

# Environmental Awareness and the Intention to Contribute to “Green Crowdfunding Donation” Among Students: The Mediating Role of Attitudes

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*Abstract— Environmental awareness is increasingly recognized as a key factor in promoting pro-environmental behavior. This work explores the influence of environmental awareness on students' attitudes towards participation in green crowdfunding campaigns, focusing on the crisis of environmental degradation, as well as the impact of their attitudes on the intention to contribute to financing. A survey was conducted among students from a Moroccan public university, and the data collected was analyzed using structural equations (Smart-PLS).*

*The results of this study show that the environmental awareness of students has a positive impact on their attitude, and the attitude has also a positive influence on the intention to participate in green crowdfunding donation campaigns.*

*These results underline the importance for project initiators as well as for green crowdfunding donation platforms to lead campaigns to raise students' awareness of environmental issues, in order not only to stimulate favorable attitudes among them, but also, therefore, to increase their active participation in green crowdfunding campaigns in the future.*

*Index Terms: Attitude, Environmental awareness, Green crowdfunding donation, Students' intention.*

## I. INTRODUCTION

In recent decades, awareness of environmental issues, particularly among younger generations, including students, has increased significantly [1]. Various factors have contributed to this awareness, namely education via the introduction of the concepts of sustainability and environmental preservation into school programs [2]. Moreover, the influence of awareness campaigns and social media also play a role in the formation of a generation that is both aware and committed to environmental issues.

The emergence of green crowdfunding platforms could contribute to increasing environmental awareness and initiating concrete actions. Students who are adept at new technologies, may represent a segment that is particularly interested to green crowdfunding campaigns. As future leaders and decision-makers, students could play a vital role in promoting and adopting environmentally friendly behaviors. However, depending on various factors such as level of understanding of environmental issues and personal involvement, students may adopt different attitudes.

The question then arises regarding whether this environmental awareness positively affects students' attitudes and whether these attitudes, in turn, positively influence their intention to participate in green crowdfunding donation.

Our objective is to answer this question by proposing a conceptual framework based on a literature review and then testing it through structural equations modeling using data from a survey of master's students from a Moroccan public

university.

The structure of the article is as follows. First, we review the literature related to green crowdfunding, environmental awareness and attitude. Next, we describe the methodology adopted for this article. Third, we present the results and related discussions. Finally, we highlight the limitations of our work as well as perspectives for future research in the conclusion.

## II. THE CONCEPTUAL FRAMEWORK

### 1. Green crowdfunding

Obtaining financial support without resorting to traditional means of financing is possible through the practice of crowdfunding [3]. The number of projects launched on crowdfunding platforms has, in fact, increased and affects different areas such as cultural products, technology, entertainment, green products, etc. [4].

Finding the funds necessary to finance green activities such as projects linked to the protection of biodiversity, the energy transition and the preservation of the environment via crowdfunding automatically directs us towards the concept of Green Crowdfunding. This concept is defined by Ortas et al. [5] as fundraising from the public via an online platform to finance environmental and/or social projects.

Green crowdfunding is considered as a collective financing method allowing donors to contribute directly to projects that have a positive impact on the environment such as the promotion of renewable energies, the development of green technologies, etc.

Unlike crowdfunding which is of four types, green crowdfunding, according to Chen et al. [3], is limited to two types, namely green crowdfunding donation which includes non-profit activities and aims to create a green environment, and green crowdfunding reward, which is used by companies that sell green products or services. This emerging means of financing presents various advantages and has the potential to promote sustainable development.

**2. Environmental awareness**

Environmental awareness can be considered as a clear understanding of issues related to the environment and the importance of acting in favor of ecology [6]. Environmental awareness has been defined in various ways and has been treated in many studies as an intrinsic factor influencing an individual's behavior towards the environment. It has also been defined as a specific psychological factor linked to an individual's propensity to adopt environmentally friendly behavior [7]. Dunlap et al. [8] consider environmental awareness as the degree to which people are aware of environmental problems and their efforts to solve them and their willingness to personally contribute to their solutions.

These definitions agree that environmental awareness affects two essential elements: understanding environmental issues and committing to actively contribute to finding solutions to these problems.

Previous studies had treated various concepts about environmental awareness such as interest in ecology, individuals' attitudes toward taking action to prevent environmental damage, etc. [7] - [9]. According to Dunlap et al. [8], it is widely accepted that environmental awareness impacts the attitude of people, leading them to adopt environmentally friendly behaviors. Steg and Vlek [10] also assert that when individuals are aware of the environmental impacts induced by their own actions, this awareness influences their attitudes towards developing green actions and their behaviors in favor of the environment. Several other researchers also consider environmental awareness to be an important element that fosters a favorable attitude towards pro-environmental behavior [11] - [12]. Finally, Ayub et al. [13] assert that individuals' attitudes towards green products are positively influenced by environmental issues, which affects their intention to purchase green products. This leads us to formulate the following hypothesis:

**H1:** There is a positive relationship between students' environmental awareness and their attitude towards participation in green crowdfunding donation campaigns.

**3. Attitude:**

Among the antecedents of students' intention to participate in a green crowdfunding donation campaign, a crucial element identified by Ajzen's theory of planned behavior [14] is attitude. This theory posits that an individual's behavior is determined by three elements: attitude, subjective norms and perceived behavioral control. Attitude specifically refers to

the positive or negative evaluations associated with performing a behavior.

Previous researches exploring the relation between attitude and intention to contribute to crowdfunding (green or non-green) are extensive. For instance, Lee and Park [15] demonstrated that attitudes positively influence intentions to participate in reward-based crowdfunding campaigns. In the context of crowdfunding donations, Kusuma and Anafisati [16] found that attitude significantly influences students' intention to contribute. Similarly, Adamska-Mieruszewska et al. [17] confirmed a positive relationship between attitude and intention to support green crowdfunding donation initiatives. Based on these previous researches, we can then propose the following hypothesis:

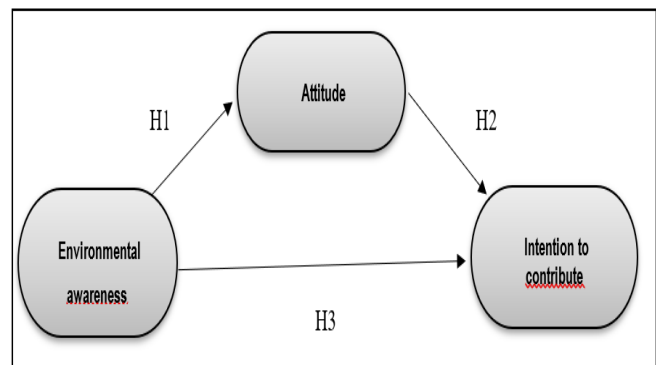
**H2:** There is a positive relationship between students' attitude and their intention to contribute to a green crowdfunding donation campaign.

**4. Relationship between environmental awareness and contribution intention: The mediating role of attitude**

Hypotheses H1 and H2 established previously suggest a potential mediating role of attitude in the relationship between environmental awareness and intention to participate in green crowdfunding. This aligns with the broader conclusion of a meta-analysis of 57 studies, conducted by Bamberg and Möser [18], which shows that environmental awareness is a significant predictor of pro-environmental behaviors. However, this effect is mediated by various variables such as attitudes and social norms. The study by Schlegelmilch et al. [19] also confirms this relationship, noting that these mediators can be contextual or individual. Based on that, we can then propose the following hypothesis:

**H3:** There is a positive relationship between students' environmental awareness and their intention to contribute to a green crowdfunding donation, with attitude playing a role as a mediating variable.

The relationship between students' environmental awareness, their attitude towards green crowdfunding donation, and their intention to contribute is illustrated in the conceptual framework presented in Figure 1.



**Figure 1:** The conceptual framework of the study  
Source :Developed by the authors

### III. RESEARCH METHODOLOGY

#### 1. Measurement of variables

The scale for measuring Environmental Awareness consists of a single item from the “Ecological Crisis” dimension developed by Dunlap et al. [8]. For measuring the *Attitude*, we adopted 3 items from the study by Liu et al. [20]. For the *Intention*, a scale of three items from the work of Wang et al. [21] was chosen. All items are rated on the Rensis Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree).

#### 2. Sample and data collection

We collected data by administering questionnaires to 72 students from two master programs at a Moroccan public university. Regarding the sampling method, we chose convenience sampling which involves selecting individuals who are easy for the researcher to reach and contact. The questionnaire was divided into two distinct parts. The first part examined environmental awareness, attitudes, and intention to contribute, while the second section of the questionnaire focused on demographic characteristics, in order to better understand the profile of the participants.

For demographic characteristics, we find that female students represent 66.66% of the sample (n=48), while male students represent 33.34% (n=24). The most common age group is between 20 and 25 years old which represent 93.05% of respondents.

### IV. RESULTS AND DISCUSSION

To test the hypotheses, we conducted data analysis using structural equations modelling with Smart-PLS software. The choice of this analysis technique is well suited for small sample sizes [22] and aligns with our objective of testing both the direct and indirect effects outlined in our conceptual framework.

#### 1. Validation of the measurement model

To validate our reflective measurement model concerning the “attitude” and “intention” variables, we tested it through the evaluation of its reliability and validity via factor loadings, composite reliability (Rho-a and Rho-c), Cronbach's alpha, average variance extraction (AVE) as well as the Fornell-Larcker criterion.

All factor loadings exceed the recommended threshold of 0.7 [22], except for one intention item with a factor loading of 0.678, which was retained. Composite reliability (Rho-a and Rho-c) and Cronbach's alpha values all also exceed the recommended threshold of 0.7 [22].

For the AVE, which reflects the total amount of variance in the indicators explained by the latent construct, this indicator also exceeds the recommended value of 0.5 [22]. Finally, the Fornell-Larcker criterion confirms discriminant validity in our study.

#### 2. Validation of the structural model through R<sup>2</sup> and f<sup>2</sup>

The R<sup>2</sup> coefficient represents the combined effects of the exogenous latent variables on the endogenous latent variable. In our case, 21.4% of the variance in students' intention to contribute to green crowdfunding campaigns is explained, while environmental awareness explains 30.2% of the variance in attitude. Additionally, it is also appropriate to examine effect sizes (f<sup>2</sup>). In this study, students' intention to contribute was predicted using attitude, which in turn was predicted by environmental awareness. Regarding the prediction of intention, attitude had a moderate effect size of 0.214, whereas environmental awareness had a strong effect size of 0.432 in predicting attitude.

#### 3. Hypothesis testing and discussion

Students' attitude has a positive and significant direct effect ( $p < 0.05$ ) on their intention to contribute with a path coefficient of 0.490 and a t-statistic of 4.983. Regarding the path coefficient which links environmental awareness to attitude, it is 0.549 with a t-statistic of 5.342, indicating its significance ( $p < 0.05$ ).

In summary, the regression weights show that both coefficients are statistically significant at the 5% level, confirming hypotheses H1 and H2.

Regarding hypothesis H3, relating to the mediating role of attitude, its verification requires consideration of both the direct effect and the indirect effect of environmental awareness on intention. The results indicate that the direct path is not significant, while the indirect effect, tested using the bootstrapping technique, is significant. These results confirm hypothesis H3, while specifying that the mediation is total.

Environmental awareness in our work positively influences the attitude of Moroccan students to engage in pro-environmental behavior which in our study consists of contributing to green crowdfunding donation, with a moderately high path coefficient. This result aligns with previous research conducted by various authors such as Indriani et al. [11], Lee et al. [12], and Steg and Vlek [10] who have identified a positive relationship between the environmental awareness of individuals and their attitude to adopt favorable behavior towards their environment.

Regarding attitudes, they positively influence Moroccan students' intentions to contribute to green crowdfunding donation campaigns. This result also aligns with previous researches conducted in crowdfunding in general (no green), and in green crowdfunding. Among these researches, we refer to the studies by Lee and Park [15], Kusuma and Anafisati [16] and Adamaska-Mieruszewska et al. [17].

Finally, regarding the test of the direct effect of environmental awareness on the intention to contribute to green crowdfunding donation campaigns, our results indicate that there is no direct impact between these variables. However, the indirect effect through attitudes is well established. This suggests that attitudes completely mediate



the relationship between environmental awareness and the intention to contribute to green crowdfunding donation campaigns.

### V. CONCLUSION

Our study constitutes an important contribution, particularly in the Moroccan context where crowdfunding is an emerging mean of financing and environmental issues hold significant importance. Our work revealed that the environmental awareness of Moroccan students, specifically their awareness of the ecological crisis, positively influences their attitudes toward green crowdfunding donation. Moreover, these attitudes, in turn, positively influence student's intention to contribute to green crowdfunding donation campaigns and also play a role of total mediator between environmental awareness and the intention to contribute.

Among the practical implications of our findings, we emphasize the importance for project leaders and green crowdfunding platforms to conduct awareness campaigns on environmental issues, particularly targeting students. Such campaigns could enhance students' attitudes toward this financing method and increase their willingness to contribute as donors.

Like any research work, our article presents limitations that need to be taken into account. Firstly, our results cannot be generalized because we conducted the study in a single public university in Morocco. Conducting further studies within several universities would help capture potential regional differences. Secondly, our sample size does not exceed 100 individuals, so we suggest conducting additional surveys with larger samples. Finally, the Environmental Consciousness variable was measured by one item from the "ecological crisis" dimension of Dunalp et al. [8]. To enhance these results, we suggest integrating other items from different dimensions of environmental awareness in future research.

In conclusion, it is noteworthy that our results contribute to enriching the theoretical base about the determinants of students' intention to contribute to green crowdfunding donation in Morocco. This contribution offers new perspectives on this specific subject, considering that academic literature addressing this particular topic is rare and, to our knowledge, there has been no previous study explicitly addressing this topic in the Moroccan context.

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