



Investigating the Relation between Corporate Entrepreneurship And Employee Turnover Intention, Mediated by Job Satisfaction And Organizational Commitment: An Applied Study on Egyptian Petrochemicals Sector

Ossama Atta

The Arab Academy for Science and Technology &
Maritime Transport, Alexandria, Egypt
osama.atta.dba@gmail.com

Prof. Ayman Metwally

The Arab Academy for Science and Technology &
Maritime Transport, Alexandria, Egypt
ametwally@aast.edu

Prof. Maha Hafez Ahmed

Sadat Academy for Management Sciences, Egypt
mahahafez2005@yahoo.com

Prof. Mohammed A. Ragheb

The Arab Academy for Science and Technology &
Maritime Transport, Alexandria, Egypt
raghebmm@aast.edu

Abstract

This research is designed to investigate the effect of Corporate Entrepreneurship (CE) on Turnover Intention (TI) with mediation role of Job satisfaction (JS) and Organizational Commitment (OC): evidence from Egyptian Petrochemicals Sector. The objectives of This research are to investigate the relation among CE and TI, to test the relation among CE and JS, to test the relation among CE and OC, to explore the relation among JS and TI, to test the relation among OC and TI, to test the mediation role of JS among CE and TI. and to investigate the mediation role of OC among CE and TI. Using a questionnaire to collect data and AMOS software to conduct structural equation model (SEM) analyses, the methodology will be based on quantitative analysis. The primary findings of this paper are the direct effect among CE and TI is statistically significant, the direct effect among CE and JS is statistically significant, the direct effect among CE and OC is statistically significant, the direct effect among JS and TI is statistically significant, the direct effect among OC and TI is statistically significant, the study found that there is partial mediation effect of the OC among the relation of CE and TI in the Egyptian Petrochemicals Sector. Finally, the study found that there is partial mediation effect of the JS among the relation of CE and TI in the Egyptian Petrochemicals Sector.

Keywords: *Entrepreneurship, Satisfaction, Commitment, Turnover Intention, Petrochemicals.*

Introduction

The shortest definition, the world economy, is a set of all the national economies of the world (Bulatov, 2023). The global economy is unique within the world economy as it encompasses the components of national economies that engage in international trade by exporting resources and products, while also importing commodities and services from other countries (Bulatov, 2023). As the global economy was gradually putting the coronavirus disease pandemic of 2019 (COVID-19) behind, with many parts of the world lifting restrictions, and several economies returning to their pre COVID-19 size, another conflict among the Russian and Ukraine struck and started shaping up to be an introduction to a new geopolitical era (Selfin, 2022). Recent developments in today's business environment, including the war in Ukraine and the COVID-19 pandemic, have caused big disruptions in most sectors (Bygballe et al., 2023). Now it is clear that businesses and industries throughout

* This article was submitted in September 2023, and accepted for publishing in December 2023.

© Arab Administrative Development Organization- League of Arab States, 2024, pp 321-338. DOI:10.21608/AJA.2023.239672.1534



the world are operating in an uncertain and dynamic global economy. CE (CE) indicates to 'entrepreneurial activities within the boundaries of established, mature corporations' (Kazanjian et al., 2017). CE builds on an organization's ability to recognize, assess, and exploit existing or emerging opportunities (Kreiser et al., 2021). External environmental dynamics, such as changes in legislation, emerging technology, shifts in socio-cultural norms, or severe disruptions, might be triggering events that stimulate CE (Elsahn & Siedlok, 2021). CE is a significant trend that can help firms enhance their financial performance (Siota & Prats, 2020). According to other studies (Finkle, 2012; Schaeffer, 2015; Pea, 2021), well-known corporations like Google, 3M, Siemens, IBM, Intel, Motorola, and Microsoft all use CE methods. There are, however, recommendations to investigate the non-financial benefits of successfully engaging in CE (Urbano et al., 2022), particularly in less studied emerging nations (Glinyanova et al., 2021). Although there have been numerous calls for research on the CE concept in emerging markets (Zahra, et al., 2000; Bruton et al., 2008), the majority of the existing studies have been conducted in countries like China, India, South Africa, and Turkey, leaving many other emerging economies untested (Demirkan et al., 2019). According to Lee et al. (2018), business owners experience costly and disruptive employee turnover. On the other hand, according to Cloutier et al. (2015), employee retention is crucial for an organization's survival and growth. In order to help organizations minimise the negative effects of employee turnover, it would be helpful to increase our understanding of the relationship between CE and TI. This might also contribute to the field of turnover research. Rubenstein et al. (2018) conducted a thorough meta-analysis of employee turnover predictors, revising previous effect sizes and looking at numerous new antecedents, and found that OC, job participation, and JS are three of the strongest attitude predictors of employee turnover. In line with other research, we found that OC and JS both influence and negatively impact TI. Several studies have found that JS is associated with a variety of individually and organizationally relevant behaviours such as task performance, absenteeism, turnover, organizational citizenship behaviour, counterproductive work behaviour, and organizational profitability (Judge & Kammeyer-Mueller, 2012). Furthermore, an employee who is committed to the organization internalises the organizational objectives and acts appropriately to achieve these goals; nonetheless, these individuals' efforts are steps for the organization to achieve its goals and be successful (Imamoglu et al., 2019). The purpose of this paper is to investigate the influence of CE on the TI in the Egyptian petrochemicals sector, with both JS and OC acting as mediators.

Literature Review

The literature review embraces a brief summary regarding the Egyptian Petrochemical sector, middle managers, and the research variables. CE is considered as the independent variable, JS and OC are considered as the mediator variables and TI is considered as the dependent variable.

The Egyptian Petrochemical Sector

Egypt was included in the top 20 emerging economies list by the Emerging Markets Institute (Casanova & Miroux, 2022). The present global crisis hit both developed and emerging economies hard. The crisis has had a negative impact on Egypt in several ways, including energy and commodity prices, interest rates, the country's debt, growth rate projections, and currency volatility. The Egyptian government set up a programme with the International Monetary Fund (IMF) in December 2022 to reform its economy. One of the goals of this programme is to implement extensive structural reforms that will lessen the role of the state, ensure that all economic actors are on an equal footing, encourage growth driven by the private sector, and improve public sector transparency and governance (Georgieva, 2022). According to the General Authority for Investment and Free Zones (Mahinaz El Baz, 2019), the Egyptian Petrochemical sector, also known as a sector of the Egyptian oil and gas industry, is one of the most significant strategic sectors to the Egyptian economy and represents 3% of GDP and 12% of total industrial production. The research investigates the relation CE with reference to OC, JS, and TI within 8 Egyptian petrochemicals companies.

Middle Mangers

Middle managers contribute significantly to organizational performance by bringing value to both top management and lower-level employees through their perceptions, attitudes, and behaviours (Arcolu et al., 2020). Middle managers have been defined as employees who work two levels below the CEO and one level above the line employees and professionals. Because of their central placement, conceptual and technical skills are equally vital to these managers (Huy, 2001). The relevance of middle managers in CE presents itself in two ways: the necessity for middle-level managers to act entrepreneurially themselves, as well as the need for them to encourage and develop others' efforts to do so (Kuratko, Hornsby, and Bishop, 2005). The strategic roles of middle managers have been defined as part of the CE process (Wooldridge, 2008). The organizational centrality of middle-level managers facilitates their work as change agents and champions of innovation (Kuratko et al., 2005). Kuratko & Audretsch (2013) explored how middle managers can work as change agents and promote innovation from the centre of the organization, and a model of their behaviour can be explained as follows: endorse, refining, shepherding, and identification and acquisition.

Corporate Entrepreneurship (CE)

According to Vargas-Halabí et al. (2017), CE is a process by which an individual or group of individuals finds, pursues, and supports innovative opportunities within the framework of an already-existing organization in order to create a new organization, revitalise an existing one, or incorporate advancements in processes and products. According to Covin & Miles (1999), the term "CE" designates a specific, multi-faceted, and empirically verifiable group of organizational phenomena. These phenomena may coexist as distinct aspects of entrepreneurial activity inside a same organization; they are not intrinsically opposed (i.e., mutually exclusive) conceptions (Schindehutte et al., 2018). CE is the collective noun for entrepreneurship in established enterprises and may involve determinants (such as the external environment) behaviour, activities, processes, or practices. Corporate entrepreneurs are influenced by a variety of elements, including decision-making style, entrepreneurial attitude, and other personality traits such (e.g., risk taking, demand for achievement, and internal locus of control), according to Pirhadi & Alireza Feyzbakhsh (2021).

The CE research focuses on firm-level activities that originate or benefit from innovation and renewal within an existing organization (Olson et al., 2020). Some academics have investigated the many activities that organizations participate in to engage middle managers and boost their interest in CE (Hornsby et al., 2009). Middle managers contribute significantly to organizational performance by bringing value to both top management and lower-level employees through their perceptions, attitudes, and behaviours (Arcolu et al., 2020). They serve as a bridge between senior management and lower-level employees (Wooldridge et al. 2008). Because the middle management level combines senior management knowledge with operational knowledge, these layer managers should be close to the top layer managers in order to receive orders from the top layer, and they should also be close to the lower layer in order to understand how these orders are fulfilled and evaluated (Arcolu et al., 2020).

The lack of prior studies that examined the effect of CE on non-financial outcomes served as the stimulus for this research to respond to the calls to expand the body of knowledge and close that gap, particularly in the context of Egypt as an emerging nation. The research paper by Nam et al. (2022) gave a conceptually thorough explanation of how CE functions in an organization and shown that CE has a negative effect on TI in the area of the relation between CE and employee turnover. In a sample of significant New Zealand companies working in several sectors, Haar & White (2013) found that CE can directly affect a firm's employee retention. In relation to corporate entrepreneurs remaining with the organization, autonomy has an effect, according to Mathe's (2013) research paper. Additionally, a CE model that was put up and evaluated by Rutherford & Holt (2007) demonstrated a substantial relationship between perceptions of the entrepreneurial behaviour of the organization and TI, JS, and affective commitment. Finally,

Brazeal (1993) examined the relationship between important individual and organizational elements such structure and reward system and a set of outcome variables including specific work attitudes (JS, OC) and the likelihood of leaving the organization.

Previous CE studies aimed to investigate the presence and effect of CE on JS and/ or OC. Giannikis & Nikandrou (2013) found that CE positively affects employee level of JS and OC among 424 employees in the Greek manufacturing industry. According to Zehair et al. (2012), innovativeness is positively connected to affective and continuous commitment, while risk taking is positively related to continuous commitment. Aca et al. (2012) showed that the relation between the intrapreneurial dimensions (innovation and risk-taking) had a positive and meaningful effect on employee satisfaction, whereas the other dimensions had no effect. Wood et al. (2008) showed that CE is positively linked to affective commitment. According to the research paper developed by Bulut & Alpkan (2006), the factors of an entrepreneurial climate contribute positively to the OC and JS of employees. 523 managers were examined in the research paper developed by Kuratko, Hornsby, & Bishop (2005), and the findings of this research suggested that work discretion and rewards/reinforcement (CE organizational factors) lead to higher perceived JS. Adonisi (2003) surveyed 333 South Africans from four different sectors, and the results showed that work discretion, work improvement, and rewards/reinforcement sub-scales had significant positive associations with extrinsic JS. Besides Significant positive associations between the CE total scale and the extrinsic JS subscale were seen.

According to Urbano et al. (2022), research has mostly concentrated on the financial consequences of entrepreneurial activity (which may be easier to evaluate), and so non-financial goals of CE projects must be studied. Urbano et al. (2022) suggested researching the types of non-financial consequences that result from successfully engaging in CE, as well as the extent to which successfully engaging in CE has an effect on other non-financial consequences. Giving more attention to the human resources perspective, which is a term that has recently appeared as a keyword frequently used in CE research in the recent period (2012-2017) (Castriotta et al., 2021). Furthermore, emerging countries' regional contributions to CE research were comparatively smaller in compared to other developed countries (Glinyanova et al., 2021).

Job Satisfaction (JS)

According to Judge et al. (2017), JS is described as an overall, evaluative assessment of one's job that might range from positive to negative. Based on an assessment of the job's attributes, it is also seen as positive sentiments about one's employment (Robbins & Judge 2013). Additionally, Armstrong (2006) described JS as the attitudes and sentiments that employees have about their jobs; favourable and positive attitudes about work reflect JS, whereas negative and unfavorable attitudes indicate a lack of it. The research takes the position expressed by Judge et al. (2017). Has been the single most studied topic in organizational strategy. Strengthening JS and lowering turnover intent requires an understanding of what employees now anticipate and want from their jobs. In the realm of attitudes towards jobs (Judge et al., 2017). (Skelton et al., 2020) JS is still applicable to organizations. Academics proposed that cultural disparities in a globalized economy and individual demands and jobs are the reasons why JS is still complex (Pan, 2015). According to research, JS is still essential for effective human resource management (Hauff et al., 2015). To avoid the negative effects of dissatisfaction, such as poor organizational performance, decreased productivity, and employee turnover, executives and supervisors should develop and implement policies that promote employee satisfaction (Ali, 2016). In order to boost productivity, production, and employee retention, managers should work to increase employee satisfaction (Skelton et al., 2020). Gonzalez et al. (2015) reported that overall satisfaction and JS facets significantly influence the firms' performance. The relationship between JS and organizational performance has drawn a lot of attention and discussion, and organizations use JS as one of the measures when they review their performances (Pang & Lu, 2018).

Organizational Commitment (OC)

OC is described as an employee's desire to be a part of an organization and contribute to the attainment of that entity's goals (Sani, 2013). One of the top ten research areas in organizational behaviour and applied psychology is organizational cognition (Bernerth & Aguinis 2016; Kim et al., 2017). It is one of the most critical and sensitive attitudes that employees acquire towards their organizations (Guzeller & Celiker 2020). Furthermore, given the various conceptualizations, it is not surprising that a larger theoretical underpinning for OC is still being sought (Mueller et al., 2020). The higher the level of employee OC, the higher the level of business performance (Ahmad & Raja, 2021). OC is a frequently debated component of organizational behaviour, and various research showed that it has positive results for the organization (Yaqub et al., 2021). An enterprise is accountable for recognising that its employees are unique for business achievements, which in turn increases employee commitment to the organization and so increases organizational performance (Meyer, 2013). In their research paper, Imamoglu et al. (2019) came to the conclusion that employees who are dedicated to their organizations display behaviour that is advantageous to the organization. In conclusion, the body of literature on organizational citizenship behaviour (OC) demonstrates a consistent correlation with various attitudinal and behavioural constructs that are associated with OC. These constructs include well-being, change-supportive intentions, task performance, organizational productivity, and voluntary TI (Masud & Daud 2018; Rubenstein et al. 2018). Although many academics are interested in the studies of OC as an outcome, there is a dearth of research on how OC as an attitudinal outcome could arise from CE. Additionally, there is a relative scarcity of OC research in non-Western nations in comparison to Western countries (Bodjrenou et al. 2019).

Turnover Intention

These days, keeping the finest employees on staff is essential to an organization's success, making employee retention a major concern for HR managers and organizations. In the fierce global rivalry of today, turnover is a major issue for organizations (Alias et al. 2018). Employee turnover is an organizational phenomenon that has piqued the long-term and vital attention of managers and academics for more than a century (Hom, et al., 2019). The voluntary separation of employees from their employers is known as employee turnover (Hom & Griffeth, 1995).

According to Belete (2018), turnover can be classified as either voluntary or involuntary. In order to accurately estimate the relationship between turnover and other factors in terms of all leavers, it is important to distinguish between voluntary and involuntary turnover. It is mentioned that voluntary turnover can be defined as the end of an employee's membership in an organization. (Morrell & colleagues, 2001) like resignations. According to Price (1977), "involuntary turnover" can be defined as "movement across the membership boundary of an organization that is not initiated by the employee." Functional and dysfunctional turnover are the two categories into which Taylor (1998) divides voluntary turnover. Subpar performers' resignations are referred to as functional turnovers, while the departure of high-achieving and successful performers is known as dysfunctional turnovers. Functional turnover can be classified as avoidable turnover (due to lower pay, unfavourable working conditions, etc.) or unavoidable turnover. This research paper will concentrate on turnover that is avoidable, dysfunctional, and voluntary. Employers place a high value on keeping valued, talented, and competent employees since they are critical to the performance and success of an organization (Al-Mamun & Hasan, 2017).

According to studies (Al-Emadi et al., 2015; Rubenstein et al., 2018; Nouri & Parker, 2020; Tett & Meyer, 1993), JS and OC are interconnected and are both crucial attitudinal drivers of TI. According to Hom et al. (2019), JS and OC have been extensively researched as turnover predictors. According to Rubenstein et al. (2018), there is a near-identical relationship between turnover, commitment, and satisfaction. According to a meta-analysis conducted in the US by Özkan et al. (2020), the strength of the effects of JS and organi-

zational citizenship behaviour (OC) are about equal, but the power of empowerment is lower. This study aimed to investigate the direction and magnitude of the relationships between TI and its primary antecedents. A moderate negative effect on TI is caused by empowerment, while a big negative effect is caused by JS and OC (Özkan et al., 2020). However, there are a small number of studies that have found the opposite to be true. For example, Setyaningrum and Cahyono (2021) found that JS and OC positively affected TI. Dewi & Nurhayati (2021) and Tran et.al. (2020) found no effect of JS on TI. Rageb et.el. (2013) found no significant relation among OC and TI. Chan & Ao's (2019) and Mensah & Kosi's (2016) research papers both found that OC had a positively correlated effect on TI.

In spite of the numerous studies on the relationships between JS, OC, and TI, there have not been nearly as many attempts to determine if JS and OC might mediate the effect of a CE workplace on employee TI. Therefore, the purpose of this research is to add to the existing body of knowledge by investigating the role of JS and OC as intermediaries in the relation between CE and TI in the literature. In light of this literature, it is possible to develop a conceptual framework and a set of research hypotheses.

Conceptual Framework and Research Hypotheses

The main aim of this paper is to investigate the effect of CE on the TI with mediation role of both JS and OC in Egyptian petrochemicals sector. The operational definition of a variable is the specific way in which it is measured in the research. (Sekaran and Bougie, 2016), The variable "CE" is measured by CE Assessment Instrument (CEAI) which consists of 5 dimensions (Rewards/Reinforcement, Work Discretion, Management Support, Organizational Boundaries and Time Availability) developed by Kuratko et.al., 2013, the variable "Job satisfaction" is measured by 4 items (Cammann et al., 1979, Cammann et al., 1983) and modified by one question from scale used by Hanaysha & Tahir (2016), The variable "OC" is measured by 15 items (Mowday et al., 1979) and the variable "Turnover Intention" is measured by 6 items (Roodt.,2004).

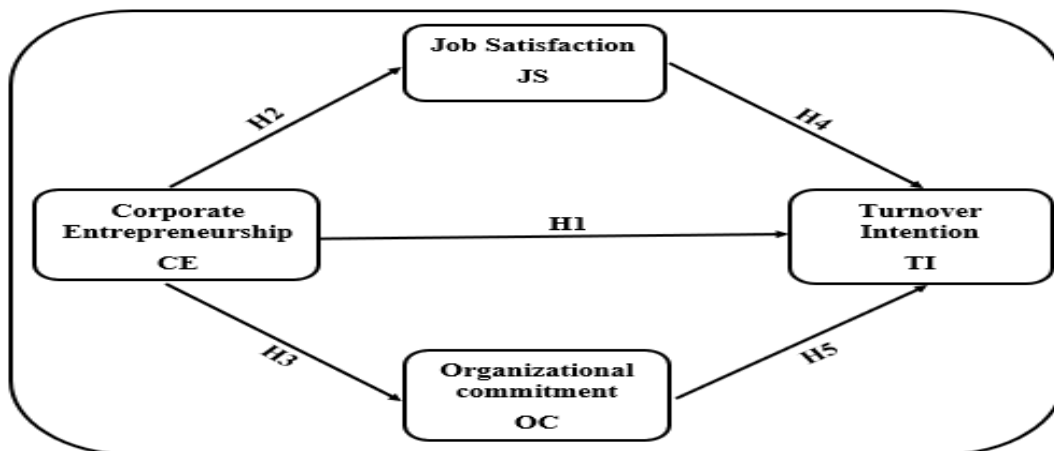


Figure 1-Conceptual Framework

On the basis of the conceptual framework, the hypothesized model, and a review of relevant studies and theories, the following research paper hypotheses were developed:

- H1: CE has an effect on TI in the Egyptian Petrochemicals Sector.
- H2: CE has an effect on JS in the Egyptian Petrochemicals Sector.
- H3: CE has an effect on OC in the Egyptian Petrochemicals Sector.
- H4: JS has an effect on TI in the Egyptian Petrochemicals Sector.
- H5: OC has an effect on TI in the Egyptian Petrochemicals Sector.
- H6: JS mediates the relation among CE and TI in the Egyptian Petrochemicals Sector.
- H7: OC mediates the relation among CE and TI in the Egyptian Petrochemicals Sector.

Research questions could be stated as follows:

- 1- What is the effect of CE on TI in the Egyptian Petrochemicals Sector?
- 2- What is the effect of CE on JS in the Egyptian Petrochemicals Sector?
- 3- What is the effect of CE on OC in the Egyptian Petrochemicals Sector?
- 4- What is the effect of JS on TI in the Egyptian Petrochemicals Sector?
- 5- What is the effect of OC on TI in the Egyptian Petrochemicals Sector?
- 6- Does JS mediate the relation among CE and TI in the Egyptian Petrochemicals Sector?
- 7- Does OC mediate the relation among CE and TI in the Egyptian Petrochemicals Sector?

Research Methodology

The target population in this research is referred to the middle managers that are working in petrochemicals companies and have an education degree of diploma or higher with total number 2373 employees. The sample size was calculated at a confidence level of 95% and a confidence interval of 5 percent by using an online sample calculator. It was found that the accepted sample size for this research paper is equivalent to 331 employees. Human resource department in these companies are the responsible and eligible to send the questionnaire to the middle managers. The research questionnaire was given to 980 people, and 469 of them returned it, accounting for 47.9% percent of the total. 42 questionnaires, accounting for 4.3% of the total, were incomplete, ineligible, or refused, and 511 (52.1% percent) were not contacted. There were 427 approved responses, resulting in a response rate of 43.6% percent, which is relatively good given the nature of the research paper. The structural equation modelling (SEM) software package was utilized in this research paper to investigate the interrelations among the constructs of the hypothesized model. Testing Hypotheses After completing a confirmatory factor analysis, the structural model is valued by evaluating the hypotheses that underpin the research model.

Results and Findings

Composite Reliability (CR) is utilized to measure the construct's measurement model reliability. CR is a more revealing measure of overall reliability and it determines the consistency of the construct itself. (Hair et al., 2019). The research result shows the CR of Management Support = 0.976, Work discretion =0.818, Rewards /Reinforcement =0.878, Time availability = 0.912, Organizational boundaries = 0.787, JS =0.828, OC = 0.777 and TI= 0.941). Consequently, it is evident that every construct in the measurement model is reliable.

According to Hair et al., (2019) The Average Variances Extracted (AVE) should always be greater than 0.50. Overall, the (AVE) of the constructs (Management Support = 0.706, Work discretion =0.596, Rewards /Reinforcement =0.591, Time availability = 0.637, Organizational boundaries = 0.531, JS =0.562, OC = 0.547 and TI= 0.727) are more than 0.500. Overall, the measurement results are satisfactory indicating that the structural model may be evaluated.

Measurement Model Summary: The 8 factors underwent CFA using the AMOS programme. DF was 2045 (it should be more than 0), c^2/DF has a value of 2.013, that is less than 3.0 (it should be less than or equal 3.0). The RMSEA was .046 (it should be less than 0.08). The TLI index was .911 which is very close to 1.0 (a value of 1.0 indicates perfect fit). The CFI was .915. All CFA indices are very close to a value of 1.0, indicating that the measurement models provide good support for the factor structure determined through the CFA

Structural Model

Structural model summary: The results of structural' model using the AMOS software, shows that DF was 2066 (it should be more than 0), c^2/DF has a value of 2.099, that is less than 3.0 (it should be less than

or equal 3.0). The RMSEA was .048 (it should be less than 0.08). The TLI index was .904 which is very close to 1.0 (a value of 1.0 indicates perfect fit). The CFI was .907. All indices are close to a value of 1.0 in CFA, indicating that the measurement models provide good support for the factor structure determined through the CFA.

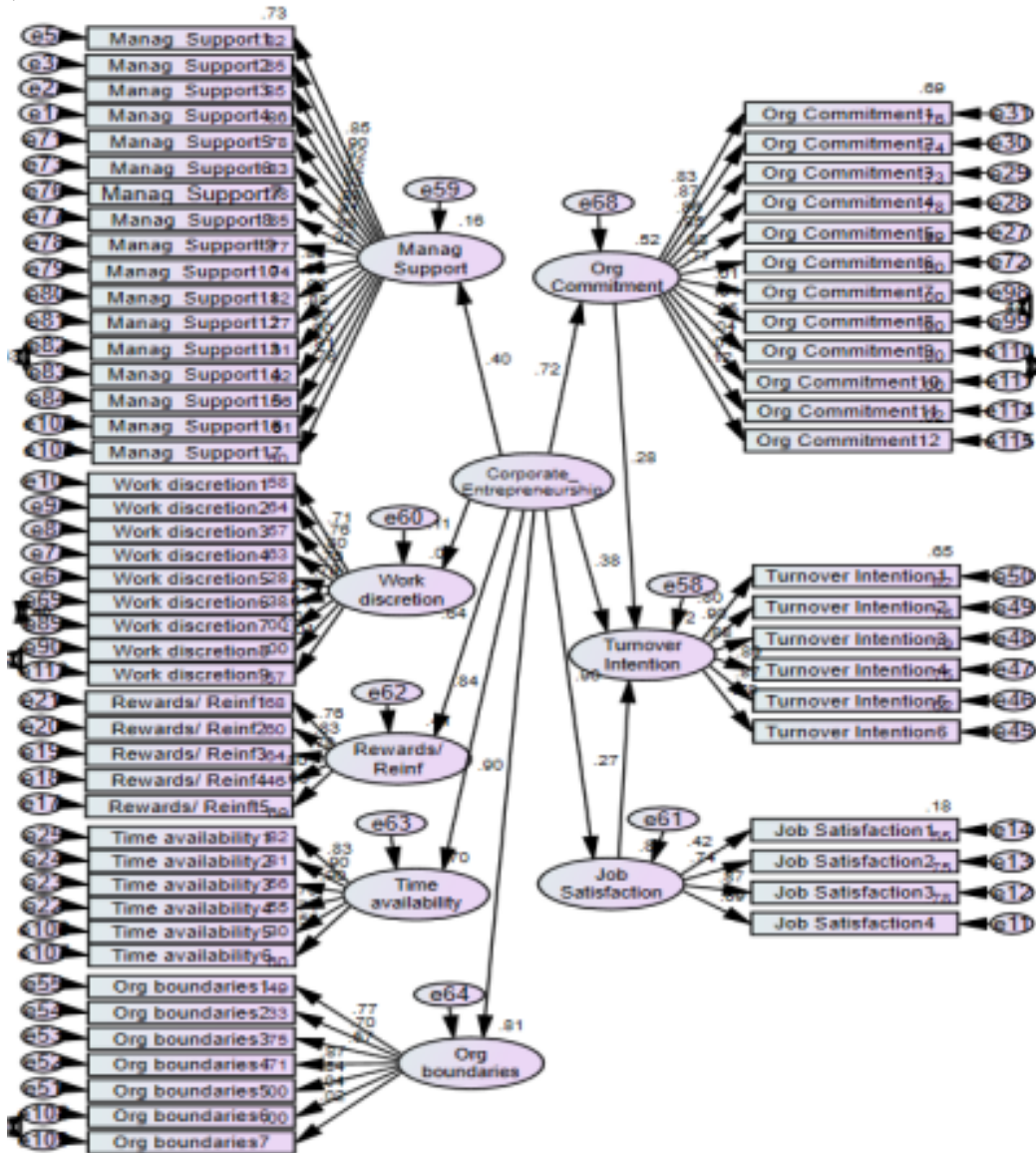


Figure (2) Structural Model

Discussions

The results and testing of the hypotheses showed that in the Egyptian Petrochemicals Sector, CE (CE) had an effect on JS and OC and that it had a substantial effect on TI, the dependent variable. On TI, JS has an effect. On TI, OC has an effect. Last but not least, in the Egyptian Petrochemicals Sector, OC mediates the relationship between CE and TI while JS mediates the relationship between CE and TI in the following ways:

The first objective is to investigate the relation among CE and TI and H_1 : CE has an effect on TI in the Egyptian Petrochemicals Sector. The findings reveal that CE has a substantial direct association with TI. ($\beta = 0.376$, CR (Critical Ratio) = 10.829, CR > 1.96, $p = 0.000$, $p < 0.05$). Previous studies in the CE literature

(e.g., Nam et al., 2022; Haar and White, 2013; Mathe, 2013; Brazeal, 1993; Rutherford and Holt, 2007) that attempted to tie the CE to TI are being continued in this work. The results of this study are largely in contrast to those of previous studies, which means that there is a challenge in the context of the Egyptian petrochemicals industry. While companies should support a more entrepreneurial internal working environment, middle managers, who are the game changers in CE, are more likely to consider and plan to leave their jobs. The majority of middle managers in the context of Egyptian petrochemical companies perceive the working internal environment regarding to the CE as follows. This finding is in an attempt to determine reasons for the unexpected effect of middle managers' perceptions-the bridge between top management and lower-level employees-of the internal organizational factors of CE on their TI:

- 1- There is encouragement from the top managers for the entrepreneurial activities, but this is not linked to the promotion and their career development.
- 2- They do not have much autonomy in their decisions regarding to their project and they don't perceive the support from top management level to facilitate and support their entrepreneurial behaviour and to get the new idea or project achieved. Besides, the financial support from organization is not adequate to the innovative projects and ideas.
- 3- The organizations don't have the culture of failure tolerance.
- 4- There is support from top managers to get the work done and recognition for performance when especially good, but the recognition has no clear link with the rewarding system.
- 5- There is no clear perception for the presence of time needed to complete the workload and to achieve and to pursue innovations.
- 6- The organizational structure and working rules and procedures are not flexible enough to entrepreneurial activities.

Based on the research findings pertaining to the recruitment process in the petrochemical industry, it has been observed that organizations lack the flexibility to hire the necessary number and quality of employees, thereby creating a void in the middle managers role for the day-to-day workload and performance monitoring of front-line staff. This results in significant challenges for middle managers (Burgelman, 1983; Hornsby et al., 2002), and theses setting in the context of this research paper contributes to raising middle managers' total time in the workplace.

The second objective is to test the relation among CE and JS. and H_2 : CE has an effect on JS in the Egyptian Petrochemicals Sector. The findings reveal that CE has a significant effect on JS. ($\beta = 0.901$, CR (Critical Ratio) = 8.854, $CR > 1.96$, $p = 0.000$, $p < 0.05$), This finding is consistent with previous research (e.g., Adonisi, 2003; Bulut & Alpkhan, 2006; Kuratko, Hornsby & Bishop, 2005; Ağca et al., 2012; Giannikis & Nikandrou, 2013; Rutherford & Holt, 2007) who supported the relation among CE and JS.

The third objective is to test the relation among CE and OC. and H_3 : CE has an effect on OC in the Egyptian Petrochemicals Sector. The findings reveal that CE has a significant effect on OC. ($\beta = 0.719$, CR (Critical Ratio) = 17.524, $CR > 1.96$, $p = 0.000$, $p < 0.05$), This finding is consistent with previous research Rutherford and Holt (2007), Bulut and Alpkhan (2006), and Giannikis and Nikandrou, (2013). The literature of CE has much less work is available on the relations among CE and OC (Rutherford and Holt 2007). An entrepreneurial environment resulted in higher OC among all levels of employees, according to research by Mullins et al. (2001). Additionally, research shows that perceptions of the organization's innovativeness, proactiveness, and risk-taking have a positive relation to OC (Giannikis & Nikandrou, 2013).

The fourth objective is to examine the relation among JS and TI, and H_4 : JS has an effect on TI in the Egyptian Petrochemicals Sector. The findings show that in Egyptian Petrochemicals Sector, JS has a significant direct relation with TI. ($\beta = 0.269$, CR (Critical Ratio) = 10722, $CR > 1.96$, $p = 0.021$, $p < 0.05$). The results

are in line with previous studies in the TI literature as the JS has a significant influence on TI (Esra et al., 2013; Rubenstein et al., 2018; Özkan et al., 2020; Al Sabei et al., 2020). On the other hand, the study revealed that in the context of our sample, the middle managers JS contradictory leads to increase their TI. The researched middle managers sample profile illustrates that (46.5%) pursue higher education degrees after completed their bachelor's degree either post graduate diploma (5.9%), Master (34%), and Doctorate (6.6%) most of them are males (92%), working in technical jobs (74.7%) and (49.9%) are of ages ranging from 35 to 45 years and (26.9%) from 25 to 35 years. Due to the global crisis, Egypt is being impacted by foreign variables that also affect Egyptian employees. These factors include a high rate of inflation, currency depreciation, and a reduction in the state's involvement in state-owned enterprises, three of which are the subject of this research paper. In an effort to maintain their standard of living, employees are searching for alternate jobs. Middle management expertise is sought after by oil and gas companies in the Arabian Gulf region and in African nations (such as Saudi Arabia, the United Arab Emirates, Oman, Mozambique, and Angola) through higher-paying jobs. When alternative jobs are compared to what could be (present jobs), the number of jobs may increase if the alternative jobs are superior to the current ones. According to Faria et al. (2015), when employees are satisfied and have high perceptions of the available alternative jobs, they will nevertheless be more likely to quit their jobs than when employees have low perceptions of the available alternative jobs. Additionally, the research paper differs from a small number of studies (Dewi and Nurhayati 2021; Tran et al., 2020) that claim JS has no influence on TI. Our findings concur with those of Setyaningrum and Cahyono's research paper from 2021, which demonstrated that JS has a positive and significant effect on TI. We also found partial support for our findings from Wang et al.'s research paper from 2016, which found a positive but not statistically significant association between JS and TI.

The fifth objective is to examine the relation among OC and TI, and H_5 : OC has an effect on TI in the Egyptian Petrochemicals Sector. The findings show that in Egyptian Petrochemicals Sector., OC has a significant direct relation with TI. ($\beta = 0.275$ CR (Critical Ratio) = 6.104, $CR > 1.96$, $p = 0.021$, $p < 0.05$). The results are in line with previous studies indicated that OC has an effect on the TI literature (Rubenstein et al., 2018; Al-Jabari and Ghazzawi, 2019). However, the findings here contradict previous studies. Our research paper is supported by and in line with some studies that state positive effect of OC towards TI (Chan & Ao, 2019; Setyaningrum & Cahyono, 2021; Mensah & Kosi, 2016), and the research study by Rageb et al. (2013) in Egyptian context revealed the significant relationship between OC and TI but not the opposite. This can also be explained in terms of the middle managers' roles in the Egyptian petrochemical industries, according to research. According to Faria et al. (2015), employees' perceptions of job chances in the labour market influence their decision to stay or go.

The sixth objective is to investigate the mediation role of JS among CE and TI. and H_6 : JS mediates the relation among CE and TI in the Egyptian Petrochemicals Sector. The results indicate that partial mediation effect of the JS among the relation of CE and TI in the Egyptian Petrochemicals Sector. ($P = 0.005$, $P < 0.05$)

The seventh objective is to investigate the mediation role of OC among CE and TI. and H_7 : OC mediates the relation among CE and TI in the Egyptian Petrochemicals Sector. The results indicate that partial mediation effect of the OC among the relation of CE and TI in the Egyptian Petrochemicals Sector. ($P = 0.002$, $P < 0.05$)

Authors Contributions

This study fulfilled the research gaps in literature and contributed to the body of literature. In the Egyptian context, there is a shortage of research on turnover, JS and OC in regards with perceived CE environment specifically in the petrochemicals sector where there is a great need to retain of skilled employees, keep the level of employee's JS and OC acceptable.

According to the analysis, At the 5% significance threshold, all are considered significant. The estimated structural model corroborated the seven hypotheses, as CE construct explained 81.2 % of JS variance ($R^2 = 0.812$), and CE construct explained 51.7 % of OC variance ($R^2 = 0.517$), Besides, CE through JS and OC explained 71.6 % of TI variance ($R^2 = 0.716$).

This study highlights the significance of CE and provides managers in petrochemical companies with empirical support to have a clear view about the benefits of adopting CE which enhances the middle managers' JS and organizational commitment while it contributes to increase the level of their tendency to leave. Besides, the research paper supports the decision makers in Egyptian oil and gas industry through understanding more about their middle managers in order to retain these crucial and talented employees. Petrochemical organizations in Egypt, should utilize the study results to improve the internal policies while engaging in CE and to link its outcomes to middle manager career development, rewarding system and recognition. Furthermore, to allow much autonomy for them.

Research Limitations

The degree to which the conclusions may be extrapolated to a larger population, cases, or situations is referred to as external validity. (Saunders et al., 2019) As a result, the researcher cannot presume that the findings apply to other situations, so the study excludes:

First, this research paper's sample is limited to one country (Egypt) and solely Egyptian Petrochemicals Sector; as a result, the conclusions should be regarded with caution. Despite the fact that the research environment is quite specialized, the findings are thought to be applicable to various sectors, industries and countries. Second, cross-sectional data were used in this research paper to examine the relation among CE and TI, as well as the mediating role of JS and OC in the Egyptian Petrochemicals Sector. As a result, the study only provides a snapshot of a single point in time, implying that the research is only meaningful provided external variables such as government legislation, the economic cycle, the competitive climate, and so on are unaffected. A longitudinal analysis for the relation among CE and TI is needed because existing measures for the relation among CE and TI are flawed because they do not take into account the effects of time on stakeholders' perceptions. Because of the short time span for data collection, the number of people who could participate was limited.

Future Research Suggestions

The following areas for further investigation are suggested based on the findings of this research paper: First, a research paper should be undertaken utilizing a qualitative technique or a mixed strategy using both qualitative and quantitative approaches in order to acquire CE on TI views and expectations. Second, a longitudinal study should be done to examine the long-term relation among CE and TI in the Egyptian Petrochemicals Sector, with the mediating role of JS. Third, because the sample was limited to only Egyptian Petrochemicals Sector, a sample derived from other sectors, industries would improve the generalizability of the findings in the future. This would also aid in comparing the relation among CE and TI, as well as the role of JS and OC in mediating the relation among CE and TI, in other sectors and industries.

References

- Adonisi, M. P. (2003). The relationship between corporate entrepreneurship, market orientation, organizational flexibility and job satisfaction. *Unpublished doctoral dissertation*, University of Pretoria, Pretoria. <https://repository.up.ac.za/bitstream/handle/2263/29788/thesis.pdf?sequence=1>
- Ağca, Veysel & Topal, Yusuf & Kaya, Harun. (2012). Linking intrapreneurship activities to multidimensional firm performance in Turkish manufacturing firms: An empirical study. *International Entrepreneurship and Management Journal*, 8. <http://dx.doi.org/10.1007/s11365-009-0132-5>.
- Ahmad, M. R., & Raja, R. (2021). Employee Job Satisfaction and Business Performance: The Mediating Role of Organizational Commitment. *Vision*, 25(2), 168-179. <https://doi.org/10.1177/0972262920985949>.
- Al-Sabei, S. D., Labrague, L. J., Ross, A. M., Karkada, S., Albashayreh, A., Al-Mansoori, F. & Al Hashimi, N. (2020). Nursing work environment, turnover intention, job burnout, and quality of care: The moderating role of job satisfaction. *National Library of Medicine*, 52 (1), 95-104. <https://doi.org/10.1111/jnu.12528>
- Al-Emadi, A.A.Q., Schwabenland, C. & Wei, Q. (2015). The vital role of employee retention in human resource management: A literature review. *IUP Journal of Organizational Behavior*, 14 (3), 7-33. <https://doi.org/10.1108/hrmid-11-2019-0272>
- Ali, W. (2016), "Understanding the concept of job satisfaction, measurements, theories and its significance in the recent organizational environment: Theoretical framework", *Archives of Business Research*, Vol. 4, No. 1, pp. 100-111, <https://doi.org/10.14738/abr.41.1735>.
- Al-Jabari, B. & Ghazzawi, I. (2019). Organizational commitment: A review of the conceptual and empirical literature and a research agenda. *International Leadership Journal*, 11 (1), 78-119. https://www.researchgate.net/publication/331635975_Organizational_Commitment_A_Review_of_the_Conceptual_and_Empirical_Literature_and_a_Research_Agenda
- Arıcıoğlu, M.A., Gökce, Ş., Gülnar, N. (2020). Mid-Level Managers in Terms of Strategic Role and Functions. In: Dincer, H., Yüksel, S. (eds) *Strategic Outlook for Innovative Work Behaviours: Contributions to Management Science*. Springer, Cham. https://doi.org/10.1007/978-3-030-50131-0_19.
- Armstrong, M. (2006). *A Handbook of Human resource Management Practice*, 10th Ed., Kogan Page Publishing, London, p.264. https://www.academia.edu/11376756/Handbook_of_Human_Resource_Management_Practice_10th
- Belete, A. K. (2018). Turnover intention influencing factors of employees: an empirical work review. *Journal of Entrepreneurship & Organization Management*, 7(3), 1-7. <http://dx.doi.org/10.4172/2169-026X.1000253>
- Bernerth, J. B. & Aguinis, H. (2016). A critical review and best-practice recommendations for control variable usage. *Personnel Psychology*, 69 (1), 229-283. <https://doi.org/10.1111/peps.12103>
- Bodjrenou, K. , Xu, M. & Bomboma, K. (2019) Antecedents of Organizational Commitment: A Review of Personal and Organizational Factors. *Open Journal of Social Sciences*, 7, 276-289. <http://dx.doi.org/10.4236/jss.2019.75024>
- Brazeal, Deborah Virginia. (1993). "Organizing for internally developed corporate ventures," *Journal of Business Venturing*, Elsevier, Vol. 8(1), pp. 75-90, January [https://doi.org/10.1016/0883-9026\(93\)90012-T](https://doi.org/10.1016/0883-9026(93)90012-T).
- Bruton, Garry; Ahlstrom, David & Obloj, Krzysztof. (2008). Entrepreneurship in emerging economies: Where are we today and where should the research go in the future?, *Entrepreneurship: Theory and Practice*. 32.1-14. <https://dx.doi.org/10.1111/j.1540-6520.2007.00213.x>

- Bulatov, A. (2023). World and global economy, global business environment, and international business: Nature, formation, and structure. In: Bulatov, A. (eds) *World Economy and International Business: Contributions to Economics*. Springer, Cham. https://doi.org/10.1007/978-3-031-20328-2_1.
- Bulut, Ç. & Alpkan, L. (2006). Behavioral consequences of an entrepreneurial climate within large organizations: An integrative Proposed model. *South East European Journal of Economics & Business* (1840118X), (2). https://www.academia.edu/189934/Behavioral_Consequences_of_an_Entrepreneurial_Climate_within_Large_Organizations_An_Integrative_Proposed_Model
- Burgelman, R. A. (1983) Corporate entrepreneurship and strategic management: Insights from a Process Study. *Management Science*, 29, 1349-1364. <https://doi.org/10.1287/mnsc.29.12.1349>
- C. A. Al Mamun & M. N. Hasan, (2017). "Factors affecting employee turnover and sound retention strategies in business organization: A conceptual view," *Probl. Perspect. Manag.*, Vol. 15, No. 1, pp. 63-71, [http://dx.doi.org/10.21511/ppm.15\(1\).2017.06](http://dx.doi.org/10.21511/ppm.15(1).2017.06).
- Cammann, C., Fichman, M., Jenkins, D. & Klesh, J. (1983). Assessing the attitudes and perceptions of organizational members. In S. Seashore, E. Lawler, P. Mirvis, & C. Cammann (Eds.), *Assessing organizational change: A guide to methods, measures and practices*. New York. John Wiley. <https://www.scrip.org/%28S%28351jmbntvnsjt1aadkozje%29%29/reference/referencespapers.aspx?referenceid=2563723>
- Cammann, C., Fichman, M., Jenkins, D., Klesh, J. (1979). The Michigan organizational assessment questionnaire. *Unpublished manuscript*. University of Michigan, Ann Arbor. <https://paulspecter.com/assessments/assessment-archive/job-attitudes/michigan-organizational-assessment-questionnaire-moaq/>.
- Casanova, L. and Miroux, A. (2022), *Emerging Market Multinationals Report 2022: Reinventing Global Value Chains*, Cornell University, New York, NY, available at: <https://ecommons.cornell.edu/handle/1813/66953> (accessed February 9, 2023).
- Castriotta, M., Loi, M., Marku, E. et al. (2021). Disentangling the corporate entrepreneurship construct: conceptualizing through co-words. *Scientometrics*, 126, pp. 2821-2863 <https://doi.org/10.1007/s11192-020-03846-2>
- Chan, S. H. J. & Chi Tat Darian Ao, C. T. (2019), "The mediating effects of job satisfaction and organizational commitment on turnover intention, in the relationships between pay satisfaction and work-family conflict of casino employees", *Journal of Quality Assurance in Hospitality & Tourism*, Vol. 20, No. 2, pp. 206-229, <https://doi.org/10.1080/1528008X.2018.1512937>.
- Cloutier, O., Felusiak, L., Hill, C., and Pemberton-Jones, E. J. (2015). The importance of developing strategies for employee retention. *Journal of Leadership, Accountability & Ethics*, 12 (2). http://m.www.na-businesspress.com/JLAE/Pemberton-JonesEJ_Web12_2_.pdf
- Covin, J. G. & Miles, M. P. (1999). Corporate entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship: Theory and Practice*, 23(3), 47-63. <https://doi.org/10.1177/104225879902300304>
- Demirkan, I., Yang, Q. & Jiang, C. X. (2019), Corporate entrepreneurship of emerging market firms: current research and future directions", *New England Journal of Entrepreneurship*, Vol. 22, No. 1, pp. 5-30. <https://doi.org/10.1108/neje-04-2019-0024>.
- Elshahn, Z. & Siedlok, F. (2021). "Can we build it? Yes, we can!" complexities of resource re-deployment to fight pandemic. *Industrial Marketing Management*, 93, 191-207. <https://doi.org/10.1016/j.indmarman.2021.01.013>
- Esra Alniaçik, Ümit Alniaçik, Serhat Erat & Kültigin Akçin, (2013). Does Person-organization Fit Moderate the Effects of Affective Commitment and Job Satisfaction on Turnover Intentions?, *Procedia -Social and Behavioral Sciences*, Vol. 99, pp. 274-281, ISSN 1877-0428, <https://doi.org/10.1016/j.sbspro.2013.10.495>.

- Faria Rabbi; Fateme Kimiya ; Muhammad Farrukh. (2015). *The Impact of Job Satisfaction, Perceived Availability of Job Alternative on Turnover Intention*, Institute of Graduate Studies, SEGi University, Kota Damansara, Malaysia, ISSN: 2395-0463 Vol. 1, No. 11. https://www.researchgate.net/publication/345500689_The_impact_of_job_satisfaction_perceived_availability_of_job_alternative_on_turnover_intention
- Finkle, T. (2012). Finkle, T. (2012). Corporate entrepreneurship and innovation in Silicon Valley: The case of Google Inc. *Entrepreneurship: Theory and Practice*, 36 (4), 863-884. <https://doi.org/10.1111/j.1540-6520.2010.00434.x>.
- Giannikis, S. & Nikandrou, I. (2013). The impact of corporate entrepreneurship and high-performance work systems on employees' job attitudes: empirical evidence from Greece during the economic downturn. *International Journal of Human Resource Management*, 24 (19), 3644-3666. <https://doi.org/10.1080/09585192.2013.778316>.
- Glinyanova, M., Bouncken, R. B., Tiberius, V. et al. (2021). Five decades of corporate entrepreneurship research: measuring and mapping the field. *International Entrep Management Journal*. <https://doi.org/10.1007/s11365-020-00711-9>
- Gonzalez, S. M., Bulchand-Gidumal, J. & López-Valcárcel, B. G. (2015). New evidence of the relationship between employee satisfaction and firm economic performance. *Personnel Review*, 44 (6), 906-929. <https://doi.org/10.1108/PR-01-2014-0023>
- Guzeller, C. O. & Celiker, N. (2020), "Examining the relationship between organizational commitment and turnover intention via a meta-analysis", *International Journal of Culture, Tourism and Hospitality Research*, Vol. 14, No. 1, pp. 102-120. <http://dx.doi.org/10.1108/IJCTHR-05-2019-0094>
- Hair, J., C. Black, W., J. Babin, B. & E. Anderson, R. (2019). *Multivariate Data Analysis*. 8th ed. England: Pearson Prentice. <https://books.google.com.eg/books?id=PONXEEAAAQBAJ&printsec=frontcover&hl=ar#v=onepage&q&f=false>
- Hanaysha, J. & Tahir, P. R. (2016). Examining the effects of employee empowerment, teamwork and employee training on job satisfaction. *Procedia-Social and Behavioral Science*, 272-282. <https://doi.org/10.1016/j.sbspro.2016.05.016>.
- Hauff, S., Richter, N. F. and Tressin, T. (2015), "Situational job characteristics and job satisfaction: the moderating role of national culture", *International Business Review*, Vol. 24, No. 4, pp. 710-723. <https://doi.org/10.1016/j.ibusrev.2015.01.003>.
- Hom, P. W. & Griffeth, R. W. (1995). *Employee Turnover*. Cincinnati, OH: South-Western College Publishing. <https://www.abebooks.com/9780538808736/Employee-Turnover-Rodger-Griffeth-Peter-053880873X/plp>
- Hom, P.W., Allen, D. G. & Griffeth, R.W. (2019). *Employee Retention and Turnover: Why Employees Stay or Leave*. Routledge. <https://doi.org/10.4324/9781315145587>
- Hornsby, J. S., Kuratko, D. F., Shepherd, D. A. & Bott, J. P. (2009). Managers' corporate entrepreneurial actions: Examining perception and position. *Journal of Business Venturing*, 24 (3), 236-247. <http://dx.doi.org/10.1016/j.jbusvent.2008.03.002> .
- Hornsby, J. S., Kuratko, D. F. & Zahra, S. A. (2002). Middle managers' perception of the internal environment for corporate entrepreneurship: Assessing a measurement scale. *Journal of Business Venturing*, 17 (3), 253-273. [https://doi.org/10.1016/S0883-9026\(00\)00059-8](https://doi.org/10.1016/S0883-9026(00)00059-8)
- Huy, Q. (2001). Time, temporal capability, and planned change. *The Academy of Management Review*, 26 (4), 601-623. <http://dx.doi.org/10.2307/3560244>

- Salih Zeki Imamoglu, Huseyin Ince, Hulya Turkcan, Birsen Atakay. (2019). The effect of organizational justice and organizational commitment on Knowledge sharing and firm performance, *Procedia Computer Science*, Vol. 158, pp. 899-906, ISSN 1877-0509. <https://doi.org/10.1016/j.procs.2019.09.129>
- Jarrod, M. Haar & Brook J. White. (2013). Corporate entrepreneurship and information technology towards employee retention: A study of New Zealand firms. *Human Resource Management Journal*, Vol. 23, No .1, pp. 109-125. <https://doi.org/10.1111/j.1748-8583.2011.00178.x>
- Judge, T. A. & Kammeyer-Mueller, J. D. (2012). Job attitudes. *Annual Review of Psychology*, 63 (1), 341-367. <https://doi.org/10.1146/annurev-psych-120710-100511>
- J Judge, T. A., Weiss, H. M., Kammeyer-Mueller, J. D. & Hulin, C. L. (2017). Job attitudes, job satisfaction, and job affect: A century of continuity and of change. *Journal of Applied Psychology*, 102 (3), 356-374. <https://psycnet.apa.org/doi/10.1037/apl0000181>
- K. T. Tran, P. V Nguyen, T. D. Nguyen & U. N. H. Ton. (2020). The Impact of Organizational Commitment on the Relationship between Motivation and Turnover Intention in the Public Sector, *International Journal of Innovation, Creativity and Change*, Vol. 11, No. 12, pp. 1-25. https://www.ijicc.net/images/vol11iss12/111201_Tran_2020_E_R.pdf
- Kazanjian, R. K., Drazin, R. & Glynn, M. A. (2017). Implementing strategies for corporate entrepreneurship: A knowledge based. *Strategic Entrepreneurship Journal*, 11 (2), 107-134. <http://dx.doi.org/10.1002/9781405164085.ch9>
- Kim, W., Kim, J., Woo, H., Park, J., Jo, J., Park, S. H. & Lim, S. Y. (2017). The relationship between work engagement and organizational commitment: Proposing research agendas through a review of empirical literature. *Human Resource Development Review*, 16 (4), 350-376. <http://doi.org/10.1177/1534484320917560>
- Kreiser, P. M., Kuratko, D. F., Covin, J. G. et al. (2021). Corporate entrepreneurship strategy: Extending our knowledge boundaries through configuration theory. *Small Bus Econ*, 56, 739-758. <https://doi.org/10.1007/s11187-019-00198-x>
- Kristalina Georgieva, (2022). *IMF Executive Board Approves 46-month US\$3 billion Extended Arrangement for Egypt*. available at: [https://www.imf.org/en/News/Articles/2022/12/16/pr22441-egypt-imf-executive-board-approves-46-month-usd3b-extended-arrangement#.YischreFal.link%20\(accessed%20February%2012,%202023\)](https://www.imf.org/en/News/Articles/2022/12/16/pr22441-egypt-imf-executive-board-approves-46-month-usd3b-extended-arrangement#.YischreFal.link%20(accessed%20February%2012,%202023))
- Donald F. Kuratko, Jeffrey S. Hornsby, Jeffrey G. Covin, (2013) Diagnosing a firm's internal environment for corporate entrepreneurship, *Business Horizons*, Vol. 57, No. 1, pp. 37-47, ISSN-0007-6813, <https://doi.org/10.1016/j.bushor.2013.08.009>.
- Kuratko, D. F. & Audretsch, D. B. (2013). Clarifying the domains of corporate entrepreneurship. *International Entrepreneurship & Management Journal*, 9 (3), 323-335. <https://doi.org/10.1007/s11365-013-0257-4>
- Kuratko, Donald & Hornsby, Jeff & Bishop, James. (2005). Managers' corporate entrepreneurial actions and job satisfaction. *International Entrepreneurship and Management Journal*. Vol. 1, pp. 275-291. <https://doi.org/10.1007/s11365-005-2589-1>.
- Lee, T. W., Hom, P., Eberly, M. & Li, J. (Jason). (2018). Managing employee retention and turnover with 21st century ideas. *Organizational Dynamics*, Vol. 47, pp. 88-98 <https://doi.org/10.1016/j.orgdyn.2017.08.004>
- Lena E. Bygballe, Anna Dubois, Marianne Jahre. (2023). The importance of resource interaction in strategies for managing supply chain disruptions, *Journal of Business Research*, Vol. 154, pp. 113-333, Issn 0148-2963. <https://doi.org/10.1016/j.jbusres.2022.113333>. <https://www.sciencedirect.com/science/article/pii/S0148296322007986>

- Mahinaz El Baz. (2019). *Petrochemicals: A Held-Back Boom*, American Chamber of Commerce in Egypt, available at: <https://www.amcham.org.eg/publications/business-monthly/issues/278/February-2019/3824/petrochemicals-a-held-back-boom>
- Masud, H. & Daud, W. N. W. (2018). Human resource management practices and organizational commitment: Research methods, issues and future directions. *Review of Integrative Business and Economics Research*, 8, pp. 217-226. <http://dx.doi.org/10.6007/IJARBS/v8-i11/5159>
- Mathe, T. E. (2013). *Corporate Entrepreneurship and the Retention of Corporate Entrepreneurs in the Organization*. <https://repository.up.ac.za/bitstream/handle/2263/22759/dissertation.pdf?sequence=1>
- Mensah, Robert & Kosi, Isaac. (2016). Organizational commitment and turnover intentions of clinical laboratory scientists in Ghana. *European Journal of Business and Management*. Vol 8. pp. 164-172. https://www.researchgate.net/publication/292437240_Organizational_Commitment_and_Turnover_Intentions_of_Clinical_Laboratory_Scientists_in_Ghana
- Meyer, J. P. (2013). Organizational commitment in the military: Application of a profile approach, *Military Psychology*, pp. 381-401. <https://doi.org/10.1037/mil0000007>
- Morrell, K., Loan-Clarke, J. & Wilkinson. (2001). Unweaving leaving: The use of models in the management of employee turnover. *Business School Research Series*, pp. 1-65. <http://dx.doi.org/10.1111/1468-2370.00065>
- Mowday, R. T., Steers, R. M. & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14 (2), pp. 224-247. [https://doi.org/10.1016/0001-8791\(79\)90072-1](https://doi.org/10.1016/0001-8791(79)90072-1)
- Mueller, K., Straatmann, T. & Schefer, M. (2020). Organizational commitment. In: Maggino, F. (ed.) *Encyclopedia of Quality of Life and Well-Being Research*. Springer, Cham. https://doi.org/10.1007/978-3-319-69909-7_2030-2
- Mullins J. M. & Linehan .S Walsh. (2001) People centered management policies: A new approach in the Irish public service. *Journal of European Industrial Training*, 2(3), pp. 247-259. <http://dx.doi.org/10.1108/EUM0000000005442>.
- Nam, J., Kim, D. H. & Kang, J. (2022), "From corporate entrepreneurship to turnover intention: A view from humane entrepreneurship", *Journal of Small Business and Enterprise Development*, Vol. 29, No. 6, pp. 863-877. <https://doi.org/10.1108/JSBED-11-2021-0450>
- Nouri, H. & Parker, R. J. (2020). Turnover in public accounting firms: A literature review. *Managerial Auditing Journal*, 35 (2), pp. 294-321. <https://doi.org/10.1108/MAJ-03-2018-1823>.
- N. E. Alias, S. Ismail, R. Othman & W. L. Koe. (2018). "Factors influencing turnover intention in a Malaysian manufacturing company," *KnE Soc. Sci.*, Vol. 3, No. 10, p. 771, <https://doi.org/10.18502/kss.v3i10.3171>
- Olson, B. J., Wenlong, Y., Yongjian, B. et al. (2020) Interpreting strategic issues: Effects of differentiation strategies and resource configurations on corporate entrepreneurship. *The International Journal of Entrepreneurship and Innovation*, 21 (3), pp. 141-155. <https://doi.org/10.1177/1465750319874602>
- Özkan, A., Elci, M., Karabay, M., Kitapci, H. & Garip, C. (2020). Antecedents of turnover intention: A meta-analysis study in the United States. *E a M: Ekonomie a Management*, 23 (1). <http://dx.doi.org/10.15240/tul/001/2020-1-007>.
- Pan, F. C. (2015). "Practical application of importance-performance analysis in determining critical job satisfaction factors of a tourist hotel", *Tourism Management*, Vol. 46, pp. 84-91, <https://doi.org/10.1016/j.tourman.2014.06.004>
- Pang, K. & Lu, C. S. (2018). Organizational motivation, employee JS and organizational performance: An empirical study of container shipping companies in Taiwan. *Maritime Business Review*, 3 (1), pp.36-52. <http://dx.doi.org/10.1108/MABR-03-2018-0007>

- Perez, M. (2008). *Turnover Intent Diploma Thesis*. University of Zurich. <https://docplayer.net/20983210-Turnover-intent-diploma-thesis.html>
- Pirhadi, H. & Feyzbakhsh, A. (2021). Corporate entrepreneurship, its antecedents, process, and consequences: A systematic review and suggestion for future research. *Journal of Int Entrep*, 19, 196-222. <https://doi.org/10.1007/s10843-021-00294-8>
- Price, James L. (1977). *The Study of Turnover*, James L. Price. Ames: Iowa State University Press. <https://www.worldcat.org/title/study-of-turnover-james-l-price/oclc/470983653>
- Rageb, M. A., Abd-el-salam, E. M., El-Samadicy, A. M. & Farid, S. (2013). *Organizational Commitment, Job Satisfaction and Job Performance as a Mediator between Role Stressors and Turnover Intentions: A Study from an Egyptian Cultural Perspective*. <https://ijbed.org/details&cid=4>
- Rintis Sukma Dewi & Mafizatun Nurhayati. (2021). The effect of career development on turnover intention with job satisfaction and organizational commitment as mediators: Study at PT control systems arena Para Nusa, *European Journal of Business and Management Research*. <https://doi.org/10.24018/ejbmr.2021.6.4.918>
- Robbins S. P. & Judge T. A. (2013). *Organizational Behaviour*, 15th ed., Boston: Person. [http://www.mim.ac.mw/books/Organizational%20Behavior%20\(15e\).pdf](http://www.mim.ac.mw/books/Organizational%20Behavior%20(15e).pdf)
- Rodríguez-Peña, A. (2021). Assessing the impact of corporate entrepreneurship in the financial performance of subsidiaries of Colombian business groups: under environmental dynamism moderation. *Journal of Innovat. Entrep*, 10, 16. <https://doi.org/10.1186/s13731-021-00152-w>
- Roodt, G. (2004). *Turnover Intentions*. Unpublished document. Johannesburg, University of Johannesburg.
- Rubenstein, A. L., Eberly, M. B., Lee, T. W. & Mitchell, T. R. (2018). Surveying the forest: A meta-analysis, moderator investigation and future-oriented discussion of the antecedents of voluntary employee turnover. *Personnel Psychology*, 71 (1), 23-65. <https://doi.org/10.1111/peps.12226>
- Rutherford, M. W. & Holt, D. T. (2007). Corporate entrepreneurship: An empirical look at the innovativeness dimension and its antecedents. *Journal of Organizational Change Management*, Vol. 20, (3), pp. 429-446. <https://doi.org/10.1108/09534810710740227>
- Sani, A. (2013). Role of procedural justice, organizational commitment and job satisfaction on job performance: The mediating effects of organizational citizenship behavior. *International Journal of Business and Management*, 8, pp. 57-67. <https://doi.org/10.5539/ijbm.v8n15p57>
- Saunders, M. N. K., Lewis, P. & Thornhill, A. (2019). *Research Methods for Business Students*. 8th edition. Pearson Education Limited. https://www.pearson.com/nl/en_NL/higher-education/subject-catalogue/business-and-management/Research-methods-for-business-students-8e-saunders.html
- Schaeffer, V. (2015). Corporate entrepreneurship and creativity in large firms: The practice of start-up contests. *Journal of Innovation Economics & Management*, Vol. 18 (3), pp. 25-51. <https://doi.org/10.3917/jie.018.0025>
- Schindehutte, M., Morris, M. H. & Kuratko, D. F. (2018), "Unpacking Corporate Entrepreneurship: A Critique and Extension", Kuratko, D. F. & Hoskinson, S. (Ed.) *The Challenges of Corporate Entrepreneurship in the Disruptive Age: Advances in the Study of Entrepreneurship, Innovation and Economic Growth*, Vol. 28, Emerald Publishing Limited, Bingley, pp. 11-35. <https://doi.org/10.1108/S1048-473620180000028001>
- Sekaran, Uma & Bougie, R. (2016). *Research Methods for Business: A Skill Building Approach*. 5th ed. John Wiley & Sons, Inc. <https://www.wiley.com/en-ae/Research+Methods+For+Business:+A+Skill+Building+Approach,+7th+Edition-p-9781119266846>

- Setyaningrum, Nurma & Cahyono, Edi. (2021). Kepuasan kerja, komitmen organisasi dan turnover intention : Studi pada pegawai honorer di kabupaten grobogan. *Jurnal Ekomaks, Jurnal Ilmu Ekonomi Manajemen dan Akuntansi*. <https://doi.org/10.33319/jeko.v10i1.81>
- Siota, J. & Prats, J. (2020). *Corporate venturing latam: Corporate giants' collaboration with start-ups in Latin America*. Barcelona, IESE Business School.
- Skelton, A. R., Nattress, D. & Dwyer, . R. J. (2020). Predicting manufacturing employee turnover intentions. *Journal of Economics, Finance and Administrative Science*, Vol. 25 (49), pp. 101-117. <https://doi.org/10.1108/JEFAS-07-2018-0069>
- Taylor S. (1998). *Employee Resourcing*, Cromwell Press, Wiltshire. <https://www.amazon.com/Employee-Resourcing-organisations-Stephen-1998-01-01/dp/B01N5KU49W>
- Tett, R. P. & Meyer, J. P. (1993). JS, Organizational commitment, turnover intention, and turnover: Path analyses based on meta-analytic findings. *Personnel Psychology*, Vol. 46 (2), pp. 259-293. <https://doi.org/10.1111/j.1744-6570.1993.tb00874.x>
- Urbano, D., Turro, A., Wright, M. et al. (2022) Corporate entrepreneurship: A systematic literature review and future research agenda. *Small Bus Econ*. <https://doi.org/10.1007/s11187-021-00590-6>.
- Vargas-Halabí, T., Mora-Esquivel, R. & Siles, B. (2017). Intrapreneurial competencies: Development and validation of a measurement scale. *European Journal of Management and Business Economics*, Vol.26(1), pp.86-111. <https://doi.org/10.1108/ejmbe-07-2017-006>
- Wang, Jen-Hung; Tsai, Kuan Chen; Lei, Luo; Chio, Im & Lai, Sut. (2016). Relationships among job satisfaction, organizational commitment, and turnover intention: Evidence from the Gambling Industry in Macau. *Business and Management Studies*. 2. <https://doi.org/10.11114/bms.v2i1.1280>
- Wood, C., Holt, D., Reed, T., Hudgens, B. (2008). Perceptions of corporate entrepreneurship in air force organizations: Antecedents and outcomes, *Journal of Small Business and Entrepreneurship*, 117-132 2008. <http://dx.doi.org/10.1080/08276331.2008.10593416>
- Wooldridge, Bill; Schmid, Torsten & Floyd, Steven. (2008). *The Middle Management Perspective on Strategy Process: Contributions, Synthesis, and Future Research*. University of St. Gallen. 34. <https://doi.org/10.1177/0149206308324326>
- Yael, Selfin. (2022). The global outlook: Without respite, *KPMG Global Economic Outlook*, April, <https://assets.kpmg/content/dam/kpmg/uk/pdf/2022/04/global-economic-outlook-april-2022-brochure>.
- Yaqub, R. M. S., Hussain, N., Mahmood, S. & Farooq, Z. (2021). Linking compensation, employee engagement, employee loyalty and organizational performance: The mediating role of organization commitment, *Bulletin of Business and Economics*, 10 (3), pp. 17-32. Retrieved from <https://www.bbejournal.com/index.php/BBE/article/view/73>
- Zahra, S. A., Neubaum, D. O. & Huse, M. (2000). Entrepreneurship in medium-size companies: exploring the effects of ownership and governance systems. *Journal of Management*, 26 (5), pp. 947-976. <https://doi.org/10.1177/014920630002600509>
- Zehir, Cemal & Müceldili, Büşra & Zehir, Songül. (2012). The impact of corporate entrepreneurship on organizational citizenship behavior and organizational commitment: Evidence from Turkey SMEs. *Procedia-Social and Behavioral Sciences*, Vol, 58, pp. 924-933. <http://dx.doi.org/10.1016/j.sbspro.2012.09.1071>