

Theoretical and Empirical Analyses of Citizens' Willingness to Pay: Ethical and Policy Implications for the Environment in United Arab Emirates

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Abstract

Exploring people's willingness to pay (WTP) in order to protect the environment has ethical dimensions in addition to its public policy relevance. People's environmental behavior is considered a complicated reality as social, personal, economic, political, and regulatory factors influenced how a person respond to environmental issues. The present study analyzed WTP in light of four main environmental theories: (1) economic theory which suggests that environmental behavior is an outcome of rational decision making mechanisms where people calculate their gains and losses before they decide how to respond to any environmental issue, (2) attitude-behavior theory which posits that people may have positive or negative feelings and values toward the environment, however their actual behavior in interacting with their surrounding may differ from what they believe in, (3) public goods theory which suggests that clean air, clean water, and other environmentally essentialities are goods that have value and the government can regulates, and (4) altruism theory claims that altruistic people may spend money for the sake of protecting the environment even if the cost they pay is high. To this end, 1805 surveys were administered to a national random sample in United Arab Emirates. Descriptive and logistic regression analyses demonstrated that albeit environmental attitudes were generally positive and people were aware and concerned about the major international and national environmental challenges and problems, their willingness to pay extra in order to protect the environment within the country was conditional, fluctuating, and inconsistent; there was clear conditions which people posed before they could show willingness to pay. The citizens have perceived environmental problems as 'social' rather than 'personal', thus they shifted its responsibility to the government (the other) and they refused to change their way of life or change their daily routines in order to preserve the clean air, water, energy, etc. The study found evidence that while the citizens trusted the government as a moral agent that does 'good' they were indeed over-dependent on it to protect the environment with limited personal responsibility to contribute to that effort. The ethical and public policy implications of the findings were discussed and recommendations were outlined.

Keywords: willingness to pay; environment; attitudes; united arab emirates; logistic regression; policy

INTRODUCTION

Ensuring public policies are responsive to citizens' needs and preferences is an ethical manifestation of good governance in which governments empower their citizens and help them realize happiness. Citizens' attitudes about environmental issues, however, are not always clear due in part to lacking adequate research and coherent theory about the subject matter (Djoundourian, 2011; Kazim, 2007; Al Saquri & Sulaiman, 2014; Al Amir & Abu Hijleh, 2013). The purpose of the present study is to analyze theoretical and empirical aspects of a major part of environmental attitudes, which is citizens' willingness to pay in order to protect the environment (WTP). By doing so, the study will explore the moral and policy implications of WTP in United Arab Emirates (UAE). Examining WTP outside the Western context, where most of the literature has

previously been conducted, is crucial to the broader ethical and practical understanding of good governance. In addition, choosing UAE, as the non-western context for the study, is more than just convenient because this country fairly represents its region in terms of having a conservative culture in addition to striving to adopt new and successful environmental policies. At the same time UAE policymakers may lack adequate knowledge about citizens' attitudes or how they may respond to new policies and approaches. Moreover, UAE is a role-model for many other Arab countries in regard to reforming the public sector and initiating 'good' by shifting away from the old public administration paradigm of top-bottom service delivery to the new public management paradigm where citizens' happiness is recognized and celebrated as a policy

goal and a moral framework for decision makers (Yaghi, 2010; Yaghi & Antwi-Boateng, 2015).

Examining WTP will shed light on the ethical dilemmas in environmental behavior. Mainly, it is essential to understand if people understand that environmental problems are real, eminent, and touch their lives (i.e., awareness). It is also important to assess whether people have a sense of urgency to protect the environment. Lacking understanding and concern expose other ethical and moral problems, such as environmental hypocrisy where believing in certain values do not get translated into actions (e.g., to know about the seriousness of global warming yet do nothing to reduce personal energy consumption). In addition, WTP alludes into the relationship between the government and its citizens especially when the former attempts to promote equality and fairness in the society as fundamental values in good governance instead of welfare and subsidies which are inherently biased.

Country Context and Environmental Policy

The conservative society in UAE has a collectivist value system that places group's interest ahead of personal interests, yet however, selfishness can be detected when environmental issues are concerned (Oweini & Houri, 2006). Since its establishment in 1971, the traditional public administration paradigm dominated UAE policymaking as well as the government's relationship with the citizens hence environmental policies were often made by technocrats who might pay little attention to facts about citizens' preferences. Back then, the government's commitment to citizens' wellbeing was translated through providing cheap public goods including environment-related ones, such electricity and water. That approach meant among many other things that the citizens relied on energy subsidies and relaxed environmental regulations (O'Brien, Keivani, & Glasson, 2007). In 2005, however, things have changed as the decline of oil reserves has enticed the government to adopt a new public management paradigm by focusing on citizens empowerment through customer service-centered strategy and excellence in public sector services and operations (Yaghi, 2010; Reiche, 2010). Those changes were formally institutionalized in 2016 by establishing the Ministry of Happiness giving it the responsibility of aligning and re-designing all public policies in such a way that can better achieve citizens' happiness through responsive policies and excellent services (Al Maktoum, 2016; Al Khateeb, 2016; Clickgreen.org, 2015; Al Saqri & Sulaiman, 2014).

The happiness of UAE citizens is not only a virtue for policymakers but also a mandate to achieve excellence that brought with it new challenges (Al Khateeb, 2016). While the old paradigm allowed the citizens to get subsidies and live with minimum

environmental regulations, the new paradigm entails citizens to pay and to live with regulations. In the absence of a coherent theory to justify the changes, policymakers found themselves in the midst of a moral dilemma as they are obligated to explain to their constituencies how paying environmental tax, for example, can be compatible with happiness. Explicitly, in a traditional society where the government has always been perceived as a moral agent who does 'good', policymakers now need to justify the morality of measures such as imposing environmental taxes at the same time when the government in "UAE Vision 2021" and "Abu Dhabi Vision 2030" placed citizens' happiness at the core of its philosophy and operations. People also needed to relate their proposed paying for the environment, reducing private car usage, and reducing household garbage, for example, to the virtue of happiness. While there is no magical way to deal with this dilemma, the following section of the study attempts to discuss the various theories that explained how WTP could be understood aiming at the end to advise policymakers into making better ethical decisions (Yaghi, 2010; Reiche, 2010).

THEORETICAL BACKGROUND

Liebe, Preisendörfer & Meyerhoff (2011) argue that while having an adequate theory to explain environmental behavior including WTP is lacking, there are several theories that provide partial explanation to the subject matter, namely rationalism, public goods, altruism, and attitude-behavior (Stern, 2000; Babbie, 2004; Witzke & Urfei, 2001; Ivanova & Tranter, 2004). These theories share ethical elements, such as selflessness and citizenship (Liebe et al., 2011). In this section the four theories are discussed. The economic theory posits that people are rational thus they pay for environmental goods which they personally value or perceive as important. Hence, WTP varies depending on the different valuation of environmental goods as well as on the individual's ability to invest personal resources (Liebe et al., 2011; Meyer & Liebe, 2010). However, this theory fails to explain why some people decide to voluntarily spend money, time, and resources to protect the environment even when they have little resources to offer (Ivanova & Tranter, 2004). Kahneman & Knetsch (1992) explain that altruism drives people's voluntary environmental behavior because they morally feel obliged and committed to protect what they perceive essential to the wellbeing of their community whether they are rich or poor. Therefore, it is not economic rationality and maximization of monetary gains (utilitarianism), but bearing moral responsibility and citizenship that drives their behavior (Hirsh & Dolderman, 2007; Alibeli & Yaghi, 2011; Sarigollu, 2009; Duroy, 2008). Liebe et al. (2011) argue that altruistic people are also rational actors who seek to maximize the quality of their life by selectively paying for certain

aspects of the environment (Chuvieco, 2012). The moral question here is what roles the government can play to encourage altruistic behavior? Extreme rationalist and extreme altruistic propose different answers.

Stroup and Shaw (1992) argue that government's intervention to protect the environment is unethical because it violates people's rights of free expression and it damages their financial independence (i.e., economic liberty). While governments may aim well, their environmental policies do not help citizens become happy but gives governments too much power to manipulate citizens' behavior and limits their freedom. Hence, Stroup and Shaw (1992) insinuate, that instead of doing 'good', environmental policies introduce 'bad', which can be dilemmatic to conservative governments which want their policies to make people happy. Richter and Van Soest (2011) add that even environmental policies, especially taxes, hurt the environment itself because they cause traffic jam among the various altruistic civic groups and private citizens who work silently and dedicatedly to protect the environment out of personal initiative and virtue (Farber, 2012). But critics of altruism argue that relying on people's voluntary behavior and ignoring the fact that people are driven by self-interests is not sustainable because the concept of "voluntarism" falsely assumes that all people are moral, always behave altruistically, have environmental citizenship, and have willingness to pay to protect the precious environment. Critics also add that proponents of altruism mistakenly suggest that people have adequate knowledge about the environment and their behavior is driven by such knowledge (Rosen, 1981; Ostrom, 2000) ignoring in so doing the fact that the connection between knowledge and attitude has never been inclusively confirmed (Tuncer, Ertepinar, Tekkaya, & Sungar, 2005; Benton & Funkhouser, 1994; Kramer & Mercer, 1997; Clark, Kotchen, & Moore, 2003; Chuvieco, 2012). Some also hinted that paying for some goods is an expression of selective morality, which is highly debated and disputed on ethical grounds as morality and ethics are a totality that should not be divided.

Public goods theory explains that the environment is a public good which virtually all people enjoy without excluding anyone a fact that encourages free-riders to maximize their environmental gains simply by not making any contribution to protect it. Liebe et al. (2011) posit that free-riding allows people to rely on "others" hoping the latter makes contributions, a reality that causes social dilemmas and consequently reduces the likelihood of paying for the environment. Not trusting "others" motivates people to abstain from paying (Benton & Redclift, 2013). According to Allison, Beggan, and Midgley (1996) this deliberate selfishness is categorically harmful to the society

especially when more people behave selfish. Social dilemma therefore is the problem of caring about one's personal interest on the expense of any other interest even if that means hurting the collective interest of the society. Moral, of course, and immoral behaviors do exist naturally in any society, but the problem arises when more immoral (i.e., selfish) than moral attitudes and behaviors are exhibited because in such case communal spirit diminishes. Policy makers realize that the immorality of the some can cause a social trap to the rest of the population (Platt, 1973) because short-term benefits often blind citizens from appreciating the long-term harm their lack of communal spirit may cause to others as well as to themselves. Social dilemma and social trap, therefore, overlap indicating poor altruism. Hence poor altruism contradicts the essence of ethical behavior and cannot be divided and altruism is to do the "right" thing always, not sometimes (Cody & Lynn, 1992). This complexity of ethics and its impact on the collective "good" urge the government to intervene and to promote environmental citizenship and educate the people about imminent environmental problems, such as drought in UAE or the depletion of natural resources in other countries (Hirsh & Dolderman, 2007). This discussion hints that public goods theory needed economic and altruistic principles to explain the causes and consequences of people's apathy leading to "collective irrationality", a danger that requires government intervention to safeguard the public interest (Benton & Redclift, 2013; Kollock, 1998 in Liebe et al., 2011).

Ajzen, Brown, and Rosenthal (1996) explain that four factors help predict WTP, namely people's perceived positive or negative attitude toward the environment, having social pressure that causes shame for people to act selfish, and people's perception of the easiness of making contribution to protect the environment. Related to people's knowledge about environmental issues some researchers reported positive correlation (Alibeli & Yaghi, 2011; Bedrous, 2008; Dunlap & Jones, 2002: 485). But there is no inclusive evidence that knowledge leads to awareness, or the latter leads to better WTP (see Van Liere & Dunlap, 1980: 181; Adelabu & Akinsolu, 2009). Moreover, it is not clear whether environmental behavior is improved when people get in touch with the environment such as through sea diving and hills hiking (Carson, Flores, & Meade, 2001). Liebe et al. (2011) handsomely clarify this by suggesting that "knowledge" alone remains impotent unless it leads to better environmental behavior, including WTP (p. 108).

RELEVANT LITERATURE

Empirical research tried to differentiate between environmental knowledge and environmental attitude by noting that while knowledge refers to the breadth or scope of information which people may possess,

attitudes refer to favorable or unfavorable evaluation of an environmental issue (Abdul-Wahab & Abdo, 2010; Oweini & Houri, 2006, p. 96). Nevertheless, in UAE and the Arabian Gulf region, some researchers reported no empirical relationship between knowledge and attitudes meaning that people could be knowledgeable about environmental problems but their knowledge did not show in positive attitudes (Alibeli & Yaghi, 2011; Sivek, 2002). Similarly, Tuncer et al. (2005) confirmed that positive behavior and engagement in protecting the environment were not motivated by people's knowledge but rather by other factors, such as the role of the person's family (see Vlaardingerbroek & Taylor, 2007; Yilmaz, Boone, & Anderson, 2004).

Although the aforementioned four theories in the literature do not directly explain the role of demographical factors, some researchers found attitudes to be associated with gender, previous engagement in environment-related activities, and having knowledge about environmental problems in general (Alibeli & Yaghi, 2011). These findings conform to those reported by Hersch and Viscusi (2006) and Clickgreen.org (2015) who found educated people to be more aware and more willing to pay extra money to protect the environment. Hersch and Viscusi (2006) found older people to be less WTP compared to young people.

The role of gender in WTP literature was not always consistent. Some researchers found women to be more altruistic and more likely to pay compared to men (Oweini & Houri, 2006; Achtnicht, 2012, p.681). Women expressed more support to environmental issues in general (Alibeli & Yaghi, 2011; Blocker & Eckberg, 1997; Clickgreen.org, 2015; Abdul-Wahab & Abdo, 2010) and eagerness to pay (Oweini & Houri, 2006). Although women had less knowledge about environmental issues (Benton & Funkhouser, 1994) they showed more interest in taking practical steps to protect the environment (Oweini & Houri, 2006). Abdul-Wahab and Abdo (2010) found men to be more rational, knowledgeable and better aware about the environment and also more engaged in supportive activities, such as membership in environmental civic groups. Similar to gender, income was important for people's WTP (Witzke & Urfei, 2001). While Alibeli and Yaghi (2011) reported insignificant role of income, Hsu, Walters and Purgas (2008) and Achtnicht (2012) found people with higher incomes and more education were more willing to pay (i.e., gasoline tax). Martinsson, Lundqvist, and Sundstrom (2011) asserted that higher income people had stronger environmental awareness compared to others (also see Meyer & Liebe, 2010).

To summarize, the literature provided different yet overlapping perspectives on WTP. There were

several theories that were useful in explaining aspects of WTP but none had the ability to provide comprehensive explanation of it without supplementing one theory with another. Moral and immoral attitudes have been justified based on competing and sometimes conflicting theoretical principles. Moreover, government's intervention has been challenged and good governance values, such as happiness and responsiveness, were criticized by claims of violation of freedom and undermining of voluntary altruism. Altruistic behavior itself, however, suffered from conditional, partial, and limited valuation of environmental goods. Linking environmental knowledge with positive environmental attitude was inconsistently supported by empirical examinations. Inconsistency in people's environmental attitudes has urged policymakers to strengthen good governance tools (e.g., empowerment) to reduce government's single stewardship toward better engagement of citizens in decision making as well as better emphasis of ethical standards hoping to bring environmental problems closer to individual citizens and eliminating the possibilities of perceiving those problems as social (Platt, 1973; Cross & Guyer, 1980; Cody & Lynn, 1992). In the next paragraph, various theories were examined empirically.

STUDY SAMPLE AND THE ANALYSIS

Data for the present study came from distributing a special survey to a random sample of 1,805 male and female citizens in UAE during 2014 and 2015. SPSS V.21 was utilized to analyze 1,282 completed surveys with a response rate of 71% which was an acceptable return rate (see Cronbach, 1951; Tabachnick & Fidell, 2007; Babbie, 2004; Yaghi & Antwi-Boateng, 2015). The survey included eleven demographic questions and 125 topical questions. The survey was administered using drop off- pickup method, which is a popular and acceptable method in this part of the world (Oweini & Houri, 2006; Yaghi & Yaghi, 2014). It is worth noting here that the present study is part of a larger interdisciplinary, funded-project and the analysis here reflects the responses to only WTP and policy-related questions of the survey.

The topical questions were measured using three-point scale; favor, oppose, and neutral. Then at a certain stage in the analysis process, these responses were dichotomized to better suit the logistic regression (1= favor). WTP was the dependent variable which was recorded and dichotomized (1= willing to pay). The independent variables and in light of the previous theoretical background were: Gender, age (6 categories), educational level (four categories), and education of parents (two categories). Because one question could not adequately assess income status (eight categories, noticing that 1 US\$ equals 3.6 AED) other questions were added, namely number of maids (four

categories), home ownership (two categories) and type of the house (two categories). In UAE, it is not unusual for some households to employ three or four maids at the same time and families with higher income usually employ more maids (domestic workers). In addition, to live in apartments is often considered an indication of low level income as most UAE citizens own their homes and villas. Of course, living in villa means a better income than living in just a house, which usually refer to an independent accommodation that is bigger than an apartment but smaller than a villa.

Tables 1 and 2 provide description of the study sample. The majority of the respondents are young (61% is between 19 and 25 years old), well-educated (62% has a bachelor or post-secondary education), and have educated parents (literacy is 72% among mothers and 66.7 among fathers). Table 2 describes the economic status of the respondents and shows that 50% of them have income between 16,000 and 63,000 dirhams (middle and upper middle class). Table 2 also shows that the majority of the respondents own homes and live in houses and villas compared to apartments (only 12.2% live in apartments and 12.1% rent as supposed to own). Lastly, the majority has indicated his/her household is served by at least one servant or house maid which is consistent with the previous results on citizens' economic status (54.1% employs 1 to 3 maids). Consequently, it can be said that the study sample reflects the opinions of middle and upper middle classes in the UAE society.

Table 1: *Demographics of the Study Sample*

Variable	%	%	%	%
Gender				
Male	18.3			
Female	81.7			
Age				
18 or younger	3.8			
19-25	61			
26-32	9.9			
33-39	10.7			
40-46	14.3			
47 and older	0.8			
Educational Level				
High School or lower	29.5			
Bachelor/ Diploma	62.6			
Masters/Doctorate	2.2			
Other	5.8			
Father's Education				
Completed High School	66.7			
Did Not Complete High School	33.3			
Mother's Education				
Completed High School	72.3			
Did Not Complete High School	27.0			
N= 1282				

Table 2: *Factors Indicating Economic Status*

Variable	%	%	%	%
Number of Maid and House Help				
0	8.3			
1-3	54.1			
4-7	23.9			
8 or more	13.7			
Income in UAE Dirham (AED)*				
15,000 and lower	29			
16,000- 31,000	38			
32,000- 47,000	12			
48,000- 63,000	11			
64,000- 79,000	0			
80,000- 95,000	2			
96,000- 111,000	2			
112,000 and higher	6			
Home Ownership				
Own	87.9			
Rent	12.1			
Type of House				
Villa or house	87.1			
Apartment	12.2			

N= 1282

*1US\$= 3.6 AED

The findings in Table 3 indicate that citizens are generally supportive of taking actions to protect the environment (56%) but their support fluctuates from one issue to another (see Ostrom, 2000). While they support the reduction of household waste (51.6%) and the reduction of energy consumption (45%), they were unsupportive of reducing private car usage (23.8%) and reducing household waste (22%). Therefore citizens undervalue some environmental goods, such as clean environment (packaging) and air pollution (using private cars) compared to other goods, such as energy. In addition, although people support campaign launching, their support seems superficial because campaigning does not require them to make changes in their life or to exercise commitment to the environment. This is evident when knowing that other environmental actions that need people to do real effort have been shifted to other stakeholders and particularly the government. By so doing, free-riders refuse to make substantial or costly contribution (Camerer, 2003). Olson's argument about the reliance on "others" to protect the environment is evidently supported by the previous findings of this study (Olson, 1965). But it is not clear why people want the government (the "other") to pass legislation (72.8%) and enforce environmental laws (75.4%), when they themselves refuse to comply with such measures (e.g., they refuse to reduce using private cars and reduce household waste). Ajzen et al. (1996) suggest that people psychologically quit trying to change their behavior once they perceive such change difficult to do. But if they were adequately altruistic about the environment they would demonstrate better commitment and would perceive the change easy to

perform. As Kahneman and Knetsch (1992) describe it, people need to feel that changing their behavior is self-fulfilling, but the respondents in this study did not want the protection of the environment to lead them to change their daily routine. But if the “other” was responsible for the change and its consequences, then the change would be remote enough for them to

support. Hence, as the government targeted happiness as the guiding value of its governance style, the respondents’ attitudes insinuated that their happiness could be achieved by free-riding and selfishness; gaining the benefits of environmental policies but without making real, personal contribution.

Table 3: *Descriptive Statistics for Attitudes towards the Environment*

Variable*	Favor %	Oppose %	Neutral %
Do you support the launching of campaigns to reduce consumption of energy?	45.8	34.5	19.7
Do you support the launching of campaigns to reduce using private vehicles?	23.8	35.1	41.1
Do you support the launching of campaigns to reduce household waste?	51.6	28.3	20.1
Do you generally support the launching of campaigns to protect the environment?	56.0	26.9	17.1
Do you support the enforcing of laws to use home insulation to reduce energy consumption?	75.4	15.4	9.2
Do you support the enforcing of laws to control packaging to reduce household waste?	22.1	30.5	47.4
Do you support the passing of legislations to protect the environment	72.8	18.9	8.4
Do you support the enforcing of a rationing system to reduce energy consumption?	50.5	29.1	20.4
Do you support the enforcing of a rationing system to reduce driving personal cars?	30.5	22.6	46.9

N= 1282

*Total percentage is 100% without including incomplete responses

So far, the study explored the general environmental attitudes of the respondents and concluded that such attitudes were fluctuating and have not led to willingness to make personal sacrifices to translate the altruistic feelings the people expressed about the environment. This section will examine WTP through a number of questions about specific environmental goods. The results in Table 4 indicate that 46.8% of the respondents are willing to pay extra money to protect the environment, which is a moral attitude. When citizens were asked about some remote and more abstract actions such as passing legislations and launching campaigns, their support was relatively high ranging from 75.4% to 23.8%, but when they were asked about paying extra money or extra tax to materialize their support of the environment they expressed varied responses. Table 4 shows that while 46.8% of the respondents were willing to pay, the percentage dropped sharply when the purpose of paying was to pay for patrol gas (9.7%) or garbage (31.5%).

The empirical findings in Table 4 challenge the assumptions of the economic theory in terms of “use value” because the respondents use many environmental goods such as energy but still they are not willing to pay (Carson et al., 2001). In a way, they were acting irrational by assuming that the saved environment would not maximize their gains of good health, for example. The public goods theory explains that people’s poor WTP stems from the belief that clean and safe environment is a public good from which they cannot be excluded. Therefore, they do not need to make any contribution to protect it while the “other” does all that. This behavior changes any environmental problem to a social dilemma (Benton & Redclift, 2013; Liebe et al., 2011). Comparing the results in Table 4 and 3 hints that citizens’ reliance on the government (i.e., the “other”) to protect the environment is a “planned behavior” rather than “random behavior” simply because they rejected to pay or to make contribution knowing that somebody else would do and fearing no social pressure to make them feel guilty or ashamed for behaving against their moral beliefs (see Ajzen et al., 1996).

Table 4: *Descriptive Statistics for the Willingness-to-Pay to Protect the Environment*

Variable	Favor %	Oppose %	Neutral %
Are you personally willing generally to pay extra money in order to help protect the environment in UAE? (<i>dependent variable</i>)	46.8	21.4	31.9
Are you personally willing to pay extra money in order to reduce energy consumption?	14.6	22.6	62.8
Are you personally willing to pay taxes on patrol gas in order to help reduce driving?	9.7	18.6	71.6
Are you personally willing to pay tax on car you purchase in order to fund public transportation?	27.8	24.3	47.8
Are you personally willing to pay extra tax on household garbage in order to reduce waste?	31.5	21.6	46.9

N= 1282

*Total percentage is 100% without including incomplete responses

In order to better examine WTP, logistic regression was performed and results were illustrated in Tables 5, 6 and 7. The findings in these tables provide support to Liebe et al.'s argument about the explanatory power of single theories (see Liebe et al., 2011). Eleven main variables predicted WTP from which only four variables have significantly correlated with WTP. Those variables were knowledge about/ interacting with the environment (economic theory), social dilemma (public goods theory), preference and attitude toward the environment (attitude-behavior theory) and moral values (altruistic theory). Having these variables produced in the same logistic regression model provides further attestation that one single theory as suggested by many researchers cannot provide the needed depth and rigor to understand the complexity of WTP or its ethical implications (Liebe et al., 2011). This conclusion is based on the fact that the logistic regression model predicting the outcomes (WTP; dependent variable) was significant (Chi-square= 312.180, df= 40, p= .000 with 95% confidence) and showed improvements compared to earlier modes of relations in predicting the outcomes (Chi-square = 312.180 compared to -2LL= 728.702). In addition, the explanation of the variance in WTP has improved considerably from 50.9% to 77% with the Nagelkerke R Square predicting around 45% (.454) of the variance in the dependent variable. More importantly is the increase in number of predictors with positive coefficient B values.

The exponential (B) was quite illustrative to the complexity of the WTP. In particular, altruistic citizens who believe in living in harmony with nature are six (Odds= 6.392) times more likely to be WTP compared to those who believe otherwise and citizens

who believe that oil spells damage maritime wildlife are six (Odds= 6.110) times more likely to be pay compared to those who believe otherwise. When asked if pollution changes the environment, rationally-driven respondents have indicated that any pollution would change the environment and they were about six times more likely to pay (Odds= 5.721). Similarly, citizens who feel frustrated by not being able to protect the environment are about five (Odds= 4.651) times more likely to pay compared to those who feel otherwise. Littering seems to be a serious problem for environmentally concerned UAE citizens (public goods, attitude-behavior, and altruistic theories) because respondents who feel strongly against street littering are about three (Odds= 3.020) time more likely to pay compared to those who want the government to intervene and fine litterers are three (Odds= 2.928) times more likely to pay compared to others. Citizens who think that government should play a bigger role in protecting the environment by means such as reducing environmental inequality are about three (Odds= 2.804) times more likely to be willing to pay as compared to others. This result is consistent with the previous finding about willingness to protect the environment even if that would cost more (about three, Odds= 2.804, times more likely to pay). Other predictors in the logistic model include the feeling that nature is struggling to survive (Odds= 1.511), emphasizing the importance of economic growth to enable citizens to care about the environment (Odds= 1.499), and citizens wanting to use garbage bags to collect waste when going to desert for site seeing or tourism, are about three (Odds= 2.928) times more likely to pay to protect the environment.

Table 5: First Results of Logistic Regression Analysis (WTP)

Table 3. First Results of Logistic Regression Analysis (WHI)							
Variables in the Equation		B	S.E.	Wald	df	Sig.	Exp (B)
Step 0	Constant	.035	.073	.225	1	.635	1.035
Omnibus Tests of Model Coefficients							
Step 1		Chi-square	Df	Sig.			
	Step	312.180	40	.000			
	Block	312.180	40	.000			
	Model	312.180	40	.000			
Model Summary							
Step 1	-2 Log likelihood	Cox & Snell R Square		Nagelkerke R Square			
	728.702 ^a	.340		.454			
Classification Table ^a							
	Observed	Predicted					
		Q29					
		.00		1.00	Percentage Correct		
Step 1	Q29	.00	304	65	82.4		
		1.00	108	274	71.7		
	Overall Percentage			77.0			

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

b. The cut value is .500

In order to explore the attitudes of those who were less likely to pay, findings were organized in Table 6. Numbers show negative B coefficients indicating that citizens who accept animal testing as long as it saves citizens' lives are .208 times less likely to pay for environment protection. In addition, respondents who believe that the private sector can solve economic problems are .421 times less likely to pay compared to those who believe otherwise. In line with these findings, citizens who have positive perception about

acid rain and how useful it can be to plants are .270 times less likely to pay compared to those who have other perceptions. Similarly, the Odds value of .044 indicates that those having belief about saving the environment should be done to future generations are less likely to pay. This result seems tricky because citizens who are less likely to pay may care about the environment but they may underestimate the seriousness of not protecting it.

Table 6: *Logistic Regression Model for WTP*

Variables in the Equation	B	S.E.	Wald	Df	Sig.	Exp(B)
-Society needs economic growth to protect environment	.405	.209	3.745	1	.050	1.499
- Animal testing ok if it saves human lives	-1.572	.355	19.618	1	.000	.208
-Nature is a struggle for survival of fittest	.413	.210	3.865	1	.049	1.511
- Too difficult for me to help environment	1.537	.333	21.255	1	.000	4.651
- Private enterprise solves economic problems	-.865	.219	15.599	1	.000	.421
-Government responsible for reducing inequality	.712	.215	10.979	1	.001	2.037
- I help environment even if it costs more	1.031	.329	9.820	1	.002	2.804
-Balance of nature easily destroyed	.687	.344	3.979	1	.046	1.987
- Live in harmony with nature to survive	1.855	.794	5.453	1	.020	6.392
- Save environment for future generations	-3.119	1.090	8.189	1	.004	.044
- Pollution is an indicator of technological progress	-1.942	.463	17.581	1	.000	.143
- Use garbage bags for litter when visiting desert	1.074	.448	5.762	1	.016	2.928
- Make a policy to fine those who litter	1.105	.379	8.491	1	.004	3.020
- Pollution is all things that change the environment	1.744	.531	10.786	1	.001	5.721
- Oil spills damage wildlife in sea	1.810	.342	27.995	1	.000	6.110
- Acid rain benefits desert plants	-1.309	.373	12.316	1	.000	.270
Constant	-1.870	.546	11.721	1	.001	.154

*This table shows the independent variables that significant in predicting the dependent variable.

Unlike reports from some studies, the logistic regression in Table 7 indicates that educational level and mother's educational levels are the only two demographics that possible can predict the outcome variables; WTP. Specifically, respondents who are educated (coded as having college degree or higher is "1" and everything else is "0") are about twice

(Odds= 1.890) the time more likely to show WTP compared to those who are uneducated. Also, respondents with educated mothers (coded the same way as the previous variable), were 1.049 times more likely to be willing to pay compared to those of uneducated mothers.

Table 7: *Results of Logistic Regression Analysis (personal factors as predictors)*

	B	S.E.	Wald	df	Sig.	Exp (B)
Constant	-3.309	0.669	24.470	1	.000	.037
Gender	.213	.159	1.797	1	.180	1.238
Age	.024	.025	.957	1	.328	1.025
Education	.636	.155	16.836	1	.000	1.890
Father's Education	-.017	.022	.556	1	.456	.983
Mother's Education	.048	.022	4.807	1	.028	1.049
Income	.000	.000	.433	1	.511	1.000

N= 1282

*Dependent variable: "Willingness to pay to protect the environment."

DISCUSSION

The findings suggest that WTP is too sophisticated to be explained by a single theory (Liebe et al., 2011; O'Brien et al., 2007). Each theory alone fails to provide consistent or comprehensive explanation of WTP. For example, the respondents had knowledge about the environment, its challenges, and its threats yet they were unwilling to pay to protect it. Not only

this, but there was inconsistency in the respondents' attitudes toward other environmental issues. For the major part, they held moral values supporting various measures to protect the environment but with the condition that such measures do not change their life style or reduce their perceived benefits. Moreover, they wanted the government to adopt policies which they themselves refused to obey! From value

perspective, citizens seem to act upon two different sets of values which may raise ethical questions about their commitment to their own environmental beliefs. Questioning ethical inconsistency while it may not be popular in a conservative society as that of UAE, poses a serious challenge to public policymakers operating within the new happiness paradigm of governance. In particular, government's transparency as a main pillar of new public management requires changing the seemingly collective attitude of environmental hypocrisy within the society. Achieving people's happiness requires people themselves to improve their responsiveness and cooperation with their government.

The findings indicate that WTP in UAE has some similarities but also some differences from that in the West. Ideally, protecting the environment can be more effective when people perceive environmental problems as their own, personal problems. But the findings show that UAE respondents like those in the West shift environmental responsibilities to somebody else "the other" thus causing social dilemmas (Gibson & Farah, 2012; Ousi, 2002; Benton & Redclift, 2013). The significant differences between UAE society and Western societies were, first, UAE citizens had overall favorable attitude toward the environment but they were not always willing to act upon that (Duroy, 2008; Hirsh & Dolderman, 2007). Second, unlike those in the West, UAE respondents' economic strength (i.e., income) did not affect their environmental behavior or their WTP (Ivanova & Tranter, 2004; Chuvieco, 2012; Vlaardingerbroek & Taylor, 2007; Carson et al., 2001; Benton & Funckhouser, 1994).

Similar to the findings of Alibeli and Yaghi (2011) in other Arab countries, the UAE respondents' attitudes were an important predictor of their WTP. While Western-based studies report that citizens prefer to make personal initiatives to protect the environment and therefore they consider imposed taxes inefficient (Stroup & Shaw, 1992; Richter & Van Soest, 2011), the present study asserts that the UAE respondents rely heavily on the government and prefer not to be themselves part of solving environmental problems. While people in UAE were heavily dependent on the government and therefore preferred to do little contribution, people in the West were self-dependent hence they preferred limited or no governmental intervention. These differences can be contextualized in the values and cultural norm systems of each society (e.g., liberal versus traditional or individualism versus collectivism). While demographic factors, such as age and gender were important to predict citizens' WTP in the West, the same factors were insignificant in UAE (Mashnouk, 1993; Sarigollu, 2009). The role of income was also a significant difference between Western and UAE societies as discussed above because unlike

Westerners, UAE citizens with higher incomes did not show a higher level of willingness to pay, which is something that did not conform to the reported findings in the literature.

Theoretically, the findings support the argument of Liebe et al. (2011) that a single theory is insufficient to explain people's WTP. In line with the literature (Stern, 2000; Kollock, 1998; Reiche, 2009; Reiche, 2010), the study asserts that WTP is a sophisticated phenomenon and therefore it is difficult to comprehend the ethical aspects of it unless multi-theory framework was utilized. Confirming the theory of Liebe et al. (2011) indicates that the government's adoption of the new happiness-based paradigm is essential to transforming the long-held beliefs about the role of government and the virtues of doing 'good'. Unlike the top-bottom paradigm, the new paradigm is timely and needed because the approach to happiness should improve participation in decision making as well as enhance better environmental altruism. Engaging people in environmental policy making is expected to guide citizens to perceive environmental problems as real, and close-to-them, rather than remote, and social problems.

CONCLUSION

The present study was conducted to explore WTP and whether a single theory could explain it. To this end a survey was administered to a random sample of UAE citizens and univariate and multivariate analyses were utilized. The findings indicate that WTP is too complicated to be explained by one theory. Therefore theorizing about WTP should not remain, for example, isolated from the ethical, economic, social, and attitudinal dimensions. In UAE, the complexity of WTP was evident through several realities. Firstly, inconsistency of citizens' attitudes as they expressed concern about the environment but they were also reluctant to pay in order to protect it. Secondly, citizens support governmental measures to protect environmental goods as long as such measures do not require them to change or alter their life style. Thirdly, while citizens trust the government and believe in it as the moral agent that does 'good', they over-depend on it to achieve environmental protection with little role to be played by the citizens themselves.

Based on the findings, introducing environmental taxes in the present time may not be the best policy alternative because citizens need first better education and awareness about the environment as well as about their role as engaged and responsible citizens. The UAE citizens need to realize that protecting the environment is a shared responsibility in which they have to play a major role. The new public management paradigm, which the UAE government has adopted, targets people's policy engagement by

emphasizing their moral obligation to act upon those environmental values in which they believe. In addition, it urges citizens to become moral agents themselves so that happiness can be collectively maintained, rather than depending on the few “others” to do it all. Here, policymakers have to strike a careful balance between drafting responsive policies and reducing the economic burden on the government. While it is essential to correspond to citizens’ needs and expectations thus achieve their perceived happiness, policymakers need also to make efficient policies. Put differently, reducing environmental subsidies and tightening environmental regulations may clash with maintaining government popularity among citizens who seem to refuse the trading between happiness and behaving environmentally responsible (i.e., environmental citizenship).

However, more crucial here is the government’s need to maintain transparency about the lack of public support to new environmental policies. Within the good governance paradigm and new public management thinking, it would be inevitable to engage various groups of the population in open dialogues about environmental citizenship and the new roles of government (i.e., moving away from providing services to facilitating service provision). For example, educators, students, parents, businesses, and civic groups need to be part of a collective effort to protect the environment. These different stakeholder need to be concerned about environmental problems, but more importantly they need to practically change one’s life style in order to translate feelings into actions. These changes are particularly relevant to stakeholders who possess more resources than others, such as income. Therefore, policymakers are recommended to target the rich by well-designed awareness programs in order to improve their awareness about environmental problems as well as to enhance their moral responsibility, especially that knowledge was found in this study to be as a predictor of positive, altruistic attitude in UAE as it was in Western countries (Tuncer et al., 2005).

The study recommends that in parallel with the awareness programs, the government may design a gradual system of environmental taxes that starts with those with high incomes because they were the least aware group about environmental problems but also they were the least willing to pay in order to protect it, per the present study. Therefore, a tax system coupled with educational programs may better lead to responsive environmental policies. However, in a traditional society where people perceive government’s subsidies as a given-right and consider their dependency on the government as a form of loyalty, such as in UAE, other alternative policies to taxation could be useful, such as introducing a

gradual reduction of utility subsidies (i.e., water and electricity bill) and re-pricing some goods with environmental impact, such as gasoline. Policymakers can also reward citizens who voluntarily reduce energy consumption so that good governance can lead to cultural changes in the society and reduce environmental apathy and selfishness among some citizens. However, the government needs to approach any environmental decisions (i.e., taxation) diligently as not to increase citizens’ dependency and at the same time not to rush in imposing universal environmental taxes that may impoverish policy responsiveness. Ethical policies as those proposed here should help the government sponsor and promote equality and fairness values within the society instead of welfare and dependency (i.e., subsidies). Because the proposed changes constitute a significant deviation from the traditional welfare role of the UAE government, a gradual, continuous, and institutional dialogue between the government and the citizens need to be put in place so that people first can better realize their moral and ethical responsibilities prior to showing willingness to pay to protect the precious environment.

Lastly, the present study recommends researchers to conduct further studies on the different dimensions of WTP and environmental behavior to better understand the reported conditional and fluctuating support to the environment. Researchers are also recommended to explore the political, social, and cultural contexts of environmental behavior and WTP in UAE in addition to the possible impact of introducing the changes discussed earlier.

While the findings of the present study are generalizable within the UAE society and within other Arab societies with similar economic, political, and social circumstances, the theoretical and practical implications of the findings can be globally useful in order to better understand WTP. The findings are also relevant to the emerging roles of public administration as facilitator for the exchanges between policymakers and other stakeholder within the society. The present study is valuable for researchers and practitioners who seek better understanding of the emerging roles of the government as facilitator in the society and to its ethical role as a promoter of good governance based on universal values, such as engagement, environmental citizenship, fairness, and equality.

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