Institutional Analysis of Corruption Configurations in South-West Asian Countries: A Fuzzy-Set Qualitative Comparative Analysis (fsQCA)

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Abstract

Considering corruption as one of the chronic harms of the administrative system, and the social factor affecting economic growth, the present study sought to explain, for the first time, the differences in the perceived levels of corruption among 16 Southwest Asian countries, relying on the sociological "new institutionalism" theory in analyzing organizations, describing causal mechanisms and their mutual impact, and creating corruptive contexts. The fuzzy-set Qualitative Comparative Method (fsQCA) and the secondary data were used to find the causal configurations leading to corruption in these cases. The experimental judgment led to two causal configurations showing that some institutional requirements of the institutional environment, in contrast to the requirements of the technical environment, exacerbated the gap between formal and informal structures. Conflicts lead to the formation of informal norms and networks that, over time, provide shared mental patterns for actors in executing current actions and confronting ambiguity and uncertainty; and on the basis of contextual rationality, they are interpreted as an appropriate way of acting. This reduces the costs of corruption and increases the opportunity for abuse by diminishing supervision and control and strengthening informal networks.

Keywords: Causal configurations**,** Corruption, Fuzzy set qualitative comparative analysis, Institutionalism, Southwest Asia

1. Introduction

Corruption is a complex phenomenon and one of the social factors influencing economic growth (Evans & Roach, 1999). The existence of significant differences in the rate of corruption among developed and developing countries can be predicted due to significant differences between their socio-economic and political structures, but having such differences shared among countries in a region with significant structural similarities begs us to ponder why such scenarios exist? And which set of causes make corruption more prevalent in some countries in one region more than others?

Providing a comprehensive definition of corruption as a starting point for comparative studies in many countries faces legal and political problems. However, in 2003, Transparency International (TI) provided a definition of corruption accepted by the United Nations and many scholars (Treisman, 2000; Goel & Nelson, 2010; Blason & Peyton, 2011; Mashali, 2012). According to the given definition, corruption is "the abuse of entrusted power for personal interests". TI, in its annual report assigns a score between 0 (most corrupt) to 10 (least corrupt) to the countries it examines. The average scores of 16 Southwest Asian countries[1] between 2003 and 2015 indicated that the average score of perceived corruption varied from 6.25 in Qatar to 2.23 in Kyrgyzstan; but why? The causes of differences in corruption in different countries have been studied in various studies.

Treisman (2000) examined the causes of the difference in corruption perception in 85 countries. The results of the regression analysis showed that countries with a Protestant tradition, a

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1 . Qatar, United Arab Emirates, Bahrain, Oman, Kuwait, Saudi Arabia, Turkey, Georgia, Egypt, Armenia, Iran, Kyrgyzstan, Pakistan, Azerbaijan, Yemen and Kyrgyzstan.

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historical record of British colonialism, a more developed economy, and higher imports, were less corrupt. Federal governments were more corrupt. The current level of democracy was not significant, but long-term exposure to democracy predicted lower levels of corruption.

Montinola and Jackman (2002) used public choice theory, in which corruption is seen as one consequence of a lack of competition in the economic or political arena, or both. The study was conducted using a quantitative comparative method encompassing 66 countries. The findings supported the relationship between economic competition and corruption. They showed that government size did not systematically influence corruption, but it did have a significant effect among OPEC member countries (oil producing and exporting countries).

Shen and Williamson (2005) conducted a quantitative study among 91 countries using structural equation modeling. The findings showed that corruption usually occurs in the process of government intervention in the economy. In addition, language and ethnicity gaps directly and indirectly influence corruption control.

Lodha (2007) compared the nature and consequences of two anti-corruption campaigns in India and Nigeria through interviews and secondary data. Experience in India has shown that corruption is not an unsolvable problem. Access to information and the participation of civil society groups rooted in the local community is recommended in order to hold the government accountable.

Quah (2007) compared anti-corruption agencies in four countries: Singapore, Hong Kong, Taiwan, and South Korea. A comparative institutional study using historical sources, documents, and secondary data showed that without political will, establishing

different models of anti-corruption agencies is not successful in preventing corruption.

Blasen and Peyton (2011) investigated a set of variables that were identified as being effective in pervasive corruption in previous research on corruption in 159 countries, including 127 developing countries and 32 developed countries; the countries were first studied separately and then in a compositional sample. Secondary data was used through statistical regression analysis. Higher life expectancy, free press, and democratization were associated with reduced perceptions of corruption in developing countries. The variable of national wealth was not seen as effective in developing countries, while in countries with high inflation and oil production the opposite was seen.

Gochipata and Reddy (2013) compared the roles and functions of the Central Bureau of Investigation (CBI) in India with the qualitative-comparative approach to the successful roles and functions of the Independent Commission Against Corruption (I.C.A.C) in Hong Kong. According to the findings, the fight against corruption should be guided by a national anti-corruption strategy that minimizes the opportunity for corruption in institutions and organizations through structural reforms.

Stevens (2016) considered the formal institutions, value orientations, and socioeconomic contexts as a causal configuration for explaining corruption, using the new institutionalist theoretical framework in criminology and fuzzy-set comparative qualitative method. The research findings support new institutionalism's claim: the effect of each condition is configurational and depends on the presence or absence of other conditions; for example, increasing levels of democracy may not lead to lower levels of corruption perception when not accompanied by changing value orientations and human development.

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Analyzing the macro causes of difference in levels of corruption across countries does not often address how these factors influence the outcome of corruption. The New Institutionalism Theory in Organizational Analysis (Meyer & Rowan, 1977) helps to understand the mechanisms that lead to such outcomes. Trying to understand the causes of corruption means trying to discover the interconnected conditions that affected the cost and motivation of corrupt behavior and led to cases of corruption.

But since it is not possible to reach a consensus on a cause, it is necessary for decision makers to have the information to clarify which combination of causal conditions causes corruption, given the differences in social contexts.

The quantitative variable-oriented approach is organized to determine the contribution of each of the assumed causes to the outcome, while looking for combinations of causes that, in some cases, lead to outcomes, and in some others do not. Stevens (2016) examined the level of perceived corruption among 77 countries and showed that the effect of each causal condition is configurational and depends on the presence and absence of other conditions. This research sought to identify the configurations of the causes that lead to a reduction in the cost of corruption through the use of institutional analysis. This is how the effects of one set of causes may have consequences elsewhere. Thus, the present study tries to find a combination of causes that are found causality position, through a qualitative comparative approach based on set analysis and using fuzzy software.

Hence, the differences in the perceived corruption in 16 Southwest Asian countries were analyzed using the explanatory power of Sociological new institutionalism in organizational analysis and the capabilities of the fuzzy set qualitative

comparative analysis method. To this end, Transparency International's (TI) data on the perceived corruption of 16 Southwest Asian countries, and theory-related data including natural resource rent, privatization, and institutional power of religion, rule of law, favoritism, and prosecution of government abuses were used. Finally, the findings were analyzed in fuzzy software (fsQCA: Ragin, 2000, 2008) for each set of cases.

2. Theoretical framework

2.1. Sociological new institutionalism in organization analysis

As a major social phenomenon, pervasive corruption arises from the existence of the appropriate context for the corruption of a large number of individuals and for their corrupt behavior. To explain the conditions leading to corruption and the causes of the difference in perception level, Stevens (2016) used a new institutionalist criminological theoretical framework. But so far, sociological institutionalism in organization analysis has not been used in the analysis of organizations to explain corruption. This theory allows for a study of the mechanisms that lead to lower costs of corruption and pervasive corruption as follows.

Given the definition of corruption as "abusing an entrusted position for self-interest", it can be regarded as a disadvantage to the bureaucratic structures, efficiency-based rationality and legality, two important feature of said structure. Weber clearly sees the emergence of legal-rational bureaucracy as more probable than any other, given the existence of specific institutional contexts.

Organizational new institutionalism also seeks to show how rationality-based efficiency and legality in organizations are influenced by the characteristics of the macro-institutional

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environment that surrounds them, and can theoretically explain the spread of corruption. In other words, when rationality-based efficiency and legality are weakened, the conditions for corruption are in place.

2.2. The basic concepts

Organizational studies on new institutionalism's approach were shaped by John Meyer and his colleagues (Brian Rowan in 1977 and Richard Scott in 1981 and 1983). A central feature of the organizational new institutionalist approach is the analysis of the organization as a whole. This approach firstly emphasizes the **institutional environment** outside organizations and distinguishes institutional environments from **technical environments** (DiMaggio & Powell, 1983); secondly, contrary to the classical theories of organization, it believes that "one must distinguish between the **formal structure** of an organization and its **daily work activities**" (Meyer & Rowan, 1977, p. 343).

Organizations deliver products or services in the **technical environment** and are rewarded for their effective performance. The most common way organizations interact with the technical environment is the exchange of information resources and human resources (Scott, 1981, p. 198). Organizations depend on the **institutional environment** for funding and legitimacy and need markets that are supported by the institutional environment to deliver their services and products.

The institutional environment imposes norms and rules established by the government and professional associations, as well as goals and practices imposed by powerful social institutions on organizations, and limit the content of organizational actions by

means of prescriptions for the organization (Meyer & Rowan, 1977; DiMaggio & Powell, 1983). Both types of environments impose pressures on organizations, requiring organizations to respond for their survival, but it should be noted that rules derived from the institutional environment have no concern for efficiency (DiMaggio & Powell, 1983).

Interaction between formal organizational elements and current organizational activities is weak when the requirements of the institutional and technical environment conflict. Organizations are often violated by regulations; decisions are not executed or they have uncertain consequences if implemented; technologies often have performance problems; evaluation systems are either loose or ambiguous and provide little coordination.

Organizational control efforts, both within and outside the organization's structures, are sacrificed for the sake of formal conformity by highly institutionalized patterns (DiMaggio & Powell, 1983). In these situations, processes would be active that render organizations more similar without necessarily making them more efficient; however, organizations that adhere to the established rules of the institutional environment are more successful and probably more resilient because of the resources and legitimacy they gain (Meyer & Rowan, 1977, p. 361).

In the case of this research, the institutional environment imposes its requirements on organizations through two mechanisms: **coercive** and **mimetic mechanisms**. Coercive factors include political pressure, government power, legal oversight and control (Powell & Colyvas, 2007), which may result from formal practices, interaction with other relevant organizations, and the existence of a common legal environment (DiMaggio & Powell, 1983, p. 149).

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In some cases, changes in structure or arrangements within the organization are a direct response to government orders such as legal rules, budget, employment, and so forth. In the present study, the existence of two types of requirements in the institutional environment, without concern for efficiency, make the context of organizations' actions similar in the path of pervasive corruption: privatization and religion. Previous research has also examined privatization (Blason & Peyton, 2011) and religion (Treisman, 2000; Stevens, 2016) as influencing factors on the level of corruption in countries. Here, we attempted to see the impact of the presence or absence of these two factors on the factors that provide the basis for corrupt behavior.

In developing countries, the promotion of development indicators is not an endogenous process, but is rather followed by models formulated and implemented by governments as the most important actors at the level of nation-state units.

When the government is in charge of economic growth and allocates resources and opportunities in the form of policies, plans, financial and credit support, tax breaks, etc., the formation of stakeholder groups in government structures can be postulated. Although privatizing the economy is a rational decision, it is at the expense of individuals and groups who are beneficiaries of the structures of governmental economy whose interests lie in the governments' control of the economy.

To impose legal requirements through the institutional environment on organizations in the interest of privatization means that the legitimacy and support for the continuity and survival of organizations are subject to compliance with the requirements of its implementation. The problem of legitimacy exerts coercive pressures on conformity in the form of force, persuasion, or

invitation to join in collusion. Organizations symbolically adhere to these requirements, while the actual performance of organizations has a weak relationship with the formal rules. Political influence works here, often regulations are violated, and decisions are not implemented. Due to the conflict between the legal requirement arising from the institutional environment and the interests of the groups affected by government structures, the lower level of success a country has in privatization, the more structural conflicts it faces to advance it. Hence, the variable of failure in economic liberalization has been used as an indicator for the degree of conflict between institutional requirements and current realities.

The goals and practices imposed by powerful social institutions, including religious institutions, also influence the way organizations operate through coercive mechanisms. The existence of certain features makes bureaucratic structures one of the hallmarks of rationality in the modern age, including role specialization, recruitment based on technical ability and knowledge, and long-term merit-based rewards.

In a situation where compliance with religious principles is necessary to gain legitimacy and support for the institutional environment in organizations, there is a contradiction between the rules imposed by the institutional environment and the requirements arising from the organizational technical environment. This paradox sacrifices control and oversight in exchange for the proper implementation of the technical requirements for the organization's symbolic compliance with religious rules to gain legitimacy and resources, and adds to the gap between formal structures and current organizational practices. The power of religious principles to determine formal practices demonstrates the strength of their impact on organizations as one of

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the requirements of the institutional environment, which is examined in the present study through the index of non-interference of religious dogmas.

Mimetic factors relate to conventional or assumed responses, or standardized responses to conditions of uncertainty (Powell & Colyvas, 2007, p. 2; DiMaggio & Powell, 1983, p. 150), which are activated as one of the consequences of the conflict between the requirements of the institutional and technical environment. Mimetic mechanisms, or the modeling of other legitimate organizational actors, instead of acting according to existing formal rules, occur when organizational technology (techniques) are not properly understood and goals are ambiguous, or the environment symbolically produces uncertainty. The benefits of mimetic behavior in the economics of human action are also significant (DiMaggio & Powell, 1983).

2.3. Explaining corruption

When ambiguity about goals and conditions of uncertainty increases as a result of the conflict between the **requirements of technical and institutional environments**, informal norms that are created to facilitate, motivate, and guide everyday activities expand, which means widening the gap between formal and informal structures. Accordingly, networks are created that pursue current affairs, gain interests and privileges under informal rules and empower their members to oppose formal rules, the labels of stagnation and inefficiency, and failure to follow reforms. Thus, individuals are collectively prevented from disseminating information that may lead to the discovery of opportunism and abuse of authority. As a result, the cost of corruption is reduced and

mimetic-based behavior patterns are replaced by law-based behaviors due to the reinforcement of informal networks.

In this study, the variable of nepotism was used to investigate the presence or absence of a gap factor between formal and informal structures, and the rule of law variable is used to examine the supervision and control factor. In order to investigate the presence or absence of corruption cost factor in the arrangements and practices that lead to pervasive corruption, the prosecution of office abuse variable is used.

Some factors can increase the severity of the impact of institutional environment requirements on organizations, consequently increasing the severity of isomorphism, such as a greater degree of dependence of the organizations on a single source or multiple sources to provide supportive resources, or the greater extent of one-field organizations' dealings with government agencies in general. Government dependence on natural resource rent has been identified as one of the factors influencing corruption rates in some research (Treisman, 2000; Blason & Peyton, 2011), and in this research, it was considered as an indicator of the concentration of resources in the government and the presence of the government, which makes organizations dependent on a single source for providing resources and reinforces the impact of the institutional environment's requirements on organizations. First, because of the strong presence of government and the high degree of exchange and interaction between the organizations and government, it increases the need for organizations to follow the rules of the institutional environment. Second, it severely limits the choice of organizations to meet their needs for multiple sources.

The requirements of the institutional environment do not impose a direct force on actors, but provide them with grounds for action

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and reinforce the emergence of particular forms of action. This is why a change in the institutional environment results in change in people's behavior. Intensification of isomorphism weakens even relationships between formal and informal structures, declines supervision and control, dwindles inspection systems, and violates regulations. As a result of the aforementioned process, the cost of corruption decreases, and the weakness of organizational identity justifies illegal behavior patterns due to poor interaction between formal and informal structures.

Continuing such a trend over time creates corruptive patterns of behavior and norms that emerge from the experience of day-to-day practices as reliable and accessible ways to solve common problems. Trends up to this point lead to corruption in the form of a large-scale social output, and if not prevented, it will continue until the new generation of corporate actors treats these patterns as social data. Thus they expand and deepen, and corrupt processes are institutionalized in administrative structures that make it much more difficult to control corruption and fight against it.

Based on the explained theoretical framework and the logic of qualitative comparative analysis in which first, the outcome is a combination of causal conditions and second, each combination of causal conditions is a sufficient condition to produce outcome, a combination of the causal conditions includes: the high dependence on natural resource revenues (A); the religious requirement in the institutional environment (B); the requirement for privatization in the institutional environment (C); weaknesses in control (P); weak interchangeable relation between formal and informal structures (Q); the low cost of corrupt behavior (D), are the sufficient causal condition for a high level of corruption perception (E).

3. Methodology

3.1. Fuzzy set qualitative comparative analysis

Anti-corruption strategies have roots in models that explain the causes of corruption. The focal element of causality is relation, and causal assertion in the social sciences can be presented in three meanings in the form of the relationship between the elements: 1) the existence of causal mechanisms; 2) inductive causality; 3) necessary and sufficient conditions. The dominant methodological approach in social research is quantitative variable-centered and inductive causality-based.

The quantitative variable-centered approach is unable to analyze the complexity of social phenomena due to the initial assumptions, because it seeks to determine the contribution of each of the assumed causes to the outcome. The application of regression analysis in the social sciences as a fundamental technique in variable-centered analysis is legitimate and generalizable when the dependent variable has a normal distribution and the relationship between the independent and dependent variable is linear. Furthermore, the independent variables should not correlate with each other in order to identify the net contribution of each in explaining the outcome. So one can claim to conduct a quantitative variable-centered analysis if he first breaks down the dependent variable into measurable components, and secondly, separates the variables from the context in which they were created; while in order to account for multiple causalities, one must look for combinations of causes that, in some cases, lead to outcomes and don't in others. In such an approach, the focus is not on simplified variables, but on cases that have complex causes and conditions. The subject of the study was not the change of the list of variables around the mean, but rather, it emphasizes the fact that conditions

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are combined in a way or ways to take causal position relevant to the outcome.

The purpose in fuzzy approach is to study the relationships between the sets, which are based on the principle of the subsets. The truth and falsehood of relationships are studied by examining causal versions in the truth table, consistency index, and coverage index. In the subset relation, if the set of X is the subset of Y, then it is a sufficient condition for Y to occur. It should be noted that the subsetness relationship is asymmetric, and "the distinction between necessary and sufficient is only meaningful in the context of a theoretical perspective" (Ragin, 1987). For fuzzy set analysis to be useful, fuzzy sets must be well established, which in turn raises the calibration matter (Ragin, 2008).

The sample size in this paper included 22 Southwest Asian countries of UAE, Qatar, Georgia, Saudi Arabia, Oman, Turkey, Kuwait, Bahrain, Armenia, Egypt, Pakistan, Azerbaijan, Kazakhstan, Iran, Kyrgyzstan, Uzbekistan, Tajikistan, Turkmenistan, Iraq, Yemen, Afghanistan and Syria. Afghanistan, Iraq, Syria, Tajikistan, Turkmenistan and Uzbekistan, were excluded because of a lack of information in some indicators. The final sample includes the remaining 16 countries.

3.2. Data Collection

Taking into account the asymmetry of the subsetness relationships and the importance of the theoretical construct, the target sets must be properly defined prior to starting the calibration. The sets are the set of consequences and the sets of each of the causal conditions in the theoretical model used to explain the outcome. The target groups in this study included countries with high levels of

corruption (outcome), a high share of natural resources in national income, the requirement for privatization rules in the institutional environment, the requirement for religious rules in the institutional environment, weak relationships between formal and informal structures, weak control and supervision, and a low cost of corruption. Subsequently, the degree of membership of each of the items in each set was examined. In the following, the source of the data was described, and for causal conditions that do not have an interval scale, elements are defined that have such a scale and can be calibrated.

Cross-national researches on corruption are largely based on two similar corruption indicators developed by Transparency International and the World Bank. Although the indicators are cumulative and methodological they were not without criticism, but the correlation between Transparency Organization Corruption Perceptions Index (CPI) and World Bank Corruption Control Index (CCI) is 0.97 (Shadabi, 2013, p. 109). The TI index in recent years has been increasingly strengthened by the use of multiple sources and multi-year data averages and is highly reliable in measurement (Seligson, 2006, p. 354). The Use of CPI in various scientific articles and research (Treisman, 2000; Goel & Nelson, 2010; Blason & Peyton, 2011; Mashali, 2012; Shadabi, 2013; Dirienzo & Das, 2014; Maeda & Ziegfeld, 2015; Wong, 2016; Ubertia, 2016; Stevens, 2016, etc.) can also be a confirmation of the validity of these data in scientific studies, which were also used in the present study as an indicator of the level of corruption in countries.

The share of natural resource rent in GDP as an indicator of concentration of resources available to organizations is compared through World Bank data (2016) on the index of "Natural resource rent, a percentage of GDP". The measure of the success of societies

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in the "Index of Economic Freedom" was used as a reference to examine the success of organizations in resolving paradoxes in organizational fields whose data are available in the Quality of Government (QOG) Institute database. The Index of Economic Freedom (2016) is designed and measured under the heading of the private economy, and the final score of each country is between 0 and 100, which is obtained by weighing 10 types of freedom and converting them into economic freedom, with 100 representing maximum economic freedom. As far as religion plays a more prominent role in shaping the rules and frameworks of the institutional environment, organizations are forced to conform more closely to practices imposed by religious institutions, without considering their impact on efficiency. The variable of "no interference with religious dogmas" has been examined through the data contained in the Index of Political Transformations and as one of the hallmarks of stateness through the following question: how are the legal order and political institutions defined without interfering with religious beliefs? Here "1" represents the maximum presence and "10" the minimum presence of religion in the legal order and political institutions.

Lack of control is the consequence of organizational isomorphism arising from the institutional macro level that occurs with mimetic and coercion mechanisms. We used the rule of law index of the Bertelsmann Stiftung (2016) as a reference for comparing control in which "1" represents the lowest and "10" the highest level of rule of law. A higher score in the rule of law indicates a better level of control.

The variable of nepotism was used as an introduction to examine the relationship status between formal and informal structures. Its data can be obtained from the Global

Competitiveness Report (2013-2014) by Schwab (2013). In examining the impermeability of public institutions, the variable of nepotism presents the following question "to what extent do the government officials in your country exert nepotism when deciding on policies and contracts regarding companies, and familiar and influential people? The answer is a score of 1 to 7, with 1 representing the maximum and 7 the least in government structures. A higher level of nepotism indicates a weaker relationship between formal structures and current organizational activities. The variable of "prosecution of government position abuse" is used as a reagent for the cost of corruption, which is available in Bertelsmann's (2016) data. Responses are scored on a scale of 1 to 10, with 1 indicating no fear of legal consequences or harmful public consequences for breaking the law and committing corrupt behavior and 10 indicating severe legal follow-up and harmful public consequences for employees who commit corruption and corrupt behavior. The more severe the public consequences of law-breaking and corruption in society, the greater the cost of committing corrupt behavior will get.

3.3. Calibration

In this study, three qualitative thresholds, namely "full membership", "crossover point" and "full non-membership", were determined for each interval variable by direct calibration method. In the case of CPI, the Transparency Organization classification was used and in the range of 0 to 100 across countries, countries with a score of 60 to 6 were considered as a set of countries with maximum purity, those with a score of 30 to 39 in the intermediate status; and countries with scores of 10 to 19 with a high level of perceived corruption. Accordingly, countries with a score above 60

were completely non-members; countries with a score of 35 (35 was chosen because the numbers 30, 32, 33, and 34 were observed in the distribution) were the most ambiguous; and countries with a score of less than 19 were full members. The World Bank classification can be used to calibrate natural resource rent. Full membership entry threshold was considered for greater than 18.98%, in contrast, while lower than 3.11% was defined for full non-membership, and %7.92 was the maximum ambiguity.

For other research variables, data sources do not provide qualitative thresholds for the researcher and only provide raw scores. "The determination of quality thresholds in such cases relies on everyday and relative meanings from above and below. Therefore, a point of rupture in the distribution (no observable value) near the mean is known as the point of maximum ambiguity (fuzzy degree = 0.5). The full membership threshold (score = 1) and full non-membership (score = 0) are set near the rupture points, with approximately 20% of countries at the top and 20% of countries at the bottom at each side of the distribution" (Stevens, 2016; Haller, 2002; Fiss, 2011, 2008). In accordance with this, the three qualitative thresholds and their corresponding fuzzy membership degrees in the variables under study were described in Table 1.

It was said that in the fuzzy approach, causality is examined in the form of necessary and sufficient arguments. If one or more causal conditions are necessary for the consequence to occur, then they should be excluded from the analysis because in such a situation, the consequence is a causal subset and causal paths cannot be examined. In this regard, the relationship between the individual causal conditions and the outcome was evaluated with the necessary condition and 0.965 was set as the criterion (Thiem &

Dusa, 2013). None of the theoretical structural conditions were the necessary conditions for corruption.

Table 1. Fuzzy set calibration threshold

Condition set	Calibration threshold		
	Fully out	Maximum ambiguity	Fully in
High perceived corruption (hpc)	19	35	60
Low perceived corruption (lpc)	60	35	19
High total national rent %GDP (nr)	18.98	7.92	3.11
Fail in economic freedom (ef)	49.2	50	70.8
High interference of religious dogma (rd)	2.6	4	7.4
Low level role of law (rl)	3.15	4.5	5.75
High level favoritism (fa)	2.8	3.5	4.6
Low level prosecution of office abuse (pa)	3	4.5	6

3.4. Truth Table Analysis and Findings

In the present study, considering the sample size (16 countries), the minimum frequency required is 1 and the consistency score of 0.9 is set as the crossover point. The truth table data in Table 2 of the consequences shows that 6 recipes or causal configurations of the

12 obtained recipes resulted in high level perceived corruption (score 1 on the consequence). This means that the causal condition in these 6 rows is a subset of corruption (outcome) and is a sufficient condition for its occurrence.

Table 2. Result of fuzzy set truth tables for outcomes of

high perceived corruption

nr	ef	rd	rl	fa	Pa	number	hpc	consist.
1	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
1	**0**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
0	**0**	**0**	**0**	**1**	**1**	**1**	**1**	**1**
0	**0**	**0**	**1**	**1**	**1**	**1**	**1**	**0.989637**
0	**0**	**1**	**1**	**1**	**1**	**1**	**1**	**0.977444**
1	**0**	**0**	**1**	**1**	**1**	**1**	**1**	**0.963899**
1	0	0	0	1	0	1	0	0.75
0	0	0	0	1	0	2	0	0.609524
1	0	0	1	0	1	4	0	0.527586
1	0	1	1	0	1	1	0	0.517442
1	0	0	1	0	0	1	0	0.492063

By combining, simplifying, and processing the 6 causal configurations of the truth table in the intermediate solution, we obtained two causal configurations (Table 3), which showed that the empirical explanation of the high perceived corruption is the causal configuration of "the privatization requirement in the institutional environment", as well as[1] "the weak link between

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1 Logical "AND"

formal and informal structures" and "the low cost of corruption", which are found in Yemen, Kazakhstan, Armenia, Kyrgyzstan, Egypt and Pakistan, or[1] it was caused by the causal configuration of "the religious requirements in the institutional environment", "the high dependence on rent of natural resources", "the poor relationship between formal and informal structures" and "the low cost of corruption" seen in Iran and Yemen.

Table 3. Intermediate solution for high perceived corruption

Configuration	Consistency	Coverage	Country in each configuration
LOW LEVEL PROSECUTION OF OFFICE ABUSE (D), HIGH LEVEL GAP BETWEEN FORMAL AND INFORMAL ORGANIZATION (Q) **AND** PRIVATIZATION MYTH (C) **OR**	0.929	0.815	Yemen, Kazakhstan, Armenia, Kyrgyzstan, Egypt, Pakistan.
LOW LEVEL PROSECUTION OF OFFICE ABUSE (D), HIGH LEVEL GAP BETWEEN FORMAL AND INFORMAL ORGANIZATION (Q), HIGH LEVEL INTERFERENCE OF RELIGIOUS DOGMA (B) **AND** HIGH TOTAL NATIONAL RENT %GDP (A)			Yemen, Iran.

Data from the truth table (Table 4) for the negated outcome analysis showed that 4 causal configurations of the 11 resulted recipes explained the negated outcome in the cases examined (score 1 on negated outcome). In addition, according to the

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1. Logical "OR"

crossover point criteria, it has a consistency score above 0.90 and set relationship between causal conditions and outcomes has at least one appropriate frequency (experimental case) in the experimental study. After considering the theoretical assumptions in the intermediate solution, fuzzy software has provided 3 causal configurations as a sufficient condition for negated outcome (Table 5).

Accordingly, the absence of high level perceived corruption arose from the causal configuration of "dependence on natural resource rent", 'the lack of privatization requirement in the institutional environment" and "the high cost of corruption" in the UAE and Kuwait; or it followed the causal configuration of "the lack of the privatization requirement in the institutional environment", "the absence of weak link between formal and informal organizational structures", "the strong rule of law" and "the high cost of corruption" the empirical examples of which are Kuwait, Georgia and Turkey. Or the causal configuration of "high dependency on rent of natural resources", "the religious requirement in the institutional environment", "the absence of the privatization requirement in the institutional environment" and "the absence of a weak relation between formal and informal structures" explained the lack of high perceived corruption in Saudi Arabia.

Table 4. Result of fuzzy set truth tables for outcomes

of low perceived corruption

pa	Fa	rl	Rd	ef	nr	number	~lpc	Consist
0	**0**	**1**	**0**	**0**	**1**	**1**	**1**	**1**
1	**0**	**1**	**1**	**0**	**1**	**1**	**1**	**1**
0	**1**	**0**	**0**	**0**	**0**	**2**	**1**	**0.966667**
0	**1**	**0**	**0**	**0**	**1**	**1**	**1**	**0.948529**
1	0	1	0	0	1	4	0	0.9
1	1	1	0	0	0	1	0	0.813471
1	1	0	0	0	0	1	0	0.77037
1	1	1	0	0	1	s1	0	0.67148
1	1	1	1	1	1	1	0	0.634921
1	1	1	1	0	0	1	0	0.578947
1	1	1	1	0	1	1	0	0.52027

Table 5. Intermediate solution for low perceived corruption

Configuration	Consistency	Coverage	Country in each configuration
HIGH TOTAL NATIONAL RENT %GDP, privatization myth **and** low level prosecution of office abuse **Or** privatization myth, low level role of law, HIGH LEVEL LOOSED COUPLED **and** low level prosecution of office **or** HIGH TOTAL NATIONAL RENT %GDP, privatization myth, HIGH LEVEL INTERFERENCE OF RELIGIOUS DOGMA **and** high level gap between formal and informal organization	0.960	0.643	United Arab Emirates, Kuwait. Kuwait, Georgia, Turkey. Saudi Arabia.

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4. Discussion

4.1. Outcome Analysis: The first causal configuration

In the first causal configuration, "the requirements of privatization in the institutional environment, the poor linkage between formal and informal structures and the low cost of corruption" were present in six countries: Kazakhstan, Kyrgyzstan, Armenia, Yemen, Pakistan and Egypt. However, the presence of the privatization requirement in the institutional environment is the causal condition that affects the performance of organizations defining the rules and patterns of interactions. The three countries of Kazakhstan, Kyrgyzstan, and Armenia were among the 15 countries formed after the end of the Cold War and the collapse of the Soviet Union in 1991. Thereafter, the New World Order was characterized by two components in political and economic dimensions: liberal democracy, and a competitive free market. Newly independent countries also began to provide the basic foundations for free economy structures with the intervention of powerful international institutions such as the World Bank and the International Monetary Fund (IMF). At the same time, however, they were also confronted with problems from the remnants of the centralized economy of the communist era and issues of nation-building.

Imposing free economic policies on the structures left over from a socialist economy confronted organizations with policies that were in conflict with the requirements of the pre-existing technical environment, so that the logic of interactions and organizational performance could not be derived from technical and specialized administrative rules, which led organizations to embrace symbolic conformity with institutional requirements for resources and legitimacy. The result was the isomorphism.

The same was true for the three countries of Pakistan, Egypt, and Yemen. After its independence from India in 1947, Pakistan enjoyed less natural and economic capital (10 percent of the subcontinent) and more population (20 percent of the population), but had a variety of ethnicities and identities, which came to light in 1971 in the Civil War and separation. In addition to the triple powers as the pyramid of power, the military, political parties, pressure groups, and religious groups and organizations are important centers of power in Pakistan, each with tools to pursue its own interests and goals. The administrative structures left over from the colonial period were dominated by the Punjabis, and the opportunity to use these structures for legal and specialized confrontation with institutional environmental pressures was not provided. Here, the requirements arising from policies of privatization, while accepted as rational rules for growth, were in practice conducive to the exercise of institutional requirements and the isomorphism of organizational fields.

With Anwar Sadat coming to power in 1970, Egypt became the first Middle Eastern country to experience economic liberalization and privatization, but Sadat was a traditional patrimonial leader in the most obvious way. One of Sadat's actions was to abolish the presidential term limit in 1980 by repealing articles of the constitution that limited the presidency to a six-year term. Privatization in a bureaucratic authoritarian state based on unity between the state, the army, and parts of the capitalist class, inevitably lead to institutionalization of the influence of government and interest groups in administrative structures, because the creation and expansion of political communication was the best way to make a profit in the economic field.

During the Mubarak era, the mid-1990s saw the economy move

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forward while the political sphere moved backwards, and the rent-seeking and imbalanced development went so far as to be one of the major causes of the 2011 revolution. Privatization in Egypt thus led to isomorphism and its consequences, including the weak link between formal and informal structures through coercive mechanisms.

The Republic of Yemen, as another member of the first causal configuration, in 1934, became independent of the Ottoman government and existed in the form of the northern and southern Yemeni states until 1990. South Yemen, while having better social indicators its northern counterpart, had a secular historical context and was considered as a Soviet ally in the Cold War. While northern Yemen was known for its historical religious context and its alliance with the West. The unification of the two Yemens meant the decision to create a common identity and state by combining two different cultural and social historical entities. Following the unification of the two, the Yemeni tribal context has also been one of the main sources of internal conflict within the community between supporters of the central government and its opponents, and the government also fueled the problem with advocacy.

Attempts to improve the economic situation of the people by relying on social forces, because of the ongoing conditions, triggered a redistribution of resources among influential groups, which became a highly political event. Thus, the context was suitable for action of both the isomorphism mechanisms, i.e. coercion and mimetic, and the weakening of bureaucratic specialization in Yemen.

All the six countries in question are post-colonial countries and, although undergoing different historical and social developments,

face similar problems in establishing national identities and integrated governments. The requirement for privatization in this space as a seemingly rational policy and a proponent of progress, serves as a conduit for the pursuit of stakeholder goals instead of advocating improvement, to the extent that the privatization and economic liberalization of the Middle East, more specifically, is claimed to strengthen the status of current regimes and not to create a completely new relationship between government, society, and the economy. Therefore, coercive and mimetic mechanisms can act to create isomorphism.

The isomorphism of the organizations under the aforementioned processes negatively affects the quality of organizational control, organizational evaluation, and the implementation of organizational rules, resulting in a weak interchange between formal and informal structures that has been identified as another causal condition in this framework. Under such circumstances, the context for identification of the informal groups becomes possible within the organization. Over time, informal groups create informal norms and networks that empower them to face the technical uncertainty and ambiguity of their work environment. The informal network empowers its members to counter formal laws, label stagnation and inefficiency, implement reforms and prevent the dissemination of information that leads to opportunism and corruption. This mechanism reduces the cost of corrupt behavior and increases corruption.

4.2. Second Causal Configuration

The second causal configuration states that in Iran and Yemen, the presence of the religious requirement, coupled with the high rent of

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natural resource sales, weakens the link between formal and informal structures and reduces the cost of corrupt behavior, leading to high perceived corruption. The question arising here is "how does such a mechanism works?" Over 90% of the population in both Iran and Yemen are Muslim (with a different mix of Shia and Sunnis) and in both countries, according to international standards, religious institutions play a very powerful role in setting goals, procedures, rules, standards, and policies. In Yemen, the two groups of Ansarullah (affiliated with Shia Houthis) and Ansar al-Sharia (an al-Qaeda-affiliated Jihadist-Salafist group), apart from all the substantive and fundamental differences, have a common ground in establishing a state with religious foundations and principles.

With the beginning of public space in Arab countries, following the Arab revolutions, Ansar al-Sharia stepped up its efforts to create an Islamic state governed by Islamic law. Their outstanding performance features include prioritizing widespread social programs to attract and train followers, and working with local organizations to advance programs that expand their influence in the community[1]. According to one of the fundamental principles of Ansar al-Sharia, anyone who seeks something other than Islam, such as democracy, has revealed his infidelity and deserves no value and respect. Therefore, Ansar al-Sharia, in its view and practice, has been implementing religious policies in society, making the legitimacy of individuals and institutions subject to the acceptance and practice of these principles.

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1. The Counter-Narcotics Campaign in Libya was one of the most successful programs undertaken by Ansar al-Sharia and fulfilled with the cooperation of al-Rahba Clinic at the Benghazi Psychiatric Hospital, Al-Ahli Football Club, Libyan Telecom and Power Company.

The rise of the Ansarullah movement in Yemen has emphasized the identity of the Zaydiyah sect, which is also characterized by belief in the presence of rules derived from religion in the context of human social life. Therefore, the organizations in Yemen, for their survival and gaining of legitimacy and resources, have to conform to the principles and policies imposed by religious forces andinstitutions, and religion acts as an institutional requirement.

Iran has been dominated by a political system for nearly four decades since the 1979 revolution, which is constitutionally based on both republicanism and Islamism, and is the source of inspiration for many religious movements (such as Hezbollah in Lebanon and Ansarullah in Yemen). Specifically, the body of the Guardian Council in the power structure is the one that carries out Islam and republicanism and has two essential duties. First, the evaluation and consideration of the qualifications of the various electoral candidates; and second, the approval of the conformity of the laws adopted by the legislature with Islamic law and the constitution. The leader must also be religiously qualified for ijtihad and jurisprudence. According to Article 110 of the constitution, the Supreme Leader has duties and powers that make him the highest official in the Islamic Republic.

Hence, the arteries of the life, resources, and legitimacy of organizations depend on meeting the requirements of the rules of religion. In this causal configuration, the high share of natural resource rent in the gross national income is also a factor in creating corruption. Dependence on the income from the rents of natural resources is very important in social contexts where strong institutional requirements exert pressure on organizations, because the centralization of resources in government has made organizations more dependent on one resource, and increased their

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dealings with government agencies that sit among factors that have increased the impact of these requirements and expanded and deepened the isomorphy of organizations. As a consequence, the weak link between formal and informal structures leads to the identification of informal networks, which, according to the aforementioned process, ultimately leads to a reduction in the cost of corruption.

4.3. Negated outcome

Negated outcome analysis also identified three causal configurations that explain the lack of high perceived corruption in the five countries of UAE, Kuwait, Georgia, Turkey, and Saudi Arabia. The first causal configuration indicates that the combination of resource dependence arising from natural resource rent will result in negated outcome if it is not accompanied by the institutional requirement of privatization and the low cost of corrupt behavior. The UAE and Kuwait have experimental features of this causal configuration. Negated outcome in Saudi Arabia indicating that the simultaneous presence of the religious requirement and dependence on the rent of natural resources leads to negated outcome if not accompanied by the absence of the privatization requirement, and the absence of a gap between formal and informal structures.

A third causal configuration in Kuwait, Georgia, and Turkey says the absence of the privatization requirement "and" absence of weakness in control, if contribute to prevent corruption costs reduction, could lead to negated outcome by controlling the impact of the gap between formal and informal structures. A comparison of the causal condition of the relationship between formal and

informal structures in the configurations shows that this causal condition is both an outcome (high perceived corruption) subset and negated outcome (low perceived corruption) subset. Such a combination is possible in fuzzy analysis because, due to its asymmetry, there is no mathematical reason for the existence of a completely negative correlation between the consistency scores of outcomes and the consistency scores of negated outcomes. Table 6 has an overview of the causal configuration of outputs (outcome and negated outcome).

Table 6. The causal configurations of outcome and negated outcome

Causal configurations / Outputs	High total national rent %GDP (nr)	Economic freedom requirement	religious requirements	weakness in control	Gap between formal and informal structure	Low cost of corruption
Outcome (high perceived corruption)	Yes	-	Yes	-	Yes	-
	-	Yes	-	-	Yes	Yes
Negated outcome (low perceived corruption)	**Yes**	No	-	-	-	No
	Yes	No	**Yes**	-	No	-
	-	No	-	No	**Yes**	No

5. Conclusion

The causes of difference in the prevalence of corruption between countries were investigated in different studies, albeit with two issues: 1) the mechanisms of the influence of macro-level causes are not discussed, and 2) the combination of causes that lead to corruption are ignored. In the present study, we attempted to take

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into account the mechanism of causality by using new institutionalism in the analysis of organizations. In addition, we tried to find the causal configurations by using the fuzzy-set qualitative comparative method. In the study of 16 Southwest Asian countries, two causal configurations for explaining the outcome (pervasive corruption) and 3 causal configurations for explaining the negated outcome (lack of pervasive corruption) were obtained.

The number of high perceived corruption set via two corruption-making causal configurations imposes requirements on organizations with two different structural motives that conflict with the requirements of the technical environment without concern for efficiency. Obtaining legitimacy and resources for survival is one of the top priorities of activists in organizations and is awarded only if they comply with the rules of the institutional environment. Therefore, if necessary, the rules of the technical environment are ignored, one of the consequences of which is the weakening of professionalism and its subsequent rational consequences. The result of such a condition is the ambiguity and uncertainty in organizational structures that leads to the activation of mimetic mechanisms.

In other words, conflicts lead to the formation of informal norms and networks that, over time, provide shared mental patterns for actors for doing current actions and confronting ambiguity and uncertainty; and on the basis of contextual rationality, they are interpreted as an appropriate way of acting.

An empirical evidence of such claim lies in the causal effect of nepotism as an element of the gap between formal and informal structures, in which all members of the set of countries with high perceived corruption had a high level of nepotism in their

organizational structures. Informal network interactions reduce the cost of corruption and add to the difficulty of tracking administrative health. As a result, efforts to combat corruption do not produce the expected and long-lasting results, and high perceived corruption are seen as a manifestation of widespread administrative corruption in these countries.

In Kyrgyzstan, Kazakhstan, Armenia, Pakistan, Egypt, and Yemen, the causal configuration indicates a conflict between the institutional requirement for privatization with technical environment requirements, coupled with poor linkage between formal and informal structures and the low cost of corruption lead to perception of pervasive corruption. In Iran and Yemen, the conflict between the institutional requirement to conform religious rules with the technical environment's requirements and the rents from natural resources coupled with the weak link between formal and informal structures and the low cost of corruption has led to a perception of pervasive corruption.

Countries where perception of corruption is not pervasive (negated outcome) include the UAE and Kuwait, where despite the rents of natural resources, the institutional requirement for privatization does not conflict with the requirements of the technical environment, and the cost of corruption is not low. The causal configuration of negated outcome in Saudi Arabia indicates that there is institutional requirement to conform to religious rules and natural rent-based resources, but there is no requirement for privatization in the institutional environment as opposed to technical environment requirements, and Saudi Arabia is not in the set of countries with a gap between formal and informal structures. In Kuwait, Georgia and Turkey, the institutional requirement for privatization does not conflict with the requirements of the

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technical environment, and these are not included in the set of countries with weak control, weak rule of law, gaps between formal and informal structures and low costs of corruption.

By removing the names of countries from the conclusions of the study, a fundamental claim could be made on the pervasiveness of corruption: It seems that the impact of institutional requirements on organizations, on the one hand, leads to the isomorphism of the organizations and reduces the cost of corrupt behavior, which provides the context for the creation, expansion and deepening of patterns of corrupt behavior, and on the other hand, it is the cause of weakness and inefficiency of the forces that follow-up administrative health procedures. The result is widespread corruption in the form of high perceived corruption.

From this perspective, combating pervasive administrative corruption in the most fundamental and feasible form requires policies that reduce the power of institutional requirements, the extent of conflicts arising from their interference with the technical environment, and the degree of the isomorphism of organizations.

Diversifying resources for organizations; improving organizational interaction; and decreasing the transaction between the government and organizations are important steps in this regards. On the organizational level, steps that must be considered include improving the bureaucratic structure to reduce the ambiguity and uncertainty, applying efficient control and supervision, reducing the gap between the formal and informal structure and improving the rule of law. We can suggest investigations on the relationship mechanism between social groups and organizations (in order to exchange resource and information), performing concept analysis on rules in different levels, recognizing the conflict areas between the technical and

institutional framework, performing research on professional groups and guilds and their effect on coast of corruption and organizational ethics, and performing a case study on high perceived corruption in Azerbaijan and qualitative analysis on low perceived corruption in Qatar, Bahrain and Oman that are not covered by this research. The findings can create more practical knowledge.

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