

## **Attitude, Behavioural Intention and its Relationship with Afforestation Program in Nigeria: A Proposed Framework**

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**Abstract:** Afforestation is the practice of establishing forests where none previously existed by way of the planting of trees. Afforestation in Nigeria can assist in addressing several environmental and socioeconomic problems, including desertification, soil erosion, and a scarcity of wood for construction materials and fuel. However, removing carbon dioxide from the atmosphere can serve as a habitat for animals and lessen the negative consequences of climate change. In Nigeria, several groups and government initiatives promote afforestation and reforestation projects. Thus, this paper examined the relationship between attitude, behavioural intention and afforestation programs in Nigeria. The quantitative method will be used for this study, and a self-administered questionnaire will be used. The questionnaire items were adopted from previous studies. The study used a simple random sampling approach in selecting respondents. 450 respondents were used for the survey. The study uses SEM-AMOS for data analysis. Finally, the research proposed a framework that illustrates the nexus between attitude, behavioural intention and afforestation program.

**Keywords:** Attitude, Behavioural Intention, Afforestation Program, Deforestation, Trees

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### **Introduction**

Afforestation is the process of planting trees in areas that have been previously deforested or where there were no trees (Di Sacco et al., 2021). It can be used to restore ecosystems, increase biodiversity, reduce soil erosion and pollution, and provide habitat for wildlife (Di Sacco et al., 2021; Vadell, de-Miguel, & Pemán, 2016). Afforestation programs may involve planting native species of trees, as well as non-native species that are better suited to local conditions. Afforestation programs often require a long-term commitment from landowners and other stakeholders to succeed. In some cases, afforestation projects may include reforestation efforts such as replanting existing forests or restoring damaged ecosystems. This type of project typically involves removing invasive plant species and controlling pests while reintroducing native flora back into the area (Kamal, Yingjie, & Ali, 2019).

Afforestation programs may also include thinning existing forests, restoring wetlands, planting windbreaks or hedgerows, and establishing buffer zones around sensitive areas (Bonnot et al., 2021). In addition, these projects often involve public education about the importance of maintaining healthy forests and other ecosystems (Wang, Zhen, Luo, Wei, & Xiao, 2021). Afforestation programs usually require ongoing monitoring and maintenance to ensure they are successful (Huebner, Fadhil Al-Quraishi, Branch, & Gaznayee, 2022). To help address this issue, governments have implemented various afforestation projects, which are the deliberate planting of trees on deforested or severely degraded lands. These projects have successfully restored whole ecosystems, promoted biodiversity, and improved water cycles in local areas.

Nigerian people are indifferent towards afforestation, with most being completely unaware of the global problem (Isyaku, 2021). This is due to the lack of education and access to information in many parts of Nigeria (Travel & Literacy, 2022). After all, a country's citizens can only care about what they know and understand. To combat this, the government has begun to increase awareness of deforestation's implications, such as holding public seminars and launching campaigns. The Nigerian government has developed numerous initiatives to support reforestation efforts in the country. These include:

- i. The Forest Reclamation and Rehabilitation Project (FRRP): This project is aimed at restoring degraded forests by planting trees, controlling bushfires, preventing soil erosion, and promoting sustainable land management practices.
- ii. Community-Led Forestry Program (CLFP): This program encourages community members to manage their local forest resources through capacity-building activities such as tree nursery establishment and training on agroforestry technologies.
- iii. Green Wall of Nigeria Initiative: This initiative seeks to restore degraded lands across the nation to provide employment opportunities for youth while combating climate change through tree planting, mangrove restoration, wetland conservation and other natural resource management activities.
- iv. National Tree Planting Day: Annually held every June 5th since 2005, this event mobilises citizens from all over Nigeria to plant trees as part of an effort towards reforestation.

Yet, despite government efforts, the citizen's attitudes and behavioural intentions towards afforestation is moot. Thus, this study examines the relationship between attitude, behavioural intention and afforestation program.

## **Literature Review**

### **Attitude**

Attitude is a psychological construct, often defined as a mental and emotional entity that inheres in or characterises a person (Jirovsky & Jirovsky Jr, 2019). It typically refers to an individual's evaluation of people, objects, events, activities and ideas. Attitudes can be positive or negative views about the attitude object (Haka, Asib, & Supriyadi, 2021). Attitude is the outlook we have on life and is a factor in determining our success (Tus, 2020). It is essential to recognise our attitude's impact on our lives and be aware of how it can shape the future.

Attitude can play a significant role in the success or failure of an afforestation program. A positive attitude towards afforestation can help to foster support for the program, leading to increased funding and participation (Buda, Pethes, & Lehota, 2019). A negative attitude towards afforestation can hinder the program's progress, as people may be less likely to get involved or contribute resources (Herbohn et al., 2023).

Many factors can influence people's attitudes towards afforestation programs. For example, people may be more supportive of afforestation efforts if they understand trees' benefits, such as improving air quality, providing habitat for wildlife, and mitigating the effects of climate change. In addition, people may be more likely to support afforestation programs if they feel a personal connection to the trees being planted or if they believe that the program is well-organised and will successfully achieve its goals.

### **Behavioural intention**

Behavioural intention is widely used in psychology to understand and predict a person's future behaviour (Chao, 2019). It is widely accepted that behavioural intention is formed through the combination of attitude towards behaviour, subjective norms, and perceived behavioural control (Dean & Suhartanto, 2019). Attitude towards behaviour is an individual's emotional or cognitive evaluation of the behaviour. Subjective norm is the perceived social pressure to perform or not perform a behaviour. According to Cao, Duan, Edwards, and Dwivedi (2021), behavioural intention focuses on the cognitive, affective, and volitional (intentional) processes that influence behaviour formation. Behavioural intention is the degree to which an individual has a robust and conscious motivation to engage in a specific behaviour (Al-Ghazali & Afsar, 2021).

Understanding the intention of behaviour can help design more effective interventions for various applications. Darmansyah, Fianto, Hendratni, and Aziz (2020) posit that behavioural intention refers to an individual's intention to engage in a specific behaviour. It is a cognitive process that reflects an individual's motivation to engage in a particular behaviour. It strongly predicts whether or not an individual will engage in that behaviour. Behavioural intention is a useful predictor of actual behaviour, but it is not guaranteed (Hwang, Kim, & Lee, 2021). Behavioural intention is typically influenced by some factors, including attitudes towards the behaviour, perceived social norms, and the perceived consequences of engaging in the behaviour.

The theory of planned behaviour is the foundation of behavioural intention. Actions are directly controlled by behavioural intentions and, in certain situations, by perceived behavioural control, according to the Theory of Planned Behavior. This theory is used to study and forecast behaviours. (Empidi & Emang, 2021). The interplay of three factors determines behaviour: attitudes toward the activity, subjective norms, and perceived behavioural control. Domestic public perceptions of afforestation and their behavioural intentions will considerably impact forestry policies' effectiveness. It is essential to assess potential connections with intent to predict the actions that will impact and change behaviour. If behavioural intentions toward protecting the natural forest are better understood, pressure from environmental concerns brought on by land use may be reduced.

### **Relationship between attitude and Afforestation Program**

Researchers conducted empirical studies on the relationship between attitude and afforestation programs. For instance, the study by Tian, Lu, Joshi, and Poudyal (2018) examined attitudes, opinions and interests in forest certification in China. The researchers also looked at the diversity of these groups' demographics, ownership traits, management goals, and perspectives on the advantages and drawbacks of implementing forest certification. The findings indicated that to increase landowners' interest in forest certification, it was necessary to differentiate between them when devising and implementing particular motivation-based incentives and when customising outreach and communication techniques. KC and Sedhai (2019) examined the attitudes of Bharatpur residents towards planting trees on their property. Results indicate that most inhabitants have a favourable attitude toward trees because they have solid cognitive intentions toward them. Thus, the following hypothesis is derived:

**H<sub>1</sub>:** Attitude significantly affects the afforestation program

### **Relationship between Behavioural Intention and Afforestation Program**

Behavioural intention and afforestation programs are often linked because an individual's intention to participate in an afforestation program may be influenced by their attitudes, beliefs, and values related to environmental issues. If an individual has a solid behavioural intention to support afforestation efforts, they may be more likely to participate in an afforestation program. Research has been conducted on behavioural intention and afforestation programs. The literature established there is a relationship between behavioural intention and afforestation programs.

The relationship between behavioural intention and afforestation programs can be complex, as it depends on a variety of factors, such as the specific goals of the program, the strategies used to promote participation, and the attitudes and beliefs of the individuals or communities targeted by the program (Secco, Pettenella, & Gatto, 2011). Research has shown that individuals are more likely to participate in an afforestation program if they have a strong behavioural intention. Factors that can influence behavioural intention include attitudes towards the program (e.g. positive attitudes lead to stronger behavioural intentions), subjective norms (e.g. perceived social pressure to participate), and perceived behavioural control (e.g. perceived ease or difficulty of participating).

An afforestation program can take different forms, such as government-led, community-led, or business-led programs. The success of each program may depend on the specific design and implementation of the program, as well as the target audience and the messages used to promote participation (Yin, Yang, & Chen, 2020). To increase the likelihood of participation, program design should consider the attitudes, beliefs, and values of the target audience and use strategies that align with these factors to promote participation. Overall, there is a strong relationship between behavioural intention and afforestation programs, and effective program design and implementation can help increase participation and achieve the program's goals.

Roggie (2017) determine how the Bahi District's economic activity has affected deforestation. According to this study, the economic activities that speed up deforestation include the need for firewood and charcoal, fast population increase, substandard agricultural practices, and unemployment. Poor community involvement in afforestation activities, a lack of clear forest laws, and adequate community education on forest protection prevent effective afforestation. Yu, Wu, Ning, and Zhang (2019) use a principle-agent model to examine how afforestation subsidies affect how planters manage their forests in light of local forest division interference. The study establishes that, in the presence of knowledge asymmetry, forest planters maximise their economic returns by minimising management efforts, accelerating rotation times, and expanding afforestation areas.

Moreover, Yang, Jiang, and Paudel (2021) study farmers' desire to engage from five perspectives: result assessment, belief in outcome, belief in norm, belief in compliance, and believe in control. Researchers like (Azhar, Hamid, Akhtar, & Subhan, 2022; Floress et al., 2019; Garba, Salleh, Hafiz, Nasidi, & Bakar, 2022; Lai, 2022; Nasidi, Ahmad, & Dahiru, 2022; Prishchepov, Ponkina, Sun, Bavorova, & Yekimovskaja, 2021) established the nexus between behavioral intention and afforestation program. Therefore, the following hypothesis is proposed:

H<sub>2</sub>: Behavioral intention significantly affects the afforestation program

### **Methodology**

This study is a proposed framework for examining the nexus between attitude, behavioural intention and afforestation programs in Nigeria. The study focused on the Yobe state to test the research model. A quantitative method will be used. A questionnaire would be used to collect data, using a 5-point Likert scale from 1 strongly disagree (SD) to 10 strongly agree (SA). The questionnaire items were adopted from previous research; The sample will be selected using simple random sampling techniques. A total of 450 respondents will be used for the survey. The study proposed to use SEM-AMOS to analyse the data and hypotheses.

### **Development of the conceptual framework**

Current literature confirmed the relationship between attitude, behavioural intention and afforestation programs in Nigeria. This research proposed the following conceptual framework:

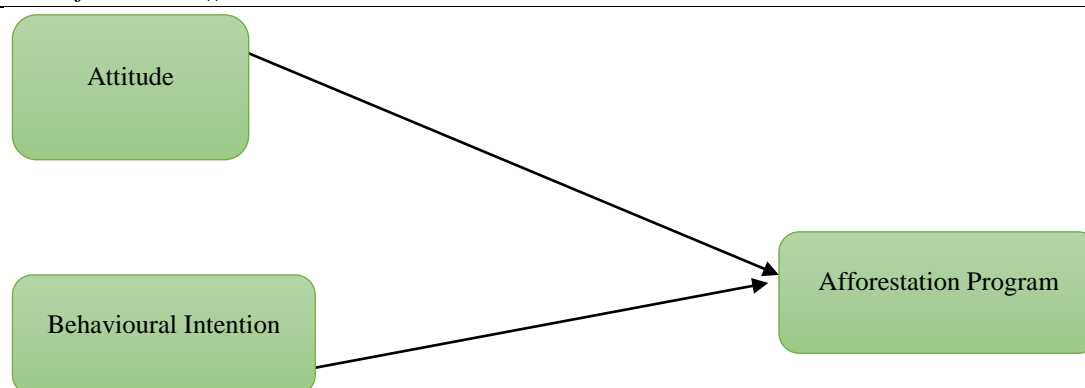


Figure 1: Research Model

### Conclusion

The conceptual study explains the relationship between attitude, behavioural intention, and afforestation programs. The finding will significantly contribute to the existing literature. This research can help the Nigerian government to identify the tree species that are most suitable for the local climate and soil conditions, as well as those that are most likely to survive and thrive; identify the locations that are most suitable for afforestation efforts, such as areas with the right amount of sunlight, water, and other resources; identify the most efficient and cost-effective methods for planting and caring for trees, which can help the government save resources and achieve better results.; help the government understand the economic and social impacts of afforestation programs, including the potential for increased employment and income for local communities, as well as the potential for improved air and water quality and other environmental benefits. Lastly, this research can help the government track the success of afforestation programs over time, allowing them to make adjustments and improvements as needed.

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