

Competitiveness among employees: Descriptive study for the employees of Keynana Sugar Company

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Abstract

This study explores the levels of competitiveness among employees at the Keynana Sugar Company with an aim to establish correlations with key demographic variables, specifically the years of experience and gender. Utilizing descriptive methodology, the primary dataset was obtained through the application of the Hypercompetitive Attitude Scale. The research involved 49 participants (37 males and 12 females), and employed statistical analyses, such as T-tests and Pearson Correlation, to yield comprehensive insights. The findings of this research unveiled a marked prevalence of competitive attributes among employees at Keynana Sugar Company. Notably, the investigation revealed a lack of significant correlation between competitiveness and employees' years of experience. Furthermore, the analysis indicated no statistically significant variations in competitiveness based on gender among the employees at Keynana Sugar Company. This research significantly enriches the academic discourse on human resources competence, particularly within the domain of human resources psychology. By shedding light on the dynamics of competitiveness and its associations with demographic factors, the study provides valuable insights that can provide strategies for enhancing workforce effectiveness and organizational performance.

Keywords: competitiveness; competition; employees; Keynana Sugar Factory.

1. Introduction

Competition, an enduring facet of human existence, is intrinsically linked to the imperative of survival in the rapidly evolving world. The indispensability of competing has grown with life itself compelling individuals to engage in an unyielding struggle for existence. Fundamentally, this paradigm aligns with the principle of survival of the fittest, given the highly competitive nature of the world people are inhabiting in. Organizations are not exempt from this reality as employees in both private and public sectors find themselves immersed in direct or indirect competition for promotions, positions, and recognition (Michael et al., 2018). Despite competition pervading organizations and the broader market, scholarly inquiries into individual-level competition remain relatively scarce (Wang et al., 2018). Recognizing competition and competitive advantage as paramount survival strategies is crucial as it constitute critical elements for individuals, organizations, and society at large (Thiel, 2017).

The landscape of organizational competition presents a formidable challenge, addressing the crucial aspects of human behavior, social dynamics, cultural influences, and organizational structures. Traditional perspectives on competitiveness, encompassing productivity, human and social capital, technology, social innovation, and socio-economic development, often fall short in thoroughly evaluating society's intrinsic ability and capacity to independently shape and direct

sustainable competitive advantages without any external interventions from government and business entities (Thiel et al., 2019).

Moreover, competitiveness is ingrained in human nature and instinct (Churchill et al., 1997; Ketchen et al., 2004; Matsumoto & Willingham, 2006; Dohmen et al., 2011). Human growth and maturation are inexorably intertwined with competition, both within the environment and among species (Carroll & Tomas, 1995; Pfeffer & Sutton, 2000; Birkinshaw, 2001; Marino & Zbojnik, 2004; De Waal-Andrews & Van Beest, 2018). Intriguingly, some individuals perceive competition as a challenge, leading them to engage in self-sabotage in an attempt to evade success (Pappo, 1983; Zuckerman et al., 1980).

In workplaces emphasizing collaboration and teamwork, individuals find themselves to navigate the delicate balance between cooperation and competition, revealing the intricate dynamics of human interactions. Research posits that this tension is an integral aspect of human dynamics and serves as a reinforcement mechanism (De Waal-Andrews & Van Beest, 2018). Another perspective frames competition as grounded in social comparison with individuals striving to outperform their peers and deriving satisfaction from prevailing over others (Klein & Miller, 1998). When effectively managed, workplace competition is designed to propel organizations to new heights, enhancing productivity, organizational commitment, job satisfaction, and overall involvement.

This pioneering study, the first of its kind within Sudan and within the defined scope of the researcher, embarks on a comprehensive exploration of competitiveness from a

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psychological perspective. The research seeks to address critical questions regarding the general traits of competitiveness among employees at Keynana Sugar Company, the nuanced relationship between competitiveness and employees' years of experience, and potential statistical variations in competitiveness based on gender variables (male/female). The study aspires to provide profound insights into the multifaceted landscape of competitiveness, shedding light on its impact on individual and collective performance, exploring its correlations with professional experience, and elucidating potential gender-based disparities.

Idiomatically, competitiveness is defined as "the enjoyment of interpersonal competition and the desire to win and be better than others" (Fletcher et al., 2008). Procedurally, it is defined as the scores obtained by the examinee after applying the competitiveness scale to the employees. Generally, three different methods are employed for understanding competitiveness: (i) a psychological perspective where competitiveness is an innate drive and viewed as a personality trait (Kayhan, 2003); (ii) another psychological view where competitiveness is understood as a dynamic mental state that drives a performer toward excellence sustained by social comparisons to be better than others (Jones, 2015); and (iii) an evolutionary biological perspective where competitiveness is seen at the behavioral level as an ability to use resources in competition with others (Baldauf et al., 2014). Competition is inherent in various types of activity in which conflicts of interest occur. Therefore, competitive relations initially require organization, stimulation, and regulation (Aristotle, 1984; Plato, 2002). From the ancient Greeks to the neoclassicists, financial interests were regarded in economics as a basis for competition among workers (Gordeev, 2007).

Competitiveness is defined as the enjoyment of interpersonal competition and the desire to win and be better than others (Fletcher, et al., 2008). An alternative definition also emphasizes the interpersonal aspect: Competition refers to social comparisons involving an unequal distribution of rewards or scarce resources deriving from the relative performance of the participants in an activity (Mudrack, et al., 2012). Additionally, competitiveness is defined as a dynamic mental state that drives a performer toward excellence sustained by social comparison to be better than others (Jones, 2015). Another definition views it as an innate drive and a personality trait (Kayhan, 2003). Competitiveness can be understood as the desire of an individual to be in a competitive situation even if not in real competition.

Competitiveness is crucial in the field of educational choices and labor market outcomes in the future. Individuals who shy away from competitive environments may limit themselves to better jobs and salaries (Kleinjans, 2009). Research also indicated that women tend to exclude themselves from competing with others, resulting in few qualified women reaching the top (Bertrand, 2011) and contributing to the acceleration of the gender wage gap in the upper tail (Albrecht et al., 2003; Arulampalam et al., 2007). Furthermore, competitiveness could be an especially important trait for certain fields such as sciences and mathematics, which are perceived as competitive.

Self-Determination Theory (SDT) is a method that utilizes experimental and empirical procedures to develop human personality, highlighting the importance of individuals' interests (Ryan, et al., 1997). Thus, its focus is on detecting interests and the basic psychological needs that form the base

of self-reinforcement, from which three needs emerge: the need for competency, relatedness/connectedness, and independency that appear essential for facilitating optimal functioning of the natural propensities for growth and integration, as well as for constructive social development and personal well-being (Ryan, et al., 2017).

The integration of Social Interdependence Theory (SID) finds relevance within the scope of this study. According to this theoretical framework, the stress systems of different individuals, emanating from their respective goals, can exhibit positive or negative interconnections. Positive interdependence manifests when there is a favorable correlation among individuals' goal accomplishments, leading them to believe that they are capable of achieving their objectives only if their cooperatively linked counterparts also attain their goals. Conversely, negative interdependence arises when there is an adverse correlation among individuals' goal achievements, wherein individuals perceive that their success is contingent upon the failure of others with whom they are competitively associated. In cases where there is no correlation among individuals' goal achievements, reflecting a lack of mutual influence, individuals perceive that the realization of their goals is independent of the achievements of others (David & Roger, 2011).

Several previous studies were relevant to this research. Michael et al. (2018) conducted a study on workplace competitiveness, exploring the impact of conflict-handling styles and organizational type. This research explored the competitive dynamics within the workplace, specifically focused on the impact of conflict-handling styles and organizational types on employees. The study employed a purposive sampling technique to select a sample of 308 employees with a demographic composition of 189 males and 119 females. The researchers utilized the Hypercompetitive Attitude Scale developed by Ryckman et al., (1990). It was hypothesized that conflict-handling styles and organizational types would not significantly influence employees' competitiveness. The results showed that conflict-handling styles and organizational types significantly influenced employees' competitiveness. It was concluded that the unhealthy hypercompetitive behavior of employees would threaten the peace and harmony among employees and organization in general.

Additionally, Fletcher et al. (2008) investigated an interactive relationship between competitive climate and trait competitiveness with workplace attitudes, stress, and performance. This research examined the influence of competition as an interaction between trait competitiveness and competitive climate. The research sample comprised employees in the information technology sector, considering competitive climate as both an individual-level variable and a workgroup variable. Results showed that the effect of competitive climate was dependent upon trait competitiveness and the level at which the climate was assessed for four outcomes: job satisfaction, organizational commitment, job dedication, and supervisor-rated task performance. In general, the effect of competitive climate is more negative for individuals who are less competitive. A competitive psychological climate is associated with greater stress regardless of the level of trait competitiveness but is not directly related to self-rated task performance. The results suggest that managers should be cautious in encouraging a competitive climate.

Buser et al. (2012) also conducted research on gender, competitiveness, and career choices. This research aimed to detect gender differences in competitiveness in the labor market with the research sample consisting of secondary school students aged 15 years. The results showed some differences in the ability of competitiveness between males and females in favor of males.

The study posits several hypotheses: The general trait of competitiveness among the employees in Keynana Sugar Company is high (H1); there is a relationship between competitiveness and years of experiences (H2) and there are statistical differences in competitiveness among the employees attributing to the gender variable (male/female) (H3).

2. Methodology

This research employed a descriptive correlational method, defined as "correlational research that refers to studies in which the purpose is to discover relationships between variables and subjecting the variables to correlational and multiple regression analysis" (Gall et al., 2003). Data collection was conducted through a survey with competitiveness measured using 26 indicators from Ryckman, et al., (1990) on a five-point Likert scale. To evaluate the validity and reliability of the instrument, a pilot study involving 26 company employees was performed. The item-to-total analysis revealed that the correlation coefficient of each indicator ranged from 0.669 to 0.720, meeting the validity criteria. Meanwhile, Cronbach's alpha analysis demonstrated a coefficient of 0.83, fulfilling the requirement for good reliability.

The main sample for the research comprised 49 employees from Keynana Sugar Company. The sample size was determined using an electronic sample size calculator (<http://www.enterprise-development.org/measuring-results-the-decd-standard>). Based on gender, the sample included 37 males (75.5%) and 12 females (24.5%) with ages ranging from 30 to 60 years old and years of experience spanning from 5 to 30 years. Data analysis utilized t-tests and Pearson correlation analysis, processed through the Statistical Package for the Social Sciences (SPSS).

Table 1. Inter-Item Correlations in the Scale

Item	Correlation	Item	Correlation	Item	Correlation
1	0.676	10	0.674	19	0.693
2	0.675	11	0.688	20	0.667
3	0.688	12	0.698	21	0.673
4	0.675	13	0.656	22	0.700
5	0.669	14	0.715	23	0.684
6	0.694	15	0.677	24	0.682
7	0.687	16	0.688	25	0.720
8	0.676	17	0.696	26	0.686
9	0.676	18	0.673		

Table 1 unveils the inter-item correlations inherent in the scale, providing insight into the pairwise relationships among the 26 items. Notably, each correlation manifests positively, denoting a uniform positive association among the respective items. This pattern suggests a cohesive and interrelated structure, wherein the elements comprising the scale demonstrate consistency and positive interdependence.

In the evaluation of the scale's internal consistency, the reliability analysis yielded a Cronbach's Alpha coefficient of 0.7, indicative of a satisfactory level of stability. This result emphasized the scale's capability to effectively encapsulate the intended construct, as higher Alpha values generally signified

heightened internal consistency.

Moreover, the internal reliability of the scale found reinforcement in an overall internal reliability coefficient of 0.83. This metric served as an additional indicator of the scale's robustness and internal cohesion. The heightened internal reliability coefficient substantiated the argument that the scale consistently measured the latent construct it was designed to assess.

The positive inter-item correlations not only underscored the internal coherence of the scale but also, in conjunction with the commendable internal reliability metrics and the stability indicated by Cronbach's Alpha, collectively affirmed the scale's efficacy in capturing the targeted construct with precision and reliability.

3. Results and Discussion

3.1. General trait of competitiveness among employees of Keynana Sugar Company

Table 1 presents the examination of the general trait of competitiveness among employees at Keynana Sugar Company through the results of the one-sample t-test analysis. The findings indicated a high level of competitiveness among the employees, aligning with the first hypothesis posited by the researcher.

Table 2. The results of the one sample t-test analysis

Hypothetical mean	Arithmetic Mean	Standard deviation	t- value	Significance
78	98.76	12.11	10.36	0.000

The results supported the contention that competitiveness is deeply ingrained in human nature, as echoed by philosophical perspectives such as Heraclitus' notion that "War is the father and king of all things" (Heraclitus, 1969). This aligns with the contemporary concept of bio-determinism, which views competition as a pervasive force shaping human interactions.

Competition is being inherent in various activities marked by conflicts of interest, necessitates organization, stimulation, and regulation (Aristotle, 1984; Plato, 2002). Historical perspectives, from ancient Greek philosophers to neoclassicists, regarded financial interests as a fundamental driver of competition in economic contexts (Gordeev, 2007). The researcher posits that competitiveness is a normal aspect of behavior, reflecting the essence of life, where individuals compete for natural resources, employment opportunities, recognition, and other pursuits.

3.2. Relationship between competitiveness and years of experience

The examination of the relationship between competitiveness and years of experience is elucidated in Table 3, which presents the results of Pearson correlation analysis. The analysis aimed to uncover any discernible correlation between the level of competitiveness and the duration of employees' professional experience.

The Pearson correlation coefficient between competitiveness and years of experience is 0.16, and the associated significance value is 0.24. It is noteworthy that the correlation value falls below the conventional significance threshold of 0.05, rendering it statistically insignificant. Thus,

based on the analysis, it can be concluded that there is no significant relationship between competitiveness and the years of experience among Keynana Sugar Company employees. This finding diverges from the second hypothesis posited by the researcher, suggesting that the duration of work experience does not exert a discernible influence on the level of competitiveness demonstrated by employees.

Table 3. The Results of Pearson Correlation Analysis

Variable	Significance value	Correlation value
Competitiveness	0.24	0.16
Years of experience		

The researcher contends that competitiveness is an inherent aspect of human behavior, suggesting that individuals, regardless of their years of experience, exhibit a consistent inclination towards competitive behavior. This aligns with the idea that competition is a fundamental trait ingrained in human nature, and as such, individuals, irrespective of their tenure in the workforce, display similar patterns of competitiveness.

Theoretically, the absence of a relationship between competitiveness and years of experience may be related to meeting worker needs. Referring to Self-Determination Theory (SDT), the need for competency, relatedness/connectedness, and independence are three basic needs that can arise in a worker (Ryan, et al., 2017). The absence of a significant relationship between competitiveness and years of experience shows that the more experienced someone is, the more someone believes that their needs, as identified in SDT, can actually be met not by competing with other workers but by collaborating with other workers. Furthermore, if we refer to Social Interdependence Theory (SID), the absence of a significant relationship between competitiveness and years of experience indicates the occurrence of positive interdependence as a worker becomes more experienced (David & Roger, 2011).

3.3. Gender and competitiveness

The investigation into the relationship between gender and competitiveness is expounded in Table 4, where the results of an independent sample t-test analysis are presented. The objective was to discern if there are notable statistical variances in competitiveness concerning the gender variable (male/female).

Table 4. Results of Independent Sample T-Test Analysis

Comparative groups	Standard deviation	Arithmetic mean	t- value	Significance
Male	13.16	99.24	2.58	0.115
Female	8.91	96.83		

As per the outcomes outlined in Table 4, no significant differences in competitiveness were observed between male and female employees, contradicting the third hypothesis posited by the researcher. This outcome diverges from Buser et al.'s (2012) study, which indicated that boys were more likely to choose prestigious profiles than girls. In contrast, the researcher posits that both male and female employees exhibit similar tendencies in achievement motivation, qualifications, and a desire for promotion and high ranks. Consequently, both genders engage in rigorous competition, thereby eliminating observable distinctions in competitiveness.

The lack of relationship between competitiveness and years of experience may be related to trends in equal rights and

awareness between genders. This trend encourages the emergence of the need for female workers and male workers. Referring to Self-Determination Theory (SDT), workers, regardless of gender, need three needs for competency, relatedness/connectedness, and independence (Ryan, et al., 2017). In addition, based on Social Interdependence Theory (SID), the absence of a significant relationship between competitiveness and gender indicates the occurrence of positive interdependence in male and female workers (David & Roger, 2011).

Moreover, findings in the literature suggested that competitiveness is a significant predictor of profile choice, with up to 23 percent of the gender difference in profile choice attributable to variations in competitiveness. This supports the extrapolation of laboratory findings on competitiveness to real-world labour market settings. The researcher contends that competitiveness transcends gender and aligns with the universal needs of individuals, highlighting that women in developing countries share similar aspirations with men, leading them to compete and strive similarly.

This study holds theoretical significance as one of the limited inquiries into workplace competition from a psychological standpoint within the Sudanese context. It contributes to the Sudanese and Arab academic repository, potentially serving as a theoretical framework for future studies. Additionally, the practical implications of this study are noteworthy, as employers can leverage the insights gained to develop activities fostering competitive behaviour among employees, ultimately enhancing productivity.

4. Conclusion

This research underscores the pivotal role of competitiveness within the workplace and delves into the theoretical underpinnings explaining this phenomenon. The findings unequivocally indicated a high level of competitiveness among employees in the examined company. Moreover, the study discerned that neither gender nor years of experience significantly impacted this competitive disposition.

The significance of this study lies in its exploration of competition as a psychological phenomenon, elucidating its potency as a robust motivator for bolstering productivity and fostering achievement motivation. By delving into the psychological aspects of competitiveness, the study offers valuable insights for enhancing production and employee motivation.

However, it is imperative to acknowledge certain limitations inherent in this research. Human limits constrain the generalizability of the findings, as the study exclusively focused on employees at Keynana Sugar Company, encompassing both male and female labor. Spatial and temporal boundaries also existed, with the study confined to the White Nile State, the location of the company, and conducted in 2023. Additionally, subjective limits are acknowledged, as the study primarily concentrated on competitiveness from a psychological perspective.

In essence, while shedding light on the psychological dimensions of competitiveness, this research provides a foundation for further exploration of this intricate phenomenon within diverse organizational contexts. Future studies could transcend these limitations by incorporating a broader spectrum of participants, expanding spatial boundaries, and diversifying the temporal scope, thereby contributing to a more

comprehensive understanding of competitiveness in the workplace.

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