



EXPLORING GENERATIONAL RELATIONSHIPS IN MILLENNIALS AND GENERATION Z: A MOTIVATIONAL STUDY IN THE IT FIELD

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ABSTRACT

This paper focuses on possible intrinsic and extrinsic motivational factors which may influence different generational groups. The paper outlines probable organizational issues in understanding motivation within the workplace and potential reasons why employee satisfaction and drive may be essential elements to sustaining a competitive advantage in several fields. The paper also explores different theories which suggest how individual behavior is shaped by desires and passions which are both internal and external in nature. The literature also details the methodology of the proposed study. This includes methods to gather the targeted sample for the experiment and the type of assessment tool, SHL Motivation Survey (MQ), which was used for measuring motivation in two different generational cohorts. The paper also details the data analysis procedure. This includes three statistical analyses conducted used to uncover possible relationships between age and seven motivational drivers. The literature also describes the procedures utilized to confirm validity, reliability, and normality within the motivation tests. Based on the results from the data, there was no significant relationships between the variables age, experience and the seven motivation factors. The results did conclude there were statistically significant relationships between autonomy, interest, status, reward, and recognition. The final section of this paper discusses the limitations and results of the experiments. The discussion includes the practical implications of the study as well as recommendations for future research.

Key words: motivation, generational differences, employee satisfaction, competitive advantage, rewards, IT field.

INTRODUCTION

Employee motivation is an important element to organizations attempting to gain a competitive advantage in their respective market (Dust et al., 2021). Understanding an employee's internal and external motivating factors have a been regarded as a method to increasing productivity (Dust et al., 2021). Happy and inspired workers are a vital function for companies who depend on staff performance in order to sustain financial success (Chua & Ayoko, 2021). Motivation is defined as the energy and passion workers exhibit in order to provide their best work

(Southwick et al., 2019). In turn, well-trained employees' passion and hard work may create a more efficient and productive environment (Southwick et al., 2019).

Organizational leaders who are interested in increasing motivation may consider what intrinsic needs, such as satisfaction of a task or mastery, and extrinsic needs, such as rewards and monetary gain, inspire their employees. Employee motivation is a concept which examines the intensity and passion workers commit to the day-to-day functions within their work environment as well as how they believe

policy changes and new implementations align with their own personal values and aspirations (Ryan & Deci, 2020). When increasing organizational performance by driving motivation, executives may examine how supportive their workers are to committing to organizational goals (Ryan & Deci, 2020). Organizational leaders who want to increase productivity and commitment are often suggested to increase motivation within their work teams (Olusadum & Anulika, 2018).

Generational Differences

One avenue which can be examined as it pertains to distinct perception and motivation, is how age might influence the preference of intrinsic and extrinsic rewards. Additionally, research exploring how certain generations perceive employee or management reward practices may prove beneficial to companies. Generational differences can be observed in several social situations in business (Dimock, 2019). For example, since the U.S. Census recorded the youngest generation entering the workforce in 2020, older generations might have observed changes within several businesses functions while younger generations entering the workforce may have different outlooks on company protocol (Weeks & Schaffert, 2019).

Based on research conducted by the Pew Research Center, there are four generations within the workforce in 2022; Baby Boomers, Generation X, Millennials, and Generation Z, with Millennials being the largest percentage in the United States work force currently (Dimock, 2019). Baby boomers are defined as individuals born between 1955 and 1964, this generation is now retiring or leaving the workforce (Dimock, 2019). Generation X is an older generational cohort with individuals ranging for 42 to 57 years of age (Dimock, 2019). The largest generation working within the United States are Millennials; this generational cohort birth year range from 1981 to 1996 (Dimock, 2019). The youngest generation and most recently entering the workforce is Generation Z; this cohort consist of individuals born between 1997-2012 (Dimock, 2019).

Studies have suggested since each generation has survived vast and varied experiences, their outlook and engagement on certain scenarios may be significantly different (Dimock, 2019); Gaidhani et al., 2019). For example, generational working styles may alter slightly. Based on some studies, Baby Boomers are considered newcomers to technology (Kim, 2018). These individuals may have a more difficult time not only utilizing daily technology but may have resistance or complications with adopting new methods of digital information (Gaidhani et al., 2019). Furthermore, older generations, such as Baby Boomers and Generation X, may prefer face-to-face

communication over emails and text messaging; while younger generations may prefer a more casual approach to professional communication (Naim & Lenka, 2018).

Statement of the Problem

The focus of the study is to investigate the possible differences that may be present between generation cohorts based on intrinsic and extrinsic motivational factors. Motivation may differ based on individual and generational preferences. This information may prove useful in business. According to data collected by the HR department for Human Resource Growth, organizations which increase employee motivation have been reported to aid in facilitating creativity, heightening morale, and increasing productivity (Jiang et al., 2018; Leonova et al., 2021; Olusadum & Anulika, 2018).

Purpose of the Study

The purpose of the study is to investigate the possible relationship between employees' perceptions of organizational motivation and age, age will be grouped by generation (Generation Z and Millennials). Generation Z would encompass any individuals born between 1997 and 2012. Millennials would include only participants born between 1981 and 1996. If there is a significant correlation between age and employees' perception of company incentives, the organization may be able to adapt to employees' concerns or suggestions in order to aid in creating a productive and collaborative work environment (Mousa et al., 2020).

Additionally, if companies can prove there is a difference in values and perspectives based on age, management may be able to interact with their staff in approaches that are more supportive and impactful (Weeks & Schaffert, 2019). This study may also aid in understanding methods to increasing productivity and company morale when concerns and avenues of effective communication are addressed (Narayan, Sidhu, & Volberda, 2021).

Research Questions

RQ1: Is there any significant relationship between employees' perceptions of organizational incentives (rewards and recognition) based on age?

Ho1: There is no significant relationship between employees' perceptions of organizational incentives (rewards and recognition) based on age.

Ha1: There is a significant relationship between employees' perceptions of organizational incentives (rewards and recognition) based on age.

RQ2: Is there a difference in employee motivation based on age?

Ho2: There is no significant difference in employee

motivation based on age.

Ha2: There is a significant difference in employee motivation based on age.

RQ3: Is there a relationship between extrinsic motivation (reward and recognition) and other motivational drivers?

Ho3: There is no relationship between extrinsic motivation (reward and recognition) and other motivational drivers?

Ha3: There is a relationship between extrinsic motivation (reward and recognition) and other motivational drivers?

The Concept of Work Motivation

Motivation is the method in which one can commence, guide, and control approaches to achieving goals within an organization (Olusadum & Anulika, 2018). Motivation also considers what drives a course of action (Rita et al., 2018). This can encompass emotional, social, and cognitive elements which influences behavior. The activation of motivational behaviors is only one aspect of this notion. Understanding why such psychological elements sustain and drive employee actions is another factor considered by researchers (Twalib & Kariuki, 2020).

Several researchers have proposed many theories to how and why individuals are passionate or disinterested within the workplace (Chua & Ayoko, 2021; Kang, 2020; Kumar & Prabhakar, 2018; Lloyd & Mertens, 2018; Wolor et al., 2020). In most instances, management will make inferences to why individuals produce certain actions by observing behaviors (Olusadum & Anulika, 2018). Some researchers acknowledge there are undetectable factors which may attribute to why people make certain work decisions (Kang, 2020; Lloyd & Mertens, 2018).

There may be several benefits to employing motivational techniques within a company. Understanding how motivation can be employed can help organizational leaders instill passion and engagement within their employees (Ghosh et al., 2020). Some examples of benefits when applying motivation factors to increase organization performance include possible higher performance levels which may cultivate better organizational outcomes (Ghosh et al., 2020), an increase in innovation and creativity (Wingerden & Stoep, 2018), possibly lower turnover numbers and callouts of work, and may increase prospective employee interest (Olusadum & Anulika, 2018).

Exercising motivation techniques effectively may also aid in increased efficiency (Antony, 2018). One study found that work motivation and organizational environment play a significant role in

increasing employee commitment (Kasuma et al., 2018). This study found a significant positive relationship between both variables (Kasuma et al., 2018). Results displayed when employee motivation and motivational factors were improved employee performance also increased (Kasuma et al., 2018). Increasing workplace motivation may also aid in avoiding destructive behaviors within some workers such as risk taking or addiction (Afsar & Umrani, 2019). Additionally, motivation methods utilized within organizations has been cited to improve overall well-being and happiness (Antony, 2018).

There are three themes within motivation which are primary components to its measurement: activation, persistence, and intensity (Kurniawanto et al., 2022). Activation is the first phase of motivation; this is where an action is initiated, and desires or goals begin to form (Dust et al., 2021). The second phase of motivation is persistence. This element of motivation entails committing to the goals or tasks of a business despite challenges or obstacles (Dust et al., 2021). The final phase of measure within organizational motivation is intensity. Intensity, as it pertains to motivation, is the focus and passion placed within the completion of a task (Dust et al., 2021).

Motivation is a concept which has been championed and heavily researched for several decades (Chua & Ayoko, 2021; Kang, 2020; Lloyd & Mertens, 2018). Although some researchers have reported the benefits of applying motivational techniques, there are some potential setbacks (Gaihre et al., 2021). Some research has suggested motivation is not a “quick fix” (Afsar & Umrani, 2019; Khusainova et al., 2019). Understanding what factors drive employees and implementing a plan may require consistency and time (Afsar & Umrani, 2019). Additionally, individuals may be viewed as distinct entities due to their vast and varied experiences, this may notion there is not a “one-size-fits-all” method to increasing work motivation (Khusainova et al., 2019).

In addition, there has been acknowledgment of a list of potential obstacles which can be evident to organizations with low morale and employee drive. Based on past research the items below are some of the most common reasons for lack of motivation (Senbursa, 2022; Uddin, 2021).

- Inadequate leadership: poor management styles can include passive aggressive behaviors, no accountability, inactive listening, and unanswered concerns. These actions can cultivate a hazardous work environment (Senbursa, 2022).
- Unclear goals, which can include a lack of clear communication on objectives and job responsibilities. Unclear objectives can cause confusion within employees and their colleagues which may decrease motivation

(Senbursa, 2022).

- Conflict in work teams, work conflict can encompass many scenarios such as discord with leadership, differing personalities on one's team, and disagreements on work styles (Senbursa, 2022).
- Employees may feel they have no purpose or connection to company goals or organizational outcomes. This may cause strained behaviors which can promote disinterest or contempt (Uddin, 2021).
- No development or coaching from management can also lead to unproductive behaviors within the workplace. In terms of intrinsic inspiration, some employees may receive a sense of satisfaction to find purpose and advancement within their field (Senbursa, 2022).
- Overworked, employees can lose the drive to move towards company goals when the workload is considered laborious. Additionally, overworked employees may lose creative approaches to performing tasks and can lower productivity (Senbursa, 2022).
- Work-life balance unfulfilled, some employees may consider an equal work life to home life balance as an attractive incentive to working hard and sustaining inspiration to carry out work behaviors which will lead to success (Senbursa, 2022).
- Working remotely, some employees may find working from home an appealing quality to work-life balance. In some cases, working from home can create the desired behaviors within staff. On the other hand, working from home may be an undesired aspect to a job which can have the opposite impact on individual motivation (Uddin, 2021).
- Motivation may also be influenced by the environment where an employee completes tasks. An inadequate work environment or not enough space to work efficiently may hinder motivation negatively (Senbursa, 2022)

Theory Identification for Motivation and Age

This study will employ the use of several theories which examine motivation, perception, and age. One theory is Maslow's Hierarchy of Needs (1943). Maslow's Hierarchy of Needs suggest that all desires and needs of individuals can be place on a pyramid (Stefan et al., 2020). On this pyramid, the most essential needs are at the base (Stefan et al., 2020). As each need is met, the higher one can ascend to other more intrinsic needs (Carducci, 2020). Based on Maslow's hierarchy, generations may have differing needs based on life experiences,

perspectives, and situations (Carducci, 2020). For example, as individuals move through their career and life cycle, as their needs are met, they ascend to a higher level on the pyramid. As they ascend and time passes, they may desire different intrinsic or extrinsic elements than previously coveted.

Vroom's Theory of Expectancy (1964) may also be a key element this study. Vroom's expectancy theory describes how all individuals will be motivated by the maximization of pleasure and the minimization of painful actions (Lloyd & Mertens, 2018). Vroom's theory may assist in supporting the possibility there is a universal method for organizational leaders to utilize when increasing motivational efforts within their work teams. (Lloyd & Mertens, 2018)

Self-determination theory (1985) may also aid in better understanding how the intrinsic and extrinsic needs of employees may influence passion and drive within staff. (Ryan & Deci, 2020) The intrinsic drive of individuals, based on self-determination theory, states there are three factors for individuals to grow and adapt for goal-oriented behavior: autonomy, master, and purpose (Rigby & Ryan, 2018). When looking at age and motivational factors. life experience may influence what elements increase or decrease one's passion to act on organizational outcomes (Rigby & Ryan, 2018).

In addition to Self-determination theory (1985) and Maslow's Hierarchy of Needs (1943), Herzberg's Motivation-hygiene theory (1959) may aid in better understanding unique motivations and elements which are regarded as essential to individual employee job satisfaction and behavior based on fourteen distinct areas of focus (Herzberg, Mausner, & Snyderman, 1959)

When investigating motivation from the perspective of age, generations may have extremely polarizing beliefs, attitudes, and values on work culture and business processes than other generational cohorts within their companies (Taylor, 2018). Margaret Mead's Generation Gap Theory (1970) suggest that thought processes and perceptions of each generation is often differing from other age groups (Namiq, 2018). Additionally, these distinct world views are caused by age and fluctuating circumstances which occur within each generation's life span (Martin & Peters, 2019).

Research Methods and Design

This study employed a quantitative, survey design in order to measure relationships between employee perception and age. Additionally, a quantitative study may be the best approach to measuring the level of employees' agreement objectively (Rahi et al., 2019). The study utilized the Saville and Holdsworth Limited (SHL) Motivation Questionnaire (MQ) to assess what scenarios would

likely increase or decrease an employee’s motivation to work (Duoug, 2019).

The quantitative instrument gauges motivators such as flexibility and recognition, and measures how interested an employee is to receive assorted motivational benefits (Pakdel, et al., 2018). The Motivation Questionnaire (MQ) encompasses approximately 18 components of employee motivation and cultivates a comprehensive outline on which factors an employee is passionate about and which is not as significant (SHL Motivation Questionnaire, 2022). The motivational questionnaire (MQ) process prompts participants to read about situations and asked to gauge how likely that scenario would motivate them to take a certain action to increase personal work performance (SHL Motivation Questionnaire, 2022).

The motivation questionnaire examines four dimensions of motivation. The first area is energy and dynamism. Energy and dynamism are aspects which uncover where individuals get their drive to pursue action (Wang et al., 2019). The second dimension to motivation is synergy. Synergy describes how one’s environment has influence on the comfortability of sustaining motivation (Fischer et al., 2019). The third and fourth fields examined in the Motivation Questionnaire (MQ) are the intrinsic and extrinsic dimensions. Intrinsic, as it pertains to the MQ, focuses on conditions which individuals are motivated to completed task on their own (Fischer et al., 2019). The extrinsic element of this questionnaire observes what scenarios regarding physical and tangible rewards drive an individual’s behavior (Fischer et al., 2019).

RESULTS

Data Preparation and Collection Process

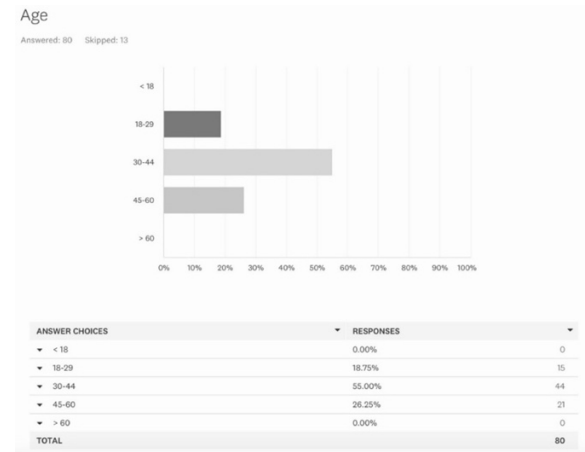
Data for this study were collected via SurveyMonkey and analyzed through IBM SPSS. Ninety-three participants volunteered for the study. SurveyMonkey only entered participants data if they completed the survey in its entirety. This criterion garnered 90 participants. Based on a regression calculation, 90 participants were the minimum required number of volunteers needed to yield possible significant results for a linear regression on the hypotheses above. A Cronbach’s Alpha was also calculated for this study in order to validate reliability within the data set.

Sample Demographics

The sample set for this experiment focused on individuals between 18 and 60 years of age. This encompassed three generational cohorts. Individuals born between 2014 and 1997 were classified as Generation X (United States Census Bureau, 2022), individuals born between 1996 and 1981 were labeled Millennials and individuals born between 1980 and 1965 (United States Census Bureau, 2022) were

categorized into Generation X cohort. Individuals considered for this experiment were required to be employed within the information technology field. Participants within each cohort were distributed equally by age and experience within the specified industry (information technology).

Figure 1
Age Demographics



Based on the data above, the age of all participants was evenly distributed. Millennials (ages 30 - 44) were the largest group employed within the United States within the IT field (U.S. Bureau Labor Statistics, 2022). Based on this labor statistic, a majority of the participants fit the Millennials cohort. Millennials encompassed approximately 55% of the volunteer group. Generation X (45-60 years of age) was the second largest group to complete the SHL Motivation survey.

Generation X (45-60 years of age) was comprised of approximately 26.2% of the participant group. The smallest group of participants in the study was Generation Z (ages 18-29). This group is currently the newest generational cohort to enter the workforce (Chopra, 2019) Generation Z was approximately 18.75% of the sample group which were administered the survey.

Based on the data below, job experience between all three generations (Generation X, Millennials, and Generation Z) were evenly distributed. There was an estimated 20.43% of survey volunteers which worked in the information technology field for 0-5 years. Approximately 22.58% of motivational participants worked within the IT field between 6 and 10 years. An estimate of 26.88% of participants had worked between 11 and 16 years and 30% of volunteers identified with 16 plus years of experience within the IT field.

Figure 2
Job Experience Demographics

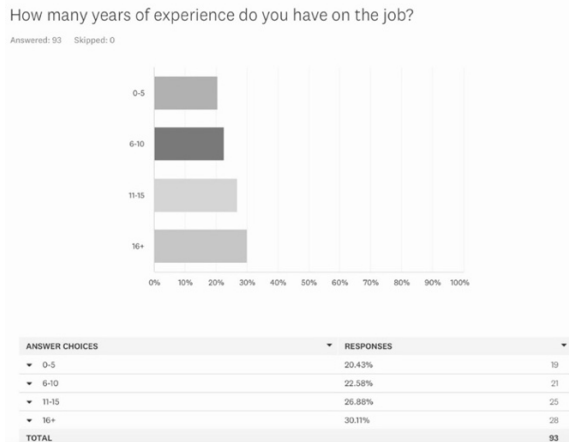


Table 1
Reliability of Motivation Variables

Reliability of Motivation Variables		Mean		Std. Deviation		N		
Recognition		3.8889		.97663		90		
Interest		3.9778		.98275		90		
Flexibility		3.5556		1.05053		90		
Autonomy		3.8556		.98939		90		
Item Means		3.860	3.522	4.133	.611	1.174	.058	7
Inter-item Correlations		.193	.726	.533	3.766	.022	7	

Table 1 illustrates the reliability of the motivational variables examined. The table assessed all seven motivational drivers including RECOGNITION, INTEREST, FLEXIBILITY, AUTONOMY, REWARD, STATUS and PROGRESS. The scale of the mean was based on a Likert type scoring, displayed in Table 5. This scale measured motivational preferences based on a rating between highly demotivating to highly motivational. Based on the summary item statistics, there is a strong level of inter-reliability.

This signals there is an agreement between individual participants. Additionally, the skewness and kurtosis of all of the variables within the study scored between -3 and 3. This calculation indicates a normal distribution between the data gathered and that there were no outliers within this study (Liddy, 2023). Based on this information, the researcher was free to proceed with the experiment.

Instrument Reliability and Validity of Sample

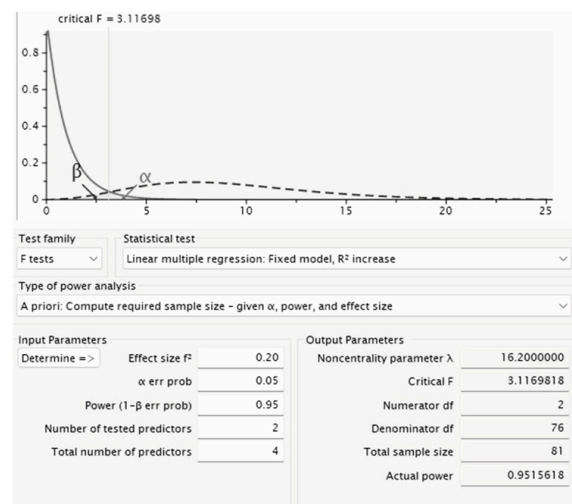
Validity is defined as the degree to which a test will correctly measure its intent (Fuller, et al., 2020). It is essential to have confirmed validity within an experiment (Carroll et al., 2020). This ensures the study can be appropriately analyzed and interpreted. There is no single test to establish validity within an analysis. There are several avenues in which validity can be confirmed (Fuller et al., 2020). For this experiment, validity was determined by two measures:

external and construct validity (Fuller et al., 2020).

External Validity

External validity confirms the number of participants needed to generalize findings to a group or specified demographic (Findley et al., 2021). External validity within an experiment can apply findings to a broader scope of individuals. A significant purpose for this procedure is to gather possible results and apply the results to generalized real-life applications (Findley et al., 2021). Based on a G-Power Analysis, the minimum number of participants needed to gather a strong external validity for this experiment was 90 participants (n=90). This number was based on two tested predictors with an $\alpha = 0.05$ and power = 0.951. Furthermore, a sample of 81 would also have achieved a 95% confidence with a significance level of .05% (Liddy, 2023).

Table 2
G-power Analysis for Standard Multiple Regression Analysis



Construct Validity

Construct validity is defined as the measure which indicates if a survey or question test what its intended to assess (Bowman & Goodboy, 2020). Construct validity may be especially important in measures which cannot be directly calculated; for example, intelligence, opinions, and perspectives (Bowman & Goodboy, 2020). To minimize research bias, a high measure of construct validity is important to ensure accurate determinations of intangible variables (Mathieu et al., 2020).

For this experiment, the Saville-Holdsworth Limited Motivation Survey has been verified for construct validity overtime and by several participants. Additionally, psychologists have tested this motivation questionnaire in test-retest ability as well as over multiple demographics and industries.

Reliability

A Cronbach’s Alpha was utilized to confirm the Likert-type scale questions and responses are reliable within the experiment (Carroll et al., 2020). Due to the difficulty in measuring intangible variables such as perceptions and motivation, it was imperative the questions were confirmed to determine and assess factors correctly (Carroll et al., 2020). Internal consistency, also known as reliability, can be verified through Cronbach’s alpha analysis. A Cronbach’s alpha can pinpoint the success or failure of a variable or groups of variables in measurement (Liddy, 2023).

When utilizing a Cronbach alpha as a means of testing reliability, a score > .70 indicates a strong reliability measure (Cronk, 2018). For this study, internal consistency yielded a result of .859. The .859 reliability score was the outcome of all seven motivation drivers tested (i.e., reward, recognition, interest, autonomy, status, progress, and flexibility). These results produced a high reliability rate which allowed the researcher to proceed with the analysis.

Descriptive Statistics

For this quantitative experiment, there were a number of descriptive characteristics which were measured in order to accurately gauge the data gathered. Descriptive statistics were analyzed for all variables including AGE, EXPERIENCE, RECOGNITION, INTEREST, FLEXIBILITY, AUTONOMY, REWARD, PROGRESS, STATUS, MOTIVATION, and REWARD and RECOGNITION (R&R). The variable AGE in this study was defined by three separate generational cohorts and code into variables 1, 2, and 3 (1= Generation X, 2= Millennials and 3= Generation Z). Experiences were also recorded by intervals of 5, 1=0-5 years of experience in information technology, 2= 6-10, 3=11-15 and 4= 16 years or more of IT job experience.

The variable MOTIVATION was recoded into the average scores of each participants’ individual responses to each motivational driver. Additionally, the variable of R&R, which is a combination of REWARD and RECOGNITION, was recorded by the average of the two motivational driver factors. Table 4 reflects the SPSS descriptive statistic for all variables with the addition of participants’ recoded scores. Scores for the AGE variable were taken by birth year and recoded as numbers 1-3 and were classified by generation. All motivational variables were coded in a Likert-type scale ranging from 1-5, 1=highly demotivating, 2=demotivating, 3=no effect, 4=motivating, and 5 = highly motivating.

The REWARD variable is illustrated below in Figure 11. This graph displays responses from surveyed participants by percentage. The responses are tallied by a Likert-type scale which is displayed in Figure 11; 1= highly demotivation, 2= demotivation.

3= no effect, 4=motivating, and 5= highly motivating. The graph displays REWARD as a highly motivating tool based on a percentage score of 48.39% rating by survey volunteers REWARD was also considered motivating by 27% of participants. The remainder of the ranks rate no effect at approximately 13% and demotivating by less than 10% by participants of the study.

Figure 3
Scores for Reward Variable

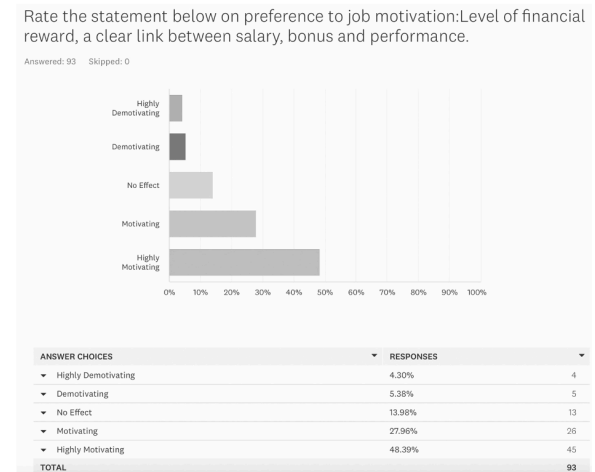
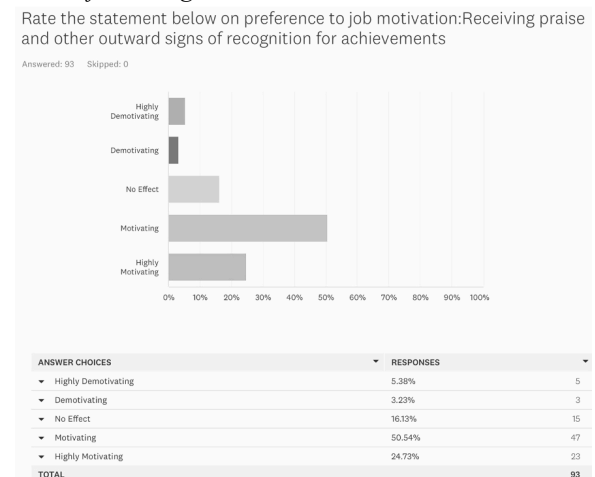


Figure 4 displays the percentage scores for the RECOGNITION variable. This factor was considered a motivating (4) motivational driver by 50.54 % of participants within this experiment. A fraction of volunteers also considered RECOGNITION to be highly motivation at 24.73%. The RECOGNITION item scored 16.13% with no effect. Additionally, participants of this study scored RECOGNITION as demotivating by a cumulative score less than 10%.

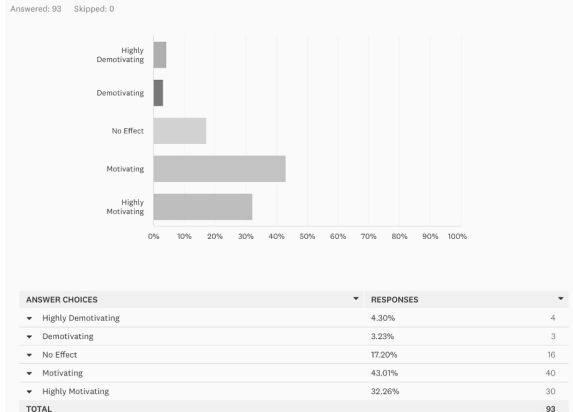
Figure 4
Scores for Recognition Variable



The INTEREST factor was also tallied by a Likert- type scale. Based on the 93 participants who completed the survey, 75.29% considered INTEREST as motivating (a rating of 4 or 5). A score of 17% of participants were neither motivated nor demotivated by the variable and less than 10% were demotivated in some way by INTEREST.

Figure 5
Scores for Interest Variable

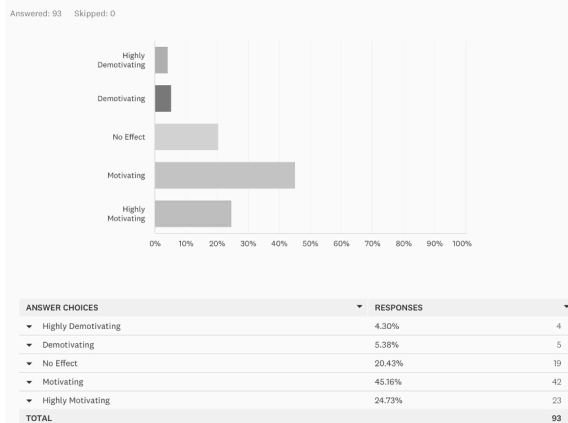
Rate the statement below on preference to job motivation: Work that provides variety, interest and stimulation



The fourth factor examined was AUTONOMY. This factor was regarded as motivating by 69.89%, approximately 20.4% of motivation survey volunteers viewed AUTONOMY as gaining no effect on work drive. A total of 9.68% regarded AUTONOMY as demotivating by some level (highly demotivating -2 or highly demotivating-1).

Figure 6
Scores for Autonomy Variable

Rate the statement below on preference to job motivation: Having the freedom to organize work as one sees fit.

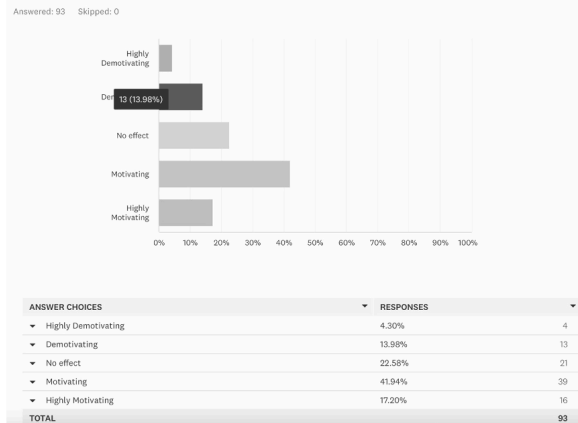


FLEXIBILITY was also investigated as a possible motivational driver within this experiment. The FLEXIBILITY item scored a 59.14% motivating for information technology employees. This item also produced 20.4% of participants ranking FLEXIBILITY

as having no effect on their personal motivation at work. This factor also scored less than 10% as demotivating to some degree.

Figure 7
Scores for Flexibility Variable

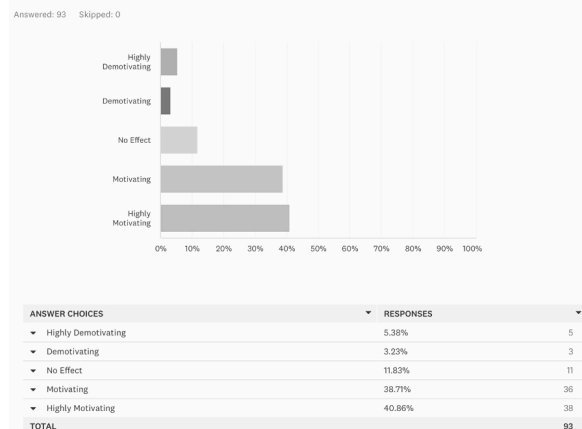
Rate the statement below on preference to job motivation: Having a fluid unstructured environment and flexibility in the way tasks are carried out.



PROGRESS was another motivation variable examined within this experiment. Several participants ranked PROGRESS as motivating (78.57%) Survey volunteers regarded PROGRESS as neither motivating nor demotivating by 11.83%. There was a minimal number of individuals which scored PROGRESS as demotivating at work. Less than 10% ranked PROGRESS as either demotivating or highly demotivating within this experiment.

Figure 8
Scores for Progress Variable

Rate the statement below on preference to job motivation: Having opportunities for promotion.

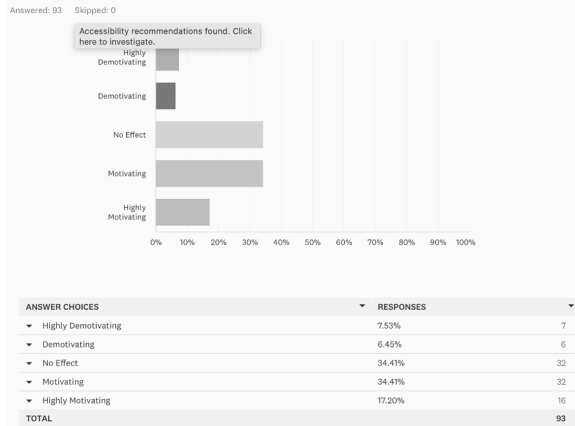


The final variable within this survey examined was STATUS. Status was considered motivating by 51.61%. within this experiment STATUS was regarded as No effect in work motivation to 34.41% of participants. Volunteers which believed STATUS as demotivating, scored at

6.45% and yielded a score of 7.53% for highly demotivating individuals within this experiment.

Figure 9
Scores for Status Variable

Rate the statement below on preference to job motivation: Having outward signs of position and status.



Descriptive scores for RECOGNITION were based on 90 participants, the range was 4 and the minimum and maximum statistic were 1 and 5, respectively. The mean statistic for RECOGNITION was 3.8889 with a standard error of .10295. Standard deviation was calculated at .97663 with a variance of .954. Scores for INTEREST were also ranging from 1 to 5 with a mean of 3.9778. The standard error for the INTEREST variable were calculated at .10359. Standard deviation for INTEREST were .98275 with a variance of .966. Descriptive numbers for the FLEXIBILITY variable were expressed as a mean statistic of 3.5556 and a standard error of .11074. FLEXIBILITY also measured 1.05053 in standard deviation with a variance of 1.104.

AUTONOMY calculated a mean of 3.8556 with a standard error of .10429. AUTONOMY also scored .98939 in standard deviation and .979 in variance. REWARD was scored 4.1333 for mean with a standard error of .11307. The REWARD variable within this study also measured 1.07264 in standard deviation and 1.151 in variance. The PROGRESS variable scored a mean average of 4,0889 with a standard error of .11245. PROGRESS also measured a standard deviation scored of 1.06681 and a variance of 1.138. The STATUS variable scored a mean of 3.5222 with a standard error of .1097. Status also measured a score of 1.04104 for standard deviation and 1.084 in variance.

The factor MOTIVATION which encompassed all seven motivation drivers (INTEREST, FLEXIBILITY, REWARD, RECOGNITION, PROGRESS, AUTONOMY, and STATUS) calculated a mean statistic of 3.8602 with a standard error of .07957. MOTIVATION measured a standard deviation of .75490 with a variance of .057.

An R&R variable was also calculated for a combined average of REWARD and RECOGNITION(R&R). R&R measured a mean of 4.0111 and a standard error score of .09480. The R&R item also scored a .89937 in standard deviation and a .890 in variance. All variables were considered equally distributed within this experiment. AGE, EXPERIENCE, RECOGNITION, INTEREST, FLEXIBILITY, AUTONOMY, REWARD, PROGRESS, STATUS, MOTIVATION, and R&R all measured a skewness and kurtosis within an acceptable range.

DATA ANALYSIS PROCEDURES

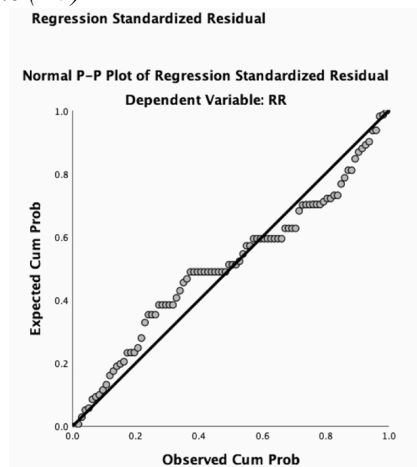
Research Questions and Statistical Analysis

Three separate linear regressions were conducted to answer the three-research questions stated above. All linear regression calculations were completed in an effort to uncover any possible relationships between age, job experience and the seven motivational drivers of work performance-reward, recognition, status, progress, autonomy, flexibility, and interest.

Research Question 1: Is there any significant relationship between employees’ perceptions of organizational incentives (rewards and recognition) based on age?

A linear regression analysis was conducted on possible relationships between (R&R), AGE and EXPERIENCE. The regression equation was not significant $F(2,87) = .442, p = .644^b$ with an R^2 of .010. Based on the data collected from this experiment, neither AGE nor EXPERIENCE are a significant predictor of REWARD and RECOGNITION within work motivators. Based on the results of the linear regression, the researcher failed to reject the null hypothesis of Research Question 1.

Figure 10
Linear Regression P-P Plot w/RR as Dependent Variable (DV)



Research Question 2: Is there a difference in employee motivation based on age?

A linear regression analysis was conducted to predict the possible relationships between generational cohorts (e.g., Generation X, Millennials, Generation Z) and seven motivation drivers (REWARD, RECOGNITION, STATUS, PROGRESS, FLEXIBILITY, AUTONOMY, and INTEREST). The regression equation was not significant $F(2,87) = 5.50, p = .579$ with an R^2 of .012. Based on the data collected neither AGE (generational cohort) nor EXPERIENCE is a significant predictor of motivational driver preferences. Based on the results of the linear regression, the researcher failed to reject the null hypothesis of Research Question 2.

Figure 11

P-Plot for Linear Regression w/Motivation as DV

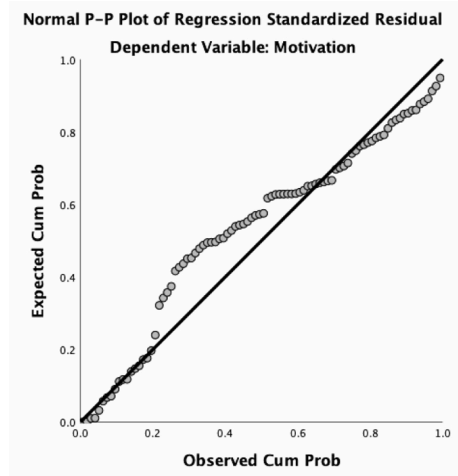
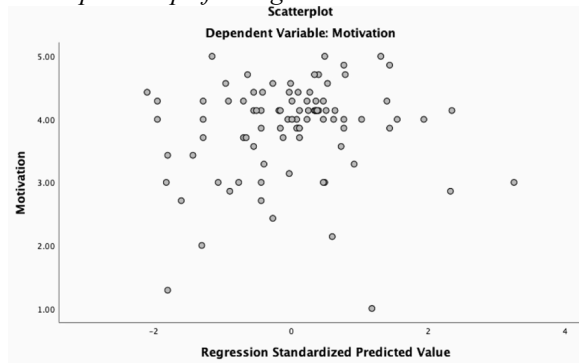


Figure 12

Scatterplot Graph for Regression Model



Research Question 3: Is there a relationship between extrinsic motivation (reward and recognition) and other motivational drivers?

A linear regression analysis was calculated to predict possible significant relationships between REWARD and RECOGNITION (R&R) and the five

other motivational drivers examined (INTEREST, AUTONOMY, FLEXIBILITY, PROGRESS and STATUS). A significant linear equation was found $F(3,86) = 44.535, p < .001^d$ with an R^2 of .595. Participants of the study predicted R&R equal to $.673 + .389 (\text{INTEREST}) + .236 (\text{STATUS}) + .249 (\text{AUTONOMY}) \pm \text{ERROR}$.

Based on the SHL Motivation survey administered, participants which scored high on being motivated by R&R also increased scoring in INTEREST by .389 points, STATUS increased by .236 point and a .249 increase in motivation by AUTONOMY as well. It is important to note that not all five remaining motivational drivers had a possible significant relationship with R&R. FLEXIBILITY and PROGRESS did not yield any significant results with REWARD and RECOGNITION within this analysis. Based on the results of the linear regression, the research can reject the null hypothesis of Research Question 3.

Figure 13

Linear Regression P-P Plot w/RR as DV

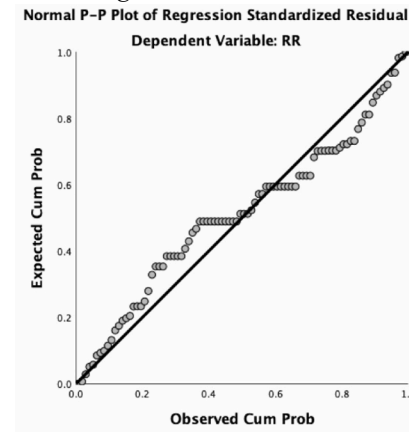
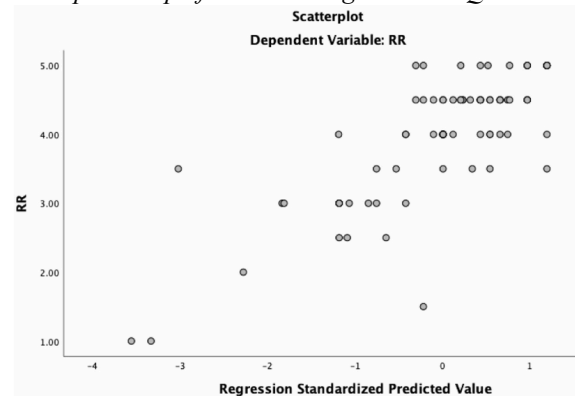


Figure 14

Scatterplot Graph for Linear Regression- RQ3



DISCUSSION

Shortcomings and Limitations of the Study

This study had a few shortcomings which can be expanded on in further studies. One limitation was the statistical test. For example, a linear regression only examines the mean. (Cronk, 2008). A multiple regression analysis has a few disadvantages depending on the data set and hypotheses (Knief & Forstmeier, 2021). For example, with this motivational experiment, there may have been some relationship between variables which were significant but not linear in nature.

Additionally, linear regressions only examine relationships within a data set (Cronk, 2008). There are several other statistical analyses which could have been executed within the experiment to uncover possible significant results. An analysis of variance (ANOVA) may have brought more insight into differences between age, experience, and motivational drivers than a multiple linear regression (Yang et al., 2019). For example, an ANOVA may have found possible significant relationships between age groups and motivation (Đalić & Terzić, 2021).

In addition, statistical shortcomings, the utilization of surveys may have posed another error with the data set. Using surveys within an experiment can prone the set to social desirability bias (Elston, 2021). Social desirability bias is a phenomenon which occurs when individual answer questions based the answer choosing to be the most socially sound and not based on honesty (Elston, 2021). Although all bias may not be completely eliminated within a survey design, the SHL motivation survey has been repeated tested and believed to be as neutral and unbiased based on profession recommendations (Glasgow et al., 2021).

Findings

There were three questions which were evaluated in this study to uncover possible relationships between motivation drivers, AGE, and EXPERIENCE. The first question focused on the probability of relationships between AGE, EXPERIENCE, and seven motivation preferences. The second question aimed to uncover significant relationships between REWARD and RECOGNITION (R&R) based on age and experience, if any. The third research question examined the seven motivational preferences in an effort to explore possible relationships between the seven intrinsic and extrinsic motivation dimensions.

Table 3

A Comparison of Research Findings

Research Q1:	Based on the data, there is no significant statistical relationship between motivation, age and/or experience. Based on the outcomes, motivational preferences cannot be predicted regardless of age or years of experience. Trends may not be predicted in how motivational drivers are predicted by information technology employees.
Research Q2:	Based on the outcomes from the data, there is not statistically significant relationship between REWARD and RECOGNITION (R&R) based on AGE and EXPERIENCE. Based on the multiple regression analyses, there is no significant trend which can predict how individuals will perceive REWARD and RECOGNITION (R&R) as motivating or demotivating based on generational cohort or years of experiences within the IT field.
Research Q3:	Based on research outcomes, there is a significant relationship between REWARD, RECOGNITION, STATUS, INTEREST, and AUTONOMY. Additionally, based on the results from Chapter 4, there is no significant relationship between FLEXIBILITY, PROGRESS, REWARD, and RECOGNITION. This indicates there may be trends which predict an individual's preference based on their rating of REWARD, RECOGNITION, STATUS, AUTONOMY, and INTEREST.

The outcomes of the experiments both supported and refuted all theories utilized as framework for the experiments. For example, Maslow's Hierarchy of Needs (1987) suggest that as individuals move through stages of needs, one's need will become more intrinsic in nature. Based on the study, neither age nor year of experience have a significant relationship between motivational drivers. Additionally, Hertzberg et al.'s Two-Factor theory (1959) was neither support nor refuted by the study as the statistically measure examined relationships rather than differences.

Research Question 3 found a significant relationship between five of the seven motivation drivers examined (recognition, reward, interest, autonomy, status, flexibility, and progress). These findings display those participants who preferred both Reward and Recognition (R&R) also preferred Status, Interest, and Autonomy as a means of work motivation.

Academic Implications

There were six theories which provided the framework for this experiment: Vroom's Motivational Theory (1964), Maslow's Hierarchy of Needs (1987), McGregor's Motivational Theory (1957), Self Determination Theory (2000), Herzberg Two Factor Theory (1959) and Meads Generational Gap theory (1970). Based on Vroom's Motivation Theory (1964), the outcomes from the study support the notion that all individuals possess their own unique preferences on motivation regardless of demographics and are more closely predictive by distinct lifestyle choices and

experiences. This study does not support Mead's generation gap theory (1970) which suggests generational cohort members collectively prefer specific motivational drivers based on their shared life experiences. RQ1 and RQ2 did not find any significant relationship between age, experience, and the seven motivation drives assessed.

Although Mead's theory (1970) did not support the idea that age groups think similarly on the opinions of work drivers, there was not sufficient data collected or analyzed to examine the differences between groups (i.e., Generation X, Millennials, Generation Z). McGregor's Theory (1957) and Maslow's Hierarchy of Needs (1987) were also neither supported nor refuted within this study. The data were not sufficient to assess each tier on their hierarchy or the managerial preferences.

Instead, the data did support that the bottom tier (REWARD) and the higher tiers (RECOGNITION) as highly motivating elements to driving job satisfaction. Additionally, based on the results, there is no discrepancy between rewards or autonomy being more or less motivational than the other. Furthermore, AGE, REWARD and AUTONOMY, based on the outcomes, are not significantly related.

On the other hand, RQ3 found a significant relationship between REWARD, RECOGNITION, STATUS AUTONOMY, and INTEREST. This outcome may signal more investigation may need to be done in order to understand how Vroom's (1964), Mead's (1970), McGregor's (1957) and Maslow's theories (1987) related to all 18 motivation dimensions based on SHL Motivational survey. Based on self-determination theory (2000), the results of the experiment do not support the notion that intrinsic motivation is the best method for motivating employees.

The results of the study display that both extrinsic and intrinsic motivational drivers are both motivating and demotivating in IT employees of all ages. Herzberg's Two-Factor Theory (1959) was supported in all research questions (RQ1, RQ2, RQ3). Similar to Vroom's Theory (1964), Herzberg and his associates suggest that there are distinct perspectives based on individual experiences which drive job satisfaction and work motivation (Herzberg, 1987). The regression outcomes illustrate that age and experiences do not necessary predict any relationships between REWARD, RECOGNITION, AUTONOMY, FLEXIBILITY, STATUS, PROGRESS, or INTEREST preferences.

Managerial Implications

Based on the regression outcomes and theoretical framework, there are some implications which may be important for management to consider. The first implication for managers is diversifying

incentives to increase motivation. Based on the results, there is not one driver which is more motivational than another within the information technology field. Additionally, due to individual experiences and preferences, there are both intrinsic and extrinsic drivers which can motivate for demotivate employees.

One approach to increasing motivation would be to allow individuals workers to choose their incentive options from a platform which encompasses several motivation dimensions. Another approach for business leaders to utilize is interviews or questionnaires which can assess what incentives garner the highest interest within their company. This method may pinpoint possible trends within employees and management can provide incentives which may boost job satisfaction and productivity.

FUTURE RESEARCH

Researchers may expand on this study by focusing on the differences between the variables and data collected rather than the relationships. Since the study did not find relationships based on Age and Experience, this does not indicate the possible differences which may be present in the data. Future experiments may examine this data for others for utilizing a *t* test or ANOVA to investigate the possible differences in generational cohorts within the IT field.

Further research into motivation could examine several different arenas. For example, this study only assessed employees between 18 and 60 years of age which worked in the information technology field. Research may be expanded to other fields, especially fast-growing industries such as hospitality and healthcare (Singh & Misra, 2020). These employees may possess contrasting opinions on job satisfaction and motivational drivers based on their experience. This study can also be narrowed to other demographics as dependent variables. For example, age and experience may not be statistically significant within this study but geographical region or socioeconomic status may play a role in how motivation incentives are regarded.

Research may also focus on all of the 18 dimensions of motivation defined by Saville and Holdsworth Limited. This study only investigated seven motivational variables. If all 18 dimensions were assessed and analyzed, researchers may garner a more accurate gauge of how each motivational item is related, if at all. Other experiments may also divide the dimensions by categories (i.e., synergy, intrinsic, extrinsic, and energy) and assess items for relationships, differences and/or correlations.

CONCLUSION

This study was prepared in an effort to assess the possible relationships between generational cohorts and their preferences of motivational

incentives in the information technology field. Motivation is cited as an effective avenue to increasing productivity, lowering cost within a company, and increasing innovation (Motyka, 2018; Sivapragasam & Raya, 2018; Weeks & Schaffert, 2019). As employees move through their career's theories have found many individuals opinions, preferences, and work goals change (Maslow & Lewis, 1987; Vroom, 1964), in an effort to uncover motivational trends within the IT field, three multiple linear regression were conducted.

Based on the results, there were no significant relationships between age groups, years of experience, and seven of the motivational driver items. Based in the data, there was a significant relationship between reward, recognition, status, interest, and autonomy. This may signal the need for examination in combining different motivational incentives to facilitate the best work satisfaction and productivity from employees.

REFERENCES

1. Đalić, I., & Terzić, S. (2021). Violation of the assumption of homoscedasticity and detection of heteroscedasticity. *Đalić, Irena, and Svetlana Terzić. "Violation of the assumption of homoscedasticity and detection of heteroscedasticity." Decision Making: Applications in Management and Engineering.*
2. Afsar, B., & Umrani, W. A. (2019). transformational leadership and innovative work behavior: The role of motivation to learn, task complexity and innovation climate. *European Journal of Innovation Management.*
3. Alrawahi, S., Sellgren, S. F., Altouby, S., Alwahaibi, N., & Brommels, M. (2020). The application of Herzberg's two-factor theory of motivation to job satisfaction in clinical laboratories in Omani hospitals. *Helivon 6.*
4. Antony, M. R. (2018). Paradigm shift in employee engagement—A critical analysis on the drivers of employee engagement. *International Journal of Information, Business and Management, 32-46.*
5. Bowman, N. D., & Goodboy, A. K. (2020). Evolving considerations and empirical approaches to construct validity in communication science. *Annals of the International Communication Association.*
6. Carducci, B. J. (2020). Maslow's hierarchy of needs. *The Wiley Encyclopedia of Personality and Individual Differences: Models and Theories, 269-273.*
7. Carroll, H. A., Hook, K., Perez, O. F., Denckla, C., Vince, C. C., Ghebrehiwet, S., & Ando, K. (2020). Establishing reliability and validity for mental health screening instruments in resource-constrained settings: systematic review of the PHQ-9 and key recommendations. *Psychiatry research.*
8. Chopra, K. (2019). "Indian shopper motivation to use artificial intelligence: Generating Vroom's expectancy theory of motivation using grounded theory approach. *International Journal of Retail & Distribution Management.*
9. Chua, J., & Ayoko, O. B. (2021). Employees' self-determined motivation, transformational leadership and work engagement. *Journal of Management & Organization, 523-543.*
10. Cronk, B. (2008). *How to use SPSS statistics: A step-by-step guide to analysis and interpretation (7th ed.).* CA: Pycrczak Publishing.
11. Dimock, M. (2019). Defining generations: Where Millennials end and Generation Z begins. *Pew Research Center, 1-7.*
12. Duoug, M.-Q. (2019). University staff's work motivation: Do personal factors make a difference? *Thai Journal of East Asian Studies, 2-17.*
13. Dust, S. B., Liu, H., Wang, S., & Reina., C. S. (2021). "The effect of mindfulness and job demands on motivation and performance trajectories across the workweek: An entrainment theory perspective. *Journal of Applied Psychology.*
14. Elston, D. M. (2021). Participation bias, self-selection bias, and response bias. *Journal of the American Academy of Dermatology.*
15. Findley, M. G., Kikuta, K., & Denly, M. (2021). External validity. *Annual Review of Political Science.*
16. Fischer, C., Malycha, C. P., & Schafmann, E. (2019). The influence of intrinsic motivation and synergistic extrinsic motivators on creativity and innovation. *Frontiers of Psychology.*
17. Fuller, D., Colwell, E., Low, J., Orychock, K., Tobin, M. A., Simango, B., & Buote, R. (2020). Reliability and validity of commercially available wearable devices for measuring steps, energy expenditure, and heart rate: systematic review. *JMIR mHealth and uHealth.*
18. Gaidhani, S., Arora, L., & Sharma, B. K. (2019). Understanding the attitude of generation Z towards workplace. *International Journal of Management, Technology and Engineering, 2804-2812.*
19. Ghosh, D., Sekiguchi, T., & Fujimoto, Y. (2020). Psychological detachment: A

- creativity perspective on the link between intrinsic motivation and employee engagement. *Personnel review*.
20. Glasgow, G., Butler, S., & Iyengar, S. (2021). Survey response bias and the 'privacy paradox': evidence from a discrete choice experiment. *Applied Economics Letters*, 625-629.
 21. Herzberg, F., Mausner, B., & Snyderman, B. (1959). *The motivation to work*. New York: John Wiley & Sons.
 22. Jiang, J., Gao, A., & Yang, B. (2018). Employees' critical thinking, leaders' inspirational motivation, and voice behavior: The mediating role of voice efficacy. *Journal of Personnel Psychology*.
 23. Kang, E. (2020). The relationship between reinforcement of employee's customer centric behavior and employee motivation factors. *Advances in Social Sciences Research Journal*, 338-347.
 24. Kasuma, D. B., Windijarto, & Saptandari, P. (2018). The influence of work motivation and organizational culture on improving employee performance in financial division at companies in energy sector. *Proceedings of the 2nd International Conference Postgraduate School*, 45-50.
 25. Khusainova, R., Jong, A. D., Lee, N., Marshall, G. W., & Rudd, J. M. (2019). (Re) defining salesperson motivation: Current status, main challenges, and research directions. *Journal of Personal Selling & Sales Management*, 2-29.
 26. Kim, S. (2018). Managing millennials' personal use of technology at work. *Business Horizons*, 261-270.
 27. Knief, U., & Forstmeier, W. (2021). Violating the normality assumption may be the lesser of two evils. *Behavior Research Methods*, 2576-2590.
 28. Kumar, P. C., & Prabhakar, P. V. (2018). Personality and work motivation: A decisive assessment of Vroom's expectancy theory of employee motivation. *Asia Pacific Journal of Research*, 174-179.
 29. Kurniawanto, H., Rahmadi, Z. T., & Wahyudi, M. A. (2022). Effect of work environment and motivation on employee performance with job satisfaction as a mediation. *International Journal of Social and Management Studies*, 150-162.
 30. Leonova, I. S., Pesennikova-Sechenov, E. V., Legky, N. M., Prasolov, V. I., Krutskikh, I. A., & Zayed, N. M. (2021). Strategic analysis of the motivation on employees productivity: A compensation benefits, training and development perspective. *Academy of Strategic Management Journal*, 1-11.
 31. Liddy, D. (2023, January). Statistics meeting. (B. kempink, Interviewer)
 32. Lloyd, R., & Mertens, D. (2018). Expecting more out of expectancy theory: History urges inclusion of the social context. *International Management Review*, 28-43.
 33. Martin, J. L., & Peters, O. (2019). Embracing the generational differences to "bridge the gap" in the workplace. *IEEE IAS Electrical Safety*.
 34. Maslow, A., & Lewis, K. J. (1987). Maslow's hierarchy of needs. *Salenger Incorporated*, 987-990.
 35. Mathieu, J. E., Luciano, M. M., D'Innocenzo, L., Klock, E. A., & LePine, J. A. (2020). The development and construct validity of a team processes survey measure. *Organizational Research Methods*, 399-431.
 36. Motyka, B. (2018). Employee engagement and performance: a systematic literature review. *International Journal of Management and Economics*, 227-244.
 37. Mousa, M., Massoud, H. K., & Ayoubi, R. M. (2020). Gender, diversity management perceptions, workplace happiness and organisational citizenship behaviour. *Employee Relations: The International Journal*, 1249-1269.
 38. Naim, M. F., & Lenka, U. (2018). Development and retention of Generation Y employees: a conceptual framework. *Employee Relations*.
 39. Namiq, F. A. (2018). Most effective management style for modern workplace. *International Journal of Engineering and Management Sciences*, 402-411.
 40. Narayan, S., Sidhu, J. S., & Volberda, H. W. (2021). From attention to action: The influence of cognitive and ideological diversity in top management teams on business model innovation. *Journal of Management Studies*, 2082-2110.
 41. Olusadum, N. J., & Anulika, N. J. (2018). Impact of motivation on employee performance: a study of alvanikoku federal college of education. *Journal of Management and Strategy*, 53-65.
 42. Pakdel, F., Khodadoust, K., Pakdel, S., Nosrati, S., Amaghani, F. A., Farokhnia, H., Ghanizadeh, M. (2018). Factors affecting job motivation among faculty members of Tabriz school of dentistry based on the Herzberg's 2-Factor Theory. *Avicenna Journal of Dental Research*, 57-62.
 43. Rahi, S., Alnaser, F. M., & Ghani, M. A.

- (2019). Designing survey research: recommendation for questionnaire development, calculating sample size and selecting research paradigms. *Economic and Social Development: Book of Proceedings*, 1157-1169.
44. Rigby, C. S., & Ryan, R. M. (2018). Self-determination theory in human resource development: new directions and practical considerations. *Advances in Developing Human Resources*, 133-147.
 45. Rita, M., Payangan, O. R., Rante, Y., Tuhumena, R., & Erar, A. (2018). Moderating effect of organizational citizenship behavior on the effect of organizational commitment, transformational leadership and work motivation on employee performance. *International Journal of Law and Management*.
 46. Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary educational psychology*.
 47. Senbursa, N. (2022). Work-life balance challenges: Constructing an employee-friendly workplace. *Handbook of Research on Future of Work and Education: Implications for Curriculum Delivery and Work Design*, 511-532.
 48. SHL Motivation Questionnaire. (2022). *Motivational questionnaire (MQM5)*.
 49. Singh, A., & Misra, S. C. (2020). A dominance based rough set analysis for investigating employee perception of safety at workplace and safety compliance. *Safety Science*.
 50. Sivapragasam, P., & Raya, R. P. (2018). HRM and employee engagement link: Mediating role of employee well-being. *Global Business Review*, 147-161.
 51. Stefan, S. C., Ștefan Cătălin Popa, & Albu, C. F. (2020). Implications of maslow's hierarchy of needs theory on healthcare employees' performance. *Transylvanian Review of Administrative Sciences*, 124-143.
 52. Southwick, D. A., Tsay, C.-J., & Duckworth, A. L. (2019). Grit at work. *Research in Organizational Behavior*.
 53. Taylor, M. K. (2018). Xennials: a microgeneration in the workplace. *Industrial and Commercial Training*.
 54. Twalib, M. H., & Kariuki, M. M. (2020). Influence of motivation on employee performance at telkom kenya limited. *International Journal of Business Social Sciences & Education*, 421-431.
 55. Uddin, M. (2021). Addressing work-life balance challenges of working women during COVID-19 in bangladesh. *International Social Science Journal*, 239-240.
 56. United States Census Bureau. (2022, June 30). *Nation continues to age as it becomes more diverse*. Retrieved from United States Census Bureau.
 57. Vroom, V. H. (1964). *Work and motivation*. Wiley.
 58. Wang, J., Zhang, R., Hao, J.-X., & Chen, X. (2019). Motivation factors of knowledge collaboration in virtual communities of practice: a perspective from system dynamics. *Journal of Knowledge Management*.
 59. Weeks, K. P., & Schaffert, C. (2019). Generational differences in definitions of meaningful work: A mixed methods study. *Journal of Business Ethics*, 1045-1061.
 60. Wingerden, J. V., & Stoep, J. V. (2018). The motivational potential of meaningful work: Relationships with strengths use, work engagement, and performance. *PloS one*.
 61. Wolor, C. W., Wolor, S., Susita, D., & Martono, S. (2020). How to maintain employee motivation amid the covid-19 virus pandemic. *International Journal of Economics and business Administration*, 78-86.
 62. Yang, K., Tu, J., & Chen, T. (2019). Homoscedasticity: An overlooked critical assumption for linear regression. *General psychiatry*.