their intention to vote will be in favor of those who include proposals for zero-emission mobility, showing that the theory explains the phenomenon in the context study.

Expectations about the presidential elections to be held in 2018 and the installation of cycle routes will not affect the voter samples to maintain an image and unfavorable vote intention to any candidate, even if some include proposals for zero emissions mobility.

### **Method**

A documentary study was carried out with an intentional selection of sources indexed to national repositories, assuming that their period of publication places the informative source in a select group to discuss the relationships between the variables indicative of the research object: a model for the study of the sustainable local development. The limits and scope of the search, selection, processing and modeling of the information are warned, suggesting a more sophisticated and extensive procedure.

A complexity model was established, carrying out a documentary research that considers the literature published from 1974 to 2017, as well as the inclusion of the concepts "spatiality", "habitus" and "capacity". The selected information was processed using the Delphi technique, which consists of the selection, synthesis and integration of the data consulted.

A non-experimental, exploratory and transversal study was carried out. A non-probabilistic lesson of 250 residents of two municipalities of the State of Mexico, 125 of a municipality with cliclopista and 125 was carried out. 5 residents of another municipality without bike path. The time of residence, the elector's credential and the vote in previous elections were considered. 70% of the interviewees are men and the remaining 30% are women; 52% are under 18 years old, 33% are between 19 and 29 years old, the remaining 15 are between 30 and 65 years old. 40% completed primary school only, 24% completed secondary school, 19% completed high school and the



remaining 17% completed a university degree. 62% entered less than 3500 pesos per month, 28% entered between 3500 and 7000 pesos per month and the remaining 10% entered more than 7000 pesos per month. 80% do not have a bicycle and the remaining 20% have a bicycle, but only 5% use it for transportation.

The Risk and Benefits Perception Scale of Carreón (2016) was used, which measures the image of politicians around proposals for sustainable mobility or zero emissions, focused on the utility of the bikeway or cycle paths, parking and road safety. It includes 21 items with six response options ranging from 0 = not at all probable, 1 = very unlikely, 2 = unlikely, 3 = neither improbable nor probable, 4 = not very likely, 5 = very unlikely.

The intention scale of voting of Carreón (2016) was used, which includes 28 items related to 1) the management of sustainable mobility or zero emissions and 2) the administration of transport safety. It includes six response options ranging from 0 = not at all likely, 1 = very unlikely, 2 = unlikely, 3 = neither probable nor unlikely, 4 = unlikely, 5 = very unlikely.

Residents were surveyed at their home, considering the proximity to the bike path or cycle path, as well as some other transport and mobility system, guaranteeing in writing the confidentiality of their data and the anonymity of their responses, as well as the warning that results of the study would not affect their quality of life in terms of transport, mobility and safety. The information was processed in SPSS version 17.0 and AMOS version 4.0

Reliability estimates were made with the Cronbach alpha parameter in order to establish the internal consistency of the instruments. Validity was calculated with an exploratory factorial analysis of principal axes with promax rotation to reduce data and establish factors. Correlations were made between socioeconomic factors and scales of expectations and intentions. Multiple regressions were estimated to observe the dependency relationships between the factors and an analysis of variance was calculated to establish differences between the groups.

## Results

Table 2 shows the psychometric properties of the instrument that measures perceptions of risk and benefits, as well as voting intentions in favor of zero-emission mobility policies, focused on the installation of bicycle lanes.

<b>R</b>	<b>M</b>	<b>SD</b>	<b>SW</b>	<b>K</b>	<b>A</b>	<b>F1</b>	<b>F2</b>	<b>F3</b>
R1	3.01	1.04	1,23	1,43	0.736	0.346		
R2	3.54	1.02	1.34	1,46	0.762	0,348		
R3	3,27	1.04	1,32	1,59	0.751	0.374		
R4	3.92	1.01	1,28	1,40	0,738	0.382		
R5	3.92	1.03	1,30	1,56	0.704		0.325	
R6	3.03	1.28	1,42	1,68	0.716		0.334	
R7	3.83	1.46	1,49	1,32	0.705		0.394	
R8	3.02	1.03	1,29	1,35	0,726		0.384	
R9	3.23	1.01	1,13	1,26	0,712			0.394
R10	3.40	1,27	1,15	1,41	0.703			0.357
R11	3.45	1.20	1,14	1,60	0.724			0.325
R12	3.36	1.01	1,38	1,35	0.731			0.394

R0 Reactive, M = Median, SD = Standard Deviation, SW = Swness, K = Kurtosis, A = Crombach's alpha, removing the value of the item. Extraction method: mair13n axes, promax rotation. Adequacy and sphericity [ $X^2 = 324.34$  (12gl)  $p = 0.000$ ; KMO 0,678] F1 = Perception of risks (28% of the total variance explained and alpha of 0.771), F2 = Perception of Benefits (18% of the total explained variance and alpha of 0.765), F3 = Intent to vote (14% of the variance) total expl i each and alpha of 0,778). All the items are answered with five response options ranging from 0 = not at all probable, 1 = very unlikely, 2 = unlikely, 3 = moderately probable, 4 = very probable and 5 = quite probable.

Once the factors were established, they were compared in a correlational and reflective model. The risk factor is more associated with the intention

of vo to the perceived benefits (0.546), although this also has a positive and significant relationship (0.523).

The adjustment parameters [ $\chi^2 = 124.35$  (22gl)  $p = 0.006$ ; GFI = 0.990; CFI = 0.995; RMSEA = 0.009] suggest the acceptance of the null hypothesis which warns the theoretical explanation of the observed phenomenon.

## **Discussion**

The contribution of this work to the state of knowledge lies in establishing a model for the e studio of l a s policy of zero emissions for the implementation of bicycle lanes and its orientation towards governance development human , but the type selection the sample, the search in national repositories and the analysis technique limit the model, for which an informative selection is required in international repositories with a more sophisticated analysis technique such as data mining.

However, the type of exploratory study, the type of intentional sample selection and the type of factor analysis of principal axes with promax rotation limit the results to the context and to the study sample. It is necessary to carry out an extension of the study for the contrast of the model and its adjustment to the empirical data observed in the context of the investigation. It is a probabilistic selection with a principal component analysis with varimax rotation. Such a strategy would allow the inclusion of theoretical, conceptual and empirical frameworks related to sustainable local development such as social mobilization, collective action, civil spheres and citizen networks in conflict and agreement with their authorities.

## **Conclusion**

The aim of this study was to establish the reliability and validity of an instrument that measures the perception and intention to vote in favor of policies and candidates who support as mobility strategies zero emissions based on the implementation of the s bikeways. The results show that the expected risks have a greater correlation with the intention to vote, but not very different from the incidence of the perception of benefits.

That is, in the context of the study, a peculiarity not observed in other scenarios seems to be evident, as is the case of ambivalence, which assumes that the electorate is divided into a group that supports zero emission reduction strategies but coexists with another group that seems to be dissatisfied with the proliferation of cyclists and the abandonment of traditional mobility.

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