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**| RESEARCH ARTICLE**

## **Self-Determination Theory: The Mediating Role of Generational Differences in Employee Engagement**

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**| ABSTRACT**

The fulfilment of basic psychological needs of autonomy, competence and relatedness exists along a continuum from amotivation to intrinsic motivation. Between these extremes is extrinsic motivation. More than ever before, we have more generational gaps in today's workplace, and it is generally believed that younger employees differ strongly from older generations in values and motivation. Generational differences were used as the mediating variable in this study, which examines the predictive validity of employee engagement using extrinsic and intrinsic motivation. Structural equation modelling was used to analyse data obtained from 564 respondents across different generational cohorts using structured questionnaire. The study found that generational differences do not positively mediate between extrinsic and intrinsic motivation and engagement outcomes. Generational differences in the workplace were found to be mostly exaggerated. Also, intrinsic motivation was more positively related to employee engagement than extrinsic motivation across all generations. Furthermore, we found that even though extrinsic and intrinsic motivation operates on different spectrums, they complement each other. These findings have important implications for managers, particularly because employee engagement is a critical enabler for productivity and employee retention.

**| KEYWORDS**

Self-determination theory, extrinsic motivation, intrinsic motivation, generational differences, employee engagement.

**| ARTICLE INFORMATION**

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### **1. Introduction**

The increase in life expectancies and a delay in retirement have increased generational gaps in the workplace, especially in this century, with the most recent four generations working alongside (Lancaster & Stillman 2002; DelCampo et al. 2011). Having a generationally diverse workforce increases knowledge sharing and improves succession planning (Cooney, 2021). It also has its challenges, such as communication issues, negative stereotypes, varying employee expectations, attitudes and skill levels (Bojic, 2023; Saluja & Sharma, 2019).

Employee engagement is still a psychological construct which remains unclear and undifferentiated (Dulagil, 2012). Furthermore, research on the subject of the millennial workforce has been minimal, as most of the scholars have mainly studied employee engagement at a broad level (Sahni, 2021). Some researchers have argued that the body of empirical evidence in connection with generations is largely wrong (Rudolph & Zacher, 2018; Robert et al., 2020).

Studies on the relationship between human resource management and employee engagement are few (Clark, 2019). The paucity of studies on work engagement creates the need to examine this critical construct from a generational differences standpoint. This study is therefore aimed at expanding the subject of self-determination theory and filling the existing gap by examining the mediating role generational differences play between self-determination theory and employee engagement.

**2 Literature Review**

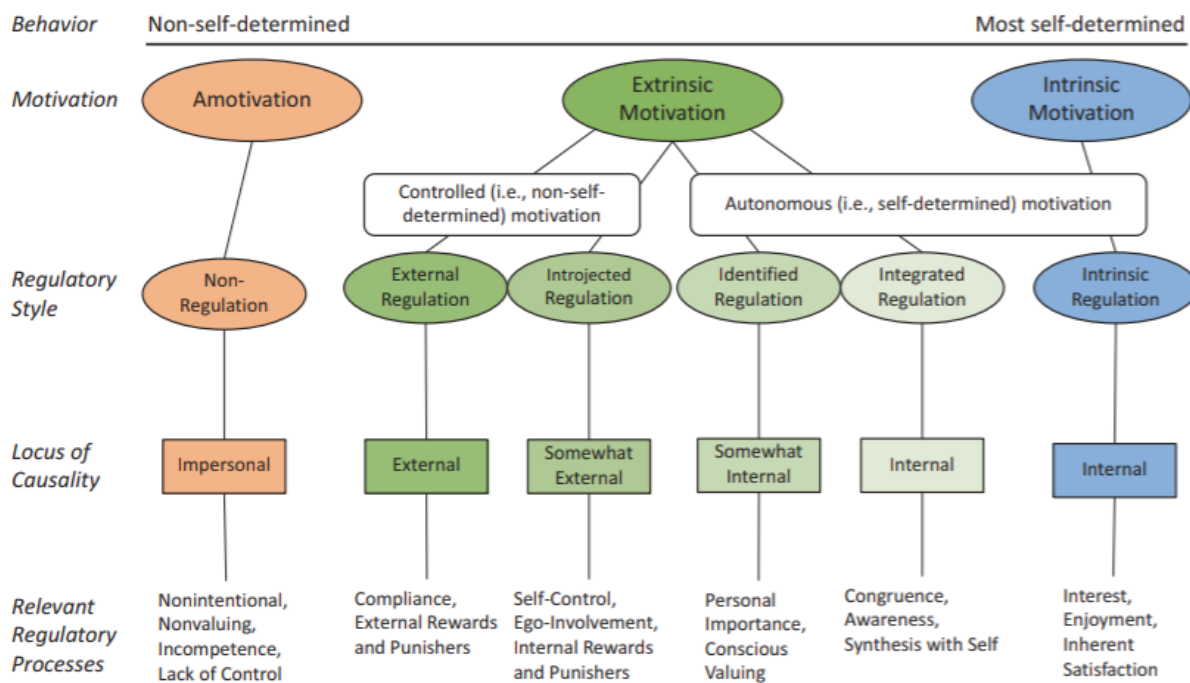
**2.1 Generational cohort theory**

The belief that people in each generational cohort possess similar preferences and principles has been widely researched in various fields, including sociology and anthropology. Generational cohort theory suggests that the way people in different age groups think and feel about life issues is determined by their life experiences (Becton et al., 2014; The Pew Research Center, 2015, Harnphattanusorn & Puttitanun, 2021). This tendency to share historical experiences is due to their similarity in age, and therefore perceptions and values are distinctive (Park & Gursoy, 2012).

**2.2 Self-Determination Theory (SDT)**

Self-determination theory is underpinned by basic psychological needs – autonomy, competence and relatedness (Olafsen, Halvari & Frølund, 2021). The theory helps understand uncertainty and interdependence that may impact motivation and wellbeing as technological advancement changes the way work is performed (Gagné et al., 2022). SDT assumes individuals continuously strive to understand themselves through the integration of new experiences and connections with others (Legault, 2017). Legault believes there is a continuous and dynamic interaction by the individual with the environment which could make them either engaged, curious, connected and whole, or they could be demotivated, ineffective and detached.

The theory describes two distinct types of motivation, namely: autonomous (motivation regulated through natural and internal processes such as inherent satisfaction) and controlled (motivation regulated through externally held demands and expectations) (Lawman & Wilson, 2013). From the attribution theory perspective, this distinction describes whether the perceived locus of causality is internal (intrinsic motivation) or external (extrinsic motivation) (Wang & Hall, 2018).



**Figure 1: The internalization continuum according to self-determination theory (Source: Legault, 2017)**

**2.3 Basic Psychological Needs Satisfaction**

Basic psychological needs explain how and why the social context in the workplace is related to the quality of motivation and several important work outcomes (Olafsen, Halvari & Frølund, 2021). These include the need for autonomy, competence and relatedness (Gil-Flórez et al., 2022). Autonomy is the feeling of freedom by individuals to choose their actions and accept the consequences, to be in control of their behaviours and to accept challenges (Stover et al., 2017). Competence is the feeling of effectiveness by a person in a role while interacting with the social environment (Deci & Ryan, 2008). Finally, relatedness is about social relationships, connection, attachment, belonging, being cared for, caring and having empathy for others (Nwoko & Yazdani, 2022).

**2.4 Intrinsic Motivation**

Behaviours that are intrinsically motivated are undertaken because they are seen to be inherently interesting, satisfying, or they are enjoyable instead of some separable outcomes meaning that the means and the end are the same (Ryan & Deci, 2000, Legault, 2016). The social and work environment must nourish intrinsic motivation for it to flourish through its effect on autonomy, competence and relatedness (Liu et al., 2014; Wang et al., 2017). Intrinsic (internalised) motivation has a higher association with positive attitudinal and performance outcomes, including job satisfaction and proactivity (Van den Broeck et al., 2021).

**2.5 Extrinsic Motivation**

Extrinsic motivation is performed in order to attain some outcome (Legault, 2016). It can take the form of tangible rewards, societal acceptance, proving something to oneself or ensuring that one’s values and behaviours are consistent (Patrick & Williams, 2012). Unlike intrinsic motivation, extrinsic motivation is basically instrumental because people are extrinsically motivated when they perform an action because of the associated outcome (Legault, 2017). Some researchers believe that extrinsic motivation factors, including money, hinder intrinsic motivation (Deci, 1971; Legault, 2017).

**2.6 Generational Differences**

Analysis from various literature suggests that differences between generational cohorts are very noticeable (Pragya and Richa, 2021). However, there is no consensus among researchers on the exact birth years to define generations (Gurbuz and Aytekin, 2020).

We now have five generations in the workforce, with each growing up in a fundamentally different time, which in turn influences how they see the world (Cooney, 2021). For example, baby boomers are presumed to be not quite efficient with the use of technology, while millennials are assumed to have poor work ethic (Pasini, 2018).

**Table 1: Synopsis of Generations and their Work-Related Values**

<b>Generation</b>	<b>Other Name(s)</b>	<b>Work-related Values and Implications for Engagement</b>	<b>Challenges</b>
G1 1928–1945	Silent Generation (Traditionalists)	Hard work, patient, loyal to system and rules, conservative, highly disciplined, traditional	Expects respect, want to feel needed.
Baby boomers 1946–1964	Me Generation	Job security, more formalized and structured environment, lack familiarity with new technologies, may prefer face-to-face meetings to online ones, appreciate the chance to share their expertise, given they have industry knowledge like to be recognised for their skills and hard work. They prefer reduced schedules and appreciate the option to work from home, and want health care and retirement benefits.	Difficulty in new learning, generally resist change and don't like multitasking.  Prefer structure, not tech savvy.
Generation X 1965–1980	Xers; 13th Generation	Prefer independence and the ability to manage their workload. They like to have their physical and psychological space. High focus on family, healthcare coverage, flexible work arrangement, availability of on-site daycare, a good work-life balance and monetary rewards.	Prefer lone working rather than in teams and may lack interpersonal skills.

Generation Y 1981–1996	Millennials; Generation Next	Highly connected, tech-savvy, and focus on flexible schedules and remote work. They are brilliant, good communicators, have high profit orientation and entrepreneurial spirits.	Very independent, confident and technology savvy. They value teamwork
Generation Z 1997–2012	Zoomers	Prefer flexible schedule and good work-life balance. They value opportunities for growth and promotion. They like to work for a higher cause, distaste toxic work environments and are quick to quit their job when they see a clash between their values and those of their employers.	Early starters, digital technology dependent. Great at multitasking and prefer to work independently

*(Adapted from DelCampo et al (2011); Saluja & Sharma (2019) and Szczepanek (2022))*

### **2.7 Employee Engagement**

The concept of employee engagement evolved from studies on organisational commitment, motivation and employee involvement (Clark, 2019). Engagement is a multi-faceted construct, and no single definition exists (Kahn, 1990). However, for this study, employee engagement is defined as the attachment and emotional commitment of the employee to an organisation and the organisation's goals (Kurniawati and Raharja, 2022). It is about a positive work attitude that produces higher levels of identification with the goals of an organisation (Schaufeli, Salanova, Gonzales-Roma & Bakker, 2002).

Employee efforts and engagement determine organisational productivity (Musgrove et al., 2014). Similarly, Frankovsky et al. (2015) believe that it is imperative to have employees who are truly and fully committed. They opined that in today's global business environment, only satisfaction, stability, loyalty and some levels of devotion are inadequate to ensure positive business outcomes. Similarly, a study by the Chartered Institute of Personnel Development (CIPD) has shown the importance of employee engagement on performance, retention and wellbeing, amongst others. The study concluded that engagement is measurable, correlates with performance, varies from poor to great and can be influenced by employers (MacLeod & Clarke, 2009).

### **3 Current Research Gap**

A gap still exists between knowledge and policy, which needs to be closed in relation to the important relationship between psychological needs, satisfaction and motivation (Ryan & Deci, 2020).

This study seeks to find out whether generational differences actually exist from an employee engagement standpoint or it is only a myth. Even though there have been several years of research on the relationship between extrinsic and intrinsic motivation and their contrary effects on employee engagement outcomes, many important questions are still unanswered and extrinsic motivation is hardly measured (Kuvaas et al., 2017).

McGuire et al. (2007) believe that generational differences truly exist and influence variables, including employees' attitudes, work values and behaviour to a certain degree. However, others believe there is harmony across different generational cohorts (Constanza et al., 2012 and Gurbuz, 2015) and that generational differences are myth rather than reality (Costanza & Finkelstein, 2015).

Given the inconsistencies in existing literature, and since most of the prominent evidence of the importance of employee engagement to organisational profitability involved Western firms (Kaliannan and Adjovu, 2015), this study aims to find out if generational differences have any implication for employee engagement by asking the following important questions in the Nigeria context:

**RQ1:** *Do generational differences affect employee engagement (emotional and cognitive) outcomes when extrinsic and intrinsic motivation are applied?*

**RQ2:** *Do extrinsic and intrinsic motivation relate differently to employee engagement outcomes?*

### 3.1 Hypothesis Development

Research on the antecedents and consequences of employee engagement has been minimal (Sahni, 2021). In a study by Deas and Coetzee (2022), it was found that generational groups significantly differ in their value-oriented, organisationally obligated outcomes. Similarly, there exists a relationship between motivation and employee engagement, even though extrinsic motivation was found to be more significant than intrinsic motivation (Engidaw, 2021). Therefore, based on these findings and other relevant literature, this study assumes that employee engagement could vary depending on the interplay of motivation and generational differences. Therefore, the following hypothesis have been developed.

**Hypothesis 1:** *Generational differences positively mediate the relationship between extrinsic and intrinsic motivation factors and employee engagement outcomes*

**Hypothesis 2:** *Extrinsic and intrinsic motivation relate differently to employee engagement outcomes.*

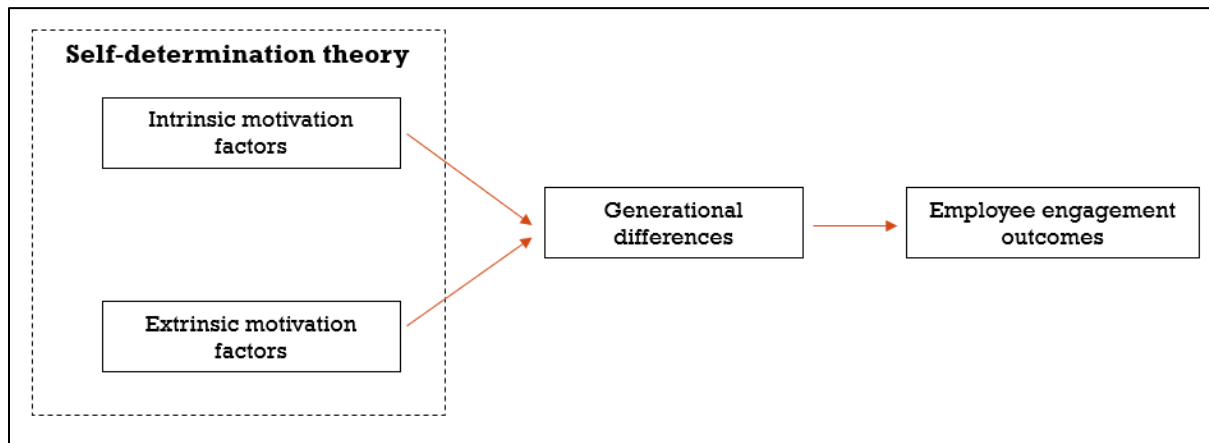
## 4. Methodology

The methodology used in this study is outlined in this section.

### 4.1 Population and Sample Selection

The samples were selected randomly from people employed in different sectors of the Nigerian economy across different age groups and geographical locations. Survey questionnaires were divided into four sections, and 34 questions were used. Measures for the mediating variable and personal information of the respondents were provided in the first section. The respondents provided responses to questions on the independent and dependent variables in the remaining sections. A total of 564 complete responses were received from different cohorts: Boomers (5%), Generation X (29%), Generation Y (46%) and Generation Z (19%).

To understand the mediating effect of generational differences on employee engagement outcomes, a cross-sectional study was conducted. Three group variables were examined – independent, mediating and dependent variables.



**Figure 2: The Research Model**

## 4.2 Measures

### 4.2.1 Independent Variable

Self-determination (intrinsic and extrinsic) motivation types were the independent variables. Intrinsic motivation was measured with items from Kuvaas et al. (2017), which are: (1) The tasks that I do at work are themselves representing a driving power in my job; (2) The tasks that I do at work are enjoyable (3) My job is meaningful; (4) My job is very exciting (5) My job is so interesting that it is a motivation in itself, and (5) Sometimes I become so inspired by my job that I almost forget everything else around me. Other items taken from Work Extrinsic and Intrinsic Motivation Scale [(WEIMS) (Tremblay et al., 2009)] for intrinsic motivation measurement on why employees do their work are: (1) Because I derive much pleasure from learning new things; (2) For the satisfaction I experience from taking on interesting challenges; and (3) For the satisfaction I experience when I am successful at doing difficult tasks.

Measurement of extrinsic motivation in this study was done using items from Kuvaas et al. (2017) which are: (1) If I am supposed to put in extra effort in my job, I need to get extra pay; (2) It is important for me to have an external incentive to strive for in order to do a good job; (3) External incentives such as bonuses and provisions are essential for how well I perform my job; and (4) If I

had been offered better pay, I would have done a better job and items from the Work Extrinsic and Intrinsic Motivation Scale (WEIMS) on why people work namely: (1) For the income it provides me; (2) Because I want to succeed at this job, if not I would be very ashamed of myself; (3) Because it allows me to earn money; (4) Because I want to be very good at this work, otherwise I would be very disappointed; (5) Because I want to be a “winner” in life; and (6) Because this type of work provides me with security (Tremblay et al. 2009; Angle and Swenson Lepper 2020).

A five-point Likert scale was used for items measuring intrinsic and extrinsic motivation (5 – strongly agree; 1 – strongly disagree)

#### 4.2.2 Mediating Variable

The mediating variable for this study, generational differences, was measured using the generation classification adopted by Pew Research Center (2019). Generations were defined as follows: Silent Generation (1928-1945); Baby Boomers (1946-1964); Generation X (1965-1980); Generational Y (Millennials) (1981-1996); and Generation Z (1997-2012). The work characteristics of these different groups are summarised in Table 1.

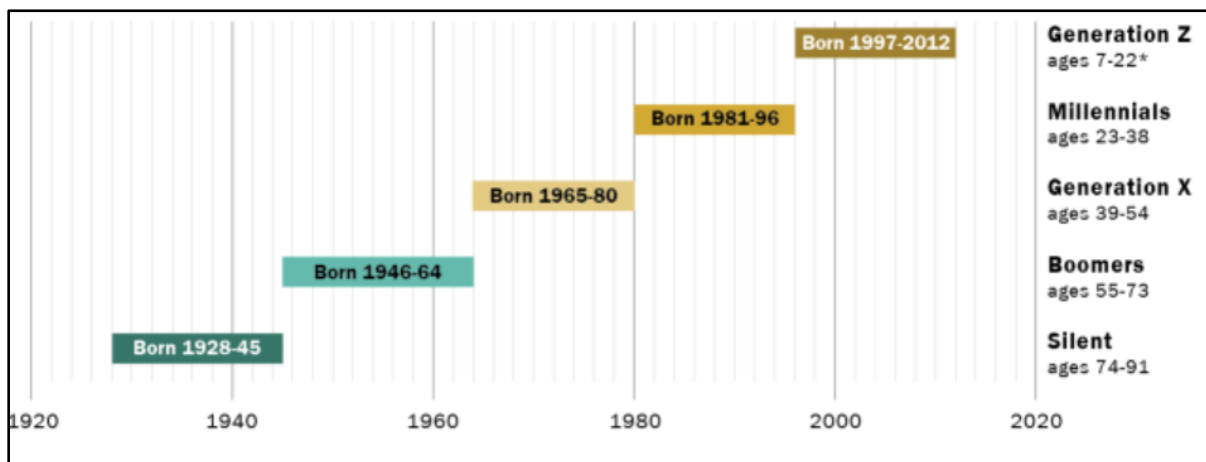


Figure 3: The Generations Defined (Pew Research Center, 2019)

#### 4.2.3 Dependent Variable

This study used the Utrecht Work Engagement Scale (Schaufeli and Bakker, 2003) to measure employee engagement based on the following items: (1) At my work, I feel bursting with energy; (2) I find the work that I do full of meaning and purpose; (3) Time flies when I am working; (4) At my job, I feel strong and vigorous; (5) I am enthusiastic about my job; (6) When I am working, I forget everything else around me; (7) My job inspires me; (8) When I get up in the morning, I feel like going to work; (9) I feel happy when I am working intensely; (10) I am proud of the work that I do; (11) I am immersed in my work; (12) I can continue working for very long periods at a time; (13) To me, my job is challenging; (14) I get carried away when I am working; (15) At my job, I am very resilient, mentally; (16) It is difficult to detach myself from my job; and (17) At my work, I always persevere, even when things do not go well.

#### 4.2.4 Statistical Analysis

AMOS was used to analyse the collected data and to test the hypotheses. Using structural equation modelling, the study examined the mediating effect of generational differences on the relationship between intrinsic and extrinsic motivation (independent variables) and employee engagement (dependent variable). Each statement was measured on a 5-point Likert scale where 1 indicates strong disagreement, and 5 indicates strong agreement. The mean and standard deviation were provided for each statement, along with the minimum, maximum, and quartiles. Overall, there was a total of 564 complete responses to the survey.

### 5. Results

Table 2 presents Cronbach's alpha values for each variable, namely, extrinsic motivation (0.75), intrinsic motivation (0.83), and work motivation (0.86). These values exceed the recommended threshold of 0.70 (Hair et al., 2021), indicating good reliability of the measures. Additionally, the table includes the values of composite reliability (CR) and average variance extracted (AVE) for each variable. Specifically, extrinsic motivation exhibited a CR of 0.73 and an AVE of 0.51, while intrinsic motivation and work motivation exhibited a CR of 0.81 and 0.84 and an AVE of 0.58 and 0.85, respectively. These values surpass the suggested benchmarks of 0.70 for CR (Hair et al., 2019) and 0.50 for AVE (Aburumman, 2021), indicating strong convergent reliability.

**Table 2: Convergent validity**

<b>Construct</b>	<b>Items</b>	<b>Factor Loadings</b>	<b>CR</b>	<b>AVE</b>	<b>Cronbach's <math>\alpha</math></b>	<b>Mean</b>	<b>SD</b>
<b>Extrinsic motivation</b>	<b>EX1</b>	0.595	<b>0.73</b>	<b>0.51</b>	<b>0.75</b>	<b>3.87</b>	<b>0.73</b>
	<b>EX2</b>	0.902					
	<b>EX3</b>	0.766					
<b>Intrinsic motivation</b>	<b>IX1</b>	0.726	<b>0.81</b>	<b>0.58</b>	<b>0.83</b>	<b>4.03</b>	<b>0.61</b>
	<b>IX2</b>	0.831					
	<b>IX3</b>	0.737					
<b>Work Engagement</b>	<b>WE1</b>	0.788	<b>0.84</b>	<b>0.85</b>	<b>0.86</b>	<b>3.84</b>	<b>0.62</b>
	<b>WE2</b>	0.813					
	<b>WE3</b>	0.77					
	<b>WE4</b>	0.803					
	<b>WE5</b>	0.403					

**6. Discussion and Conclusion**

**6.1 The Structural Model**

To achieve the objectives of the study, a structural equation model (SEM) was employed to estimate the strength and direction of the relationships between the latent and the observed variables for the different generational cohorts. The summary of the SEM results is presented in the table below:

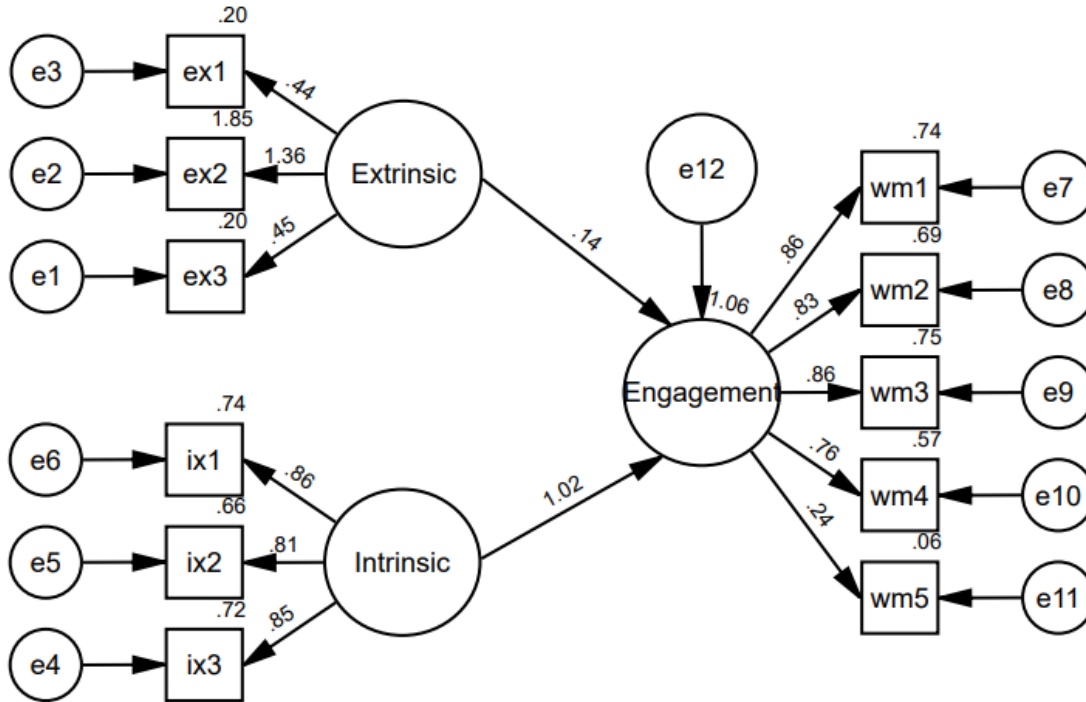
**Table 3: Results of measurement**

		<b>Estimate</b>	<b>Std. Err</b>	<b>C.R</b>	<b>P-Value</b>
<b>Boomers</b>					
Engagement <---	Extrinsic	0.283	0.136	2.084	0.037
Engagement <---	Intrinsic	0.974	.160	6.101	0.0001
<b>Generation X</b>					
Engagement <---	Extrinsic	0.031	0.066	0.470	0.638
Engagement <---	Intrinsic	1.072	0.099	10.791	0.0001
<b>Millennial</b>					
Engagement <---	Extrinsic	- 0.030	0.061	0.491	0.624
Engagement <---	Intrinsic	1.038	0.105	9.882	0.0001
<b>Generation Z</b>					
Engagement <---	Extrinsic	0.143	0.101	1.412	0.158
Engagement <---	Intrinsic	0.881	0.151	5.837	0.0001

*n = 564 Source: Authors' Computation using AMOS*

**6.2 Baby Boomers**

The findings of the structural equation model indicate that both extrinsic and intrinsic motivation have a significant positive influence on engagement for “Baby boomers”. Specifically, a one-unit increase in extrinsic motivation is associated with a predicted increase of 0.283 units in engagement, while a one-unit increase in intrinsic motivation is associated with a predicted increase of 0.974 units in engagement. The implication of this finding is that, for this generational cohort, both extrinsic and intrinsic motivation are important factors in driving work engagement. However, intrinsic motivation has a stronger influence on engagement than extrinsic motivation. Therefore, employers should consider providing incentives that align more with intrinsic values and interests in order to increase employee motivation and engagement.



**Figure 4: Hypothesis testing for Baby Boomers**

**6.3 Generation X**

The structural equation model results for Generation X suggest that the relationship between “engagement” and “extrinsic motivation” is not significant ( $\beta = 0.031$ , S.E. = 0.066, C.R. = 0.470,  $p = 0.638$ ). However, the relationship between “engagement” and “intrinsic motivation” is significant ( $\beta = 1.072$ , S.E. = 0.099, C.R. = 10.791,  $p < 0.001$ ), implying that intrinsic motivation is a more important predictor of work engagement than extrinsic motivation amongst Generation X.



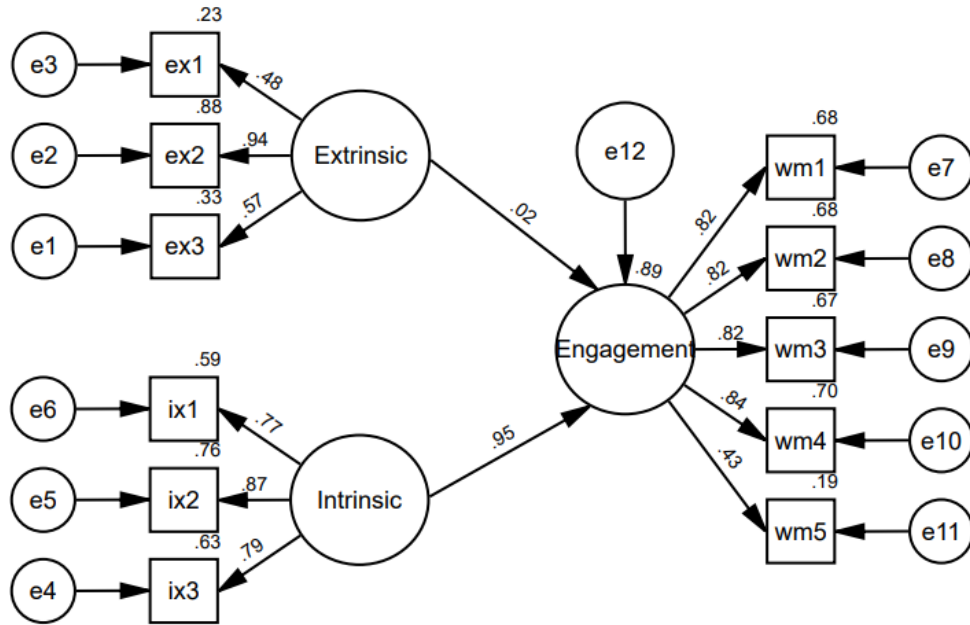


Figure 5: Hypothesis testing for Generation X

6.4 Generation Y (Millennial)

Overall, the model suggests that, for millennials, work engagement was not significantly associated with extrinsic motivation ( $\beta = -.030, p = .624$ ) but had a significant positive association with intrinsic motivation ( $\beta = 1.038, p < .001$ ). The implication of this is that for the millennial, intrinsic motivation plays a more important role in predicting work engagement, whereas extrinsic motivation is negatively related to positive outcomes.

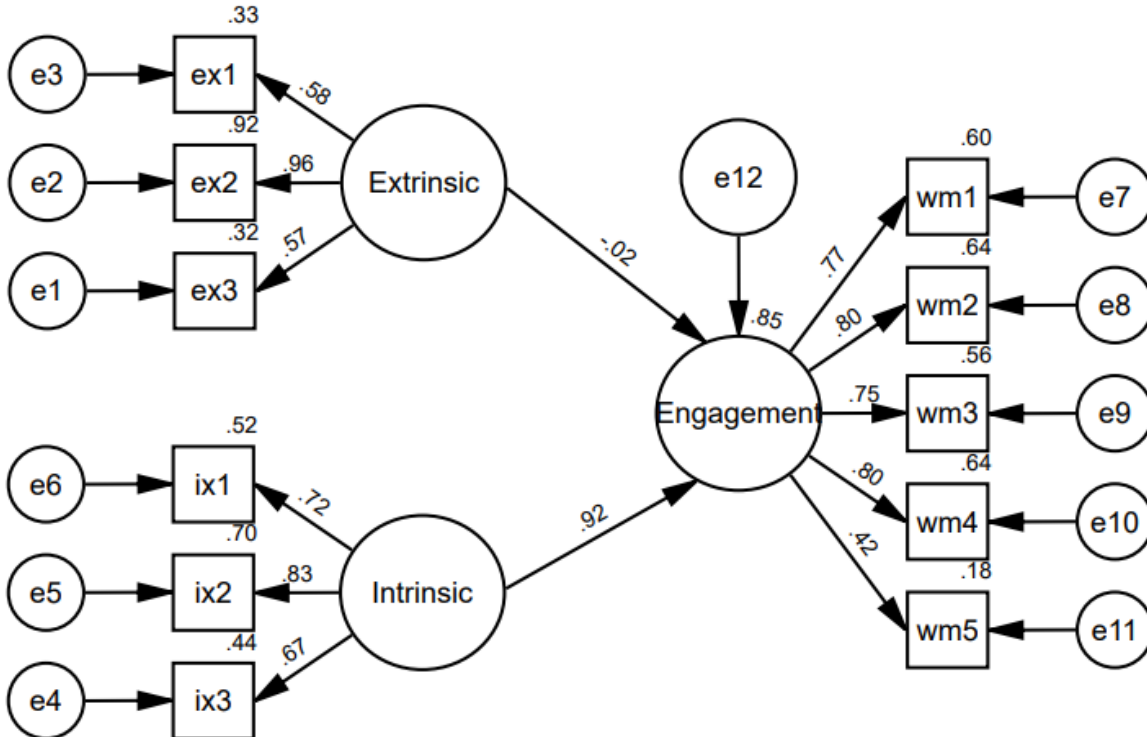
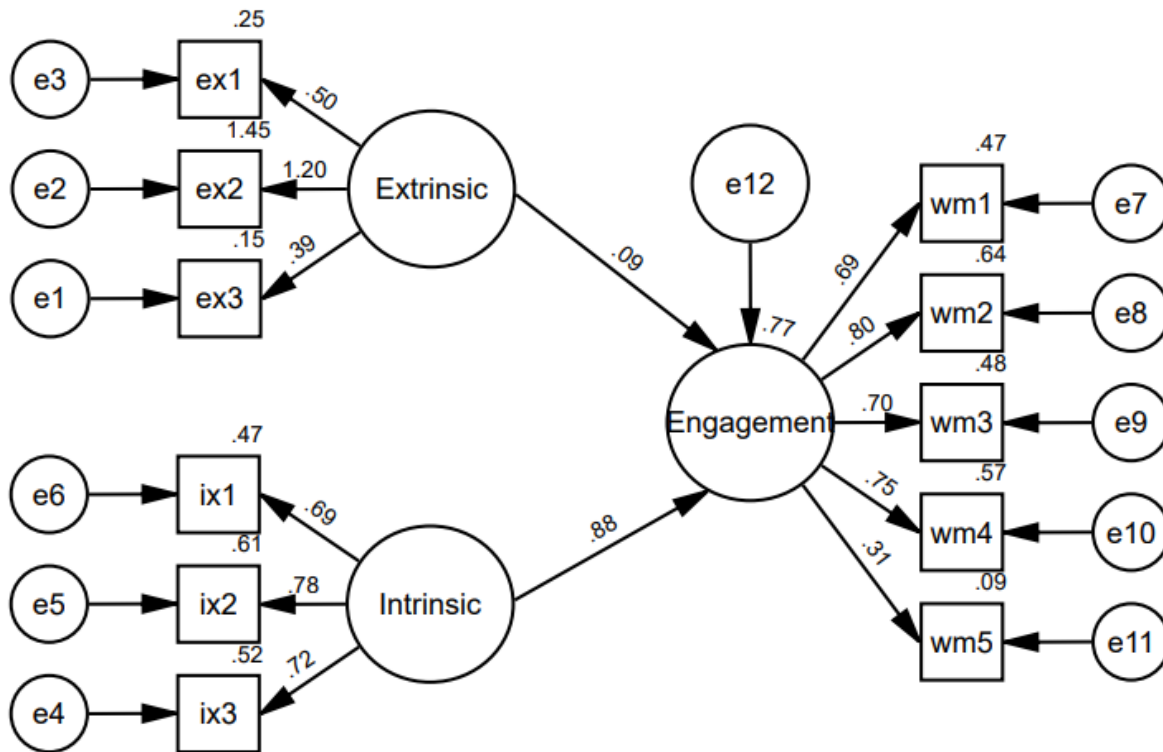


Figure 6: Hypothesis testing for millennial

**6.5 Generation Z**

The estimated coefficients indicate the strength and direction of the relationships between the variables. For this generational cohort, the path coefficient for the relationship between engagement and extrinsic motivation is positive but not significant, with an estimate ( $\beta$ ) of 0.143, a standard error of 0.101, and a p-value of 0.158. On the other hand, the path coefficient for the relationship between engagement and intrinsic motivation is positive and highly significant, with an estimate ( $\beta$ ) of 0.881, a standard error of 0.151, and a p-value less than 0.001. Although the positive path coefficient for the relationship between engagement and extrinsic motivation indicates a positive effect, the lack of significance suggests that other variables or factors may be more relevant for this generation in terms of engagement. Conversely, the highly significant positive path coefficient for the relationship between "engagement" and "intrinsic motivation" suggests that strategies to enhance intrinsic motivation, such as providing opportunities for personal growth and development, may be more effective for promoting engagement among Generation Z workers.



**Figure 7: Hypothesis testing for Generation Z**

**6.6 Main Findings and Managerial Implications**

The findings of this study are consistent with the view by Samuel (2021) and Rudolph et al. (2020) that there is scanty empirical evidence that generational differences exist or that there are obvious differences between generational groups. This means the conventional belief that generational differences exist in the workplace is mostly wrong. Employees have similar values, and their work engagement has nothing to do with the generation. It is, therefore, implicit that organisations will be better when the focus is on commonalities rather than on differences.

Across all generational cohorts, intrinsic motivation had a significantly higher impact on employee engagement and motivational outcomes. This aligns with the self-determination theory and with the findings by Team Asana (2021), who reported that intrinsic motivation can support team engagement because people seek out activities that help them create purpose and drive them to do their best work.

In addition, we found that extrinsic and intrinsic motivation are not mutually exclusive but can complement each other. This is consistent with the findings by George & Jones (2012), who suggested that employees can be motivated intrinsically, extrinsically or both at the same time. In most cases, both extrinsic and intrinsic motivation has positive implication for employee engagement and can reinforce each other (Liu & Hou, 2017; Badami, Vaez Mousavi, Wulf & Namazizadeh, 2011, cited by Morris, Grehl, Rutter, Mehta & Westwater, 2022). Therefore, managers should implement policies that include both extrinsic incentives (such as compensation and rewards) and intrinsic incentives (such as an interesting work environment and employee personal growth).

### **6.7 Limitations and future research**

This study has some limitations which future research should seek to address. First, the sample data were obtained from employees in Nigeria. With the retirement age mostly at 60 years, it was not possible to obtain sample data from the silent or traditionalist generational cohort (1928-1945) as they have all retired. Only a few sample data were available for baby boomers (1946–1964). This will not be the case in some countries where people continue to work until their late 70s or for as long as they can. This creates a limitation in the generalisation of the study results. It is therefore suggested that future studies should collect data from other countries as well to authenticate the conceptual framework of this study.

The outcome of this study is also limited in generalisation because Nigeria is a developing country with a high poverty rate. Given that most people are still struggling to satisfy lower level physiological and safety needs, extrinsic incentives will have a higher value for employee engagement. Extrinsic motivation is based on rewards such as salary and job security. On the contrary, these external incentives are less important in developed and stable societies. Collecting data from several countries for future research will help test the validity of the research model in this regard.

**Ethical Approval.** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

**Informed Consent.** Informed consent was obtained from all individual participants involved in the study. Participants in the survey took part voluntarily and, therefore not required to provide written informed consent.

**Data Availability Statement.** The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

**Conflict of Interest.** The authors declare that the study was conducted in the absence of any direct or indirect commercial or financial relationships that could be construed as competing interests or a potential conflict of interest.

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