Meta-Organizational Factors Affecting the Ethical Practices and Decision-Making of Engineering Consulting Firms*

Amir Radaiee1, Mohamad Hossein Sobhiyah**2,  Saeid Nazari Tavakkoli3, Maghsood Farasatkhah4, Davoud Danesh Jafari5

1. Ph.D. Student in Project Management and Construction, Faculty of Arts, Tarbiat Modares University, Tehran, Iran
2. Ph.D. in Project Management, Faculty of Arts, Tarbiat Modares University, Tehran, Iran
3. Ph.D. in Islamic Philosophy, faculty of theology and Islamic studies, University of Tehran, Tehran, Iran
4. Ph.D. in Planning Higher Education Development, Tehran, Iran
5. Ph.D. in Economics, Faculty of Economics, Allameh Tabataba’i University, Tehran, Iran

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Abstract

Problem Statement: Interviews with the practitioners of the “Iran Engineering and Executive System (IEES)” indicate that there is a contradiction between the ethical judgments and practices of the Engineering Consulting Firms (ECF).

Although the majority of firms consider ethical practices as a major goal, despite the individual differences of the board of directors and organizational differences of the firms, many of their decisions and practices are not according to ethical values such as honesty and respecting the interests of all stakeholders. In the literature, such issues are studied in the field of ethical decision-making.

It seems that the existing ethical decision-making theories and models have neglected the influence of meta-organizational factors (MOFs) on the ethical decisions and practices of organizations, and the lack of a clear theoretical framework for explaining the ethical practices of organizations at the system level, that requires attention to meta-organization factors, is evident in the literature.

Research Objectives: Due to the literature gap to explain the research problem, the identification of MOFs affecting the ethical practice and decision-making of ECFs has been considered as the research goal.

Research Method: Considering that there is not a clear theoretical framework in the literature to analyze the research problem, the qualitative research method and Grounded Theory methodology of Strauss and Carbine have been used.

Conclusion: “Imposing Double Pressure on ECFs” has led to the emergence of the phenomenon of “Ethical Yield Stress”, which is a major contributor to the conflict between judgments and ethical practices of ECFs. On the other hand, MOFs such as “Inefficiency of Public Executive Agencies” and “Inefficiency of the IEES” have provided the contextual conditions of adopting unethical action-interaction strategies by the ECFs in the IEES.

Keywords: Meta-Organizational Factors, Ethical Practices, Ethical Decision-making, Engineering Consulting Firms, Iran Engineering and Executive System.

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** Corresponding author: sobhiyah@modares.ac.ir.
Introduction and Problem Statement
According to the interviews with practitioners of the IEES, there seems to be a conflict between ethical judgments and the ethical practices of ECFs. ECFs tend to be ethical, but they usually, despite their individual and organizational differences, decide and practice unethically.

Regarding the literature review, it seems that existing ethical decision-making theories and models have neglected the influence of MOFs on the ethical practices and decision-making of organizations and the lack of a clear theoretical framework for explaining the ethical practices of organizations at the system level that requires attention to MOFs, is evident in the literature.

Therefore, considering the literature gaps in explaining the research problem, the following research questions have been developed based on the Paradigm Model of Strauss and Carbine’s approach (Creswell, 2011, 428):

Do the unethical practices of the ECFs in the IEES come from individual issues such as the lack of knowledge or ethical sensitivity of the board or inter-organizational issues such as the weakness of the ethical organizational governance structure and processes?

What is the central phenomenon of the ethical practice and decision-making of the ECFs of the IEES and how has it come about?

What are the MOFs affecting the ethical practice and decision-making of the ECFs?

What are the consequences of the impact of meta-organization factors on the ethical practice and decision making of the ECFs?

Theoretical fundamentals and research background
This research is based on Grounded Theory (GT), which is rooted in Symbolic Interactionism and Pragmatism traditions.

Research background
Ethical theories can be classified into three categories of empirical (descriptive), conceptual (meta-ethical) and normative theories (Arnold, Beauchamp & Bowie, 2014, 6; Shaw, 2015, 15). Discussion on the factors affecting the ethical decisions and practices of ECFs belongs to empirical studies, but the project management literature has focused on the prescriptive aspect of ethical studies, and empirical studies are scarce (Hydari, 2013, 3; Ingason & Jonasson, 2018, 6; Khaki, 2007, 248), and on the other hand, few studies in the field of empirical ethics are limited to professional and organizational ethics, and the role of MOFs (external environment of the organization) over ethical practices and decision-making of firms has been neglected.

Despite referring to the external environment of the organization in some of the ethical decision making models (Bommer, Gratto, Gravander & Tuttle, 1987, 266; Ferrell & Gresham, 1985, 89; HUNT & Vitell, 1986, 8; McDevitt, Giapponi & Tromley, 2007, 221; Trevino, 1986, 603; Verbeke, Ouwerkerk & Peelen, 1996, 1181; Vitell, Nwachukwu & Barnes, 1993, 755), the literature review of the last two decades of empirical ethics in management science, suggests that the effect of MOFs on ethical decision-making are neglected. In the project management literature about factors affecting ethical decision-making, Kliem mentioned the impact of factors such as the nature of projects (such as being a temporary organization), the impact of peers, organizational culture, competition, rewards, experiences, role expectations, organizational structure, power structure and management pattern (Kliem, 2011, 6 & 101), Müller et al. emphasized on the role of the organization’s governance structure (Müller, 2009, 2; Müller, Andersen, Kvalnes, Shao & Sankaran, Turner, Biesenthal, C., Walker, Gudergan, et al., 2013, 26; Müller, Turner, Andersen, Shao & Kvalnes, 2014, 39), and Lopez referred to three inter-organizational phenomena, including marginal errors, the line of immunity, and the disintegration of the cube of morality (Lopez & Medina, 2015, 589, 2015, 588; Lopez & Medina, 2016, 109).

The gap also exists in the literature of management
and business science, and in the newest models of ethical decision-making, neglect the influence of MOFs on ethical practices and decision-making. Ferrell et al. referred only to the impact of the severity of the ethical issue, personal factors, organizational factors, and opportunity (Ferrell, Fraedrich & Ferrell, 2015, 129) on ethical decision-making, and Schwartz’s integrated model of ethical decision-making within the organization, referred only to the individual and situational factors affecting ethical decision making (Fig. 1).

Literature review articles also indicate that researchers are negligent in identifying and studying the effect of meta-organization factors on ethical decision-making (Craft, 2013, 225; Lehnert, Craft, Singh & Park, 2016, 505-525; Lehnert, Park & Singh, 2015, 199; O’Fallon & Butterfield, 2005, 377). For example, according to Lehnert et al. (2014), out of 337 studies of the effect of independent variables on ethical decision making, only two of the independent variables were related to the external environment of the organization and the rest of variables addressed only individual and internal factors (Lehnert et al., 2014, 199).

It seems that in the literature there is a gap to explain the organization’s decision-making and ethical practice at the system level. Therefore, efforts have been made to study the effect of meta-organization factors on the Ethical Practice of ECFs, and to present a theoretical model with variables at the level of the IEES.

**Research Method**

In this research, considering that there was not a clear theoretical model in the literature to answer the research questions, the qualitative research method was used, and the Strauss and Carbine approach of Grounded Theory (GT) methodology is adopted for data analysis.

Data sources in this research were interviews with industry practitioners; Fieldnotes experiences; Reports, interviews, and press; Written documents of the IEES.

Snowball method was used to select and refer to

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**Fig. 1. Integrated ethical decision-making model. Source: Schwartz, 2016, 761.**
the interviewees and interviewed with 31 people, which included: 6 senior executives of public sector executive agencies, 10 board members of contracting companies and 7 board members of consulting companies, 4 parliamentarians and 4 members of Country Planning and Budget Organization. Each interview lasted an average of 100 minutes.

In the first four interviews, the questions were open, and in subsequent interviews, they were semi-structured using specific interview protocols for each of the groups of consultants, contractors, and executive agencies. For data analysis, according to the Strauss and Carbine approach of GT methodology, the open, axial, and selective coding trials were used simultaneously. (Corbin & Strauss, 2008, 253; Strauss & Corbin, 1998, 136)

Validity and reliability terms are related to quantitative research. To assess the quality of qualitative research, the term credibility is used, which means the trustworthiness and believability of the findings of the research and reflection of the experiences of participants, researchers, and readers. But that finding can be one of the many possible interpretations of the data (Corbin & Strauss, 2015, 346) Therefore, to ensure the credibility of the research, the diverse qualitative data, the peers and industry practitioner reviews, and the confirmation of Researchers’ bias, were used.

**Discussion and conclusion**

**• Analysis of findings (axial coding)**

During the research, it was attempted to identify ethical action-reaction strategies of ECFs, then using a reciprocal process, new data were collected and the adopting strategies were analyzed to identify the causal, contextual, intervening conditions and consequences of those strategies.

The axial coding resulted in 7 main categories and 20 subcategories which are described in Table 1.

**• Discovering action-reaction strategies**

The action-reaction strategy is the practical response of individuals or groups to the events or the problematic situations in their lives which is done by asking what meaning the actors (in terms of the problem, the purpose,...) give to a situation or set of events, and action-reaction is done to manage those problems or achieve the goals. (Corbin & Strauss, 2015, 158)

Accordingly, five unethical strategies of ECFs were identified, including: 1- Collusion of Rentier-Price (CRP), 2- Collusion of Rentier-Qualification (CRQ), 3- Collusion of Commission-Predatory (CCP), 4- Collusion of Commission-Retaliatory (CCR), and 5- Collusion of Signature Venality (CSV) (Table 1). Before proceeding to the next interview, it was asked who was using that strategy, when it was used, why, how, and with what the consequences, the strategy was used (Corbin & Strauss, 2008, 254) to identify the causal, the contextual, and the intervening conditions and the consequences of the adopting strategies.

**• Analysis of the Collusion of Rentier action-interaction strategy**

The “Collusion of Rentier Strategy” is used when competing for the development of civil engineering studies, with the collusion of the employer. This strategy is carried out both in one-stage and two-stage tenders:

1- If the ECF is small and newcomer; it will use the one-step bidding to create a “competitive Rentier-Price Trap”. using this strategy, because the ECF is small, has low office costs, and is supported by the employer, offers a very low price for studies. By doing so, larger and older ECFs lose their competitive edge due to their high office costs. The employer’s goal is to give work to a specific firm, earn high wage discounts, or earn illegitimate benefits. The ECF’s goal is to take out the competition large and old ECFs, carry out low-cost and low-quality studies, raising the service cost supported by the employer. The consequences of using this strategy
are “low-quality studies”, increased probability of faults in studies and the negative effects on the project’s stakeholders.

2. If the ECF is a large and old one, the employer will use two-stage bidding to create a “Competitive Rentier-Qualification Trap”. In the qualification phase, the employer considers unusual circumstances which are true for the ECF. In this case, other ECFs will be eliminated by the employer in the qualification phase and makes the probability of winning higher for the ECF in the next phase (price assessment) of the tender. The employer’s goal is to give the work to the desired ECF without having to use “Bids and Tenders Exemption” procedures, without the risk of response to regulatory agencies. The goal of the ECF is to eliminate equally challenging competitors. The consequence of this strategy, the uncompetitive cost for the civil engineering studies, and “low-quality studies”.

- **Analysis of the Collusion of Commission action-interaction strategy**

The “Collusion of Commission Strategy” is used when competing for the supervision of development projects, which is usually used in single-stage tenders. It is used by small firms to benefit from the opportunities and is therefore labeled as “Collusion of Commission-Predatory.” If this strategy is carried out by senior firms, it is usually aimed at offsetting bad financial conditions of the firm and is adopted ineluctably, thus is labeled as “Collusion of Commission-Retaliatory”. Usually, the bargaining ECF offers a much lower price than the real price of

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<th>Paradigm model components</th>
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| Phenomenon                | Ethical Yielded Stress | 1. Discard ethical principles  
2. Preference for Income Indicators  
3. Coercion of unethical practices |
| Causal                    | Imposition of Double Pressure on ECFs | 1. Increased financial Distress (Due to delayed reimbursement, payment of treasury documents instead of money, procrastination of releasing performance bond, … by employer)  
2. Double Burden of Regulation of Taxation and Insurance |
| context                   | Inefficiency of the IEES | 1. Ineffective / paper-based qualification  
2. Low responsibility compared to authority (for ECFs)  
3. Ineffectiveness of the selection method (for ECFs)  
4. Ineffectiveness of reimbursement method (to ECFs) |
| Far context               | Inefficiency of Public Executive Agencies | 1. Preference of political over professional considerations (in public executive agencies)  
2. Neglecting the Impact of ECFs' Faults (by Seasonal Managers) |
| Intervening               | Stay Moral Support | 1. Incentive to maintain reputation  
2. Ability to get work without tender |
2. Collusion of Rentier-Qualification (CRQ)  
3. Collusion of Commission-Predatory (CCP)  
4. Collusion of Commission-Retaliatory (CCR)  
5. Collusion of Signature Venality (CSV) |
| Consequences              | Low Quality Services | 1. Low quality studies  
2. Low quality supervisions |

Table 1: The main categories of ethical practices of ECFs-classification based on the paradigm model. Source: authors.
supervision to increase the chances of winning other ECFs. The ECF’s goal is to squeeze out rivals, win the competition, collude with the contractor, and receive a commission from the approval of contractor low-quality works and the confirmation of false executing items. The consequences of this strategy are “low-quality supervision” and the increased cost of project construction in spite of the project’s stakeholders.

• Analysis of the Collusion of Signature Venality action-interaction strategy
The “Collusion of Signature Venality Strategy” is used when competing for feasibility studies of construction projects, with the collusion of the employer. The collusion is done at the request of the highest level of public executive agency (for ex. the minister of road construction) under the political pressures of parliamentarians or other Influential stakeholders to Launch new construction projects. This is usually done using Bids and Tenders Exemption. The consultant, with the collusion of the employer, manipulates the assumptions of the project in such a way that the cost or duration of the project is less than the reality and the project is justified. The goal of the parliamentarians is to enter a new project into the development budget list of the state and carry out a campaign with a non-national and regional look. The minister’s goal is to reduce the pressure of the Influential stakeholders and preventing impeachment. The ECF’s goal is to capture the opportunity or maintaining profitable projects and good relationship with the employer. The consequences of this strategy are the emergence of new unjustified projects for cost-benefit calculations, increasing the number of projects beyond government capacity, prolonging the project construction period, halting and stagnating the limited national resources of the country, and creating inflationary impacts in spite of the project’s stakeholders.

The context and implications of non-ethical counseling strategies
The product of these analyzes is identifying the contextual conditions underlying the ethical practices of ECFs and the negative consequences of unethical action-interaction strategies outlined in Table 1.

• Selective coding
According to the GT methodology, selective codification was developed for the formulation of theory in the form of an abstract narrative of all important categories and the establishment of the relation between those categories. (Bryant, 2007, 285) Selective coding is the process of integrating and refining the theory (Strauss & Corbin, 1998, 143) by wrapping the categories around a central phenomenon (the main theme of the research for the researcher)

• Selecting a core category
According to the explanatory power of the analytical category of “Ethical yield stress” in explaining the “unethical consultation strategies” adopted by the ECFs, this concept was selected as the central phenomenon (core category) of the business of the ECFs. The relations of the main categories are described as propositions in the form of the storyline and classified according to the form of elements of the paradigm model (Table 1) and finally organized according to the diagram of Fig. 2 around the core category.

• Storyline and propositions
The central phenomenon in the business of ECFs is “Ethical Yield Stress”, which “Discarding ethical principles”, “Preference for Income Indicators” and “Coercion of unethical practices” are important aspects of this phenomenon.

ECFs respond to “Ethical Yield Stress” consciously using five unethical strategies including: 1- Collusion of Rentier-Price (CRP), 2- Collusion of Rentier-Qualification (CRQ), 3- Collusion of Commission-Predatory (CCP), 4- Collusion of Commission-Retaliatory (CCR), and 5- Collusion of Signature Venality (CSV).

The reason for the above phenomenon is the “Imposition of Double Pressure on ECFs”, which occurs through 1- “Increasing financial distress” on
ECFs due to the delay in paying their claims, and delays in the release of performance bond deposits by government employers, and 2- the “Double burden of tax and insurance regulations”. Meta-organization factors such as “Inefficiency of the IEES” and “Inefficiencies of Public Executive Agencies” are the predisposing for adopting unethical action-interaction strategies by the ECFs in the IEES. The “Inefficiency of the IEES” shows itself as 1- “Inefficient / Paper-based Qualifications” of ECFs by the government, 2- lack of transparency and “Ineffectiveness of Selection Method (for ECFs)” and “Ineffectiveness of Reimbursement Method (for ECFs)”, and 3- “Low Responsibility Compared to Authority (for ECFs)”. On the other hand, the “preference of political over professional considerations” and “Neglecting the Impact of ECFs’ Faults” in the public executive agencies of the country, as various aspects of the “Inefficiency of Public Executive Agencies”, provide the basis for adopting “Unethical Consulting Strategies”.

It seems that with the constant consideration of the factors behind the advent of unethical strategies, the existence of a higher level of “Incentive to Maintain Reputation” and “Ability to Get Work Without Tender”, lower the possibility of adopting unethical strategies by ECFs.

The consequences of the adoption of these strategies by ECFs are: “low-quality studies” and “low-quality supervisions” provided by them, and ultimately increasing unjustified projects, uncompetitive prices for development projects, and negative impacts on the stakeholders of these projects.

- **Scientific Contribution and Comparison with Literature**

In this study, the integrated model of ethical decision-making derived from the literature by researchers like Schwartz (2016) has been refined and completed (Fig. 3). (Bommer et al., 1987, 266;
Regarding the research problem and the literature gap in identifying and studying the effect of MOFs on ethical decision making,
the MOFs have been separated from other situational factors, and the integrated model has been modified. Finally, according to the research findings, the mechanism of the influence of the MOFs in the process of ethical decision making has been added to the model.

By refining and completing the aforementioned model, now it is possible to explain the causal conditions of the conflict between the judgments and the ethical decision of the ECFs, despite the existence of individual and organizational differences between the firms, the gap which is evident in previous studies.

Scientific contribution of the research

By doing this research, three scientific contributions have been made in the literature on ethical decision-making, engineering, and project management:

The existing classification of factors affecting ethical decision-making (including personal, organizational and ethical factors) was completed and refined by adding a new category of factors called “meta-organizational factors”.

According to the data analysis, inspired by the physical phenomenon of “Yield Stress”, the new phenomenon of “Ethical Yield Stress” was discovered. The data analysis shows the great similarity of a societal phenomenon with the natural phenomenon of material’s yield stress in physics. Like a structural steel element of a building structure getting to the “Yield Stress” point, which results in a considerable decrease in resistance of the member against the change of its length, if the “Destructive Synergy of MOFs” in the IEES make an ECF get to the “Ethical Yield Stress” point, the ECF as a member of the IEES, would not respond ethically as expected and despite their ethical judgment, they would decide and act unethically.

The casual conditions of the “Ethical Yield Stress” and the contextual conditions affecting a firm’s reaction to the above phenomenon are discovered.

Conclusions

The answer Research Question 1: According to research findings, all ECFs lack some of the structures and almost all of the processes of ethical organizational governance. However, the firm’s attention to ethical issues is evident in organizational processes such as absorption and release employees, performance appraisal, compensation, and reward. It seems that the causal conditions of the unethical action-interaction of ECFs are limited to the weakness of the structures or processes of ethical corporate governance. Although ECFs do not adopt the specific processes and structures of ethical organizational governance, due to the “fieldwork experience” and “technical competency” of the board members, they have good knowledge and control over the ethical practices of the firm and employees.

The answer to Research Question 2: Central phenomenon in the business of ECFs is “Ethical Yield Stress”, which “Discarding the Ethical Principles”, “Preference for Income Indicators” and “Coercion of Unethical Practices” are important aspects of this phenomenon. The reason for the above phenomenon is the “Imposition of Double Pressure on ECFs”.

The answer to Research Question 3: Meta-organization factors such as “Inefficiency of the IEES” and “Inefficiencies of Public Executive Agencies” are the contextual conditions of adopting unethical action-interaction strategies by ECFs.

The answer to Research Question 4: The consequences of the adoption of these strategies by ECFs are: “low-quality studies” and “low-quality supervision” provided by them, and ultimately increasing the number of projects that are unjustified and uncompetitive prices for
development projects and negative impacts on the stakeholders of these projects.

**Practical suggestions**

In order to improve the ethical decisions and practices of ECFs in the IEES, in addition to enhancement of individual and inter-organizational factors affecting the ethical decision making of the firms, it is suggested that the conditions of the IEES be enhanced by modifying the MOFs to prevent the “Imposition of Double Pressure on ECFs” and prevent them of getting to “Ethical Yield Stress” point.

In this regard, to prevent ECFs from getting to “Ethical Yield Stress” point, it is suggested:

- To reduce the fiscal deficit of ECFs that have been created due to the government’s debt to ECFs and to allocate optimal resources, by implementing the principles of portfolio management in the IEES and allocation of national resources strategically and Efficiently.
- To reduce the “Double Burden of Regulation of Taxation and Insurance”, by improving the insurance and tax regulations to encourage entrepreneurship and aligning the Social Security Organization with public executive agencies.
- To eliminate the “Unethical Consulting Strategies” of ECFs in the IEES, it is suggested:
  - That the government does not rule out the affairs of ECFs, such as qualifications, and the trade union of ECFs itself to qualify the ECFs based on the firms’ previous performance.
  - To establish a balance between the authority and responsibilities of ECFs, and strengthen the required mechanisms for the firm’s accountability.
- To enhance the method of selection of ECFs to prevent the preference of cost indicators on qualification-based indicators in the selection of ECFs.
- To enhance the reimbursement method for ECFs to enhance the sensitivity and motivation of ECFs to meet the projects’ goals for cost, time and quality.

To remove the contextual conditions of “Preference of political over professional considerations (in public executive agencies)” by transforming the current non-transparent politically competitive environment to a transparent economic competitive environment.

**Research suggestions**

In this research, studying the effect of inter-organizational factors on ethical decision-making was out of the research scope; nevertheless, a more detailed study of the structures and processes of ethical governance of ECFs in the IEES would be an important subject for future research and studying the reasons of not implementing the ethical governance structures and processes by the firms and the IEES is recommended.

In addition to engineering consultancy firms, contractor engineering service firms, public executive agencies, public planning and budgeting agencies, senior government management (presidential and Cabinet), public oversight bodies, and the parliament make up other actors in the IEES. The data analysis implies the prevalence of conscious unethical action-interactions at all levels of the IEES. Each of these actors is influenced by different causal and contextual conditions, and each one would be an important direction for future research. In this regard, the researchers have conducted a doctoral dissertation called “the meta-organizational factors affecting the ethical practices of the organizations of the IEES”, whose findings will be published subsequently.

**Endnotes**

1. Due to everyday needs, consultants are forced to sell these bonds below the price, which causes the company to lose profits
2. Because the pressure of insurance and tax regulations is usually on the private sector, and because semi-governmental, quasi-governmental and state-owned companies have formal and informal immunities for in insurance and taxation. Moreover, although the government employer failed to pay ECFs, and ECFs are faced with a recession, ECFs should pay insurance costs and tax on invoices that were not yet paid by the employer.
3. Instead of paying attention to the past performance of ECFs, they merely qualify ECFs by examining the documents.
4. The contradiction between the ethical judgment and decision-making of ECFs.
5. The member acts contrary to the structural expectations.

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