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Discuss the effect of the Third Organizational Efficiency Theory on Society and Economic growth via Corruption axes frustration by a non-linear model (Corruption aspects benefits)

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ABSTRACT

TBL elements' prosperity means saving and growth of the Triple bottom line, which are People, Profit, and Planet. Therefore, this work focuses on analyzing the effect of Corruption over prosperity via citizen satisfaction level (CSL) and prosperity growth indicator (PGI) through spreading questionnaires addressing the productive and service companies in Egypt. The authors link CSL and PGI with minimizing service time and maximizing income parameters respectively and tracking prosperity via non-collinear productivity growth model with threshold effects. Therefore, argue that Corruption resulting administrative, technician, and financial failure, which can be controlled by empirical proposed Automated Governance Self-Management (AGSM). The organizations' productivity has been tracked by the development efficiency index (DEI), which reflects Corruption resistance level using smart poka-yoke (SPy_{it}). The responses to the questionnaires discover that administrative Corruption has two faces, one emphasizes its benefit on facilitating and speeding up the procedures, while the other is adverse and reduces the economic growth rate. The authors advocate changing administrative policies from centralization to traceable decentralization backed by delegation and economic liberty via controlling all activities according to time.

1. Introduction:

Prosperity meaning reflects via economic and social development, which have been considered a measuring vocabulary for this study. Central administration that does not believe in delegation is an impediment to development engines in light of interconnected globalization. Therefore, we seek to study the impact of the transformation of codified decentralized self-management by activating a culture of mechanized governance of information systems that illustrates the job description of powers for managers, leaders, and decision-makers within the transparent system. Self-management is not a door to unilateral decision-making that develops moral corruption (i.e., Corruption), but it is an approach that describes decisions with flexibility in order to eliminate wasted time and wasted production and improve customer satisfaction as a community service. In (1986) many scholars as Beck, Maher, and Lien contend that Corruption leads to impede the effective delivery of administration services, whereas ***Bardhan*** **(1997)** emphasizes that Europe and America paradox situations where Corruption has resulted in economic prosperity and customer satisfaction traced via development efficiency indicator wheatear for services or production sectors. According to Huntington (2006), Corruption has a favorable impact on TBL elements' prosperity by reducing administrative processes and a lack of system openness. According to this viewpoint, Corruption serves as a facilitator that smoothest activities, particularly in a bureaucratic paradigm, and so enhances an economy's efficiency by lowering obstacles to investment and economic progress ***Nhung, V., & Phuong, L.*** **(2021)**. Corruption levels in countries around the world are classified into three behaviors (Administrative, technician, financial), and the three affect the TBL elements (people, planet, profit), which can measure by tracking the citizen satisfaction level (CSL) and prosperity growth indicator (PGI) in two types of sectors in

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countries (services and productive). Except for Asia, increased in the early stages of the reform, expanding in scale and diversification ***Campos & Pradhan,* (2007)**, but our study selects Egypt because begin in its economic reform in both sectors (services and productive) as discussed by ***Vijayabaskar, V.* (2019)**. There are two opposing theories discussed in the theoretical and applied literature about Corruption over the last 40 years. The first assumes that Corruption "greases the economic wheel" because rapidity procedures to efficient profits as argued by ***Heckelman & Powell,* (2010)** and continue to ***Johnson et al,* (2014)**. While the second motto advocates to resists Corruption and describes it as opening window for illegal behaviors at the expense of others and obstructing the administration of justice as discussed by ***Méon and Sekkat,* (2005) - *Mushq,* (2011)**. ***Trabelsi and Trabelsi* (2020)** argue two previous mottos of Corruption that can reduce prosperity near the ideal threshold. Where below this optimum threshold, a moderate amount of Corruption, as indicated by the reversal point of the relative Corruption impact on the growth curve, may be beneficial to prosperity. The source of the problem is allegedly low levels of delegation, limited economic liberty (i.e., laissez-faire), and inadequate institutional efficiency. Furthermore, because of the encroachment of political authority and the impact of administration workers on socioeconomic action, bribes (i.e., facilitator tool) are inevitably used. Another perspective advocates that facilitating tools have a beneficial influence on laissez-faire growth because it allows the bureaucratic administration to facilitate their procedures and subsidize CSL and PGI via the "speed money" mechanism as advocated by ***Aidt,* (2009)**. As a result, the study's goal is to give empirical proof of the influence of Corruption on TBL elements' prosperity, both good and negative, by employing dynamic statistical tracing actions D-STA. Furthermore, the scholars use quantile regression to comprehend the impact of Corruption on the CSL and PGI at various quantiles. As a result, recommendations are made in accordance with the Corruption definition, where Oxford vocabulary idioms (2000) define it as "Any illegal dealing between administration and private actors leads to unlawful gain", and regulators consider it fraudulent or illegal activity. Particularly by responsible people (i.e., trusted to provide impartial service among the beneficiaries), by transforming ethical standards into unethical behavior when dealing with the service. Also, Transparency International defines Corruption (i.e., abuse aspects) in 2009 as "the abuse of entrusted power for private gain", via an official accepting, soliciting, or extorting a bribe, an official position is abused for private gain", or deliberately offered by private actors (bribes to evade administration regulations and processes) to gain a competitive advantage and profit, which aptly named "unethical phenomenon" as discussed by ***Czapla, Gary* (2019).** As a result, the concept of Corruption incorporates three critical factors: ethical, behavioral in nature, and empowerment. The authors classified the abusive characteristics of Corruption as continuous variables (bribes, soliciting, extortion, favoritism, nepotism, evasion, graft and theft of state assets, diversion of state income, or unethical occurrences), but their analytical distinction was made between petty and grand values as deduced from World Bank [1]report and ***Kamanzi, A. and Shiimi, A.*, (2022).** Petty Corruption "authority abuse" arises when low- and mid-level administration employees engage with regular residents in their jurisdiction like schools, hospitals, police officers, administration offices, local administration s, and so on... as discussed by ***June et al.*, (2008)**. ***Rohwer*, (2009)** discussed the political Corruption that acts committed by a top administration official distort rules and make obstacles to achieving equity and paving to the responsibiles, especially if they have a higher authority in the administrative hierarchy to gain an advantage at the expenditure of the public's good. This work investigates and trace the resistance of Corruption via controlled by four cultures, Positivist, classical, structural, and ethical as discussed by ***Albanese, J. and Artello, K.* (2018)** on TBL elements' prosperity by reviewing the effects of institutional standards such as efficiency in implementing democratic behavior indicators that accomplish economic institutional quality freely, as mentioned by ***Saha & Gounder,* (2013)**. The classical cluster is just an individual choice to reduce the enduring hardship of routine procedures. According to routine activities culture, deviant conduct is governed by various enabling elements such as a low level of monitoring or tracking, and a loss of punishment. While the positive standpoint on Corruption acts back to internal or external deviant behavior ***Williams & McShane,* (2017)**. Therefore, the authors focus on the term Corruption in this study to refer to authorities' workers who abuse their positions by violating the agreed rules and/or circumventing the declared procedures in order to obtain personal advantage and hurt the TBL elements' prosperity. The positivism cluster is more focused on finding explanations for people' internal or external reasons for aberrant conduct than on their decisions. TBL elements' prosperity reflects CSL and PGI, according to the World Bank twenty years ago, as "a quantifiable percentage change rise in a country's GDP or GNP over a year that leads to prosperity with controlled inflation levels and enhance CSL." The author proposes prosperity deployment (CSL, PGI) depends mainly on continuous beneficial investment (CBI), innovation (Inov.), population growth rate (Icrgi), and open-up trade (O-trad.), delegation (deleg.), economic liberty (el), and trapping the Corruption aspects (bribes, soliciting, extortion, favoritism, nepotism, evasion and theft of enterprises' assets, graft, diversion of enterprises' income, or unethical occurrences). On the other view, Prosperity is an *f* (CSL, PGI). The authors reviewed measuring the application of automated governance

[1] http://www1.worldbank.org/publicsector/anticorrupt/corruptn/cor02.htm

by tracking the overall efficiency and effectiveness of 21 service and productive organizations in Egypt. The researchers collected and analyzed the results of more than 360 questionnaires of 870 who were accredited to conclude a study of the impact of the partnership, codified governance (efficiency - effectiveness), and transparency on the success of the visible automated self-management to combat administrative - technical - financial Corruption to achieve the highest satisfaction among beneficiaries ***Jassim, G.* (2018)** and ***Bahoo, S. et al.*, (2020)**, while receiving the service or commodity and for the longest period possible time, taking into account the continuous improvement in line with the requirements of society. Regulated governance oscillates between absolute centralization that reduces the openness that brings public benefit, perhaps to delayed decision-making, as we see in some organizations in Egypt, Indonesia, Azerbaijan, and Malaysia, where public service institutions are either ministries or state-owned partnerships, in which the central administration controls to Too much ***Merhi, M. I.*, (2021).** It became clear to the authors that the criterion of the educational qualification of the targeted and the number of years of experience has a negative impact on adopting the concept of self-management within a job description with specific powers, as shown by the descriptive analysis of ***Al-Mutair*, (2019)** and ***Goel, R. K., & Nelson, M. A.* (2021)** when he conducted a questionnaire on 17 individuals targeted for study in the Buraidah region and did not find Clear statistically significant differences, in contrast to the study ***Al-Ghamdi*, (2019)** and ***Fodol, M. Z.* (2021)** that he conducted in the Al-Baha region targeting 324 people to study the extent to which the success of applying the Autonomous Administration relates to the years of experience of the responsible leaders formed a clear difference and was considered an important statistical significance, as his study indicated that partnership in decision-making Among the leaders, workers and beneficiaries, it had a positive impact, and by the end of 2019 **(Bani Mortada)** and ***Bonanno, G. et al.*, (2020)** focused on some service institutions in Dammam and targeted 91 leading officials from the target group of the study and analyzed the questionnaires that included aspects of the analytical study, which showed the application of the Dammam region's institutions adopting self-management with a medium revealing degree. There are statistically significant differences between the criteria of type and experience, while the educational qualification did not show a clear statistically significant effect, contrary to what was expected. All of this confirms that combating Corruption to achieve economic prosperity, rationing technical skills, and providing financial budgets is very important ***Ramesh C. Paudel et al.* (2021)**. The authors suggest implementing smart poka-yoke (SPy_{it}) principles to overcome the Corruption behaviors mentioned in Line 102.

The authors enhance the second-best theory of institutional quality discussed by ***M. Molinari*, (2014)** to present our third one in this work. The theoretical examination of the developmental prosperity model accessed by ***Ghalwash, T.* (2014)**, this study empirically compares it with the proposed non-linear model introducing the corruption index into the growth model to discover the direct and indirect influence of Corruption on economic growth in some of Egyptian organizations, whether service or productive.

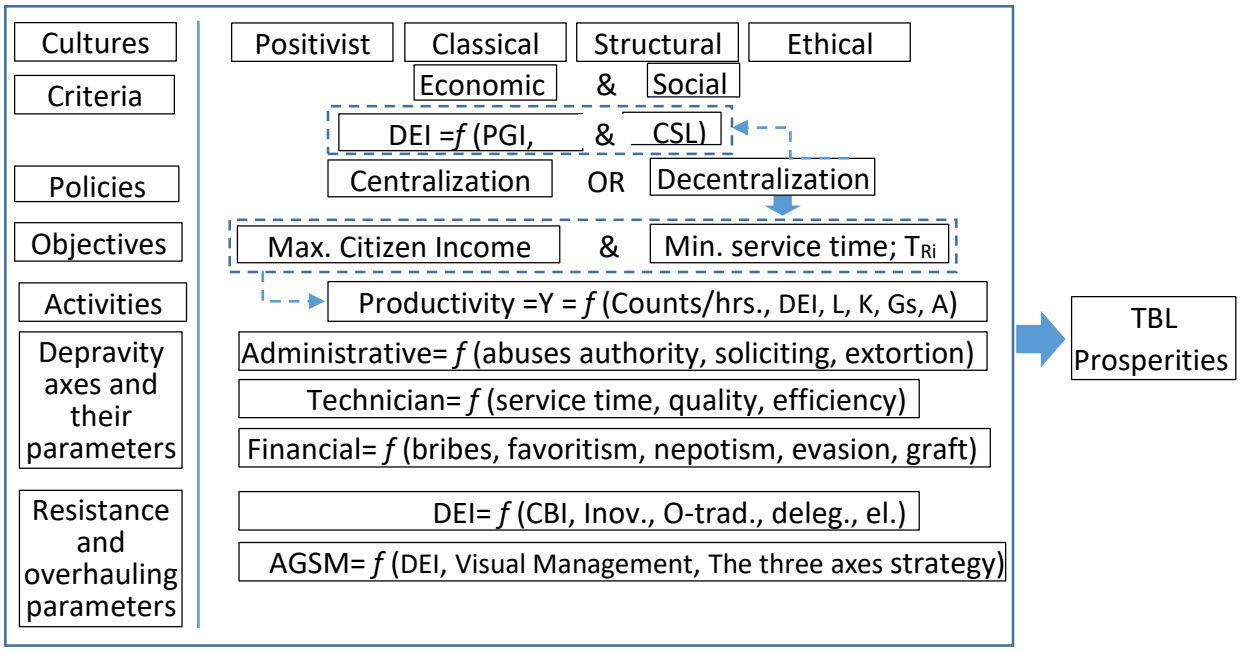

Figure 1. Automated Governance Self-Management framework model for trapping depravity behaviors

The following is how the paper is organized: Section 1 includes a review of both theoretical and empirical literature; Section 2 presents the econometric model and the key results; and Section 3 concludes with a discussion of the findings.

2. Aim of the study:

The study aims at tracking the impact of everything that impedes institutional reform and the achievement of full benefit for the beneficiaries (citizens) through well-defined activities with specific powers carried out by the managers, in order to achieve justice and equality among the citizens via accelerating operations, reducing costs, and raise the quality of services and goods. However, Corruption is considered an illegal method that hinders the achievement of the goal, harms the GDP, and weakens institutional growth, which leads to social risks for members of society ***Shafiee, M.,* (2019)** and ***Castro, A. et al.,* (2020)**

3. Data collection procedures:

The spatial framework (the Arab Republic of Egypt) caught up to 870 responsible during 1444 AH by designing a Google Form and sending them through the means of communication randomly in October 2022 AD. 512 people from service and production institutions responded, and they were counted during the period from 3 November to 15 December 2022 AD, and they were sorted and the sectors applied to mechanized governance were selected in varying proportions. For three months, 361 managers responded to 21 production institutions in the 10th of Ramadan City, and three service institutions (Zagazig University - the Syndicate of Engineers Subsidiary in SHR - one of the food commodity distribution chains) in Egypt. The authors mimic ***Masoud Khodapanah et al.* (2020)**.

The response rates varied between the different parties in terms of attendance and interest. The director of the Ideal Standard Corporation for the manufacture of bathtubs and the 2B Corporation carried out an accurate and impressive application of the objectives of the study and high response. The information needed to examine nonresponse bias was obtained from two sources: follow-up emails and follow-up phone calls. Then, those interested were asked to explain the idea of the research and their desire to participate in the application of some management concepts that reflect positively on productivity and services through a series of workshops explaining how to implement it, along the lines of ***Ibrahim, S.,* (2011).**

4. Standard description of the proposed model:

The standard description of the proposed method for applying standardized governance is based on five stages (diagnosis and planning stage - appropriate device design stage - behavioral tracking stage - performance control stage - deviation prediction stage) sequentially according to the proposed methodology (Smart Automated Governance poka-yoke) which activating visual management with the three main axes (administrative - technical - financial) to avoid wrong actions. The question is; what is phase have priority to track through the next three months up to April?

Table (1) shows the diversity of technical skills does not constitute a problem that leads to Corruption. Despite, the standard deviation has the largest, it means disparities in the skills of workers, which is acceptable. While the problem appeared in the financial axis which deviates away from the expected value of average growth of GDP via extravagance that not benefits society, while the administrative axis we thought would have the least deviation, but fears of mechanized governance may still drive the convictions of managers who think that their control will be Limiting it or because self-management is one of the modern concepts that we hear despite our vision of applying it in some of the institutions that were visited, or that some institutions follow the central administration and cannot make a transparent transition towards decentralization and the granting of governed powers. This was consistent with the conclusion of ***Jassim, G.* (2018)** and ***Bani Mortada, A.* (2019)** in the implementation of the proposals of ***Moradi, S.* (2016)**. The researchers found that the application of governance supported by the foundations of self-management in England in the west and Australia in the east came to a high degree, as indicated by ***Moradi, S. & Beidokhti,* (2016), *Al-Ghamdi, R.* (2019)** study and recommended by ***Ahmed M. Abed et al.* (2022)**

Table 1. The arithmetic means, the standard deviation of the reality of the managers' responses to activate the AGSM through smart poka-yoke.

rank	Questionnaire section	variance	mean	degree
1	Technical axis	0.852	2.21	Low
2	Financial axis	0.840	2.52	Medium
3	Administrative axis	0.745	2.33	Low
4	Self-Administrative	0.712	2.35	

4.1. Automated Governance Self-Management:

This paper aims to show how AGSM is applied through some influencing variables according to decentralization considerations extracted from the (decentralization Function Deployment) dCFD matrix, which is based on the idealization of each activity that is carried out in the workplace and has a direct link with citizens and customers against tracking the costs and time of the loss function based on the size of costs incurred to correct deviation trajectories with the help of neural network model ***Samia Elattar,* (2020).** Therefore, a Decentralization Structure (HodC) is proposed according to House of Quality (HoQ) style, which consists of five successive steps - worked out through 185 responses from a total of 360 participants. The following five stages are described to detail the application of our proposed methodology:

(1) Monitor all activities to keep process deviation within less than 1% through visual management controlled by the smart poka-yoke system.
(2) All expected faults are identified in a custom list shown in Figure (2).
(3) Create a feasibility study on corrective actions for the causes of errors at the moment they arise (i.e., in a timely manner).
(4) All activities and data were uploaded, monitored, and updated via the ERP information system.
(5) Attempting to be less costly procedures via increased productivity or services per capita.

The first three steps are considered supportive of four cultures to achieve authors' specific goals (accelerating procedures - raising economic growth rates - raising the GDP per capita ***Haoran Wei et al.* (2023)** - trapping depravities behaviors). The four cultures that must be deployed are illustrated in Figure (3). This preamble is the basis for constructing a questionnaire that reveals the importance of applying codified mechanized governance or not, after re-corresponding to the study and application respondents ***Albanese, J. and Artello, K.* (2018)**.

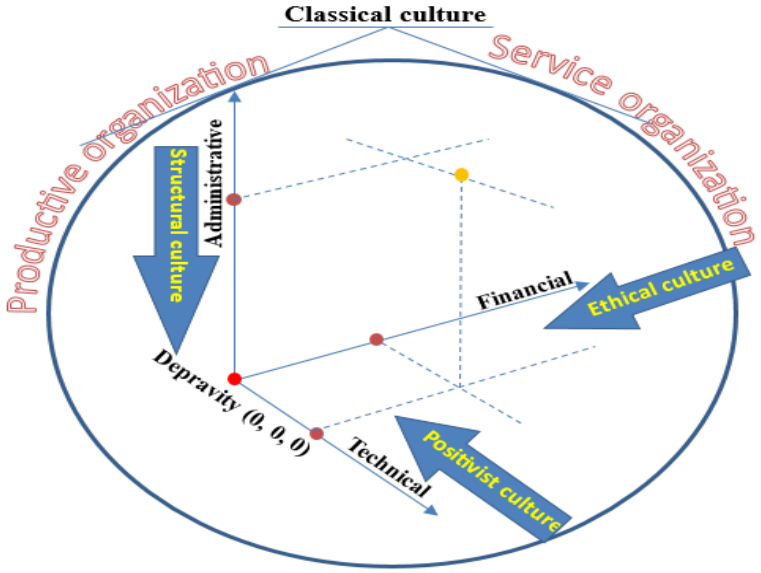

Figure 2. The three Corruption axes and their resistance culture in AGSM

4.2. TBL elements' prosperity and government spending:

This work has relied on an archives database over the period 2000-2020 of the Egyptian Central Auditing Organization for 21 enterprises that received questionnaires about famous Indicators discussed above. TBL prosperity indicator is interested in growing CSL and PGI in both productive and service sectors per capita/citizen, which can be quantified by (GDP) and national income (NI). AGSM is considered a mathematical improvement of the activation of what we call decision theory based on the values of the loss function or the cost function that determines an activity or its values of one or

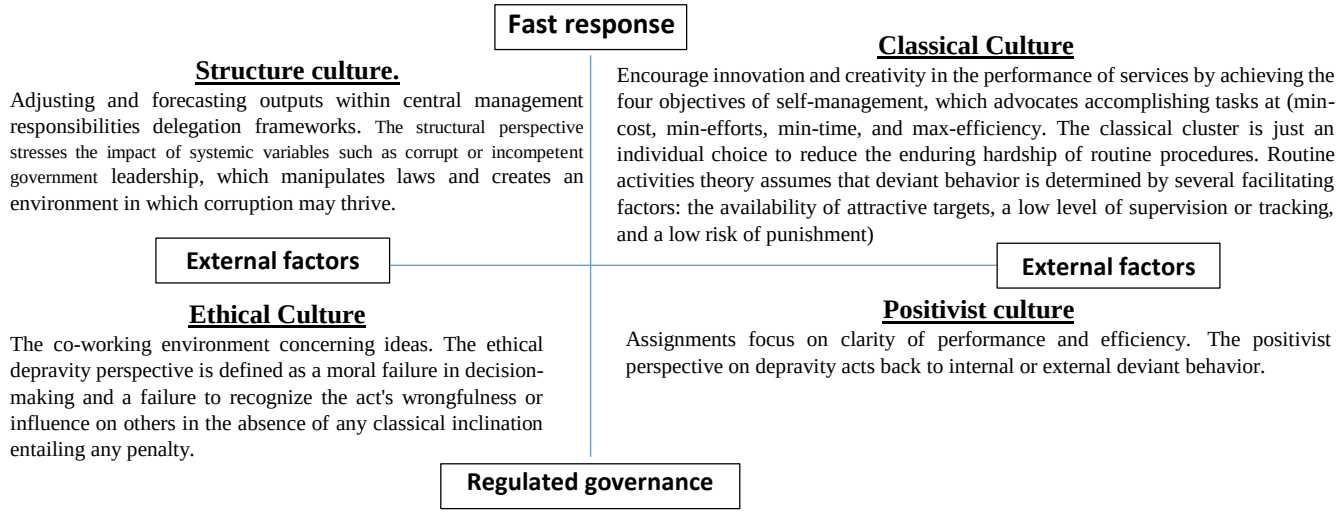

Figure 3. The four organizational cultural values

more variables (i.e. costs and time NNVA and NVA) whose trajectory can be controlled as shown in Figure (2). The proposed framework aims to reduce losses resulting from downtime (weak technical axis), customer dissatisfaction (weak response speed in the administrative axis), and cost and quality losses (weak administrative axis, weak financial axis). The measure of the loss rate can be expressed by SPy_{it} as shown by Eqn. (1).

$$SPy_i = \frac{RPN \times \sum_i (VA)_i}{\sum_i (BVA)_i + \sum_i (NVA)_i} = \frac{\sum_i (VA_{Costs,\ time})_i}{\sum_i (BVA_{Costs,\ time})_i} = \frac{RPN \times \sum_i (VA_{Costs,\ time})_i}{\sum_i (CoPP)_i} \ldots (1)$$

Therefore, the idealism sought by Eqn. (2) indicates that the effectiveness of the proposed framework is calculated using the ratio of the number of corrective actions to the total number of possible actions elicited from 185 questionnaires and determining the measure of idealism in performance according to Eqn. (2). The authors found that the Corruption behavior (Fault) leads to a deviation in the speed of the response according to its form, whether it is regular or random, as the temporal behavior compared to the permanent path shows the amount of deviation, and the system can detect this through Eqn. (3)

$$Ideality_{it}\ index = \frac{1}{N} \sum_{i=1}^{i} \frac{SPy_i}{C_i \times n_i} \times w_i \ldots (2)$$

$$Fault\ Occurrence = 1 - R(t) = \omega = 1 - \frac{fault\ free\ activites}{\#\ of\ all\ activites\ at\ a\ certain\ service\ or\ process} \ldots (3)$$

Where:

N = The number of corrective scenarios investigated to reduce the chances of losses (technical or administrative axis) that cause wasting time to complete services and goods activities.

n_i= The number of possible causes of system failure due to Corruption behaviors or inefficiency.

C_i = Cost of probable causes of faults if it occurs.

w_i = Weight of potential causes of the malfunction causing harm to the beneficiaries.

$R(t); Ideality_{it}$= The number of correct possible causes for failures caused by the detected error *i*.

The fault incidence rate is determined as the instantaneous rate of failure or unplanned outage in case of emergency as in Eqn. (4):

$$\frac{d_n}{d_t} = \lambda_t = \frac{1}{\#\ of\ activites} \left(\frac{\#\ of\ faults}{time\ interval} \right) \ldots (4)$$

The <u>severity level</u> S_v results from the weakness of the administrative and technical axis to the processing level (the time taken to end the service in which errors appear in the procedure or to return the goods to the planned desired quality), as shown in Eqn. (5) to fix a specific error as follows:

$$S_v = E\{T_R\} = \lim_{n \to \infty} \frac{1}{N} \sum_{i=1}^{N} T_{Ri} \ldots (5)$$

Where T_{Ri} : is the conventional time to detect and correct the procedures' courses of services to speed up productivity. Egypt 2030 and most of the Arab countries in the prosperity of economic life and raising the levels of satisfaction of citizens starts from understanding the relationship of four factors together (natural resources - population - invested capital - pollution) and analyzing how Corruption negatively affects the violation of the preservation of natural, human, financial and environmental resources, which leads to sharp decline in economic growth and social imbalance. The researchers reviewed the challenges of linking the factors of natural resources and invested capital with productivity and its positive impact on the economic growth of the individual, while social stability at the level of service performance in a timely manner is affected by the required efficiency of citizens on population census and environmental pollution. The main inquiry was the negative impact of administrative, technical and financial Corruption on the violation of the state of societal and economic satisfaction of citizens. The vision of Egypt 2030 and most of the countries seeking prosperity was in the decisions not to export natural raw materials except in the case of products and to provide a climate supportive of investment and to make maximum use of human energy and reduce environmental pollution curves ***Zhan, Z., et al.* (2009)**. Figure (4) indicates via forecasting abuse of natural resources administration and its relations with invested capital and the authors expect an increase in the Corruption level in 2042 point because the raw material will be rare when compared with the high population numbers. Therefore, the prosperity rehabilitation plans must be started immediately, and we have to pay attention that Corruption postpones early rescue, which will destroy any hope of prosperity achieving. The growth rate of consumption per capita is accelerated with decreasing in investments and increasing in population growth, which increases the probability of Corruption and deviant behaviors, which accelerates the depreciation rate of capital, and the initial level of output per capita. Therefore, the expected steady state of the <u>capital-citizen ratio</u> is governed by k^*

$$k^* = \left[\frac{s}{(n + Gs_t + \delta)} \right]^{1/1-\alpha} \ldots (6)$$

Where (s) denotes the <u>financial contraction</u> that back to <u>political instability</u> as a manifestation of Corruption and δ is the <u>rate of depreciation</u> of <u>physical capital stock</u> (k_t) and <u>human capital</u> (l_t) due to Corruption behaviors according to ***Gaowen Kong et al.* (2023)**. According to Eqn. (6), the steady-state capital-citizen ratio is connected favorably to the rate of saving and adversely to the rate of population increase and Corruption level. Substituting Eqn. (6) into the production function and taking the log and differentiating with respect to time yields the non-linear growth rate of productivity per capita at the steady-state level to predict the 2042 points. ***Mankiw, N.G. et al.*, (1992)** discuss the growth rate of production. $capita^{-1}$ is accelerated with increases in investments in physical and human capital and decreases in population growth as expressed in Eqn. (7), Hcl <u>is the level of human capital that grow exogenously at rate n</u> .

$$ln\, y_t - ln\, y_0 = ln\, Hcl_t + Gs_t + \left(\frac{\alpha}{1-\alpha}\right) ln\, s_t - \left(\alpha - (1-\alpha)\right) ln(\alpha + Gs_t + \delta) \ldots (7)$$

The Corruption have negative effects on these indicators and can measure via estimate the average GDP per capita depends on median investment from the private sector and average administration spending, according to ***Barro's*** **(1997)** endogenous growth theory, which pushes Cobb-Douglas to formulate the production function expressed in Eqn. (8) and modified by the authors as indicates in Eqn. (8.1):

$$Y = A \times {Hcl_t}^{1-\alpha} {K_t}^{\alpha} {Gs_t}^{1-\alpha-\beta} \ldots (8)$$

$$Y = A \times Hcl_t^{1-\alpha} \mathrm{K}_t^{\alpha} \mathrm{Gs}_t^{1-\alpha-\beta} \times idealty_{it} \ldots (8.1)$$

Where; $0 < \alpha < 1$, and Y is the total products or services completed per hour per capita relies on the number of workers used (Hcl), and capital (K) and administration spending (G_s), while (A) is a parameter describing efficiency level, which is related with Corruption index φ. According to National Bureau of Statistics data, China's Gini coefficient, a measure of income inequality, has stayed ≈ 0.47 in recent years, exceeding the global alerting limit of 0.4 and significantly higher than the 0.24:0.36 levels observed in developed countries. The effects of government spending on growth function as a part of the aggregate economy, where the total spending is Gs_t and Corruption φ and expressed as in Eqn. (9)

$$Gs_t(\varphi) = Gs_t e^{-\gamma\varphi} \quad \forall\, 0 \le \varphi \le 1 \ldots (9)$$

Where γ is the magnitude of the effect of Corruption on government spending.

The author agrees with ***Haque & Kneller*** **(2008)** when state that the elasticity of average output and administration spending in production function and discussed in Eqn. (7) depends on the Corruption factor: 1-α = γ (1 - φ) where φ is the index of Corruption in the production or services sector, where, If φ is larger, the effect of administration spending on TBL elements' prosperity reduced. If φ = 0, administration spending reaches theoretical elasticity. This infers that Corruption is a hindrance to TBL elements' prosperity, and this concept gains high agreement and generate famous phrase that "the grabbing hand" seems to be referring to Corruption's harmful impact on economic progress.

Although, other perspectives refer to positive effects of Corruption on TBL elements' prosperity, where emphasize ***Leff*** **(1964)** that Corruption may be beneficial or it is also understood to be a lubricant for the wheels of growth, if it is regulated and controlled by using official agencies and reply to "Corruption promoting" theories discussed by ***Aidt & Dutta*** **(2008)**. Therefore, the author resorts to Eqn. (10) when tackle the rate of growth of productivity as ***Levine & Renelt*** **(1992)** present:

$$\ln y = \alpha + \gamma \ln c + \beta_k \ln z + \mu \ldots (10)$$

Where c is the Corruption index and β_k is the vector of coefficients represents the partial effects of the control variables on growth. The Augmented Dickey-Fuller (ADF) test for most influenced parameters by the Corruption indicates in Table (2) that the null hypothesis of a unit root in the time series cannot be rejected at a 1% level of significance in variable levels.

Therefore, no time series appear to be stationary in variable levels. Thus, the variables follow primarily a stochastic trend as opposed to a deterministic one, although the possibility that for given sub-periods they follow a mixed process cannot be rejected ***Gaowen Kong et al.*** **(2023)**.

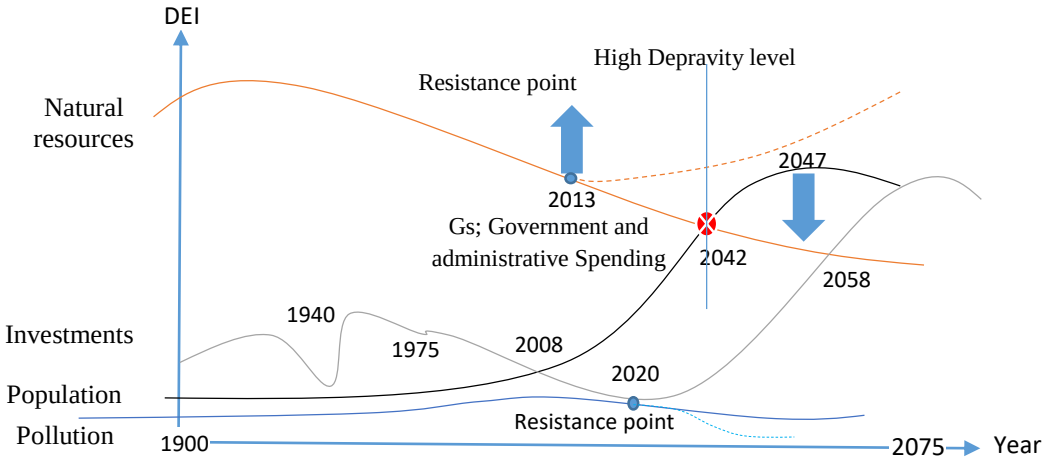

Figure 4. The relationship among the TBL elements and high depravity point

The indirect effect of Corruption on prosperity growth via the previous transmission variables [investment (*inv*), human capital (*Hcl*), government spending (Gs), openness to trade (*o-trad*) and political instability (*pis*)] can represent by the following sub-equations:

$$\ln y = \alpha + \gamma \ln c + \beta_k \ln z + \delta \ln(c * inv) + \mu \ldots\ldots (10.1)$$
$$\ln y = \alpha + \gamma \ln c + \beta_k \ln z + \delta \ln(c * Gs) + \mu \ldots\ldots (10.2)$$
$$\ln y = \alpha + \gamma \ln c + \beta_k \ln z + \delta \ln(c * o\_trad) + \mu \ldots (10.3)$$
$$\ln y = \alpha + \gamma \ln c + \beta_k \ln z + \delta \ln(c * Hcl) + \mu \ldots\ldots (10.4)$$
$$\ln y = \alpha + \gamma \ln c + \beta_k \ln z + \delta \ln(c * pis) + \mu \ldots\ldots (10.5)$$

The authors use Egyptian time series data to approximate Eqns. (10.1-10.5). The selection of these transmission factors is also consistent with the current empirical evidence, which recognizes their function as important predictors of economic growth while demonstrating that Corruption has a considerable impact on each of them ***Ghalwash, T.*** **(2014)**.

Table (2): Result of proposal regression expressions Eqn. (10).

Descriptive Variables	**Eqn. (10)**	**ADF**	
		level	**First Difference**
Constant	2.38 (2.90)*		
$\ln inv$	0.159 (2.21)*	−0.88099	−9.6493*
$\ln Hcl$	0.457 (2.94)**	−2.56041	−6.9856*
$\ln Gs$	1.778 (2.99)***	−1.6802	−7.9251*
$\ln o\_trad$	−3.448 (−2.8)***	−1.7704	−8.6591*
$\ln pis$	−4.91 (−3.42)***	−2.9830	−5.7628*
$\ln c$	−1.285 (−1.51)	−1.6040	−7.9823*
R-square	0.71		
Adj. R-square	0.69		
Durbin-Watson	0.538		

Continuo Table (2)…

Explanatory Variables	**Eqn. (10.1)**	**Eqn. (10.2)**	**Eqn. (10.3)**	**Eqn. (10.4)**	**Eqn. (10.5)**
	Y_t	Y_t	Y_t	Y_t	Y_t
The Constant	16.51 (−3.11)***	−41.49 (−3.06)***	−46.91 (−3.78)***	−39.81 (−2.65)**	−42.32 (−4.81) ***
$\ln inv$	0.291 (2.12) **	0.411 (3.09) ***	0.409 (3.8) ***	0.41 (3.31)***	0.38 (3.08)**
$\ln Hcl$	0.26 (2.48)**	0.24 (3.56) ***	0.19 (1.52)**	0.31 (2.27)	0.29 (2.96)**
$\ln Gs$	0.42 (3.28)***	0.28 (2.86) **	0.37 (2.67) **	0.36 (2.41) **	0.34 (2.39)**
$\ln o\_trad$	−0.41 (2.61)**	−0.48 (−2.99)**	−0.39 (−2.76)**	−0.37 (−2.16)*	−0.43 (−2.74)**
$\ln pis$	−0.007 (−2.08)*	−0.003 (−2.19)*	−0.001 (−2.48) **	−0.006 (−2.39) **	−0.018 (−2.13) *
$\ln c$	−2.68 (−3.039)***	−1.837 (2.41) **	−0.442 (−1.18)	−1.341 (−2.019) *	−2.61 (−2.738) **
$c * inv$	-0.019 (−2.65)*				
$c * Gs$		0.029 (0.29)			
$c * Hcl$			−0.082 (−0.76)		
$c * o\_trad$				−2.41 (−3.24)***	
$c * pis$					−2.84 (−2.75)**
Adj. R-sq.	0.651	0.712	0.683	0.714	0.712
Serial correlation	0.058	0.048	0.031	0.304	0.089
Heteroscedasticity	0.391	0.459	0.302	0.672	0.482

Notes: t-statistics in parentheses; dependent variable: *** statistically significant at the 1% level; ** statistically significant at the 5% level; * statistically significant at the 10%.

Table (2) indicates the interaction term between Corruption and other significant variables, which emphasizes that Corruption has a negative impact on prosperity growth through investment, human capital, openness, and political stability and still has a positive effect on economic growth through the government expenditure but not statically significant.

$$gdppc_{it} = f(CSL, y_0, Hcl_t) \dots (11)$$

Where, Citizen Satisfaction level (CSL), and initial level of GDP per capita (y_0) are affected by the human capital (*Hcl*). According to endogenous growth theories, urban enterprises increase their productivity through technical learning, mimicking (know-how), and culture level of Corruption resistance, relying on the belief that trained staff is more effective at learning, inventing, and executing new techniques, resulting in higher productivity. In general, all scientific studies have found that Corruption has two distinct effects: both beneficial (positive) and adverse (negative). As a result, this study is also conducted on that outcome.

4.2.1. The adverse impact of Corruption on TBL elements' prosperity:

The Corruption level reflects the rate of expenditures for Corruption and trade obstacles. ***Lambsdorff,* (2005)**. According to ***Ugur and Dasgupta* (2011)**, there are 1,002 articles on Corruption elements. The paper synthesizes current evidence on the relationship between Corruption and TBL elements' prosperity, accounting for impact type, data sources, and country categories. The research uses the terms of lower- and high-income nations. Even so, the results show that Corruption has an adverse impact on the rise of GDP/capita as a whole, that Corruption is more harmful in unsettled countries than within low incomes alone, and that the indirect effects of Corruption on TBL elements' prosperity (via human capital and finance sources) are greater than the impacts felt directly. If the Corruption index decreased one unit, the annual growth rate of GDP/ capita can be raised by 0.59 percentile point about in low-income countries. The total (direct and indirect) effect on GDP growth per capita is larger in the hybrid nation category (i.e., countries that include both LICs and Non-LICs), at -0.86 according to ***Aidt et al.* (2008)** and ***Ugur and Dasgupta* (2011). *Ghalwash, T.* (2014)** created a nonliner model of dependency between Corruption and organizational stability indicates the threshold impact of discriminating among excellent-efficiency and the impact of poor-efficiency organizations. As a result, no association between Corruption and growth has been discovered in organizations with low-efficient political organizations, while they obtain

contradictory findings in countries with high-efficient political organizations. ***Venard*** **(2013)** uses cross-national data from 21 organizations provided by USCC on perceived levels of Corruption, institutional framework quality, and TBL elements' prosperity to examine the link between organizational efficiency (administrative, technique, financial), Corruption level, and TBL elements' prosperity. Data were collected for four years (2002, 2006, 2008, and 2011), and the Partial least squares (PLS) estimate method was utilized to test the suggested strategy. The empirical results suggest that the efficiency frameworks of both organizations and Corruption have a detrimental influence on TBL elements' prosperity. Improvements in organizational efficiency and Corruption reduction are more beneficial for TBL elements' prosperity in low-organizational-efficiency nations than in high-organizational-efficiency countries. In terms of the impact of Corruption on economic progress, this analytical research supports the Zagazig University of thinking in their struggle with Corruption activities. ***Tarek and Ahmed*** **(2013)** investigate the influence of Corruption on the economy of 30 developing place from 1998 to 2011. The findings reveal that Corruption has a negative impact on economic activity and that the amount of Corruption is higher and more serious in low-income and weakly linked economies. Corruption will be more problematic in developing countries due to a weak legal framework and poor salaries for administration officials. But, what if there another prespective show the beneficial of Corruption.

4.2.2. The beneficial impact of Corruption on TBL elements' prosperity:

In contrast to those findings mentioned above, many additional academics have data indicating that Corruption aided economic progress as a lubricant. Between 1970 and 1998, ***Méon and Sekkat*** **(2005)** examined the link between the effect of corrupt practices on development and investment and found out it has an adverse effect on GDP independently. The main cause of weak growth is reduced accumulation of capital and low efficient technician human. Nevertheless, Corruption is positively correlated with efficiency (i.e., performance level) in countries with "ineffective" organizations as confirmed by ***Méon & Weill*** **(2010).** According to ***Egger et al.,*** **(2005),** Corruption increases economic performance by allowing people belonging to the private sector to correct administrative faults. Therefore, the author works on ***Aidt*** **(2008)** and ***Ugur and Dasgupta*** **(2011)** hypothetical model, which emphasizes the impact of Corruption on TBL elements' prosperity according to organizational structures have an adverse influence on high-efficiency organizations and lead to low growth, while in organizations with poor administrative efficiency, the effect is beneficial. The same results emphasized by ***Heckelman & Powell*** **(2010).**

5. Research data and methodology outputs:

Based on the preceding practical and theory-based investigations, the following model of the influence of Corruption on revenue generation is established and discussed as shown in Table (3):

Table 3. Dependent and control Variables

Symbol	Parameters	Expect.	meaning	Previous researches	Sources
Dependent variables					
$gdppc_{it-1}$	One of left hand lagged and dependent		Real GDP per capita	The natural logarithm of GDP/ capita ($)	
DEI_{it}	Development efficiency index based on Corruption behavior	*Adverse -ve*	Corruption perception sub-variables shown in Table (1)	Tarek & Ahmed (2013); Venard (2013); Ugur & Dasgupta(2011); Saha & Gounder (2013).	Transparency International- TI
		Benifical +ve		Aidt & Dutta (2008); Heckelman & Powell (2010); Ahmed M. Abed et al. (2022).	
Control parameters					
$deleg_{it}$	Delegation rate	*Benifical +ve*	Delegation rate	Heckelman & Powell (2010); Kotera et al. (2011); Saha & Gounder (2013); Ahmed M. Abed et al., (2022)	Freedom House
el_{it}	laissez-faire index	*Benifical +ve*	The average of laissez-faire index	Heckelman & Powell (2011) and Peev & Mueller (2013), Haoran Wei et al. (2023).	Economic liberity
inv_{it}	Push Investment capital	*Benifical +ve*	Investment per GDP/capita	Ekanayake & Chatrna (2010); Schumpeter(2012);	World Bank
Hcl_{it}	Related by the population growth rate	*Adverse -ve*	The annual population growth (%)	Egger & Winner (2005); Sachs (2008).	World Bank
O_trad_{it}	open up Trade	*Benifical +ve*	The import and export % upon GDP	Okuyan et al. (2012).	World Bank
$Icrgi_{it}$	a degree of culture	*Benifical +ve*	The followers enrolled in the university (%)	Boughanmii (2009).	World Bank
Gs_{it}	Government spending	*Adverse -ve*	The Government's share spending of GDP	Fölster & Henrekson (2001).	World Bank

According to variables discussed in Table (3), the model discussed in Eqn. (12) refers to the impact of Corruption on TBL elements' prosperity and shows data regressions using Sargan technique.

$$DEI(gdppc_{it}) = \beta_0 + \beta_1 inv_{it} + \beta_2 el_{it} + \beta_3 Hcl_{it} + \beta_4 Icrgi + \beta_5 Gs_{it} + \beta_x o\_trad_{it} + \mu_i + e_{it} \dots (12)$$

Where: $i = 1, 2, 3,.., N$ *(the organizations)*; $t = 1, 2, 3, \dots, T$ *(the model's observed time)*

While μ_i is the constant effect of the organization *i* and equally distributed independence errors e_{it}, where $E\left(\frac{\mu_i}{e_{it}}\right) = 0$.

6. Questionnaires analysis:

The imbalanced data survey is used to collect data on variables, which has some of "missing" in data rows of collected variable such as $deleg_{it}$. Data were collected from 21 organizations in Egypt from 2011 to 2020, including well-known and reputable websites shown in last column. Table (4) shows the analysis of collected questionnaires from two sectors (public and private) for (productive and service) types and describes the mean of variables used in establishing the modern model of tracking the Corruption effect on TBL elements, where the average prosperity is 3.87% with Corruption index approximate of 3.23.

Table 4. The static data regression results

Code	N	Mean	$S_{td.}$ $D_{ev.}$	Min	Max
gdppc **(The annual rise rate of GDP/capita)**	361	4.1018	3.2018	3.2018	3.2018
DEI	361	6.0424	0.6000	0.6000	0.6131
el **(Outsider direct investment/GDP (%))**	361	2.6609	2.6609	2.6609	2.6609
INF **(Consumer price index nation (annual %)**	361	6.8348	6.8348	6.8348	6.8348
Hcl **(administrative mangement via human capital)**	361	27.410	27.411	27.4110	27.412
O_trad **(The import and export % upon GDP)**	361	12.694	12.694	12.6943	12.694
Icrgi **(International Country Risk Guide index of Corruption scaled 0-6. Higher indicate lower Corruption)**	361	83.513	83.513	83.5131	83.513
deleg.	361	1.9348	1.9348	1.9348	1.9348
pis.	361	0.9856	0.9856	0.9856	0.9856

A data structure is the regression analysis through the data screen, where during regression analysis, any parameter is estimated with cross-section data using the Ordinary least squares technique known (OLS) relies on time series pairing in multiple times. The Best Linear Unbiased Estimation (BLUE) will be returned by the Regression Method Data survey, taking into account the total observation units of N x T with survey data. A balanced survey is data that has the same aggregate unit time for every organization. An unbalanced survey occurs when the amount of time units varies for each organization. The three most widely utilized approaches using the static survey data regressions model are Pooled (PLS), Random Effect Model (REM), and Fixed Effect Model (FEM); nevertheless, each method has advantages and downsides. The Pooled technique reveals that all organizations are homogenous, which is not realistic because each organization has its own institutional administrative features that are mostly unaltered through time, however, this may be connected with factors. When these specific impacts are not addressed, the Pooled approach might result in erroneous estimations. When investment is elevated, it leads to a rise in prosperity level, and great growth encourages additional investment. According to ***Saha and Gounder*** **(2013),** endogenous Corruption occurs when any variable is associated highly with the development efficiency index (DEI). The regression strong based on predictor variable value above or less 0.5, where the R square in this study is 0.9215, and often resort to adjust this indicator after corrected with standard error to explain F-test and compare using F-table by p-value that if less than 0.05 is evidence of influence. The author resorts to use Arellano-Bond technique to rest the correlation of the hypothesis H_0: None of which are self-correlated and are used to differential error (variance), where reject the H_0 in AR (1) process in first-order degree. While AR (2) more essential because it evaluates self-correlation at multiple levels and based on REM testing all lagged and predetermined variables.

The author resorts to using Sargan statistics to assess the validity of estimated instrumental variables, which considers the instrumental variable as a variable that is exogenous. This suggests that the correlation does not exist due to the model mistake, because it's worth is as high as feasible. As a result, using quantile regression to investigate the various quantiles of the growth distribution function is suitable. Therefore, the proposed model (1) will modify to be as in Eqn. (13):

$$DEI = gdppc_{it} \times R(t)_{it} = \beta_0 + \beta_1 inv_{it} + \beta_2 el_{it} + \beta_3 Hcl_{it} + \beta_4 Icrgi + \beta_5 Gs_{it} + \beta_x o\_trad_{it} + \mu_i + e_{it} \dots (13)$$

Table (5) displays the estimated regression result obtained from Eqn. (13) via Pooled OLS, FEM, and REM, which are shown in columns 1, 2, and 3. The author finds that FEM is matched with data via analysis of the results of the Chow and Hausman technique tests, notwithstanding the error variance of results. Therefore, the author resorts to using FGLS approach to increase estimation efficacy, as demonstrated in Column 4 in spite of its limitations, but finally, the AGSM estimate results are gathered and utilized for analysis, as shown in Column 5 of Table (5). TI developed the Corruption perception index (DPI). This is done "based on expert assessments and opinion polls of their perceived levels of Corruption." It is rated from 0:10. The 'dep' variable in this study is an index of Corruption evaluated by the CSL and modified from TI. This indication is rated on a scale of 0 to 10, with lower Corruption indicating a smaller organization and higher Corruption indicating a larger organization. Thus, for this study, it is corrected by deducting 10 points from the CSL to be the greater the value getting, the less Corruption.

Table 5. Corruption regression level for enterprises' activities on prosperity

Independence variables	Pooled	' FEM '	' REM '	' FGLS '	Proposed
Gs_{it}	0.0007	0.00191***	0.00191***	0.000971***	-0.000068**
	[0.85]	[7.98]	[7.84]	[2.88]	[-1.53]
$deleg_{it}$	0.215***	0.229***	0.235***	0.21***	0.00531*
	[7.68]	[9.12]	[9.69]	[13.13]	[1.85]
el_{it}	0.0138	0.0228	0.0254*	0.0531**	0.00525***
	[0.35]	[1.51]	[1.76]	[2.49]	[2.89]
INF	0.00211	-0.00341***	-0.00341***	0.00381***	0.000641***
	[0.88]	[-3.09]	[-3.07]	[2.83]	[4.93]
Hcl_{it}	0.0191***	-0.00991***	-0.00817***	0.0151***	0.000511*
	[4.89]	[-3.25]	[-2.74]	[7.53]	[1.81]
O_trad_{it}	0.00111***	-0.00019	-0.00019	0.000598***	0.0000561**
	[3.58]	[-1.55]	[-1.21]	[3.83]	[2.55]
$Icrgi_{it}$	0.0461***	0.00444	0.00538*	0.0419***	-0.00023***
	[5.42]	[1.43]	[1.71]	[6.61]	[-3.69]
pis_{it}.	0.181	0.171	0.153	0.131	-0.00707
	[0.58]	[1.19]	[1.09]	[0.67]	[-0.38]
Ln gdppc					0.951***
					[82.36]
Blocked factor	3.791***	2.371***	2.322***	3.568***	0.168***
	[6.72]	[17.51]	[16.21]	[13.19]	[3.98]
Observations	361	361	361	361	233
strong correlation coefficient	0.6281***	0.4503***			
Chow tech. test		173.37***			
Hausman tech. test			33.17***		
Variance test		263.18***			
Autocorrelation test		261.107***			
Sargan test					0.858
AR(2) test pvalue					0.453

hint: *, **, *** denotes relevance at the 0.01, 0.05 and 0.1; [ ] is value of the standard error

The official framework (variables of delegation and laissez-faire) and socioeconomic determinants are regulated, as shown in Table (5) col. (4), where the 'dep' coefficient is *-ve* at 1%. The analysis approves that Corruption is impeding TBL elements' prosperity in Egypt. If it increases its anti-Corruption spending by 1%, the GDP growth rate will up by 0.000067%. Therefore, prosperity can be tracked via multiple channels at two micro and macro levels. ***Dal Bo & Rossi,* (2007)** emphasizes at the micro level, Corruption affects efficiency in the allocation and utilization of industrial components, resulting in negative consequences on CLS, such as the bribes which devastate the provision of health care and education services. While at the macro level, Corruption impacts negatively on GDP/capita as discussed by ***Adesi & Di Tellai,* (1999).** Indeed, organizations with many incorrect policies, ineffective spending, and high levels of Corruption harm macroeconomic development by reducing property ownership, and competitiveness, ineffective allocation of resources, destroyed facilities, and educational investments ***Murphy et al.,* (1991).** The magnitude and direction of the influence of Corruption and organization on TBL components are shown in Column 5 of Table (5). In addition, results of quantile regression on a function-formed in Table (3) are provided in Table (6) to highlight the influence of these parameters on the quantiles of prosperity variables.

Table 6. Corruption for quantile regression level for enterprises' activities on prosperity

Independence variables	Quantile regression				
	10%	25%	50%	75%	90%
Gs_{it}	0.00281**	-0.00171	0.00311***	-0.00311**	-0.00429*
	[2.72]	[-1.83]	[2.46]	[-0.17]	[-1.39]
$deleg_{it}$	0.218***	0.278***	0.211***	0.157***	0.163***
	[12.42]	[9.41]	[4.32]	[2.57]	[3.67]
el_{it}	0.0165	-0.00949**	0.160*	0.0196**	0.0521***
	[0.63]	[-0.23]	[1.24]	[0.81]	[0.79]
INF	-0.00353*	-0.00061	0.00575*	-0.00134	0.00426
	[-1.56]	[-0.21]	[1.96]	[-0.39]	[1.93]
Hcl_{it}	0.0128***	0.0263***	0.0234***	0.000423	-0.00623
	[5.42]	[5.29]	[4.49]	[0.08]	[-1.15]
O_trad_{it}	0.000911**	0.000978**	0.000825***	0.00136***	0.00172***
	[2.85]	[1.92]	[3.27]	[2.77]	[3.21]
$Icrgi_{it}$	0.0469***	0.0435***	0.0476***	0.0246*	0.0219
	[4.43]	[2.92]	[4.12]	[1.97]	[1.65]
pis_{it}.	-0.242	-0.479*	-0.429	1.638*	2.120***
Blocked factor	-47.72***	-49.09***	-62.18***	1.856**	1.375**
	[-1.27]	[-1.97]	[-0.89]	[1.90]	[3.64]
Observations	361	361	361	361	361

Note: *, **, *** denotes relevance at the difference level of α and indicate the standard error in [ ]

Table (6) indicates that the degree of the 'dep' variable's influence on PGI and delegation rate, which varies at different quantiles of the distribution functio n of economic prosperity, in particular can provide an impetus for administrators to speed up and facilitate the procedures when the administration is slow and responsible make speedier choices to benefit the citizen, which is evident in the case of administrative weakness and political confusion that Corruption promotes services efficiency and be beneficially on economic prosperity. Furthermore, Corruption has a negative influence on prosperity at the high quantiles of 75% and 90% of the distribution function of GDP, reaching significance at 5%, which is confirmed by ***Venard and Saha et al.*** **(2013),** ***Ahmed M. Abed et al.*** **(2022)** and supportive of "The Grabbing Hand" theory. The regression coefficients of 'deleg.' and 'el' variables are positive significant statistically as indicated in column 5 of Table (5), which provides that Decentralization based on the principle of delegation enhances institutional efficiency and has a positive impact on TBL prosperity elements, especially at the higher quantiles. Also, the two factors: 'deleg.' and 'el' need to be more concerned and deployment in the service sector of Egypt. The impact level of Corruption on prosperity in low quintiles is 10% and 50% for the distribution function of growth variables. The author finds Corruption has a positive impact on prosperity and GDP and vice versa, in high divisions as 75% and 90%, while the impact is negative. A cross-sectional framework is employed to validate this, with the growth rate and the $Icrgi$ index being observed just once for each organization. The scatter plot (shown below) demonstrates and verifies the hypothesis that the link between Corruption and economic development (fitted values) is nonlinear. The curve obviously rises in the intermediate range of Corruption and falls in the lower and upper ranges of Corruption. Therefore, the author proposes the modern quadratic model appeared in Eqn. (14). Subscripts i (i=1,….. , 21) and t (t=2000,….,2018) denote index organization and time, respectively.

$$DEI_{it} = DEI = gdppc_{it} \times R(t)_{it} = \beta_0 + \beta_1 inv^3{}_{it} + \beta_2 el^2{}_{it} + \beta_3 Icrgi^2 + \beta_4 Hcl_{it} + \beta_5 Gs_{it} + \beta_x o\_trad_{it} + \mu_i + e_{it} \dots (14)$$

Table (7) shows the findings of the PCSE estimate for GDP progress where the Corruption has a negative impact on (-0.9967573) economic growth, however, the square coefficient of Corruption has a positive impact on (0.1782304) economic growth. The importance of the $\boldsymbol{Icrgi^2_{it}}$ coefficient validates the nonlinearity of this model and demonstrates the presence of a threshold over which the sign changes.

Table 7. the PCSE estimate for GDP progress

Progress	Coef.	Stand. Error	t	$P>\|t\|$	β (95%)	
Gs_{it}	0.0606801	0.0238898	2.52*	0.012	0.0138471	0.1074129
Inf_{it}	-0.0321498	0.0128278	-2.47*	0.014	-0.05744	-0.0068439
$Icrgi^2{}_{it}$	0.0093132	0.0022787	4.05*	0.000	0.004831	0.0137489
O_trad_{it}	-0.9967573	0.316782	3.13*	0.003	0.375854	1.617906
el_{it}	0.1782304	0.046467	-3.84*	0.000	-0.270452	-0.0725
Hcl_{it}	2.002872	0.513226	3.83*	0.000	0.9963812	3.008361

The concave function of Figure (5) illustrates that Corruption that aids tax evasion has two sorts of economic consequences. Where growth chances are squandered ***Cerqueti & Coppier,*** **(2011).**

%number of simulation runs

n=10000

% begin 130 tasks/day exists + 100 + 20 provided from besides window=?

Min_Procedures_per_capita_hour = MIP;

Max_ Procedures_per_capita_hour = MXP;

min_efficiency = mE;

beside_ tasks = bt;

level=[MIP: MXP];

$efficiency = bt + (mE \times level \times SPy_i)$;

for k=1:1201

cum_eff.=0;

for m=1:n

$procedures = floor(rand * (MXP - MIP) \times R(t) + (MXP - MIP) + 1)$;

$if\ procedures >= level(k) \times S_v$

% Corruption cost - Cost of trapping Corruption

$gdppc = economy/capita * level(k) \times k^*$;

else

$government\_spending = Gs_t$;

$trapping\_depravity\_cost = \delta$;

$Y = A \times Hcl_t^{1-\alpha} K_t^{\alpha} Gs_t^{1-\alpha-\beta} \times idealty_{it}$

$$ln\, y_t - ln\, y_0 = ln\, Hcl_t + Gs_t + \left(\frac{\alpha}{1-\alpha}\right) ln\, s_t - \left(\alpha - (1-\alpha)\right) ln(\alpha + Gs_t + \delta)$$

end

efficincy = partial_efficiency-s(k);

cum_eff. = cum_eff.+eff.;

end

expected_eff.=cum_eff./n;

p(k,1)=level(k);

p(k,2)=expected_eff.;

end

plot(p(:,1),p(:,2),'+',p(:,1),p(:,2),'-'),xlabel('No. of procedures'), ylabel(efficiency and Corruption level')

6.1. Discussing the relationship of axes and variables:

The arithmetic mean was extracted by using the Minitab program and the standard deviations were evaluated to see the application of automated governance that codifies responsibilities and is supported by the idea of self-analysis of variance to explain the quality of both products and services and the following tables discuss this. From Figure (5) it is clear that the wasted time variable may lead to a decrease in efficiency, as well as an increase in the rate of

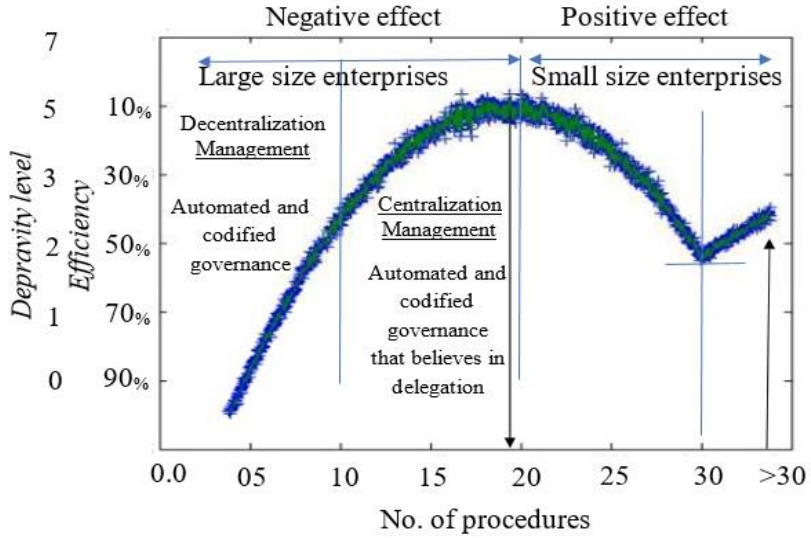

Figure 5. The relation among the depravity, efficiency, and number of required procedures

management from the perspectives of the target of the study according to the variables of wasted time, the speed of response to customers, and the quality of products and services, to reach an analysis that explains the statistical differences between the arithmetic averages By testing the "t test" for the effect of controlling lost time and speed of response to the performance of customer services and goods provided to them, while the researchers biased the one-way Corruption behaviors, which harms the GDP per capita as discussed in ***Abed et al. (2024).***

The author found the tracing of the Corruption illustrated in Figure (5) is matched with ***Mohamed Ali Trabelsi & Hédi Trabelsi***, **(2020)**. Therefore, Table (8) reviewed the relationship of wasted time with the three referred axes.

Table 8. Mathematical average, variance, and 't' test for the impact of the lost time variable on the reality of activating governance.

P value	freedom	T test	√Variance	Mean	N	sector	axis
0.009	358	0.125	0.742	2.33	143	Service sector	Administrative
			0.755	2.32	217	Productive sector	
0.795	358	0.260	.0.856	2.22	52	Service sector	technical
			0.845	2.19	308	Productive sector	
0.062	358	-1.869	0.847	2.46	211	Service sector	financial
			0.815	2.64	149	Productive sector	

7. Conclusion:

The scope of study is distributed in many services and productive organizations in ARE and KSA,

Services organizations		Productive organizations
Egypt	KSA	ARE -KSA
Zagazig University	Schools in different areas	A multinational Co. Egyptian – Saudi Arabia for the manufacture of sanitary ware and bathtubs (Ideal Standard) in the 10th of Ramadan City, Egypt.
Syndicate of Engineers (SHR)		
Logistic and Distribution center affiliated 2B.		

The authors deduce some recommendations that trap Corruption behavior in administrative, technician, or financial axes to increase efficiency percentage and confidence of organization, which share increasing the raise of GDP per capita in the country via raise high-quality exporting and high-performance services that reflect customer or citizen satisfaction level.

1. The authors enhance the second-best theory of institutional quality discussed by ***M. Molinari***, **(2014)** and present the third non-linear model that describes the

effect of the Corruption index on the $gdppc$ (economic growth) in some Egyptian organizations, whether service or productive.

2. The authors have not been observing any relationship between Corruption and economic growth in services organizations with low-efficient politics, whereas conflicting findings have been obtained in high-efficient productive organizations.
3. Transforming from centralization to decentralization management in productive and service institutions within the governance of a mechanized system that qualifies everyone to bear the responsibility of visible self-management and encourages the delegation of powers as needed.
4. The resistance cultures of Corruption behavior indicate that classical dominate over the system and enhance the Positivist and structural to feed the ethical morals of employees which decrease the Corruption index by 1.15 points in the first six months of implementation of AGSM procedures. The study indicates that democratic behavior enhances TBL elements' prosperity.
5. The R^2 for administrative spending and development efficiency index (DEI) to trace the Corruption behavior is strong 0.9215
6. The analysis of questionnaires approves that Corruption is impeding TBL elements' prosperity in Egypt. Therefore, the government intends to increase anti-Corruption spending by 1%, which the GDP growth rate will up by 0.000067%.
7. Qualifying the managers, responsible, and employees with training that eliminates the fear of using useful information systems to achieve visual self-management such as AGSM, where the average prosperity is up by 3.87% with Corruption index approximate low by of 3.23.
8. Working to provide financial support resources by encouraging all members of the organization to rationalize consumption by applying the concepts of the 5's and the smart Poka-yoke.
9. The necessity of granting workers more technical independence under the supervision of visual management to enable them to adopt the concepts of self-management.
10. Work hard to erase human and administrative obstacles to defeat Corruption by regulating ethical behavior in service and production institutions from the sum of collective norms to create their status (reputation) and pull down the Corruption behaviors to less than 29.5%.

Conflicts of Interest

The authors declare no conflicts of interest.

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