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PREDICTORS OF CORRUPTION AMONG TOWN PLANNERS: A NIGERIAN CASE STUDY

RESEARCH ARTICLE[1]

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ABSTRACT

This article examines the predictors of corruption among selected town planners in Ogun State, Nigeria, through the Differential Association-Reinforcement Theory. Questionnaires were used to gather data about corruption, economic situation, job dissatisfaction, lack of commitment, learnt behaviour (criminal or anti-criminal), and reinforcement favourable to corruption among the sample of 81 town planners. Descriptive statistics, bivariate relationships, and a series of Ordinary Least Squares (OLS) regression models were used to analyse the data. Findings show that variables with the highest correlation with corruption are job dissatisfaction, commitment, learnt criminal behaviour, and reinforcement towards corruption. Findings also show that town planners significantly engage more in corruption when higher levels of job dissatisfaction and higher levels of lack of commitment interact with higher levels of learnt criminal behaviour. This study makes an important theoretical contribution to the existing literature as well as to urban and regional planning practice in Nigeria, considering the accountability of town-planning 'officials'.

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ABSTRAK

Hierdie artikel ondersoek die voorspellers van korrupsie onder geselekteerde stadsbeplanners in Ogun-staat, Nigerië, deur middel van die *Differential Association-Reinforcement Theory*. Vraelyste is gebruik om data oor korrupsie, ekonomiese situasie, werksontevredenheid, gebrek aan toewyding, aangeleerde gedrag (krimineel of anti-krimineel) en versterking wat gunstig is vir korrupsie onder die steekproef van 81 stadsbeplanners in te samel. Beskrywende statistiek, tweeveranderlike verwantskappe en 'n reeks van gewone kleinste vierkante (OLS) regressiemodelle is gebruik om die data te ontleed. Bevindinge toon dat veranderlikes wat die meeste met korrupsie korreleer, is werksontevredenheid, toewyding, aangeleerde kriminele gedrag, en versterking tot korrupsie. Bevindinge toon ook dat stadsbeplanners aansienlik meer betrokke is by korrupsie wanneer hoër vlakke van werksontevredenheid en hoër vlakke van gebrek aan toewyding interaksie het met hoër vlakke van aangeleerde kriminele gedrag. Hierdie studie lewer 'n belangrike teoretiese bydrae tot die bestaande literatuur en stedelike en streeksbeplanningspraktyke in Nigerië, met inagneming van stadsbeplanning 'amptenare' se aanspreeklikheid.

1. INTRODUCTION

Compromising the public good and services for personal, professional, or political gains (also known as corruption) is a global, daily problem of human societies. Almost no country is free from corruption (UNODC, 2019: online). The 2018 Corruption Perception Index (CPI) of Transparency International (TI), a global organisation that measures corruption among public and private organisations, indicates that not a single country out of 180 nations surveyed received top marks, while over 120 countries scored below fifty on the scale of zero (highly corrupt) to hundred (very clean). While corruption is present in all aspects of urban development and governance globally, it has proven particularly devastating in the context of Africa's rapidly growing cities. For instance, in the 2021 CPI, the vast majority of African nations still fall in the top ten of the most corrupt countries globally. Specifically, in 2020, Nigeria was ranked third and, in 2021, the top sixth most corrupt country.

TI (2009: online; 2015: online; 2020: online) reported that the majority of corruption happens within the confines of civil service and among the many areas of the civil service, town planning, police force, and judiciary departments that are repeatedly found to be tainted with corruption. Particularly, TI (2015: online) reported that corruption related to land services is among the most serious concerns reported in countries such as Ghana, Nigeria, Japan, Russia, India, Pakistan, Kenya, South Africa, Brazil, and Italy, where a range of illicit actors and acts have been (and continue to be) part of the processes and institutions of urban and regional governance and development (Chiodelli *et al*., 2018: 88). Bribery, fraud, favouritism, nepotism, and abuse of public office by planning officials are common forms of corruption allegations in the administration of land services in these countries. According to the United Nations Department of Economic and Social Affairs (UNDESA, 2011: online), between 40% (Nigeria) and

60% (Pakistan and India) of people who dealt with land services were asked to pay bribes. Besides, one in five people, both globally and in Africa, report having been asked for a bribe when accessing basic land services; this proportion soared to an overwhelming one in three people in countries such as Kenya, Ghana, Nigeria, and Uganda (TI, 2015: online). In a recent study conducted in Nigeria, nearly 50% of town planners assessed from the state and local government levels did not measure up to an evaluation questionnaire as to whether they could be considered 'honest' planning officers (Adade, 2021: 51).

The effects of corrupt urban planning decisions have long-term and often irreversible negative impacts on cities (Graycar & Prenzler, 2013: 22). Corruption has been identified as one of the main hindrances to Nigeria's desire to achieve the 2030 Agenda for Sustainable Urban Development and, especially, its target to move millions of Nigerians out of slums by 2030 (Ajie & Wokekoro, 2012: 12-20). The New Urban Agenda for Sustainable Urban Development calls on all countries to promote capacity development programmes to help sub-national, state, and local governments in financial urban planning and management, anchored in institutional coordination at all levels, including environmental sensitivity and anti-corruption measures. Consequently, various anti-corruption drives have been launched in Nigeria.

In general, the anti-corruption institutions with corruption prevention mandates include the Independent Corrupt Practices and Other Related Offences Commission (ICPC), the Economic and Financial Crimes Commission (EFCC), the Code of Conduct Bureau (CCB), and the Bureau of Public Procurement (BPP) (Ikpeze, 2013: 157). Particularly in land-use planning and development permit process, immediate corruption measures include, among others, improving town planners' conditions of service and salaries; unifying Nigeria's many town-planning Ministries, Departments and Agencies (MDAs), while providing them with better training and equipment; incorporating public participation into the land-use approval procedure by building public complaint mechanisms into the process; subjecting all development applications to rigorous scrutiny, in order to reduce possible fraud risks; introducing well-administered Land Information Systems (LIS) that ensure accountability and eliminate cases of missing files, dual allocations and delayed transactions, and implementing an evaluations report system of town planners' trustworthiness, work ethics, skills, and capabilities.

Despite these many actions to counter corruption in town planning and the development permit process, there is a shortage of empirical research examining the characteristics of town planners and planning MDAs that may be associated with increased levels of corruption practices. Previous studies (Chiodelli & Moroni, 2015: 455; Chiodelli, 2018:1620; Badiora &

Bako, 2020: 311; Badiora, 2020:7; Adade, 2021: 45) have focused on planning corruption profiling, perception of corruption and its effects on the reputation of planning agencies and 'residents' compliance with planning law. But, without identifying these characteristics and potential causal mechanisms, it remains uncertain whether policies targeted at reducing corruption can be fruitful. Besides, many researchers and policymakers have suggested that poor conditions of service and low pay are among the causes of corruption in the Nigerian civil and public services (Olagunju, 2012: 81; Yemi, 2012: online; Melaye, 2013: online; Ijewereme, 2013: 111; 2015: 10; Adediran, 2017: 15; Badiora, 2020: 10; Badiora & Bako, 2020: 318; Adade, 2021: 41). Nevertheless, most of these studies and many of their statements and suppositions have not been tested by way of theoretically cognisant empirical analysis.

This study applies Differential Association-Reinforcement Theory (DART) to analyse whether differential reinforcement and learnt behaviour (criminal or anti-criminal) are predictors of corruption among town planners. Because planning agency is an organisation where values and behaviours are shared and reinforced (Adediran, 2017: 2), this study first reviews the indicators of corruption and then uses the social learning concept and regression models to determine whether these indicators affect the behaviour of corruption among a sample of Nigerian town planners overseeing the physical development of towns and cities in Ogun State, Nigeria.

2. LITERATURE AND THEORETICAL REVIEW

Propounded by Burgess and Akers (1966: 130), DART (also referred to as Social Learning Theory) states that criminal and conforming behaviours are learnt the same way, namely through a social learning process that involves differential association, differential reinforcement, learnt behaviour, and imitation.

DART hypothesises that individuals will more likely commit criminal acts (for example, bribery and corruption) when they differentially associate with individuals who commit, model, and support violations of social and legal norms; criminal or deviant behaviour is differently reinforced over conforming behaviour; they are more exposed to and observe more deviant than conforming models; their learnt behaviour favours committing criminal and deviant acts (Akers, 1998: 3-4). In other words, people are first indoctrinated into deviant behaviour by differential association with deviant colleagues. Then, through differential reinforcement, they learn how to earn rewards and escape punishment about the actual or anticipated costs of a given behaviour (Akers, 1998: 4). This theory can be applied to almost any kind of crime, especially any crime that has some type of gain (for example, bribery and corruption).

2.1 DART in civil service organisations

Studies of, and research on DART in explaining organised crime within planning organisations are limited. Sutherland and Geis (1949: 19) were the first scholars to consider criminal the illegal use of power committed from organisations (which could be civil and public services) by respectable members of society during their professional activities (Lilly, Cullen & Ball, 2011: 22). They referred to this corruption as white-collar crime. Sutherland and Cressey (1974: 12) argued that white-collar criminals are respectable members of society who engage in crime using their position of power. However, because of their social and organisational position, their crime goes largely unnoticed and unpunished. Sutherland and Cressey (1974: 23) believed that white-collar criminal behaviour, like any other type of criminal behaviour, is learnt through the process explained in their differential association theory.

Criminological views have suggested that occupational deviance is influenced by several factors, including power relations and socialisation processes among employees, structural complexities, formal control systems, and cognitive processes (Monahan & Quinn, 2006: 377). The occupational deviance perspective states that all occupations provide opportunities for deviant behaviours related to their practice (Alston, 2010: 45). Law, banking, accounting, medicine, town planning and land services, as well as law enforcement are among the professions whose practitioners often are in positions of power and are vulnerable to use their power and position for personal gain. These professions are also prone to forming occupational cultures, where the diffusion of new ideas, information, and learnt behaviour occurs.

Similar to the social identity theory, Coleman (1987: 423), as well as Den Nieuwenboer and Kaptein (2008: 141) argued that members from certain civil and public services work-related cultures (such as the Town Planning and Land Services Authority) are expected to identify with their profession, support their colleagues, and work to advance their common interests. However, these work cultures can host favourable dispositions of certain criminal activities or even the belief that these activities are required. Individuals who work for civil and public services or organisations, where deviant or illegal activities occur, feel pressured to join the organisation's criminal culture either because they identify with it or because of their personal interests and greed. Personal greed is the most frequent reason for individuals' deviance in civil and public services organisations (Coleman 1987: 425). Research conducted in private and public organisations found that employees' behavior is linked with perceived organisational ethical values. Specifically, perceived permissive norms and divergent ethical values promote differential reinforcement towards corruption and

have been associated with stealing, bribery, dishonesty, and serving as a collaborator in unethical behaviour (Bacharach, Bamberger & Sonnenstuhl, 2002: 644; Dodson & Coiacetto, 2006: 13; Tyler, 2011: 12; Chiodelli, Hall & Hudson, 2017: 55).

While this article explains corruption among town planners by using DART, it is important to consider that planning officers' behaviour of corruption may also be influenced by factors such as level of job dissatisfaction, economic need (Chiodelli & Moroni, 2015: 441; Badiora & Bako, 2020: 319), or by control deficits (Chiodelli, 2018: 1621). Employees' job dissatisfaction has been strongly associated with several forms of workplace deviant behaviors such as theft, bribery, fraud, favouritism, nepotism, abusing office and privileges, and sharing confidential information (Judge, Scott & Ilies 2006: 131; Chiodelli & Moroni, 2015: 445; Badiora, 2020: 2). In addition, Chiodelli *et al.* (2017: 12), Badiora and Bako (2020: 319), as well as Adade (2021: 41) found that town planners who have higher levels of control deficits are more likely to report fellow officers' deviant behavior, which would go against the planning agency's cultural norm of silence. Strain caused by economic need, family, administrative duties, and work factors is also considered to influence corrupt behaviours (Arter, 2007: 55; Getz & Volkema 2001: 6; Chiodelli, 2018: 1621). For example, Badiora and Bako (2020: 319) found that higher levels of stress caused by administrative duties, certain experiences, as well as family, social, work, and justice factors predict higher levels of town 'planners'' deviance such as displaying rude behaviour toward citizens and using excessive planning authority policing power.

2.2 DART in town-planning and land services organisations

Town Planning and Land Services (TPLS) is an agency in civil services, which regulates the use of land within a state (Badiora & Bako, 2020: 304). The core objective of town planning is to balance the competing interests of various stakeholders by placing limits on proprietors' rights on land as well as their discretion to construction. This is based on the premise that the public interest of town planning should prevail over private interests. The key enabling legislation for this objective is Urban and Regional Planning Law, which specifies a range of town-planning instruments such as federal, state, regional, and local development plans through zoning ordinances, planning standards, subdivision and building codes, as well as by-laws (Adediran, 2017: 2; Badiora & Bako, 2020: 306; Okongwu & Imoisi, 2021: 108).

The power accorded to TPLS to control land-use development is the requirement for any citizen, group of people, organisation, or government

to obtain approval from the department before the commencement of any physical development on any land. Without such an authorisation, any physical development is illegal. Thus, the TPLS Department acts as police, ensuring that approvals are given only when applicants comply with relevant laws and regulations of the state. Besides, the department usually carries out compliance checks at different phases of a development to ensure that the development meets the conditions on which the approval was granted and any applicable regulations that apply. Thus, TPLS' mission is to enforce the physical planning law and to promote a pro-social and pro-environment set of values, beliefs, and behaviours.

Corruption committed by public officials is commonly assumed as the misuse of public office for personal gain (Treisman, 2000: 442; UN-Habitat, 2004: online; Ijewereme, 2015: 10). This may include bribery (misuse of power in favour of someone in exchange for benefits given by the person); fraud (misuse of discretion for personal gain without third parties' involvement); favouritism, nepotism and clientelism (abuse of decision for the interest of family, clan, religion, political party, and ethnic group), among others (UN-Habitat, 2004: online). Nonetheless, there is a wider variety of meanings and concepts on the subject of town-planning and land-services corruption, with several authors offering varied explanations and classifications (Zinnbauer, 2013: online; 2015: online; Chiodelli & Moroni, 2015: 438; Chiodelli *et al.*, 2017: 3; Chiodelli, 2018: 1612; Badiora, 2020: 2; Badiora & Bako, 2020: 2; Adade, 2021: 3).

Town-planning and land-services corruption is a term commonly associated with bribery (Chiodelli, 2018: 1613; Badiora, 2020: 3; Badiora & Bako, 2020: 316; Adade, 2021: 27); however, it encompasses a broader range of deviant activities (Zinnbauer, 2013: online; 2015: online, Chiodelli & Moroni, 2015: 440; Chiodelli *et al.,* 2017: 34). For example, Chiodelli (2018: 1615) as well as Badiora and Bako (2020: 318) classified town-planning corruption into seven categories according to the seriousness of their actions. All of those categories can be collapsed into three broad groups, namely corruption that involves taking something against official town-planning and land-services duties, and acting or failing to act in exchange for money or gifts from a third party; misconduct that involves breaking internal town-planning organisation's rules and regulations, and crime that occurs when planning officers break the planning law in grave ways. This includes using excessive policing and demolition power, sexual abuse and harassment, getting involved in illegal land dealing, or violating an individual's 'proprietors' rights on land (Badiora & Bako, 2020: 321).

Like the police force, the policing power of town-planning units and decision-making processes (which is usually highly discretionary, with town planners granted a high degree of autonomy to make subjective

decisions on competing interests and matters overriding public interest) generates risk factors and unique opportunities for deviance (Chiodelli, 2018: 1623; Badiora, 2020: 6), as town planners are exposed to situations where free meals and gifts, sexual favours, or the possibility of earning extra money through bribes are made accessible by individuals who want to shortcut due-process, prevent planning officers from doing their job, or are sympathetic of town-planning work. Town planners are also exposed to situations where they can fiddle development plans and documents; commit perjury to protect a fellow officer, or avoid organisational discipline or criminal and/or civil liability (Chiodelli & Moroni, 2015: 444; Badiora & Bako, 2020: 325). It has been discussed that, in the course of their duties, town planners are exposed to several risk factors as a result of the policing and discretionary power (Badiora & Bako, 2020: 326). The planning officers with higher numbers of significant risk factors have a higher possibility of engaging in bribery and corruption (Chiodelli & Moroni, 2015: 445).

Irrespective of the individual motivations, town planners may or may not have to engage in corruption and illegality. Research suggests that their decisions are largely influenced by organisational and social factors found in their town-planning and land-services departments (Badiora, 2020: 9). The organisational factors include the organisation's culture, with an emphasis on professional opportunities and consequences for bad performance. The social factors include the culture held by town planners where they encourage *esprit de corps* and discourage reporting fellow officers' illegal and illicit acts. Research has consistently found that town planners working in planning ministries, departments or agencies, where corruption, illicit or illegal practices occur, are pressured into joining this abnormal culture (Chiodelli & Moroni, 2015: 438; Chiodelli, 2018: 1618; Badiora & Bako, 2020: 311).

By relating with their colleagues, town planners learn beliefs, values, and behaviour that facilitate the acceptance of corrupt and illegal activities. Accepting this planning organisation culture enables planning officers to earn approval and confidence from their colleagues and rely on their assistance, protection, and support (Badiora, 2020: 11). Common subcultural norms of TPLS corruption include not giving up colleagues or another officer; not implicating others if one gets into trouble; not getting involved in another officer's affairs and jurisdictions; not trusting new planning officers until well proven, and hoarding physical planning information by not telling any citizens or developer more than what they need to know about the development control process (Badiora & Bako, 2020: 321). In analysing the influence of corrupt planning department culture on some new officers from the Ogun State Town Planning and Land services Department, Adade (2021: 57) found that new planning officers are enthusiastic about licit, honesty, legality, and deviancy of their job.

Nevertheless, the more the new planning officers visit sites (for physical developments policing) with fellow senior planning officers or supervisors, their keen attitudes about licit, honesty, legality, and deviancy committed become increasingly more permissive.

According to Sheldon (1999: 2), this type of behaviour reflects an individual's propensity to repeat behaviour that leads to differential reinforcement, and reduces behaviour that results in negative consequences. People acquire from others how to act, by imitating superior, more experienced, knowledgeable, and capable individuals. As human beings are essentially social beings, they adjust their behavior to group standards in seeking group acceptance. For instance, Badiora and Bako (2020: 323-325) found that town planners are influenced by a culture that leads to misconduct and impacts on the number of complaints against town-planning ministries, departments, and agencies. Furthermore, they found that differential association among town planners explains the likelihood for an officer to engage in corruption. In Nigeria, the corrupt planning agency culture is protected by the silence code or blue curtain (Badiora & Bako, 2020: 324), which maintains the togetherness of planning offices, as it keeps planning officers from reporting other misconduct, in order to protect them from disciplinary actions. A group of town planners from different planning departments in Ondo State were asked to provide specific examples of corruption in their departments without disclosing names or places. Surprisingly, none of the respondents answered this question. It was discovered that any planning officers who should break the silence expose themselves to various forms of punishment, including job suspension, snubbing, and negligence. The protection that planning officers receive from their peers reinforces their corrupt behaviour, as the negative consequences for their actions might be minimised.

Corrupt town-planning practices are also reinforced when a superior or directors fail to address them by ignoring, justifying, or tolerating them (Chiodelli & Moroni, 2015: 88; Chiodelli, 2018: 1120; Badiora & Bako, 2020: 321). In their study, for instance, Badiora and Bako (2020: 326) concluded that town planners perceive corruption more seriously when their bosses punish corrupt behaviour. On the other hand, they consider corruption less seriously when their ministry, department, or agency has a corrupt culture, and their colleagues are less likely to report illicit, illegal and corrupt behaviour to their bosses. High interdependence among the corruptive influence that individual, organisational, and environmental factors have on an organisation should be studied, in order to better understand the extent of corruption in the organisation (Weick, 1979: 22).

In an organisation, the normalisation of corruption comprises three mutually reinforcing elements: the institutionalisation that happens when corruption becomes part of the routine; the rationalisation that occurs when persons

who engage in corruption use techniques of neutralisation to legitimise their actions, and the socialisation that ensues when new officers are taught to perform and accept established corrupt practices. In the same way that organisational and personal deviancy impacts on corruption among town-planning staff, planning officers with honest attitudes working in conforming planning departments are more likely to avoid corruption. Moreover, planning officers working for planning organisations that provide adequate training and equipment, and have strong accountability, procedural justice, and fair processes are more likely to avoid corruption (Chiodelli & Moroni, 2015: 441; Chiodelli, 2018: 1618; Badiora & Bako, 2020). For example, Badiora and Bako (2020: 325) found that planning officers who perceive their ministry's managerial practices to be fair, impartial, and just are less likely to get involved in corruption; less likely to defend town-planning corruption, and less likely to follow the silence code. In addition, studies conducted so far have established that town planners have a set of values, behaviours, and beliefs conducive to corruption that are transmitted through a social learning process (Zinnbauer, 2013: online; 2015: online; Chiodelli & Moroni, 2015: 444; Chiodelli, 2018: 1621; Badiora, 2020: 9; Badiora & Bako, 2020: 313; Adade, 2021: 40).

There are both theoretical and experiential reasons to suggest that town planners who are satisfied with their job would be more likely to avoid fraudulent behaviours (Chiodelli & Moroni, 2015: 441). Corruption is an illegal behaviour that has a negative connotation within town-planning organisations (Chiodelli & Moroni, 2015: 441; Chiodelli, 2018: 1619; Badiora & Bako, 2020: 305). Therefore, planning officers who are satisfied with their job and have a sense of belonging with the planning ministries, departments, or agencies should be less motivated to engage in behaviour that could endanger their position and job as planning officers (Badiora & Bako, 2020: 324). Furthermore, scholars have found that job dissatisfaction predicts deviant behaviour in offices and workplaces (Robinson, & Bennet, 1995: 566; Bolin & Heatherly, 2001: 416; Muafi, 2011: 125-126). Studies conducted on town-planning organisations have found that planning officers who are content with their organisation's management practices are less likely to justify corruption (Chiodelli, 2018: 1622-23; Badiora & Bako, 2020: 320). Nevertheless, it is also possible that town planners are more content with their job because of the benefits they receive from bribery and corruption (Chiodelli, 2018: 1621).

As shown in this literature review, limited research has established that differential reinforcement and learnt behaviour influence town planners' corruption. To date, it has not been proven whether these social learning concepts (job dissatisfaction, lack of commitment, learnt behaviour [criminal or anti-criminal], and reinforcement) are stronger predictors of corruption than economic need and job dissatisfaction among town planners.

3. STUDY AREA

Ogun State, in the Western Region of the Federal Republic of Nigeria, has a total land area of 16 981.26 square kilometers. Lying between latitude 6.2°N and 7.8°N and longitude 3.0^0 E and 5.0°E, the State is bordered in the east by Ondo State, in the north by Oyo and Osun States, in the south by Lagos State and the Atlantic Ocean, and in the west by the Republic of Benin (see Figure 1). The population estimate for 2022 was projected at 6 275 million people (NBS, 2016: 16). The state has a high concentration of industrial estates and is a major manufacturing hub in Nigeria. Consequently, these developments pose many challenges to the state land mass and physical development. Hence, apt land services are needed to control all physical developments, including residential, commercial, industrial, public, and institutional land uses.

For the purpose of physical planning and other administrative matters, Ogun State is structured into 20 Local Government Areas (LGAs) or Zonal Town Planning Offices (ZPOs) (see Figure 1). These include Abeokuta North, Abeokuta South, Ado-Odo/Ota, Ewekoro, Ifo, Ijebu East, Ijebu North, Ijebu North East, Ijebu Ode and Ikenne. Others are Imeko-Afon, Ipokia, Obafemi Owode, Odogbolu, Odeda, Ogun Waterside, Remo North, Sagamu, Yewa North, and Yewa South. Because of the volume of physical development and for the effective physical planning and development control, the State government created an additional 37 local council development authorities with all the characteristics and functions of the local planning offices.

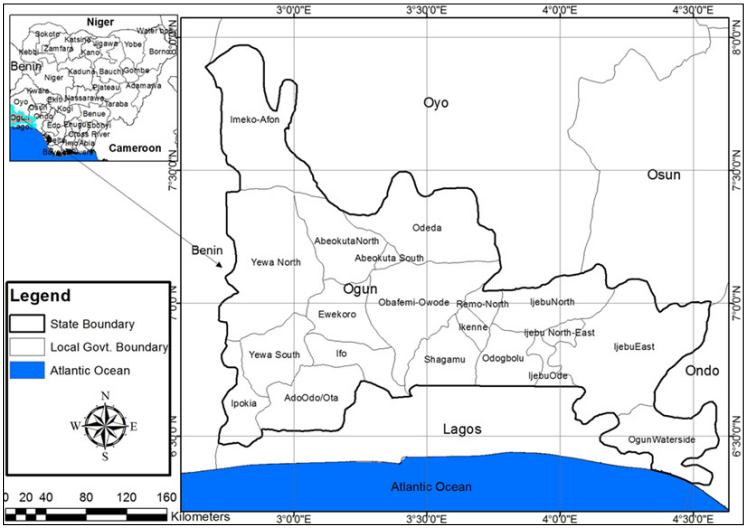

Figure 1: Map of Ogun State, indicating the LGAs or ZPOs
Source: Authors

The ZPOs are responsible for controlling various physical developments and monitoring all the developments to control the growth of urban sprawl in Ogun State. Each of these ZPOs is headed by a Head of Department/ Director, assisted by a Deputy Director and other Zonal Town Planners/ Executive Officers in implementing the State's physical planning policies and the coordination of physical development within the zone/area. Furthermore, the ZPOs report to the Ministry of Physical Planning and Urban Development that is the apex body of Physical Planning in Ogun State. The Ministry is responsible for formulating physical planning policies and the coordination of physical development within the State. It derives its statutory functions from Section 3, line 246, of the State Urban and Regional Planning Law No. 20 of 2005.

While the Ministry is the policy-making body, it has the ZPOs as its parastatals spread across the State. The ZPOs act on the approval processing for residential developments, while commercial and industrial development proposals involve the Ministry of Physical Planning and Urban Development. The development proposals are initiated in the ZPO and then sent to the Director of Development Control in the Ministry and to the Permanent Secretary, down to the Special Adviser on Physical Development and to the Commissioner, who is the Head of the Ministry. The proposed development follows the same procedures back to the ZPO in charge of the proposed site for further processing and execution of the Commissioner's decision to approve or disapprove the application.

4. RESEARCH METHODOLOGY

This study examined the causes of corruption among town planners through the lens of Differential Association-Reinforcement Theory (DART). Using a quantitative research design (Creswell, 2018: 147), a structured questionnaire survey set five constructs with 13 measures on the variables of corrupt behaviour and predictors (job dissatisfaction, lack of commitment, behaviour, and reinforcement) extracted from literature. A quantitative design allows for descriptive and inferential analysis (Flynn, 2021: 493). In this study, bivariate correlation tests were used to assess relationships among these corruption variables and predictors (Carpenter, 2018: 1599). Ordinary Least Square Regression (OLS) models were used to examine the influence of job dissatisfaction, lack of commitment, learnt behaviour, and reinforcement on corrupt behaviour among town planners in the study area (Olive, 2017: 1).

4.1 Population, sample and response rate

The population of this study are all practising town planners in Ogun State, Nigeria. The Nigerian Institute of Town Planners projects that there are 323 town planners in practice across various Ministry, Departments, and Agencies, as well as different private sectors and non-governmental organisations in the study area at the time this research was carried out (NITP, 2021: 3). Because of the difficulties in locating respondents to partake in corruption studies in Nigeria, the first respondent was picked from the author's acquaintances, through convenient sampling (Etikan, Musa & Alkassim, 2016: 2). Subsequent respondents were then referred by the previous respondents, through snowball sampling (Etikan *et al.*, 2016: 2). Using this method, a total of 81 town planners were eventually sampled, representing a 25% sample. Although the sample size is not valid and not within the recommended sample size of 175 for a population equal to or above 320 (Krejcie & Morgan, 1970: 608), these 81 town planners with professional registration status, substantiate the size of the sample. It is vital to report that not all the 81 respondents provided a complete set of answers to the questionnaire. Only 57 respondents completed the questionnaire used in this analysis properly, representing a 58% response rate. According to Baruch and Holtom (2008: 1153), average response rates for studies at organisational level research are 37.2% and 52.7% at an individual level research.

4.2 Data collection

Data were collected in March 2021 through questionnaires. Questionnaires and interviews have been used in previous corruption studies (Chiodelli, 2018; Badiora, 2020; Badiora & Bako, 2020). A pilot study was conducted on 14 town planners from a conveniently available pool of town planners to test the instruments. The rule of thumb is to test the survey on at least 12 to 50 people before full-scale administration (In, 2017: 604; Tavakol & Dennick, 2011: 23). Feedback was obtained about the length of the instrument, the format of the scales, content validity, and question ambiguity. The instrument was revised and further administered to 15 town planners. Prior to its application, a social psychology expert checked the developed scale. Thereafter, for analysis of the internal reliability of the items in the questionnaire, Cronbach's *alpha* values were tested with a cut-off value of 0.70 (Tavakol & Dennick, 2011: 54-55).

To reduce the respondents' predisposition, closed-ended questions were preferred (Teddlie & Tashakkori, 2003: 232). Town planners responded to the questionnaire in a private environment mode. The questionnaire was in the English language. This study upholds avoidance of harm, confidentiality, and informed consent during data collection.

4.3 Variables and measurements

Three groups of variables were considered in this study: dependent variable, independent variables, and control variables.

4.3.1 Dependent variable

The dependent variable 'corrupt behaviour' designates the extent to which town planners have engaged in corruption. This index was formed by summing the responses of four questions as follows: Have you passed a small physical development offence in an exchange of a deal, favour or personal gain? Have you passed a serious physical development offence in an exchange of a deal, favour, or personal gain? Have you accepted a bribe to help a developer? Have you ever taken part in an act of corruption?' Each item had six possible responses ranging from 1-Never to 6-Always.

4.3.2 Independent variables

All independent variable indices included a six-option response scale to measure opinions for each variable, where 1=Never, and 6=Always. The 'reinforcement of corruption index' measured the town planners' perception about whether corruption was encouraged in their workplaces. This index included responses to the following two questions: Do your associates or supervisors encourage bribery and corruption? Do your associates or supervisors allow bribery and corruption to happen?

The 'learnt behaviour index' measured the town planners' disposition towards bribery and corruption. This index was formed by adding the responses to the following two questions: If you want money/cash, is it okay to ask for a bribe? Are bribery and corruption good?

The 'commitment index' included the responses to the following two questions: Are you committed to your work? How committed are you to your community?

The 'job dissatisfaction index' included the responses to the questions: How happy do you feel about being a town planner in Nigeria? For how long do you want to continue to be a town planner in Nigeria? Are you comfortable with your job in Nigeria as a town planner?

4.3.3 Control variables

The control variables used in the analysis were gender, age, grade level in the town-planning agency/department, highest level of education attained, section in the town-planning agency/department, and years in the service. Gender was coded as male and female with female as the reference

variable. For section in town-planning department/agency, two categories were determined: site inspections and office administration, with the latter as the reference category. Age, highest level of education attained, grade level in the town-planning agency/department, and years in the service were also coded as dummy variables. The categories for age in years were 21-25, 26-30, 31-35, 36-40, 41-50, and over 50, with 21-25 as the reference category. For highest level of education attained, options included Ordinary National Diploma (OND), the Nigerian Institute of Town Planners (NITP) Professional Training or a Professional Diploma in Urban and Regional Planning, Higher National Diploma (HND)/Bachelor of Science (B.Sc.) and postgraduate degrees, with the combination of OND and professional training/Diploma as the reference category. The categories for grade level in the planning agency were enlisted, Town Planning Officer (TPO), Senior/Chief Town Planning Officer, and Directors, with the combination of Senior/Chief Town Planning officer (S/CPO) and Directors as the reference category. Note that, although the responses for the grade level variable include a category that comprises Directors of Town Planning, this article will use the phrase 'town planners' for all respondents, regardless of their grade level. The categories for years in the civil service were coded as follows: less than 2 years, 2-4 years, 5-7 years, 8-10 years, and more than 10 years. The category 'less than 2' was used as the reference category. The response options for the question 'How is your economic/livelihood situation?' were coded into values ranging from 1 to 5, representing the categories: 'very good', 'good', 'average', 'bad', and 'very bad'.

4.4 Data analysis

All the data analysis for this study was done using statistical package of SPSS 16.0 [IBM 22] (Dennis & Cramer, 2011: 255).

Descriptive statistics was used to generate mean scores (MSs) and percentages to analyse the characteristics of the respondents and the variables in the indices. For purposes of analysis, all independent variable indices included a six option response scale to measure opinions, where 1=Never, 2=Very rarely, 3=Rarely, 4=Occasionally, 5=Very frequent, and 6=Always

Bivariate correlation tests were applied to the data to show the comparative relationship between corrupt behavior, the seven control variables, and the four independent variables (indices) with test values between -1 (negative relationship), 0 (no relationship) and +1 (positive relationship) (Carpenter, 2018: 1600). A series of ordinary least squares (OLS) regression models were computed to determine whether the indicators of differential reinforcement and learnt behaviour affect corruption after accounting for economic need, job dissatisfaction, and lack of commitment, and other key

control variables. Lastly, a series of interactions between reinforcement and learnt behaviour and economic need, job dissatisfaction and lack of commitment are analysed.

The final analysis calculates planning officers' likelihood of engaging in corruption based on an index that counted the number of significant risk factors to which each respondent was exposed. This likelihood was calculated by first identifying the risk factors that significantly increased corrupt behaviour. The sample mean of each of these factors was compared to each individual's individual score of the risk factors identified. Cases with values above the sample mean of the risk factors identified were coded as having that risk factor. The corrupt behaviour index's mean was used to calculate the likelihood that town planners would engage in corruption. Cases with a value above the sample mean were coded as high probability (1), and cases with values below the mean were coded as low probability (0). Logistic regression was used to assess the effect of the number of risk factors on the corruption behaviour (Wooldridge, 2002: 22; Esbensen *et al*., 2009: 333).

5. FINDINGS AND DISCUSSION

Unless otherwise stated, the tables that summarise the data show the results of the survey carried out by the authors in March 2021.

5.1 Descriptive and correlation analyses

Table 1 shows that the majority (82%) of the respondents are male and older than 41 years of age (61%). The vast majority (85%) of the respondents were either town-planning officers (50%), or senior town-planning officers (35%), and 96% had either a Higher National Diploma/Bachelor Degree (70%), or a Nationa Diploma/Professional Diploma (26%). The profile shows that over half (60%) of the respondents worked in the site-inspection section of their firms. About two-thirds (70%) of the respondents had over eight years' experience in the civil service. This implies that the respondents have adequate tertiary qualifications and experience in the civil service to provide information that could help make useful deductions on the predictors of corruption among selected town planners in the study area.

Table 1: Respondents' characterictics

Variable	*Category*	*Frequency (N=57)*	*%*
Gender	Male	47	82
	Female	10	18
Age (years)	21-30	13	22
	31-40	24	43
	41-50	10	18
	Above 50 years	10	18
Education	Nationa Diploma/Professional Diploma	15	26
	Higher National Diploma/Bachelor Degrees	40	70
	Postgraduate Graduate Degrees	2	4
Section	Site inspections	34	60
	Office and general administration	23	40
Position	Town-Planning Officer (TPO),	29	50
	Senior/Chief Town-Planning Officer	19	35
	Directors	9	15
Experience (years)	Less than 2 years	4	7
	2-7 years	13	23
	8-10 years	19	33
	More than 10 years	21	37

Results in Table 2 show Cronbach's *alpha* values above 0.70, indicating internal reliability for all the indices, as recommended by Tavakol and Dennick (2011: 53). The response percentage summary shows that only a slight proportion of town planners surveyed "always" engage in bribery and corruption. Over 22% and 9% of the surveyed town planners accepted letting small and big physical development offences pass, respectively, in exchange for a "deal, favour or private gain". Furthermore, results show that over 45% of the respondents accepted bribes to help development applicants, while over 36% acknowledged taking part in the act of corruption. Slightly above 60% of the respondents indicated that their colleagues and/or supervisors encourage corruption, while slightly over 55% of them admitted that colleagues and supervisors allow corruption to take place.

Table 2: Descriptive analysis of indices (dependent and independent variables)

Index	*Category*	*Response % (N= 57)*			*Cronbach's alpha*
		Never (1)	*Middle values (2-4)*	*Always (5 or 6)*	
Corrupt behaviour (dependent variable)	Allow small physical development offence pass	75.22	22.67	1.33	0.764
	Allow serious physical development offence pass	89.17	9.83	1.00	
	Accepted bribe to help a developer	50.68	45.39	3.93	
	Participated in corruption	65.42	34.58	2.00	
Reinforcement of corruption	Encourage corruption	38.84	55.96	6.18	0.756
	Allow corruption to occur	44.70	50.76	7.54	
Learnt behaviour	It is ok to ask for a bribe	74.21	25.23	0.57	0.719
	Corruption is good	87.13	12.38	0.49	
Job dissatisfaction	I'm happy to be a town-planning officer	1.93	27.58	70.49	0.745
	I want to continue being a town-planning officer	20.93	20.57	58.50	
	I'm comfortable with my town-planning job	10.21	32.50	57.29	
Lack of commitment	I'm committed to my work as a town-planning officer	3.52	23.57	74.71	0.785
	I'm committed to my city/ zonal planning area	3.46	30.56	66.49	

Furthermore, findings show that 25% of the town planners consider it acceptable to ask for a bribe or inducement when they need money or are economically down, while only a small proportion (slightly above 12%) of them are of the opinion that corruption is good. Over 70% of the respondents are always happy about being a town-planning officer, and nearly 59% of the respondents wish to continue to be a town-planning officer for a long time, while some 10% of the respondents are somewhat uncomfortable with their job as planning officers. Moreover, findings show that 74% of the town planners feel always committed to their job, while 66% of them are always committed to their city's physical planning.

Table 3: Bivariate correlations of corruption variables among town planners

Variables		*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
1	Corrupt behaviour	1											
2	Gender	.07**	1										
3	Age	−.05	.08	1									
4	Grade level	−.09*	.07	.18	1								
5	Economic situation	−.02	.08	.01	.01	1							
6	Level of education	−.03	−.11	−.33*	−.00	.04	1						
7	Section	−.07	−.08	−.03	−.04	.09	−.26	1					
8	Years in civil service	.05	.20	.34	.18	.08	−.08	.18	1				
9	Job dissatisfaction	.43*	.05	−.07	−.08	.02*	.26	−.08	−.12	1			
10	Lack of commitment	.36*	.02	.17	.07	−.04	−.14	−.17	−.06	.21*	1		
11	Learnt behaviour	.55*	−.03	−.05	.03	.06	−.03	.06	.04	.10	−.08	1	
12	Reinforcement	.48**	.05	−.07	−.07	.27	.19	.28	.11	.15	−.07	.22	1

*Note : *p ≤ .05; **p ≤ .01*

Table 3 shows that the variables with the highest correlation with corrupt behaviour are job dissatisfaction (r = 0.43), commitment (r = 0.36), learnt behaviour (r = 0.55), and reinforcement (r = 0.48). A positive correlation exists between lack of commitment and job dissatisfaction (r = .21), learnt behaviour (r = .10), and reinforcement (r = .15). These findings show that town planners, who are unhappy with their job and less committed to serve their city, will engage in corrupt practices. Reinforcement shows positive correlations with economic situation (r = 0.27), education (r = 0.19), section (0.28), years in service (r = 0.11), job dissastisfaction (r = 0.15), and learnt criminal behaviour (r = 0.22). These findings show that learnt criminal behaviour and noticing that their colleagues and/or superiors support crime, bribery and corruption, encourage town planners to get involved in criminal behaviour, bribery, and corrupt practices. Chiodelli and Moroni (2015: 438), Chiodelli *et al.* (2017: 56), as well as Badiora and Bako (2020: 311) noted similar findings. Corrupt behaviour has a positive correlation with gender (r = .07) and years in civil service (r = .05). Accordingly, the number of years in civil service and gender may impact on whether a town planner will engage in corruption or not. However, previous studies show that female town planners (Chiodelli, 2018: 1621; Badiora & Bako, 2020: 320; Adade, 2021: 40) are, on average, more compliant than male town planners.

5.2 Multivariate analysis

The influence of the control and independent variables on corrupt behaviour was estimated in three different models. The first model in Table 3 shows the influence of gender, age, level of education, grade level, economic situation, planning section, years of service, job dissatisfaction, and commitment on town planners' corruption. The second model includes the same variables as the first model, with the addition of the variables that are considered to promote corruption: job dissatisfaction and lack of commitment. The third model includes the same variables as the second model, with the addition of the social learning variables of learnt behaviour and reinforcement. This stepwise progression has the advantage of identifying any mediating influence of these social learning variables on the effects of economic situation, job satisfaction, and commitment on the act of corrupt behaviour.

Table 4: OLS regression models predicting corrupt behaviour among town planners

Variable	*Model 1*		*Model 2*		*Model 3*	
	b	*s.e*	*b*	*s.e*	*b*	*s.e*
Gender (female)						
Male	0.40	1.12	0.34	1.06	0.31	0.94
Age (21-25 years)						
26-30 years	−0.12	1.36	−0.78	1.21	−0.49	1.09
31–35	−0.85	1.43	−0.98	1.34	−0.96	1.04
36–40	0.34	1.37	−0.31	1.88	−0.63	1.07
41–50	−1.67	1.28	−1.98	1.41	−1.23	1.06
50 years	−0.16	1.37	−1.05	1.45	0.82**	1.25
Diploma (OND and Professional)						
HND/B.Sc.	−0.30	0.67	−0.36	0.64	−0.72	0.59
Postgraduate egree	−1.56	1.36	−2.03	1.30	−2.99*	1.18
Grade level ((S/CPO), and Director)						
Junior planning officer	1.65	1.02	1.77	1.08	1.17	0.84
Economic situation	−0.49*	0.40	−0.34	0.48	−0.46	0.35
Section in town-planning department (Office admin)						
Site inspection	−0.42	0.72	0.34***	0.79	−1.01	0.65
Years in civil service (less than 2)						
2–4	−0.66	0.73	−1.10	0.79	−0.74	0.70
5–7	−1.55	0.74	−1.73*	0.70	−0.96	0.73
8–10	−0.67	0.99	−1.05	0.81	−0.48	0.79
More than 10	−4.01*	1.63	−2.74	1.45	−1.42	1.31
Job dissatisfaction			0.30**	0.22	0.20**	0.10
Lack of commitment			0.35	0.18	0.22	0.17

Variable	*Model 1*		*Model 2*		*Model 3*	
	b	*s.e*	*b*	*s.e*	*b*	*s.e*
Learnt behaviour					0.74**	0.23
Reinforcement					0.28**	0.29
Intercept	5.50	3.24	11.17	4.22	5.66	3.79
F-Test	0.671		0.084		0.000	
Adjusted R^2	0.002		0.108		0.401	

*p ≤ .05; **p ≤ .01; ***p ≤ .001; s.e = standard error for unstandardised beta;
b = unstandardised beta

In the first model presented in Table 4, the number of years in the civil service (β = -4.01, p<.05) and economic situation (β = -0.49, p<.05) have a statistical significant influence on predicting corrupt behaviour among town planners. Specifically, town planners who have been in the civil service for at least ten years engage less in corrupt practices. Similar to Olagunju (2012: 81), Ijewereme (2015: 9), Badiora (2020: 8), Badiora and Bako (2020: 318), and Adade (2021: 44), findings show that a bad economic situation is a significant predictor of corruption among town planners. In model 2, results show that having worked in the civil service for more than 10 years was no longer significant. Instead, the model reveals that having between 5 and 7 years' work experience in civil service (β = -1.73, p<.05) significantly reduces corrupt behaviour among planning officers. In addition, findings indicate that town planners with higher levels of job dissatisfaction (β = 0.30, p<.001) are significantly more corrupt than their counterparts with lower levels of job dissatisfaction. Adade (2021: 42) showed a similar finding, where officials who are dissatisfied with their job functioning were also found to be corrupt. Contrary to the findings of Badiora and Bako (2020: 316), and of Chiodelli (2018: 1623) that planning officers will engage in bribery and corruption, irrespective of the unit in the planning agency where they work, the section in town-planning department, particularly site inspection variable (β = 0.34, p<.001), became significant and had a positive regression coefficient. This suggests that units in the planning department significantly impact on whether a town-planning officer will engage less or more in bribery and corruption when job dissatisfaction and commitment are considered in their likelihood to engage in corruption. However, contrary to expectations of this study and findings by Klenowski (2012: 71), commitment to job and community were not strong predictors of corruption among these officails.

In the third model, the learnt behaviour and reinforcement toward corruption variables were introduced. It is interesting to note that these had a significant influence on predicting planning officers' corrupt behaviour in the expected direction. Specifically, findings show that town planners who have learnt criminal behaviour (β = 0.74, p<.01) and who have positive reinforcement

(β = 0.28, p<.01) towards corruption engage more in corruption than those who have learnt anti-criminal behaviour and who perceive a negative reinforcement towards bribery and corruption. It is important to note that the variable job dissatisfaction (β = 0.20, p<.01) remained significant in the third model and its regression coefficient decreased by 33.3%. Findings in the third model suggest that the effect of job dissatisfaction on corruption is partially facilitated by planning officers' reinforcement towards corruption and what they may define as right or wrong. Similar to Chiodelli's (2018: 162) argument, planning officers who are dissatisfied with their job might be more prone to learning criminal behaviour, thus allowing them to justify their corrupt deeds. Furthermore, planning officers who are dissatisfied with their job might be more likely to embrace favourable reinforcements towards corruption from colleagues and/or supervisors/directors. Reinforcement towards corruption may also be more common in town-planning organisations with high levels of job dissatisfaction. Thus, as found in other offices and workplaces that job dissatisfaction and reinforcement predict deviant behaviour (Robinson & Bennet, 1995: 566; Bolin & Heatherly, 2001: 416; Muafi, 2011: 125-126), the situation is not in any way different in town-planning offices, at least in Nigeria.

While the variable 5 to 7 years' working in civil service was no longer significant in model 3, the postgraduate degree variable became significant (β = -2.99, p<.05) and had a negative regression coefficient. This suggests that town planners with postgraduate education significantly engage less in bribery and corruption compared to the less educated colleagues when learnt behavour and reinforcement are considered in their likelihood to engage in corruption. Adade (2021: 43) suggested that higher levels of education are associated with lower justifiability of corruption. Furthermore, the age variable of 50 years and above became significant (β = 0.82, p<.01) and had a positive regression coefficient, suggesting that older town planners significantly engage less in bribery and corruption compared to the younger colleagues when learnt behaviour and reinforcement are considered in their likelihood to engage in corrupt behaviour. This agrees with Badiora and Bako (2020: 311) who argue that the town planners' age mediates their corrupt behaviour; the older they are, the more they become sensible of self-esteem, integrity, and fairness.

Table 5 presents the effect of the interaction between reinforcement and behaviour with the economic situation, job dissatisfaction, and commitment in six different models.

Table 5: Interactions predicting corrupt behaviour among town planners

Variables	*Model 1*		*Model 2*		*Model 3*		*Model 4*		*Model 5*		*Model 6*	
	b	*s.e*	*b*	*s.e*	*b*	*s.e*	*b*	*s.e*	*b*	*s.e*	*b*	*s.e*
Gender (female)												
Male	0.34	0.39	0.29	0.94	0.29	0.95	0.54	0.92	0.33	0.94	0.31	0.89
Age (21-25 years)												
26-30	−0.40	1.08	−0.46	1.09	−0.43	1.14	−0.30	1.07	−0.48	1.09	−0.44	1.04
31-35	−0.75	1.01	−1.01	1.04	−0.88	1.07	−1.06	1.01	−0.77	1.02	−0.94	0.97
36-40	−0.49	1.05	−0.57	1.06	−0.53	1.07	−0.77	1.08	−0.63	1.06	−0.64	1.01
41-50	−1.24	1.07	−1.35	1.10	−1.24	1.08	−1.47	1.09	−1.37	1.08	−1.47	1.03
More than 50	−0.99	1.22	−0.89	1.23	−0.85	1.24	−0.68	1.27	−0.69	1.23	−0.23	1.18
Diploma (OND and professional)												
HND/B.Sc.	−0.97	0.63	−0.67	0.60	−0.72	0.63	−0.86	0.59	−0.72	0.59	−0.97	0.57
Postgraduate degree	−2.48*	1.19	−3.41*	1.18	−2.33	1.44	−3.39*	1.16	−2.29*	1.18	−2.20*	1.12
Grade level ((S/CPO), and Director)												
Junior planning officer	1.26	0.83	1.19	0.85	1.18	0.89	1.09	0.83	1.19	0.85	1.03	0.81
Economic situation	0.24	0.68	−1.12	1.08	−0.46	0.35	−0.41	0.34	−0.47	0.35	−0.40	0.33
Section in town-planning department (Office Admin.)												
Site inspection	−1.22	0.65	−1.01	0.65	−1.01	0.67	−0.84	0.64	−1.00	0.65	−0.88	0.62
Years in civil service (less than 2)												
2-4	−0.80	0.70	−0.78	0.71	−0.73	0.81	−0.81	0.69	−0.75	0.71	−1.18	0.79
5-7	−0.98	0.73	−1.07	0.75	−0.97	0.83	−0.88	0.72	−0.97	0.73	−0.99	0.63
8-10	−0.62	0.79	−0.53	0.80	−0.49	0.70	−0.51	0.78	−0.49	0.91	−0.57	0.86
More than 10	−1.63	1.30	−1.51	1.32	−1.42	1.43	−1.62	1.29	−1.44	1.31	−1.88	1.35
Job dissatisfaction	0.46**	0.10	0.24**	0.10	0.30	0.32	−0.22	0.24	0.42*	0.10	0.31*	0.11
Lack of commitment	0.28	0.17	0.23	0.17	0.22	0.27	0.16	0.17	0.11	0.39	−1.31*	0.49
Learnt behaviour	0.87***	0.23	−0.18	1.56	0.91***	0.25	0.03	0.43	0.91***	0.33	−0.81	0.54
Reinforcement	0.71	0.43	0.27**	0.10	0.32	0.26	0.37**	0.09	0.20	0.33	0.32**	0.09
Eco. situation x Reinforcement	−0.17	0.14										
Economic situation x Behaviour			0.39	0.42								
Job dissatisfaction x Reinforcement					−0.04	0.05						
Job dissatisfaction x Behaviour							0.22*	0.06				
Lack of commitment x Reinforcement									0.39	0.71		
Lack of commitment x Behaviour											0.66**	0.19
Intercept	4.42	3.45	9.04	4.93	6.38	3.15	7.67	2.97	3.70	2.21	7.36	2.41
F-Test	0.001		0.000		0.002		0.000		0.000		0.001	
Adjusted R^2	0.409		0.386		0.301		0.347		0.294		0.382	

*p ≤ .05; **p ≤ .01; ***p ≤ .001; s.e = standard error for unstandardized beta; b = unstandardized beta

The first model includes the demographic characteristics of the respondents, their level of job dissatisfaction and commitment, indicators of learnt behaviour and reinforcement, and the interaction between economic situation and reinforcement towards corruption. The second model includes an interaction between economic situation and learnt behaviour. The third model shows an interaction between job dissatisfaction and reinforcement, while the fourth model shows an interaction between job dissatisfaction and learnt behaviour. The fifth model shows an interaction between commitment and reinforcement, and the sixth model shows an interaction between commitment and learnt behaviour.

Findings from Model 1 through to Model 3 show that the interaction between economic situation and reinforcement (β = −0.17), economic situation and learnt behaviour (β = 0.39), and job dissatisfaction and reinforcement (β = −0.04) do not explain corruption among the sampled town planners. Nonetheless, the interaction between job dissatisfaction and learnt behavour (β = 0.22, p<.05) significantly explains corruption among town planners in Model 4. Similar to previous studies (for example, Badiora and Bako, 2020: 318; Adade, 2021: 48), this suggests that corruption significantly increases when higher levels of both job dissatisfaction and learnt criminal behaviour interact. Furthermore, findings show that the interaction between lack of commitment and reinforcement (β = 0.39) is not significant in Model 5. However, the interaction between lack of commitment and learnt behaviour (β = 0.66, p<.01) is significant in Model 6. Contrary to previous studies (Badiora & Bako, 2020: 320; Adade, 2021: 50), this finding indicates that town-planning officers significantly increase their corrupt behaviour when higher levels of lack of commitment and higher levels of learnt criminal behaviour blend. The positive sign in the regression coefficient (β = 0.66, p<.01) indicates that when town-planning officers have higher levels of learnt criminal behaviour, their higher levels of commitment to their job/city significantly prevent them from engaging in bribery and corruption.

Table 6: Prediction of corrupt behaviour by the number of risk factors

No. of risk factors	*N*	*Planning officers per risk factor (%)*	*Odds ratio*	*Std. error*
0	20	35.09	-	-
1	20	35.09	1.88	0.99
2	11	19.30	7.43**	5.21
3	04	7.02	23.73**	26.57
4	02	3.51	27.20***	31.84
F-Test = 0.001; Pseudo-R2= 0.138; **p ≤ .01; ***P ≤ .001 Note: The Odds ratio presented is relative to the first category (0 risk factors).				

Similar to previous studies (Chiodelli, 2018: 1623; Badiora, 2020: 6), findings presented in Table 6 show that planning officers who were exposed to higher numbers of significant risk factors are at higher risk of engaging in corrupt behaviour. However, town-planning officers who were exposed to two, three, and four risk factors have 7.43%, 23.73% and 27.20% higher likelihoods for engaging in bribery and corruption, respectively, compared to town-planning officers who were exposed to zero risk factors.

6. CONCLUSION AND IMPLICATIONS FOR FUTURE RESEARCH

This study examined the characteristics associated with corruption among Nigerian town planners through the perspective of DART. This study added to the existing literature in urban planning corruption, by considering DART in relation to town planners' accountability. Specifically, findings show that job dissatisfaction, reinforcement, and learnt criminal behaviour significantly increase the levels of town-planning officers' corruption. Furthermore, exposure to a higher number of risk factors significantly increases the town-planning officer's prospect to engage in bribery and corruption. Economic situation was also found to be a significant predictor of corruption among the respondents. The analysis also shows that learnt behaviour and reinforcement partially mediate the effect of job dissatisfaction on the behavior of corruption among the sampled town planners. The effect of years in the civil service on corruption was mediated by these social learning variables (learnt behaviour and reinforcement) such that town planners who are dissatisfied with their job and have been in the civil service for a certain number of years are more likely to have learnt some criminal behaviour that is favourable to bribery and corruption and more likely to receive, perceive, or justify reinforcement towards corruption and related criminal deeds.

Accordingly, efforts to address corruption among town planners must consider the social learning concepts of reinforcement and learnt criminal behaviour towards corruption. Furthermore, efforts in tackling corruption must consider issues of job dissatisfaction and lack of commitment among town planners. Besides, improving the economic situation of town planners should be factored into the Nigerian government's anti-corruption fights and efforts.

In planning practice, the findings imply a restructuring of the present town-planning agencies in Nigeria to usher in a new ethical paradigm, explaining urban planning as a noble role for those town planners who desire to serve and truly develop a sustainable environment. To address the influence of learnt criminal behaviour, a total overhaul of town planners' psyche through ethical and moral reorientation programmes is needed. This would

provide a new template capable of modifying town planners' learnt criminal behaviour or deviant acts to the things that matter in life: self-esteem, self-awareness and self-renewal, integrity, and fairness. Furthermore, town planners should be motivated, encouraged, and adequately supported by their agencies and departments. The planning agencies should make every effort to enhance and maintain town planners' satisfaction, by paying adequate attention to factors such as pay, benefit, and working conditions. Competitive salaries should be offered to town planners, considering the reality of their living expenses in the context of the economic situation in Nigeria and the rates being offered by other similar agencies, ministries, and departments. Furthermore, planning agencies should conduct regular access audits of their systems to ensure that no employee has more access than is absolutely necessary to perform his/her designated duties. The ability to identify any vulnerabilities through regular analysis would be a strong corruption preventative measure. In addition, some technologies can help identify rising corruption risk behaviour such as stress and decreased engagement, which are key components of employee (dis)satisfaction that may lead to an increased propensity for corrupt acts. Planning agencies' managers need to be extra-vigilant in judging employee satisfaction and engagement. They should think of this as more than a means to prevent employee turnover and increased hiring costs. Creating and maintaining a culture of happiness and engagement takes an agency-wide commitment. That effort and the dedication to scrutinising and evaluating individual job satisfaction should be priorities not only for improving productivity and decreasing costly errors, but also for reducing corruption and organised crime/fraud.

While this study is a preliminary effort toward understanding the factors associated with town-planning corruption in Nigeria, there are several limitations that suggest avenues for future research. The relatively low level of explained variation suggests the existence of predictors of corruption that may have been omitted in this study. These could be the pressure that town planners receive from land cartel, political figures, political blocs and settlements, colleagues, or supervisors to participate in acts of bribery and corruption. Another limitation is that the study was not conducted across Nigeria; thus, the findings cannot be generalised. Nevertheless, because similar urban planning and development control structures operate across the Nigerian States and local governments, the study may be a policy reference point to tackle urban planning and land services corruption in Nigeria.

One more limitation concerns the uncertain causal order between the predictor and the outcome variables. The analysis of the data found that higher levels of job dissatisfaction predict higher levels of corrupt behaviour. This association could exist because higher levels of corruption make town

planners feel more dissatisfied with their job. This, in turn, leads to more corruption. The learnt behaviour and reinforcement towards corruption also predicted higher amounts of corruption. This observed relation could exist because town planners who engage more in corruption, obtain money or other benefits from this practice, and hence develop or learn behaviour (criminal) that is favourable to engage in corruption. On the other hand, if a town planner engaged in corruption prior to receiving reinforcement towards it, this should not determine whether colleagues or supervisors allowed or encouraged bribery and corruption. Colleagues or supervisors would then have to know about corruption by others for them to encourage or allow it. If these scenarios were true, there would be a conditioning effect between the act of corruption and learnt criminal behaviour and reinforcement towards corruption. Further research would be needed to establish these conditional relationships.

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