



# The Antecedents of Organizational Citizenship Behavior in the Public Sector: A study in the Effect of Organizational Justice Determinants with the Mediating Role of Job Satisfaction (Applied to the Egyptian Ministry of Transportation)

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## Abstract

*Organizational citizenship behavior (OCB) is one of the most remarkable topics and promising constructs that have lately emerged in the modern management thought. OCB is generally influenced by individuals' perceptions, behaviors, and attitudes towards the organization and the work. In this context, many antecedents of OCBs might be involved. Two of the most important antecedents are introduced here which are; organizational justice (OJ) and job satisfaction (JS). Therefore, the purpose of this research paper is to gain insight into the way in which OJ perceptions of public officials can affect their OCBs. In other words, it aims at explaining the link between OJ and OCB considering JS as a mediating variable. Indeed, the study applied the quantitative analysis method with an explanatory research design typology. For theoretical intents, it adopted the descriptive analytical approach in order to clarify the causal relationship between variables, however it conducted an empirical study to test the correlations in real practice. Empirically, the paper explores and identifies the perceived levels of OJ, JS, and OCB among a small-sized sample of employees working at the Ministry of Transportation; a crucial Egyptian public organization, and then it examines the impact of OJ determinants on OCB practices there including the intervening influence of employees' JS. Survey-based data was collected by using questionnaires of (104) respondents from the ministry.*

*The research concluded that fairness perceptions, particularly those derived from OJ major determinants, are instrumental in predicting the occurrence of OCB in public sector organizations. Also, the results proved that OJ and JS contribute positively to OCB dimensions at the Ministry of Transportation. In fact, it makes a distinct enrichment to the field of study; is that it might be the first to investigate and analyze the effect of OJ on OCB through JS, and it shows that OJ and JS could emerge as more significant predictors of OCBs in the public sector. At a practical level, this article contributes to boost the applicability and meaningfulness of these concepts in the Egyptian culture. While OJ has an essential role in enhancing JS and OCB, results of this research can be beneficial in promoting OJ in public organizations, subsequently more OCBs, and finally improving organizational performance. So, the study provides profitable findings and helpful recommendations which can be applied by Egyptian public executives.*

**Keywords:** Organizational Justice, Organizational Citizenship Behavior, Job Satisfaction, Public Organizations, Ministry of Transportation in Egypt.

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## **Preface: Introduction and Research Importance**

Nowadays, any organization cannot attain its goals unless largely relying on human resources, who are substantial actors in realizing these objectives in the form of maximum performance and productivity (Takdir et al., 2015: 652). Actually, change brings the individuals who are equipped with talents, experience, and knowledge forward as the main source of survival, competition, and success. Thence, the elements affecting organizational success in a competitive world are not associated at the first place with material values and capital, but rather with abstract values and capital which produce those material factors. Today, the primary concept for success is not considered as goods and services themselves, instead skills, talents, and potentials to renovate these attributes needed for the production (Ince & Gul, 2011: 134). Hence, in the present competitive arena, institutions demand employees whom performance exceeds their formal duties or traditional job descriptions as a pivotal source of organizational effectiveness.

Unlike the past that called staff to act according to their formal roles and job specifications, in the new psychological contract extra-role behaviors are expected and even required. These behaviors are named as organizational citizenship behavior (OCB) (Goudarzvandchegini et al., 2011: 42). Since Organ (1988) defined OCB thoroughly as a group of discretionary positive gestures and behaviors of workers that reinforce the effective functioning of the organization without any compensation, it involves over-duties activities which are not formally rewarded and in return there are no incentives. So that, OCB shows actions performed by staff with their own will and consent for the sake of their organizations' welfare, thus it is most often described as contextual performance or practices and attitudes that go well beyond the call of duty (Ali, 2016: 4; Odor et al., 2019: 9). In general, researchers paid attention to OCBs due to their strong consequences and positive effects on performance (e.g., Cohen & Kol (2004); and Bolino et al. (2002)).

Indeed, employees exhibit higher levels of commitment and performance and give more than their formal job descriptions, when they believe they are receiving equitable outputs and they are treated fairly at workplace (Takdir et al., 2015: 652). Fair treatment bolsters work motives and improves performance inevitably. Based on this, another vital organizational concept emerges which is organizational justice (OJ) (Shahzad et al., 2014: 901). Specifically, OJ is concerned with the way in which employees decide if they have been treated fairly in their workplace and how this affects other different work-related variables (Silva & Madhumali, 2014: 1). Since decades, OJ has gotten paramount attention from scholars and has become a most researched topic in organizational behavior, HRM, and industrial-organizational psychology. The reason behind is both deontological and teleological. From deontological perceptions, OJ is related to moral and ethical standards and people usually prefer those entities which act in an ethical manner. As per teleological perspective, OJ is mainly responsible for gaining practical benefits (Takdir et al., 2015: 652-653). Recently, many studies carried out on OJ have stated that it has a significant impact on various organizational outcomes, such as employees' commitment, motivation, satisfaction, attraction and retention, employee and organizational performance (Khalifa & Awad, 2018: 31).

Moreover, research has indicated that antecedents of OCBs consist of these four basic categories; characteristics of employee, task, organization, and leadership behaviors. Believing that employee characteristics influence OCB, prior studies concentrated on two major issues; moral values and behavioral tendency variables. In the first framework, job satisfaction (JS), organizational commitment, perceived honesty, and employees' perception of leader support become notable as common antecedents. Studies here found that OCB has a correlation with all these indicators to some extent. When analyzed in this setting, employees' perception of justice as well is regarded a very important antecedent of OCBs within the scope of moral values (Songur et al., 2008: 93). The second field here is behavioral tendency characteristics. The relationship of behavioral variables like conscientiousness and agreeableness, with OCB was examined and findings

asserted that these characteristics affect OCBs (Podsakoff et al., 2000). In this paper, we will focus on certain employee characteristics, especially perceptions of justice and satisfaction as moral antecedents of OCB, whereas the role of task characteristics, organizational attributes, and leadership acts will not be investigated, as they do not fall directly within the scope of this study.

On the other hand, in public organizations, employees are considered a backbone of progress and success, as their actions are key determinants of good performance. Since their over-duties behaviors are influenced by numerous factors, and at the same time these activities significantly impact the overall organizational performance, executives should understand why and how public officials adopt them. In this respect, OJ has become a leading aspect for bureaucratic organizations, as it directly affects employees' attitudes and enhances their perception of fairness. Furthermore, it is believed that public officials are motivated by a sense of service not existed among their private counterparts (Houston, 2000). Public servants are generally seen as motivated by a desire to serve the community and are more likely to be characterized by an ethic that gives priority to intrinsic over extrinsic rewards. Accordingly, the concept of public service motivation (PSM) is used here for describing and explaining the contrast between public and private sector employees. Therefore, we can imagine that public officials place high value and more interest in pro-social job behaviors, such as OCBs (Kim, 2006: 722).

As research on OCB in administrative bureaucracy develops, it would be necessary to establish strong empirical foundations of public sector difference and distinctiveness with conceptual clarity and sharpness, which justifies the importance of this study to better understand the dynamics of OCB in the public sector. In Egypt where low productivity levels prevail, it is substantial to fix out how perceived justice influences citizenship behaviors. In this regard, the starting point of the current research is to comprehend OJ perceptions of public employees that underlay their OCBs. As the paper attempts to find and determine the possible existence and the direction of any relationship between OJ and OCB in public organizations, whether direct relation or indirect one through JS. Besides, as quite rare-used tools in Egypt, the effects of OJ determinants on OCB dimensions are empirically measured using a survey applied on the Ministry of Transportation. Thus, the aim here is to elaborate a comprehensive work in a national sense and contribute to the international literature on this topic with a research from Egypt.

In conclusion, this article is designed to discover obviously the most influential antecedents or predictors of OCBs in the public sector, and to examine particularly the relationship between OJ determinants and OCB dimensions with the mediating role of JS. It is conducted in order to determine OCB, JS, and OJ perception levels, so a meaningful sample was extracted from the personnel of an important public entity in Egypt which is the Ministry of Transportation, to measure and analyze interactions between the three organizational concepts. Along with a survey in the context of the theoretical model developed in state-owned bodies, the research adds to accumulated results in the field of study until today. In addition, it is of interest to academics specialized in organization theory and organizational behavior domains, as well as practitioners in the civil service in Egypt. Hopefully, it could be a modest step towards preparing future inclusive research to evaluate the organizational and administrative reforms adopted by the Egyptian government, in its attempts to implement the sustainable development strategy (Egypt's Vision 2030) with regard to maximizing the efficiency of public sector institutions, despite the rising challenges of COVID-19 spread all over the world lately.

### **Problem Identification: Research Purpose, Objectives, and Questions**

The transformation of knowledge, skills, and talents of individuals into the prime organizational inputs was brought up as a result of the new contract and psychological relationship between the employee and the organization (Ince & Gul, 2011: 134). In today's competitive world, organizations are constantly looking for new ways to uphold the performance of their staff. Despite the growing usage and utilization of information

technology, there are still many gap areas in performance and productive organizations. There is a dominant idea that the performance of any organization heavily relies on the efforts of employees exerted at work, beyond the requirements of their formal tasks and specified roles. These behaviors are called spontaneous behavior, over-duties behavior, and OCB. Nowadays, those activities have been entered in organizational various aspects and thought as an integral part of performance management (Goudarzvandchegini et al., 2011: 42).

The necessity of OCB stems from preserving the organization from unfavorable and destructive tendencies that may restrain its smooth functioning, aside from developing employees' skills and abilities, and promoting organizational performance (Songur et al., 2008: 87). Therefore, the level of OCB is among the most significant elements to reach the individual and organizational targets, create organizational commitment, boost employees' productivity, and reduce employees' turnover rates. Moreover, and beyond any doubt, the fundamental administrative instrument to keep and retain staff, and to guarantee a sense of loyalty and affiliation in the organization is a comprehensive managerial system based firstly on justice (Ince & Gul, 2011: 134). In this context, research shows that perceived OJ is one of the points that can lead to OCBs.

OJ is essentially used to identify the role of fairness in workplace. In reviewing initial literature on OJ, Greenberg (1990) suggested that OJ research may justify many organizational behavior outcomes (Silva & Madhumali, 2014: 1). Thus, OJ which influences the motivation, satisfaction, and professional attitudes of employees has gained much interest lately and many scholars have been made within this research field nowadays. Due to the noticed value of OJ, there have been some trials to apply its principles and theories to better understand employees' actions and behaviors, and it has been employed as the basis for interpretation of OCBs. So, OJ might be regarded as a key determinant or antecedent of OCB which grasps attention because it facilitates the accomplishment of organizational goals and objectives, and thereby bolsters organizational performance (Al-Quraan & Khasawneh, 2017: 215). In sum, work-related attitudes and behaviors are generally affected by both OJ and OCB, and hence these two variables play a vital role in the effective running of the institution (Ali, 2016: 1).

In recent times, many organizations have given considerable concern to OJ and OCB in order to gain more competitive advantages. Although the study of OJ has developed markedly in the past few years, relatively-little work has focused on the impact of perceived justice on OCB mainly in governments. However, because job performance most often is largely affected by situational variables and contingencies, then finding and tracing an influence of employee attitudes as perceptions of fairness is quite-difficult (Silva & Madhumali, 2014: 1,3). On the other hand, prior work has recognized mediating and moderating effects involving the relationship between JS and OCB, but the impact also may be a direct one (Ingrams, 2018: 14). Additionally, and with reference to previous literature, it was concluded that the nature and interactions of organizational variables are not static. They rather could vary according to the characteristics related to individuals, internal working environment, external market, whole economy, and even the cultural framework of the country. Hence, the researcher here believes it is critical to shed light on such variables like OJ, OCB, JS, and their interdependence in countries underrepresented in literature, specifically Egypt (El Badawy et al., 2017: 6-7).

In Egypt, only few empirical studies are related to OJ and OCB within public organizations. In other words, although there have been studies examining the impact of OJ perceptions on OCBs, it is seen that the number of researches conducted in the Egyptian environment is limited, especially in the public sector. Furthermore, and while reviewing previous literature, nothing was found about the relationship of OJ determinants with OCB dimensions via the mediating role of JS, neither in Egypt, nor in the civil service. In this paper, an attempt is made to examine the relationship between these three variables, as it discusses the direct and indirect impacts of perceptions of fairness on OCBs in a sample drawn from one crucial Egyptian public institution. Therefore, the article provides a theoretical framework for identifying the main antecedents or predictors of OCB in governments, and then it looks at the bulk of organizational reforms carried out in the public

setting of Egypt during last years and assesses the progress in this arena, through seeking and evaluating the perceived level of justice, satisfaction, and the organizational context that may affect extra-role behaviors of public employees in the case of the Ministry of Transportation, in order to point out the problems with the current procedures and to propose some applicable solutions. Thence, the purpose of this study is to clarify OJ and OCB practices from the perspective of employees at the Egyptian Ministry of Transportation. So, the results of the research will help fill in the gaps in understanding the direct and indirect relationships between OJ and OCB, for the sake of raising satisfaction and performance standards in the Egyptian bureaucracy.

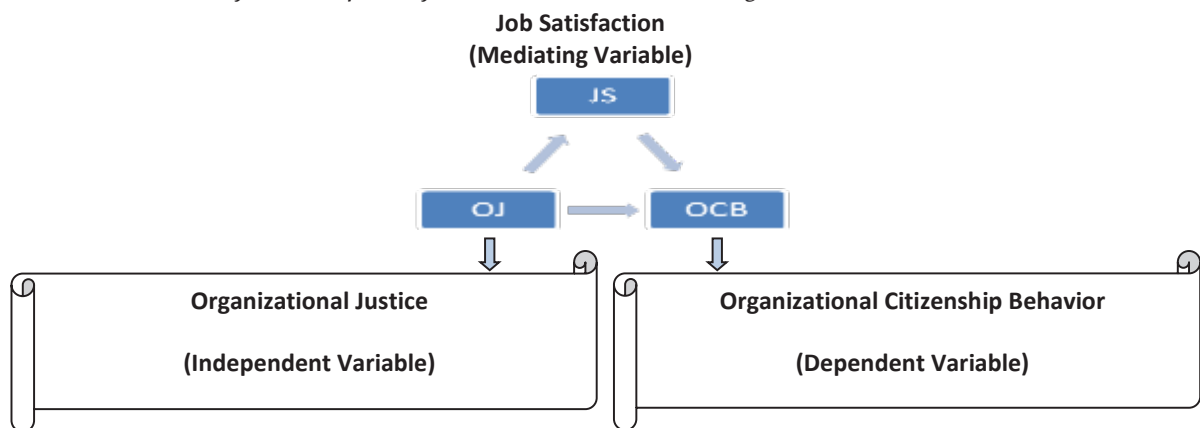
Consequently, the research investigates a purposive question which is:

***“How can OJ and JS contribute to OCBs of public officials? & to what extent do OJ determinants affect OCB dimensions at the Egyptian Ministry of Transportation, considering the mediating role of JS?”***

To answer this master question, the paper strives to find replies to the following sub-questions:

- What is meant by OJ? & what are its major determinants?
- What are the basic indicators and antecedents of OCBs considering JS?
- How does OJ level influence JS and OCBs in public organizations?
- How are OCB practices affected by employees' perceptions of OJ at the Ministry of Transportation, putting JS as a mediator?

And so, the study tests its primary variables as illustrated in figure (1) below:



*Source:* Prepared by the researcher depending on previous research (concerning the variables' indicators) as mentioned later in the theoretical overview.

**Figure (1) Research Conceptual Model**

## Literature Review: Concepts Definition and Relationships Description

### *Organizational Justice (OJ)*

Literature review in management clarifies that the term of justice was a prominent subject which has been discussed since Plato and Aristotle, and investigated by sociologists like Marx, Durkheim, and Weber as well (Wenzel, 2002). As long as it is oftentimes asked whether the decisions towards staff in different organizations are fair or not, so that the behavior of this staff in return has become an area of research. However, justice is usually emphasized as a social structure in organizational studies. In this context, it is seen that the term of social justice was adapted to organizations, and accordingly the concept of OJ which points

to the fair distribution of outputs has been evolved concurrently (Ince & Gul, 2011: 135). In the meantime, OJ has been arousing the interest of academics for the last decades (Songur et al., 2008: 94).

Indeed, social scientists and philosophers wrote about justice long before management authors have done. They have some kind of prescriptive agenda since they strive to logically assign what sorts of behaviors and actions are actually just. As such, they reside comfortably within the sphere of business ethics. Unlike the work of attorneys and philosophers, managerial researchers are more concerned with what people think to be just and less concerned with what truly is just. In other words, these authors seek to understand and explain why people view certain acts as just, as well as the consequences that follow those judgments. In this respect, justice is a descriptive and subjective concept in which it captures what people believe to be right, rather than a prescriptive moral ethical code or an objective reality. This means that producing justice requires management to take employees' perspective, and for that reason they need to identify what types of events engender this personal subjective psychological feeling of OJ (Cropanzano et. al., 2007) (Al-Quraan & Khasawneh, 2017: 217-218).

Though effort on OJ began earlier, it got promoted with Adam's (1965) work on equity theory. In fact, OJ is mainly shaped by both Adam's equity theory and Homan's (1958) social exchange theory. Equity theory is substantially based on the process by which employees decide if all their contributions (work, education, experience...) are fair relative to the results and gains (rewards) they receive from the organization, and then comparing this proportion with others (Colquitt et al., 2001). Whereas, social exchange theory regards the interpersonal social relationships as a kind of resource exchange. Accordingly, expectations of parties for being appreciated and rewarded play an essential role in maintaining social relations. Individuals usually estimate the justice of these processes based on information taken from social interactions (Okumus & Ozturk, 2015) (Demirkiran et al., 2016: 548).

Therefore, justice is considered a broad discipline and multifaceted concept with the meaning of fair treatment and non-discrimination (Metwally et al., 2018: 576), and the term OJ in particular is used to portray the role of fairness within the organization. Actually, the notion of OJ was first utilized by French (1964) to refer generally to fairness matters and affairs in managing people. It was Greenberg (1987) who used that term for the first time pointing to individuals' perceptions, where he determined OJ as a concept expressing employees' perceptions about the extent to which they are fairly treated by their institutions, and how such assessment impacts the organizational outcomes like satisfaction, commitment, and performance. So that, well-designed systems that foster justice do benefit both the employee and the organization (Al-Quraan & Khasawneh, 2017: 218). Burns & Dipoala (2013) asserted that OJ outlines employees' impressions about organizational fairness and whether their superiors deal with them fairly, with equality and respect. These evaluations can affect subordinates' attitudes for good or bad, and in turn leaving a positive or negative impact on their work performance and the whole organizational success. Thereby, OJ is a significant motivating tool of organizational behavior, since it is an important mechanism for stimulating positive acts of employees towards their employers.

According to another description; OJ is the structure which impacts staff attitudes towards division of labor, wages, rewards, along with determining the quality and level of social interactions (Dinc & Ceylan, 2008). Besides, Khalifa & Awad (2018: 35) identified OJ as employees' perceptions of fairness in the development of strategic direction, implementation of work policies, distribution of recourses, information management, nature of interactions, ethical conduct of leaders, customer relations, and service delivery. Furthermore, Ali (2016: 2) argued that OJ could be defined as employees' beliefs about whether they are treated with equity, so the term refers to the extent to which people believe workplace interactions, procedures, and outcomes are fair and honest in nature. Thence, OJ primarily focuses on fairness at workplace

and states stronger impact on various employee attitudes like absenteeism, commitment, trust, satisfaction, performance, leader-member exchange, and turnover intentions.

On the other hand, researchers have illustrated multiple dimensions for OJ. Whilst some of these dimensions are double-structured consisting of distributive justice and procedural justice (e.g. the studies of Husted (1998); Lemons (1996); and Tyler & Lind (1992)), other some are triple-structured embodying distributive, procedural, and interactional justice (e.g. Al-Quraan & Khasawneh (2017); Takdir et al. (2015); and Songur et al. (2008)), and others are four-dimension structures involving distributive, procedural, interactional, and informational justice (e.g. Nikookar et al. (2016); Goudarzvandchegini et al. (2011); and McDowall & Fletcher (2004)). In the current research, the four-dimension structure is adopted for its thoroughness and containment. Despite these dimensions are generally interrelated, they might be regarded as four separate components of overall fairness that can meaningfully work together.

Here, it is worth mentioning that OJ sub-dimensions have taken their latest format in line with the historical evolution of this notion. Originally, the term OJ is derived from the dimension of "distributive justice" which means the appropriateness of outputs and fair distribution of outcomes (Colquitt et al., 2001). Distributive justice is based on the principles of equity and economic exchange; is that people think they are justly treated if they receive outputs according to their inputs. Then, the dimension of "procedural justice" was discovered which refers to the applied procedures and taken decisions (Esterhuzien, 2008). It reflects the extent to which the procedures adopted in taking decisions concerning the distribution of gains and rewards are fair. Subsequently, in 1980s Bies & Moagen (1986) introduced "interactional justice" which indicates the quality of interpersonal treatment within the organization. It covers the social interactions between the main source of allocation and the influenced people (Ali, 2016: 3,8). Lastly, Greenberg (1993) suggested that interactional justice should be broken into two components; interpersonal and informational. "Interpersonal justice" is normally related to elements of the communication process between superiors and subordinates. This kind of justice is about the extent to which honesty, politeness, appreciation, and respect are exhibited towards employees (Demirkiran et al., 2016: 548). Likewise, "informational justice" describes the behavior of actors in sharing and transmitting information (Goudarzvandchegini et al., 2011: 43). In general, it concentrates on justifications given about policies, procedures, and methods applied, and hence it is related to the adequacy of provided explanations in terms of their specificity, reasonability, truthfulness, and timeliness (Silva & Madhumali, 2014: 2).

In sum, OJ is influential and it can be utilized in numerous areas like selecting and staffing, performance appraisal, salaries and compensations, layoffs and terminations, disciplinary procedures, conflict management, and organizational change (Baldwin, 2006). And so, employees' impressions about OJ may lead to direct positive effects on both the employees themselves and the institution, such as motivation, satisfaction, commitment, trust, organizational support, job performance, rewards, citizenship behavior, employees' loyalty, and retention (Alromeedy, 2017: 41).

### ***Organizational Citizenship Behavior (OCB)***

The literature aimed at comprehending the dynamics of OCB or extra-role behavior which has remarkable contributions to organizational performance, has grown recently in both academic and professional management-oriented research (Ince & Gul, 2011: 136). Indeed, OCB is considered a direct-claimed cause behind the sustainability of any organization. The practical importance of OCB is that it boosts organizational effectiveness and efficiency by contributing to creativity, innovation, adaptability, and resource transformation. Organ and his associates Bateman (1983) firstly introduced this term in management literature, while OCB is demarcated from many sources. According to the notion discussed by Barnard (1938); OCB means the willingness to cooperate, and Katz (1964) thought it as spontaneous and innovative behaviors, actions, and

activities (Al-Quraan & Khasawneh, 2017: 219). Nevertheless, the conceptualization of OCB originally had an American start. It was developed from some western cultures, similar to several other variables of organizational behavior. It is not recognized whether the concept is culture-versatile or not. In the Japanese civilization, for instance, little research has been conducted on OCBs, as this culture is basically collective and the workers deal with their organization as if it is a whole family, thence they perform as what they are told to do without regarding if the implemented work is an authentic part of their formal jobs or not (El Badawy et al., 2017: 5).

Thus, OCB is indicated as the willingness of employees to move far beyond their prescribed roles and to perform more than their formal job descriptions (Khalifa & Awad, 2018: 36). Organ (1988: 4) defined OCB as the discretionary individual behavior that is not explicitly or directly admitted by the reward system, and in the sum, it bolsters the effective running of the whole organization. Discretionary action means it is a matter of personal choice, such that it is not enforceable and its omission is not punishable. Moreover, OCB is not formally rewarded or acknowledged all the time by the administration. However, Lu (2014) stated that OCB is the aggregate of all formal and informal actions that express employees' sense of affiliation and belongingness towards the organization. Therefore, OCBs refer to voluntary and fair activities which finally promote the overall effectiveness. Typical examples of OCBs involve exhibiting polite behaviors and positive attitudes, helping colleagues on working issues, performing overtime without expectation of acknowledgement, and competently describing the organization to outsiders (Ali, 2016: 2-3). In fact, those assisting behaviors could improve the social environment within the organization, lower the rates of absenteeism and turnover intentions, in addition to enhancing employees' well-being and productivity (Podsakoff et al., 2000). Consequently, the most common and traditional measures used as valid and appropriate predictors of OCB may contain motivation, satisfaction, organizational commitment, employee engagement, perceived fairness, and trust (Shahzad et al., 2014: 903).

Aside from various definitions, researchers have also set out a diversity of classifications to distinguish citizenship dimensions and attitudes. For instance, a special simple one presented by William & Anderson (1988) that compares between behaviors directed towards the individual (OCBI) or fruitful for people who have much heavy work to do, so they can be viewed as a sacrifice, and behaviors directed towards the organization (OCBO) or beneficial for the organization and improve its performance and image (Ali, 2016: 4; Ince & Gul, 2011: 137). Furthermore, literature analysis shows that OCB actually could be divided into two different kinds (Baron, 2000); the first kind covers adopting all types of supportive behavior that might affect positively the organizational objectives, practices, and structure, while the second one includes avoiding all sorts of harmful behavior that might affect negatively the objectives, practices, and structure. Even though there is such a theoretical and conceptual distinction between the previous two types, they are both requested in practice (Songur et al., 2008: 89).

Although these classifications have been employed by numerous scholars, there has not been yet a complete consensus on the sub-dimensions of OCBs, so that many recent studies have addressed the issue of OCB dimensionalization (Songur et al., 2008: 90,91). Almost 30 potentially-different forms of OCBs have been identified, but still among the most famous classifications is the one demonstrated by Organ (1988), who detached five broad surfaces of OCBs involving altruism, courtesy, conscientiousness, civic virtue, and sportsmanship. While reviewing relevant literature, it was recognized that the adoption of Organ's (1988) construct would better serve the purpose and objectives of the present study due to its holistic approach to the concept, hence the researcher here used this measure for OCB.

Firstly, "altruism" is the voluntary and profitable behavior that employees exhibit towards others. Employees' feeling of supporting and helping each other, especially in unusual circumstances, lies in the heart of this dimension. Behaviors which form it involve assisting someone who has a difficulty, and voluntarily orienting newly-hired staff. Likewise, "courtesy" is the discretionary fashion of avoiding or pre-



venting work-related problems. Actions that constitute this imply respecting the privileges and rights of coworkers, and performing reminding and consulting behaviors concerning important matters or decisions in the workplace. As well, "conscientiousness" consists of acts that members show voluntarily beyond their minimum-role requirements, or in other words getting their work duties done in somewhat higher than expected. Examples may include coming to work despite being sick, working overtime despite being not enforced, always abiding by rules, and the economic use of organizational resources. Whereas, "civic virtue" is the behavior which indicates willingness and responsible participation, or illustrates the commitment and interest of employees in the political life of their organization. This dimension requires members to stick to the organizational agenda and exchange their opinions about organizational issues. Eventually, "sportsmanship" means the readiness of organizational members to solve their problems tolerantly and without complaining, whether with colleagues, supervisors, or others directly/ indirectly have connections with the organization (Demirkiran et al., 2016: 548-549; Metwally et al., 2018: 577; Khalifa & Awad, 2018: 32; Goudarzvandchegini et al., 2011: 44; Odor et al., 2019: 13).

As a result, OCB is necessary for any organization to perform its functions in an effective way. According to previous research; the importance of OCB and its relationship with performance, productivity, success, and organizational effectiveness are considerable (Ali, 2016: 3). On the other hand, past studies clarified many antecedents for upholding OCBs among workers. A comprehensive review of literature provided obvious evidence that employee characteristics, task characteristics, organization characteristics, and leader behaviors are the strongest suitable antecedents of OCB (Podsakoff et al., 2000). Herein, it is worth mentioning that the most frequently-analyzed correlates of OCBs are JS and organizational commitment. Besides, several variables like OJ, interpersonal trust, employee mood, and psychological contract might be viewed as other essential antecedents (Kim, 2006: 725-726).

### ***Job Satisfaction (JS) and its Relation to OJ & OCB***

Ang et al. (2003: 564) described JS as an individual's overall sense of well-being at his/ her work. Although employees may be highly-skilled and well-equipped for a job, their ability to translate these competencies in reality inevitably depends on plenty of attitudinal aspects, and JS plays a substantial role in this respect. Actually, JS is a multidimensional notion that puts emphasis on the certain task environment in which a worker performs his/ her work duties within (Mowday et al., 1982); is that satisfaction is constantly conceptualized in three manners; intrinsic, extrinsic, and total satisfaction. For example, Locke (1976) defined JS as a pleasurable or affirmative emotional state resulting from the evaluation of one's job or work experiences, and so JS can be connected not only to the job itself but to its various dimensions as well, such as pay, morale, and supervisors (El Badawy et al., 2017: 6). Another similar meaning introduced by Oshagbemi (2000), who thought JS as the individual's positive psychological and emotional reaction to a specific job, and thence it indicates how much the person likes or enjoys his/ her work which covers being satisfied with the work, colleagues, supervision, payment, and promotion.

Personal traits and genetic factors have also much impact on interpreting JS in general. Besides, Nadiri & Tanova (2010) in their research showed that fairness of outcomes like the perceived justice in superiors' interactions with their subordinates and equitable distribution of pay and other rewards, may definitely influence the level of employees' JS and turnover intentions (Ahmadi et al., 2012: 25). Accordingly, OJ is considered one of the fundamental pillars for the success of any organization, as it is a cornerstone in reaching JS among staff (Khalifa & Awad, 2018: 31). As noted, OJ gives the chance for employees to feel belongingness and satisfaction, and hence it focuses on their behaviors and attitudes towards their jobs and institutions, such as absenteeism, JS, job performance, organizational commitment, managerial trust, OCB, and turnover intentions (Alromeedy, 2017: 39).

However, individuals who feel satisfied with their jobs usually want to keep good relationships with coworkers, achieve maximum job performance, and continue to work at their office. That is, they generally look for their organization to be a nice place to work at, now and in the future. They may not be only concerned about the consequences of their own performance and worried about the organizational policies and goals, but rather they are also more concerned with the task fulfillment of others and the whole organizational success. Thus, they may encourage colleagues to reach their job performance, voluntarily assist them with various work-related problems, and take on extra roles. Thence, it is possibly assumed that JS has a positive relation with OCB (Kim, 2006: 727).

Indeed, JS is broadly evidenced to be positively associated with OCB. Swaminathan et al. (2013), for instance, revealed a positive relationship between JS and OCBs, particularly help-oriented behaviors. This positive correlation was also confirmed by Jena et al. (2013) whom stated that satisfaction with work was ranked first, followed by supervision, coworkers, promotion, then pay (El Badawy et al., 2017: 6). Obviously, most of the studies correlated JS with OCB have proposed that JS is a core antecedent of OCB (e.g., Waris (2005); LePine et al. (2002); and Alotaibi (2001)). In this context, Podsakoff et al. (2000) set out a schema grouping antecedent to OCB including characteristics of the individual, task, organization, and leadership. This schema was re-examined in later work, such as Organ et al. (2005) whom believed that organization and leadership antecedents should be grouped together into just one category; the organization of which leadership is a sub-category. Meanwhile, the theoretical framework disclosed another two of Organ et al.'s factors for individual and task antecedents; JS and goal clarity respectively. These three traditional antecedents have clear relevance in prior studies on OCB and the endeavors to better understand its dynamics, especially in the public sector (Ingrams, 2018: 5).

In conclusion, JS is regarded central to organizational behavior generally, and it plays a key role as a predictor of OCBs. Organ and Konovsky (1989) said that JS has the largest effect on OCB from all other predictors. However, there have also been some non-significant findings reported on the relationship between JS and OCBs, suggesting that the correlation sometimes might rely on some mediating variables (Alotaibi, 2001). Kim (2006: 723), for example, did not support the direct causal relation between JS and OCB in public organizations, and argued that JS may influence OCBs indirectly via the impact of organizational commitment. Nonetheless, research overall clarifies that JS has a direct relationship with OCB, in which its magnitude tends to heavily depend on whether or not the individual has meaningful work and intense identification with his/ her organization. Shortly, the relationship between JS and OCB takes place through several causal mechanisms which demonstrate the pivotal role it plays in OCBs (Ingrams, 2018: 6-7). Otherwise, the setting and work environment of the public sector specifically could impact the correlation between variables. Hence, further research should persist explicating the relation of JS to OCB (Kim, 2006: 736), and to other variables like OJ within a public context, which justifies the importance of the current study.

### ***OJ & JS as Predictors of OCBs in Public Sector Organizations***

In the meantime, OJ has been acquiring the interest of research for the last few decades. In fact, OJ is considered among the major topics caring a lot about workers. In this regard, we can argue that high performance is merely possible if the organization provides satisfying workplace, as well as fair treatment and appraisal for the exerted efforts of employees in advance. When employees believe they are treated fairly by their organization, they often show more positive attitudes and behaviors like JS and extra-role performance. So, OJ usually leads to employees' over-job duties and tight obligations (Ali, 2016: 2). According to Williams & friends (2002); there are some basic premises and preconditions of OCB. The primary condition is the perception of individuals about the fairness of decision-making processes and real practices (Aryee et al., 2002). This impression puts the trust of employees into action, and then stiffens their OCBs. The high

justice level means the more assertive state of mind. Williams et al. (2000) ensured that the affirmative state of mind increases the tendency to perform certain OCBs. Therefore, psychological preconditions and humors of people are from the most significant factors drawing the relationship between OJ perception and OCB (Ince & Gul, 2011: 138).

In other words, justice is essential because it concentrates on staff beliefs about fairness that affect their JS, commitment, performance, retention, and create OCB, which is not clearly or directly acknowledged by the official reward system, and at the end it stimulates the effective and efficient functioning of the organization (Metwally et al., 2018: 577). The phenomenon that underlies the studies testing the impact of moral values, such as employees' perception of honesty and satisfaction on OCBs, or a hypothetical justification for those who pursue OCB is primarily inherent in the equity theory, which assumes that individuals in work assess and compare their inputs and outputs with their colleagues. In short, when employees witness a fair and equitable working environment, they will likely behave and respond in accordance with the social exchange theory, by which individuals view interpersonal relationships in terms of costs versus benefits, and thence they will engage more in OCBs (Young, 2010). In one word, the staff impression about OJ mechanisms is considered influential in predicting the emergence or non-emergence of OCBs. In light of the above-mentioned discussion, an extrusive relationship between OJ and OCB is expected to occur (Shahzad et al., 2014: 903).

In the literature, there are many studies focusing on the association between perceptions of OJ and OCB, and they almost suggest that employees will exhibit extra-role behaviors if they think actions and practices within the institution are honest and fair (Ali, 2016: 4; Demirkiran et al., 2016: 549). Overall, previous work provides support to the positive relationship between OJ and OCB (e.g., Khalifa & Awad (2018); Metwally et al. (2018); Saifi & Shahzad (2017); Lilly (2015); and Hassani & Jodatkordlar (2012)). This result is compatible also with the researches of Nastiezaie & Najafi (2016), Damirchi et al. (2013), and Jafari & Bidarian (2012) (Ajlouni et al., 2018). Besides, many empirical studies confirm the impact of OJ on OCBs, such as Guangling (2011), Goudarzvand-Chegini (2009), Bihn et al. (2005), and Steve & Wongtze (2002) (Goudarzvandchegini et al., 2011: 44). Nevertheless, results of some empirical studies conducted by other authors detect few differences in findings, measurements, unit of analysis, in addition to research intents (Takdir et al., 2015: 653).

Furthermore, there is a fundamental support in literature for the relationship between JS as another critical predictor and OCB. For example, Bateman & Organ (1983) found a significant correlation between JS and supervisory ratings of OCB. Also, Puffer (1987) ensured the relation of pro-social behaviors to satisfaction with material tangible rewards. Organ (1988), and Organ & Konovsky (1989) as well provided empirical evidence confirming this relationship, as next did by Williams & Anderson (1991). In a sample of Australian human-service professionals, Murphy et al. (2002) reached that JS is positively correlated with OCBs to an average to strong degree (Kim, 2006: 727). Over and above, some argued that the relation between JS and OCB is exchangeable; employees' satisfaction with work can affirmatively affect their willingness to perform OCBs (Intaraprasong et al., 2012), while practicing OCBs can also make people more motivated or satisfied (Purnama, 2013). Notwithstanding and surprisingly, Budiman et al. (2014) on the contrary reported that there is no significant correlation between JS and OCB in Indonesian hotels, which calling for future studies (Ajlouni et al., 2018), especially in the Egyptian public sector context.

On the other hand, scholarly knowledge of OCBs has evolved rapidly in the private and public sectors, whereas contrast between sectors has not been largely advanced. Ingrams's (2018) study aimed to address the gap with hierarchical linear modeling of OCB antecedents across sectors. The tests of these antecedents or predictors clarified that they in principle similarly function across both of them. Additionally, the results asserted a

remarkable connection between public service motivation (PSM) and OCB, along with a variety of other central correlates with OCB in the public sector like JS, goal clarity, and leader-member exchange (Ingrams, 2018: 1).

Actually, it is notable that public sector research on OCBs is still far behind the private sector one, however scholars have observed high standards of OCB in public organizations (e.g., Christensen & Whiting (2009); and Kim (2006)). There are some reasons to anticipate that OCB has special salience in public agencies, and this is due to the relevance of the issue of citizenship in government-citizen interactions and the purpose of public administration reforms in reaching greater responsiveness to citizens. According to Vigoda-Gadot & Cohen (2004); OCB is vital for any administrative bureaucracy in its quest of efficiency, effectiveness, social justice, and growth. Empirical studies offered robust evidence of the substantial role played by OCBs in public institutions, and suggested that PSM and OCB are closely connected. A further finding in public sector literature was that OCB has intensive organizational synergies with PSM, as they are truly-complementary. Such that the former implies innovation and informal practices, whilst the latter is more formally oriented to public enterprises and can spur various areas of work beyond creativity and innovation. Thus, the theoretical foundation of PSM as a core value of public service proposes important behavioral consequences in the public sector in general, which may extend to the domain of OCBs. Hence, people with high PSM are motivated to attain the greater good of their society, as they have a strong sense of civic duty. Professionally, this satisfaction is often reflected and expressed in actions aimed to improve the organization or to assist colleagues in supportive and non-formally-expected ways (Gould-Williams et al., 2013) (Ingrams, 2018: 2-4).

Consequently, researchers hypothesized that there is a distinction in motivations and attitudes, and thereby in the degree of OCB among public and private employees. Since it is believed that public servants are generally satisfied by a sense of service not existed between private employees (Houston, 2000); is that public employees are seen as motivated by a desire to serve public interest and a concern for national community, and are more likely to be characterized by prioritizing intrinsic motives over extrinsic ones, if compared with their counterparts in the private sector. So, we can assume that public officials place a high value on OJ and pro-social job activities, such as OCBs. Though, there has not been yet enough scientific work examining the influence of public service fairness perception on OCBs of public servants (Kim, 2006) (Silva & Madhumali, 2014: 3-4).

As mentioned frequently before, prior studies showed that employees' perceptions of fairness in the workplace are related with a positive insight of OCB. Organ outlined that perceived justice is manifested by the increase or decrease in OCBs. That way, reduction of OCBs can be one clear-cut answer to the non-existence of justice in organizations (Ali, 2016: 3; Goudarzvandchegini et al., 2011: 43-44). By analogy and in agreement with past research about OCB antecedents, we could state that in order to expect upholding the OCB extent in public organizations, there should be a fair and satisfactory climate. Thus, employees in such organizations should witness a reasonable and acceptable level of all four types of OJ; distributive, procedural, interactional, and informational justice (Goudarzvandchegini et al., 2011: 46).

For instance, Ajlouni et al. (2018), Al-Quraan & Khasawneh (2017), Ali (2016), Demirkiran et al. (2016), Nikookar et al. (2016), Takdir et al. (2015), Shahzad et al. (2014), Silva & Madhumali (2014), Goudarzvandchegini et al. (2011), Ince & Gul (2011), and Songur et al. (2008) investigated the relationship of OJ and OCB and confirmed its existence in the public sector in various countries most probably not including Egypt, and occasionally with considering the influence of some mediating or moderating variables almost other than JS (e.g. Metwally et al. (2018); Takdir et al. (2015); and Shahzad et al. (2014)); is that some previous studies suggested using moderating variables in order to better evaluate the relationship between OJ and OCBs (e.g. Goudarzvandchegini et al. (2011)). In this respect, the present research comes to focus on JS as a mediator between these two variables in the Egyptian bureaucracy.

## Application: Empirical Study Discussion

### *Methodology: Research Techniques and Procedures*

The study applied the quantitative analysis method with an explanatory research design typology. For theoretical intents, it adopted the descriptive analytical approach in order to clarify the main concepts and to interpret the causal relationship between variables as well, however it used an empirical study to examine correlations through testing the research hypotheses in real practice. Therefore, in addition to providing a comprehensive coverage of available relevant literature, a field survey was carried out to capture employees' perceptions of the presence levels of variables, and then to measure the influence of OJ on OCBs through the mediating effect of JS at the Egyptian Ministry of Transportation. Data was gathered via a cross-section manner through questionnaire-based survey tools.

This case study was chosen here because the Ministry of Transportation is considered one of the essential service ministries in Egypt that is responsible for meeting the transportation needs of the whole country, whether by sea, land, or air, and meanwhile it is aligned with the Egyptian national development plans. Besides, the ministry has launched many successful projects during the past couple of years to establish, strengthen, and modernize the network of roads and bridges, along with the railway and subway networks to provide greater comfort, capacity, and safety – especially in light of the fatal previous problems and failures in the transportation area – and also to expand those networks to fulfill the future needs for growth and development. All of these remarkable activities and accomplishments might be accounted for the outstanding performance and extra-ordinary efforts exerted by the labor of the ministry – although the severe world-wide challenges of COVID-19 spread since last year – which could be in sum a good reason for studying and analyzing particularly this beneficial case in depth.

For the sake of collecting required primary data, an Arabic-language structured questionnaire sheet was utilized, as long as Arabic is the first and official language in Egypt (it was initially written in the English language, and then translated into Arabic). The questionnaire was designed based on literature review of previous studies (e.g., Ingrams (2018); Al-Quraan & Khasawneh (2017); Bahri & Kharmoush (2017); Ali (2016); Kim (2006); Niehoff & Moorman (1993); and Podsakoff et al. (1990)). It encompasses 50 items other than demographic data, and consists of three sections; determinants of OJ (distributive, procedural, interactional, and informational justice) (independent variable= 22 items), JS (mediating variable= 8 items), and OCB dimensions (altruism, courtesy, conscientiousness, civic virtue, and sportsmanship) (dependent variable= 20 items) (see research appendix).

Knowing that data was gathered by using a 5-point Likert scale as the research measurement tool, ranging from 1= strongly disagree to 5= strongly agree. Data collection and analysis took approximately two months (November & December 2020). Firstly, a pilot study was conducted on (10) people to check the clarity of the tools and to estimate the required time to fill in the questionnaire. Then, requested adjustments were done and the respondents who participated in the pilot study were excluded from the final sample.

In order to evaluate the stability of the questionnaire and reliability of the measures, Cronbach's Alpha was calculated for each variable here, and it was noticed that all coefficients are above 0.50 (which is the minimum limit to be acceptable), and the majority of them exceed 0.70. So, there is evidence that all variables in this research seem to be reliable, stable, consistent, and valid. Note that the highest reliability is for OJ (0.894), while the least reliability is for conscientiousness (0.632).

On the other hand, statistical package for social survey (SPSS-V.23) and analysis of moment structures (AMOS software) were the main tools for compiling and processing data in the quantitative part of the current research. Moreover, numerous statistical tools were employed for data analysis here, which contain descriptive analysis of demographic variables and created indicators, Pearson correlation, simple and multiple linear regressions in which the multiple one is checked through variance inflation factor (VIF), and finally structural equation modeling (SEM) which is illustrated through path analysis diagram and goodness of fit.

**Sample size, type, and characteristics:**

The target population here is the whole employees of the Ministry of Transportation (central administration in Cairo). The number is around 400 people who perform as employees there (administrative staff including managers).

Concerning the sample calculation; sample size assuming infinite population is determined generally according to the following formula (Keller & Warrack, 1999):

However, for finite population correction final sample size is:

$$n = \frac{n_0}{1 + \frac{n_0 - 1}{N}} \qquad n_0 = \frac{z_{\alpha}^2 * p * (1-p)}{e^2}$$

Since the population size here is around 400, thus the appropriate sample size according to the formula above is 100. To avoid non-response rate, 120 questionnaires were already distributed and only 104 were returned (which is the sample size here), with a response rate of 86.7%. Knowing that this sample was randomly selected. Due to the difficulty of getting a frame for all employees, so instead of taking a probability sample directly from them, the researcher took a sample from different days of the week and various hours within the day to guarantee generalization and avoid biasness in the results.

In this regard, table (1) provides some descriptive statistics of the sample to give a general view of the demographic and professional data of respondents.

**Table (1)  
Sample Description According to the Basic Characteristics of Respondents**

Variable	Gender		Age			Education			Total
	Male	Female	Under 35 Years	Less - 35 than 50	Years or 50 More	Post Graduate	.B.Sc	Less than .B.Sc	
Number	90	14	18	50	36	4	82	18	104
Percentage	86.5%	13.5%	17.3%	48.1%	34.6%	3.9%	78.8%	17.3%	100%
Variable	Job Title		Work Duration				Total		
	Manager	Employee	Less than 10 Years	Less - 10 than 25	Years or 25 More				
Number	18	86	26	76	2	104			
Percentage	17.3%	82.7%	25%	73.1%	1.9%	100%			

Empirical results indicate that the majority of 86.5% of the sample are males whilst 13.5% are females, 65.4% their ages are less than 50 years, and 78.8% of the sample are B.Sc. holders whereas 3.9% only are post graduates. Furthermore, the majority of 82.7% of respondents are employees while 17.3% are department heads (first line management), and eventually 73.1% have spent between 10-25 years working for the ministry.

**Building the Indicators of Research Variables:**

In this research, (12) indicators were created as illustrated below. Statistical technique was applied to combine each group of related questions (or factors) in one indicator. The indicators were composed by using equal weights method. That is each indicator was calculated by adding the scores of questions related to this indicator, and then the sum was divided by the number of related questions. These created indicators in the row form were used in answering the research hypotheses. The following table no. (2) clarifies some descriptive statistics of those indicators.

From the previous table, we can conclude that the value of the mean for all indicators is around 4 and 5, which means that respondents tended to agree and strongly agree to the questions that measure these

variables. It is clear also that the variable with the least agreement is civic virtue (4.00), and the variable with highest agreement is conscientiousness (4.7308), which reflects the highly presence of this indicator at the ministry, as it is normally expected putting into consideration that commitment and loyalty seem to be on top of the reasons for the distinctive performance and latest achievements of the ministry.

In this context, tables (3) and (4) display consecutively the correlations between OJ and its sub-indicators, and between OCB and its sub-dimensions using Pearson correlation coefficient.

From table (3), it is obvious that there is a significant ( $p$ -value is less than 0.05) strong positive relationship ( $R$  is around or almost above 0.7) at significance level  $\alpha=0.05$  (with confidence level 95%) between the whole indicator of OJ and each of its sub-items. Knowing that the highly-correlated item is interactional justice (0.858), and the least is distributive justice (0.649), which describes their influence on OJ at the ministry. This could be justified by the fact that majority of bureaucratic organizations still do not stress a lot on merit and rewarding, that is why distributive justice is not relatively a very important feature there, if compared to the culture of respect, honesty, and trust. As well as, table (4) above asserts that there is a significant strong positive relationship ( $R$  is around or almost above 0.6) with confidence level 95% between OCB and its sub-items. Knowing that the highly-correlated item is sportsmanship (0.756), and the least is conscientiousness (0.528), which reflects its effect on OCB, and this somehow is not compatible with the previous result regarding the highly existence of conscientiousness at the ministry as reported by the sample. However, and at the same time it makes sense with regard to the logic that flexibility and tolerance in accepting each other and dealing with the latest world-wide transformation and the exceptional work circumstances, especially during the last year (no time to be wasted in criticism and raising problems), might have more impact on employees' extra-role behaviors than devoted dedication and commitment.

### **Answering Research Hypotheses:**

Based on research problem, objectives, theoretical and conceptual framework, the major and sub-hypotheses were set and tested here as follows:

**Table (2)**  
**Descriptive Statistics of the Created Indicators**

Indicator	Minimum	Maximum	Mean	Std. Deviation
1. Distributive Justice	3.43	5.00	4.0934	0.46845
2. Procedural Justice	3.63	5.00	4.2284	0.39315
3. Interactional Justice	3.50	5.00	4.3077	0.50631
4. Informational Justice	3.67	5.00	4.3526	0.45231
5. Organizational Justice (OJ)	3.59	4.94	4.2455	0.35006
6. Job Satisfaction (JS)	3.50	4.88	4.1082	0.35529
7. Altruism	4.00	5.00	4.4663	0.39422
8. Courtesy	4.00	5.00	4.5817	0.35772
9. Conscientiousness	4.00	5.00	4.7308	0.27802
10. Civic Virtue	3.25	5.00	4.0000	0.43511
11. Sportsmanship	4.00	5.00	4.5288	0.43414
12. Organizational Citizenship Behavior (OCB)	4.00	4.95	4.4615	0.24448

**Table (3)**  
**Pearson Coefficient of OJ Sub-items**

Sub-Item	Informational Justice	Interactional Justice	Procedural Justice	Distributive Justice
OJ				
Pearson Coefficient	0.771	0.858	0.797	0.649
P-Value	0.000	0.000	0.000	0.000

**Table (4)**  
**Pearson Coefficient of OCB Sub-items**

Sub-Item	Sportsmanship	Civic Virtue	Conscientiousness	Courtesy	Altruism
OCB					
Pearson Coefficient	0.756	0.666	0.528	0.669	0.553
P-Value	0.000	0.000	0.000	0.000	0.000

1- **First hypothesis:**

H01: There is no statistically significant impact at  $\alpha \leq 0.05$  of OJ determinants (distributive, procedural, interactional, and informational justice) on OCB dimensions (altruism, courtesy, conscientiousness, civic virtue, and sportsmanship) at the Ministry of Transportation.

- H01.1: There is no statistically significant impact at  $\alpha \leq 0.05$  of distributive justice on OCB.
- H01.2: There is no statistically significant impact at  $\alpha \leq 0.05$  of procedural justice on OCB.
- H01.3: There is no statistically significant impact at  $\alpha \leq 0.05$  of interactional justice on OCB.
- H01.4: There is no statistically significant impact at  $\alpha \leq 0.05$  of informational justice on OCB.

To test whether the previous hypotheses are acceptable or not, the following two regression models were estimated and their results are shown in table (5) below. Herein, it is worth mentioning that multiple linear regression was used to examine the influence of OJ all determinants (four sub-hypotheses), and simple linear regression was applied to check the total effect of OJ on OCB dimensions (main hypothesis). Note that the hypothesis will be accepted if the significance is greater than 0.05, and vice versa.

**Table (5)**  
**Multiple and Simple Linear Regression Models**  
**Of the Dependent Variable on the Independent Variable**

Model	Dependent Variable	Independent Variable	Beta	Significance	Adjusted R-Squared	VIF
1- First (Multiple)	OCB	Distributive Justice	0.110	0.032	0.236	1.318
		Procedural Justice	0.343	0.000		1.748
		Interactional Justice	-0.099	0.135		2.301
		Informational Justice	0.057	0.041		2.002
2- Second (Simple)		OJ	0.129	0.041	0.140	

$$OCB = \beta_0 + \beta_1 DJ + \beta_2 PJ + \beta_3 intJ + \beta_4 infJ + e_t$$

$$OCB = \beta_0 + \beta_1 OJ + e_t$$

From the first model, we can conclude that:

- Each of the distributive, procedural, and informational justice have significant positive impacts on OCBs at confidence level 95% (as their p-values are less than 5%). The highest impact is for procedural justice (0.343), and this appears from the value of beta. Whilst interactional justice has no significant impact on OCB cause the significance here is greater than 0.05, which means that interactional justice does not affect OCB dimensions at all. This is surprising, as it is not anticipated considering the result that interactional justice is the highest-correlated sub-indicator with OJ. Despite of this high correlation, it does not reflect on OCB, which confirms that employees are looking for and emphasizing other aspects of justice that might impact more their job behavior, particularly those related to outcomes and allocation procedures. That is why interactional justice has no effect on OCB practices at the ministry.
- From adjusted R-squared, it is noticed that significant variables have the ability to explain about 23.6% from the variation in OCB capacity at the ministry.
- There is no multicollinearity problem, as the VIF values for all variables are less than 10, which assures the linear relation.

From the second model, it is clear that:

- OJ as overall has a significant positive impact on OCBs at confidence level 95%.
- From adjusted R-squared, it is obvious that OJ has the ability to explain about 14% only from the variation in OCB practices at the ministry (the insignificance of interactional justice inside the overall OJ indicator reduces the percentage from 23.6% to 14%).



From all the results above, the study can reach that there is a significant impact at significance level  $\alpha \leq 0.05$  of OJ determinants on OCB at the Ministry of Transportation; is that it was proven that distributive, procedural, and informational justice have significant positive effects on OCB, whereas interactional justice has insignificant effect on it, which means the first hypothesis as a whole and its first, second, and fourth sub-hypotheses as well are all rejected, whilst merely the third one is approved.

**2- Second hypothesis:**

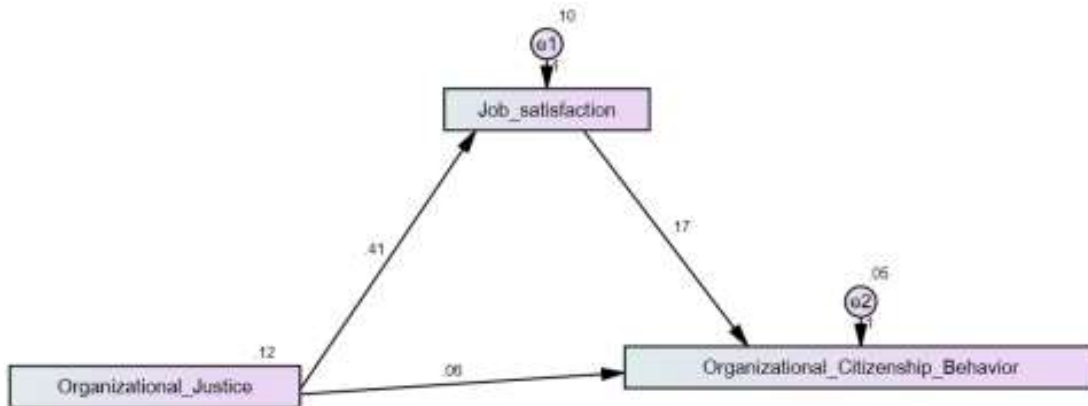
- H02: There is no statistically significant impact at  $\alpha \leq 0.05$  of OJ on OCB mediated by JS at the Ministry of Transportation.
- H02.1: There is no statistically significant impact at  $\alpha \leq 0.05$  of OJ on JS.
- H02.2: There is no statistically significant impact at  $\alpha \leq 0.05$  of JS on OCB.

To answer these hypotheses, the following models were estimated by using structural equation modeling (SEM) to test whether the mediating variable has significant impact on the relationship between the independent and dependent variables or not, and this was done via Amos. Knowing that JS here will have a significant effect on this relation, if there is a significant effect of OJ on JS, aside from a significant effect of JS on OCB.

$$OCB = \beta_0 + \beta_1 JS + \beta_2 OJ + e_t$$

$$JS = \beta_0 + \beta_1 OJ + e_t$$

The graph illustrated in figure (2) below represents the path analysis diagram, however tables (6) and (7) demonstrate the estimates and goodness of fit of the model.



**Figure (2) Path Analysis Diagram**

From table (6), it is notable that there is a significant positive impact of OJ on JS, and also there is a significant positive impact of JS on OCB with confidence level 95% (as their p-values are less than 0.05 in both ways), which emphasizes that JS mediates the relationship between OJ and OCBs at the ministry; such that the direct effect of OJ on OCB is 0.06, while the indirect effect through JS is 0.0685 (0.41\*0.167), which means when taking into consideration JS, the impact of OJ on OCBs will slightly increase (from 0.06 to 0.0685), hence the total effect= 0.1285 (0.06+0.0685).

From the previous table, the researcher can prove that all goodness of fit measures of the model show that all indicators are at acceptable limits, specifically NFI, RFI, IFI, TLI, and CFI, as they are close to (1). Therefore, fit indices express the goodness of fit of the structural model and its ability to measure the mediation effect of JS on the relationship between OJ and OCBs.

**Table (6)  
Estimates of SEM**

Dependent Variable	Independent Variable	Estimate	P-Value
JS	→ OJ	0.410	0.000
OCB	→ JS	0.167	0.019
OCB	→ OJ	0.060	0.040

Finally, the research can conclude that there is a significant impact at  $\alpha \leq 0.05$  of OJ on OCB mediated by JS at the Ministry of Transportation; is that it was reached that OJ has a significant positive effect on JS, and the latter has also a significant positive effect on OCB, thence the second hypothesis with its two sub-hypotheses are all refused as well.

### Conclusion: Concluding Remarks and policy Implications

This research has fruitful implications for both theory and practice. It aims to provide insight about the relationship between employees' perceptions of OJ and their OCBs. In measuring this correlation, the paper adds to evidence proved in earlier work regarding this relation in the public sector. Additionally, it makes a pioneer and remarkable step forward by estimating the impact of a substantial traditional antecedent (JS), and realizing its salient link with OCB, then investigating its mediating effect on the relationship between OJ and OCBs. In other words, the present study has made a paramount contribution to literature by expanding on the increasingly-growing body of knowledge in the field of concern within a public context. The research also offers a practical directory and leading educational material to executives and policy makers in the Egyptian government, especially the Ministry of Transportation, to guarantee high levels of fairness and satisfaction, along with positive attitudes and behaviors from staff.

With regard to limitations of the empirical study, some few points have to be mentioned. First of all, employees' perceptions are usually sensitive to time, that means results are affected by the situation and conditions of the current measurement moment, which is way critical in light of the international crisis of COVID-19 expansion and its consequences recently. Moreover, according to the scope and nature of this research; the empirical model here depends on cross-sectional data of self-reported survey replies, which points that reported attitudes and behavior may be for somehow about how respondents would like or prefer to see themselves. Finally, and due to limitations in resources and time, the researcher was restricted to a limited budget and a relatively short time frame.

Nevertheless, and through the research both theoretical and applied sections, it has reached the following valuable results and recommendations.

#### **Results and Findings Analysis:**

In essence, the real value of OJ is that if employees believe they are treated justly, they will be more likely to feel satisfied and hold positive attitudes towards their organizations. Indeed, the current research indicates that fairness perceptions, particularly those derived from OJ major determinants, are instrumental in predicting the occurrence of OCB in the public sector. Accordingly, findings show that there is a significant correlation between OJ and OCBs mediated by employees' JS. Hence, this paper claims that public administrators should be aware of the necessity of acting and dealing with their employees in a manner perceived as fair, because this could impact satisfaction and thereby their level of citizenship behaviors. In this respect, the key results here are:

- OJ has a vital role as a mechanism or tool of motivating and stimulating OCB in any organization. Consequently, the more OJ is cultivated at workplace, in response the more levels of JS and OCB will be displayed by employees. Thus, the administration should not discriminate or discourage their employees and should make all decisions on truly-pure merit bases.
- The most deterministic justice types impacting the citizenship five main dimensions of altruism, courtesy, conscientiousness, civic virtue, and sportsmanship are; distributive, procedural, interac-

**Table (7)  
Goodness of Fit Indices  
for the Estimated SEM**

Indice	Value
Chi-Square	9.087
Degree of Freedom	3
Level of Significance	0.000
NFI	0.931
RFI	0.983
IFI	0.953
TLI	0.981
CFI	0.947

tional, and informational justice as well.

- The study confirms the importance of developing OCB antecedents or premises in bureaucratic organizations, specifically those related to fairness and satisfaction or motivation. In addition, it indicates that having public employees with high levels of PSM is critical to reinforce OCBs in government agencies. PSM might be promoted by appropriate selection processes and socialization to the organizational values. Effective employee orientation and education programs are also a crucial component for retaining public officials with high-level PSM, because these programs can introduce the mission, objectives, and norms of the public sector, and explain the ways in which it can serve public interest. So that, public employees must experience constructive training and development programs that escalate motivational levels, which ultimately could result in maximizing their OCBs.
- Practical implications highlight that the presence of OJ, JS, and OCB indicators at the Ministry of Transportation is almost good according to the sample responses, which could be expected in light of the revolutionary reforms and great accomplishments of the ministry during the past couple of years to dramatically bolster staff performance and to improve and develop transportation services overall, and thence achieving considerable responsiveness to citizens. Otherwise, it was proven that interactional justice has the highest influence on OJ indicator at the ministry, which clarifies that the organizational culture of respect, appreciation, and justification has an effective weight there, whereas sportsmanship is the highly-correlated sub-indicator with OCB, which emphasizes the impact of tolerance, acceptance, and flexibility on extra-role behaviors of the ministry workforce.
- The results of empirical analysis provide evidence that OJ determinants collectively contributed to OCBs at the Ministry of Transportation (by 14% overall), as demonstrated through the positive relationship between the independent and dependent variables; is that it was stated that the perceived levels of distributive, procedural, and informational justice separately have positive impacts on OCB dimensions, whilst only interactional justice does not affect OCB current practices at all. This refers to the quite-weak compatibility and interdependence between justice aspects, especially those not related to outcomes and allocation procedures, and the acts and behaviors of citizenship at the ministry, and this also could reflect for an extent the moderating influences in that relation. In this regard, it was emphatic that the relationship between OJ and OCB is mediated by JS, which means when considering JS as a mediator, the effect of employees' perceptions of OJ on OCBs becomes a little bit greater; is that JS has relatively strengthened the relationship between the independent and dependent variables which was not already a strong one, so there is still a need to uphold motivation and support JS standards at the ministry to positively enhance its impact on this relation.

### ***Recommendations and Further Research:***

To increase the sense of OCB among public officials, authorities must provide and develop a nurturing and healthy environment of fair treatment at workplace. Therefore, public executives should strive to improve employees' perception about OJ because it plays a substantial role in motivating them to engage in OCBs. Based on the previous results, the research has made these principal recommendations:

- Management in general needs to ensure the practice of OJ and communicate this to employees and inform them about the rules and principles of justice, so that it can create confidence and loyalty between them.
- It is suggested that managers should take into consideration the following measures to reinforce the four dimensions of OJ, and hence to elicit OCBs; 1) developing fair and consistent procedures regarding personnel, performance appraisal, distribution of workload, outcomes, rewards, and promotions, 2) assuring employees' involvement and participation in decision making processes

without discrimination or biasness, 3) fostering the development of a culture of mutual respect and a close relationship between managers and employees, concerning about their welfare, and showing trust, support, helpfulness, and consideration, 4) using a free flow of information, open and two-way communication channels between employees and management, and preserving transparency and clarity within public agencies.

- In order to promote JS levels in public organizations for the sake of enhancing affirmative attitudes and behaviors, leaders must recognize that public sector incentive structures should give employees an opportunity to satisfy their public service motives. Public employees are oftentimes more likely to place higher value on intrinsic reward motivators which provide a considerable feeling of accomplishment, while they are less likely to put high interest in such extrinsic rewards of work like high income and short working hours. Thence, public executives need to offer their subordinates chances to feel they are doing something worthwhile and to experience a great sense of achievement.
- Empirical results recommend that there must be more genuine efforts and serious endeavors to support, link, integrate, and achieve coordination and consistency between OJ key determinants on one hand, and OCB practices at the Egyptian Ministry of Transportation on the other hand, which for sure will eventually impact positively staff performance and productivity. In this respect, it is worth giving greater attention to interactional justice that was evidenced it did not affect OCBs completely, in spite of being the highest correlated indicator with OJ at the ministry. This is in addition to distributive justice the least correlated with OJ; is that authorities have to increase it according to the proportion of work done by employees as salary, bonus, benefits, and promotions. Otherwise, executives also need to better manage and promote the relationship between organizational commitment and OCBs at the ministry. They need to know that the feelings employees hold for their organization could manifest themselves in the form of pro-social job behaviors. Note that affective commitment in the public sector might be influenced through the strategic use of intrinsic incentives. Over and above, the role of moderating factors and their assertive impact on the magnitude of the relation between OJ and OCB should be maximized.
- Concerning future work; it can be recommended to do research in the future on the same topic with a larger and varied sample to draw a more representative picture of reality. Furthermore, researchers who will conduct studies on OJ and OCB later on may resort to various diversifications in measurement instruments by applying quantitative scales together with qualitative methods. Besides, these two constructs could be addressed from the point of view of other potential intervening or moderating variables, such as loyalty, commitment, job stress, reward management, leadership styles, organizational culture, organizational structure, personality, and demographic features of employees. As well as, this kind of research might be expanded to more public bureaucratic institutions in different service and manufacturing sectors to contribute to the literature, along with expanding the research to other private business organizations in Egypt to give opportunities for comparison. Also, further work needs to be conducted internationally in several cultural situations to examine the generalization of results across nations. And finally, since the nature and scope of this study is to discover the effect of one variable on another, it would be more meaningful if it will be carried out over time as a longitudinal research.

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**Third/ Job Satisfaction (Mediating Variable):**

	Statement	strongly agree	agree	neutral	disagree	strongly disagree
23	Your job provides you a chance to do challenging and interesting work.					
24	Your superiors give you the information and support you need to do a good job, and they appreciate your efforts.					
25	You are given the opportunity to be involved in activities that promote your professional advancement and growth.					
26	You have good relations with your colleagues, and the ministry has a healthy working environment in general.					
27	You gain fair and satisfactory rewards (financial and non-financial benefits) by working for the ministry.					
28	The ministry has fair and flexible policies and procedures, and takes employees' interests/ concerns into account in making important decisions.					
29	You feel good about your job and the kind of work you do, and you do not want to leave it in the meantime.					
30	Overall, the ministry is a good place to work at, and you are so proud of being part of it.					

**Fourth/ Organizational Citizenship Behavior (Dependent Variable):**

Sub-Variable	Statement	strongly agree	agree	neutral	disagree	strongly disagree
Altruism	31 Usually, you assist your colleagues in finishing their work, when they are overloaded.					
	32 Mostly you are interested in helping new colleagues to adapt with the work environment.					
	33 You often collaborate with your manager to do his/ her job well.					
	34 You constantly prioritize business interest over personal interest.					
Courtesy	35 Always you strive to compliment your colleagues at work and encourage them in difficult times.					
	36 Usually, you stay away from interfering with colleagues' privacies.					
	37 You are keen to respect the desires and preferences of colleagues, and to consult them before taking any step.					
	38 You often avoid taking any decision that might cause confusion at work.					
Conscientiousness	39 You strictly abide by work rules and regulations, and the attendance and departure time.					
	40 You are always keen to preserve the ministry's assets (equipment and furniture) in the workplace.					
	41 Constantly you do your work with perfection, dedication, and to the fullest.					
	42 You accept to continue working beyond the official working hours, when needed.					
Civic Virtue	43 Usually, you are keen to improve the image and reputation of the ministry in front of others.					
	44 You are interested in the future and development of the ministry, and the success of its activities and practices.					
	45 You often present valuable ideas and suggestions to promote work level.					
	46 You are constantly interested in developing your capabilities and job performance, even at your own expenses.					
Sportsmanship	47 Generally, you do not like to complain a lot, and avoid making troubles and raising trivial problems.					
	48 Mostly you are not looking for others' mistakes.					
	49 Usually, you accept criticism openly and tolerate personal abuse.					
	50 You often accept changes in work conditions.					