

CORRUPTION NETWORKS: HOW IT REMAINS DOING AND PERSISTS

¹Professor Yuri Verlanov,

²Assistant Professor Alexander Verlanov

Ukraine, Mykolaiv, Petro Mohyla Black Sea National University;

¹Head of Economic Theory and International Economy department;

²Accounting and Audit department

JEL Classification Numbers: D73, K42, O17

DOI: https://doi.org/10.31435/rsglobal_wos/30042019/6442

ARTICLE INFO

Received: 24 February 2019

Accepted: 19 April 2019

Published: 30 April 2019

KEYWORDS

corruption in Ukraine,
hierarchical corruption networks,
horizontal and vertical corruption.

ABSTRACT

Using the well-known three-tier model of corruption, we analyze the construction of an elementary corruption network. Considering the public choice theory and the organization culture theory as our theoretical basis, we propose principles of the corruption network functionality, including horizontal links which provide participants with the necessary protection from the risks of been exposed. Elementary corruption networks use organizational mechanisms which, despite the rigid rules of functioning, make them sufficiently flexible and secure. At the same time, even though the main “productive force” of the system is the vertical “client-agent” relationship, the networks, through horizontal links, can unite, spreading out towards many influential spheres of society, where they support each other and thus stay viable. In such an environment the fight against corruption seem to be a simple demonstration of the network’s strength, which gets rid of the participants who violate “rules of the game”.

Citation: Yuri Verlanov, Alexander Verlanov. (2019) Corruption Networks: how it Remains Doing and Persists. *International Academy Journal Web of Scholar*. 4(34). doi: 10.31435/rsglobal_wos/30042019/6442

Copyright: © 2019 Yuri Verlanov, Alexander Verlanov. This is an open-access article distributed under the terms of the **Creative Commons Attribution License (CC BY)**. The use, distribution or reproduction in other forums is permitted, provided the original author(s) or licensor are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

Introduction. In the last half-century, the problems of corruption are vigorously discussed in scientific publications. This is probably since corruption negatively affects many aspects of society, limiting the prospects for development or improving welfare.

Ukraine is one of the countries with a relatively high level of corruption: in the ranking of 2017, it occupied 130th place together with Iran and Sierra Leone (Transparency International, 2018/1). It is #32 among the most corrupt countries in the world (Ranker, 2018).

Fig.1 (Transparency International, 2018/1) demonstrates the dynamics of the Corruption Perception Index (CPI) in Ukraine, Moldova and Georgia. It is obvious that over the past 14 years, there has been no tangible progress in reducing the level of corruption in the country. On the contrary, one can see significant progress in Georgia, where the CPI raised by 3,1 times from 18 to 56.

This is more than likely one of the reasons why in 2016 Georgia had GDP p.c. 1.75 times higher than in Ukraine. Since 2003 Georgia grew its GDP p.c. two time faster than Ukraine (The World Bank, 2018).

This paper attempts to explain some features of corruption in Ukraine (and not only in Ukraine) that cause corruption to persist and weaken the efforts to counter it.

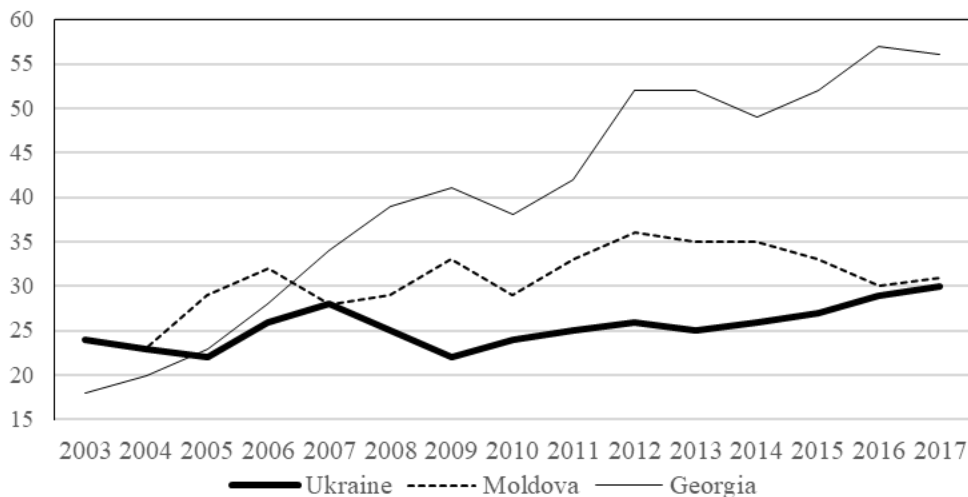


Fig.1. Corruption Perceptions Index

Corruption is “... the abuse of entrusted power for private gain” (Transparency International, 2018/2) and has multiple structures, forms, participants and so on.

Scientific publications contain a sufficient number of corruption models, including: fragmented, sequential, hierarchical and disorganized (Ajit Mishra, 2006).

Among them there are structures that are particularly interesting for analysis because of their viability: Whereas, for example, consistent corruption in hierarchical structures can be fragmented, it is never disorganized, and it is based on incentives for participants, special procedures and restrictions that ensure not only its stable operation, but also growing to the level of networks. Most often, these types of corrupt structures are referred to kleptocratic (Sarah Chayes, 2016), however kleptocracies appear not only as “governmental”, but anywhere where corrupt leaders (formal or informal) use their domination to exploit human and natural resources to increase and support their personal wealth and power.

So, in the first part of the paper we would like to answer the questions: (1) What is a corruption network and (2) How does it operate? Answering these two questions should explain why these structures persist despite the efforts to dismantle them.

The second part is devoted to the question: Is it possible to reduce corruption by increasing the salaries of staff in an organization in which “metastasis” of a hierarchical corruption network have appeared?

We realize that the analysis covers only a small part of the corruption problems, but we hope that answering these questions – or at last by throwing some light on the questions – will provide a better understanding of how to diminish corruption’s impact on society.

Theoretical background. Before we go on with the research let’s consider the theoretical basis. Gjalte de Graaf (2007) presented six main concepts of corruption, comprised of: public choice theories, “bad apple” theory, organizational culture theory, clashing moral values theory, the ethos of public administration theories and correlation “theories”.

The research is devoted to a very specific kind of corruption; i.e., corruption in hierarchies. To some extent, such a form of corruption can be investigated in the context of each of the theories mentioned. But if we consider corruption in hierarchies as “a stable system of relations that relies on organizational norms of behavior,” none of them can be used as a pure basis of analysis. Here are some points of contiguity with the traditional theories that are closer to the present research:

“Public choice theory” suggests that a “free” rational official (agent) occasionally makes a decision that leads to a more or less predetermined outcome for his own gain. On the contrary, within the corrupted hierarchical structures the agent isn’t absolutely “free” in his choice and his behavior is strongly guided by obligatory (yet unlawful) organizational norms.

“Bad apple theory” theory considers the corrupt activity of an agent from his personal point of view, considering that an autonomous individual making the unlawful action demonstrates deviant behavior that doesn’t fit the accepted social norms. Whilst within the hierarchical system of corruption the agent is not a “bad apple” or “black sheep”, because he follows the established rules of the game.

“Organizational culture theory” is considered the collective programming of the mind that distinguishes the members of one organization from others (Mashal Ahmed & Saima Shafiq, 2014).

M. Campbell (2015) developed the definition of Schein (1990) for a corrupt organizational culture. He defined six parameters of corrupt schemes that actually create the basis of a system stability: “(a) a pattern of basic assumptions [that supports corruption], (b) invented, discovered, or developed by a given group, (c) as it learns to cope with its problems of external adaptation and internal integration, (d) that has worked well enough to be considered valid and, therefore (e) is to be taught to new members as the (f) correct way to perceive, think, and feel in relation to those problems”.

Such a definition from the corrupt organization culture point of view seems to be fairly general. It presupposes that corruptness extends to the behavior of all members of the organization. In fact, only trusted employees participate in corrupt activities. Actually, these employees themselves constitute the hierarchical corruption system. Other (“untrusted”) employees have a choice: either to adopt the norms of corrupt behavior and thereby enter the hierarchical structure, or, contrary to their moral standards, continue to work without paying attention to violations, or be fired.

Thus, the theory of organizational culture, embracing the organization in a whole, may not identify specific contexts of its functioning, such as the built-in elements of a hierarchically corrupt system.

At the same time, it helps to identify such elements and to understand the organizational basis for the corrupt hierarchical system and its functionality: a nature of basic assumptions accepted by a given group; the way of coping with its external and internal problems; and the maintaining of the correct way of behavior that should be taught to new members. These components give an idea of how the hierarchical corrupt network is created and operates.

Another generalized approach was used by A. Vannucci (2015) who presented “paradigms” of corruption from an economic, cultural and neoinstitutional points of view. He distinguishes three main approaches to understanding corruption in general:

1. The economic approach, which is grounded on the principal-agent model of relations, when corruption is considered the outcome of rational individual choices, and its expansion within a certain organization is stipulated by the factors of expected costs and rewards.

2. The cultural approach, that considers the differences in cultural traditions, social norms and internalized values which shape individual's moral preferences and an assessment of his social and institutional role. It was presented as a leading factor that can push a public or private agent to be engaged in corrupt activity.

3. The neo-institutional approach was explained as a mechanism which provides internal regulation of social interactions within corrupt networks, and their effects on individuals' beliefs and preferences. The relations between the participants of corrupt activities are regulated through the informal, non-written rules, contractual provisions and conventions.

The propositions mentioned above can be used in constructing the concept of a hierarchical system of corruption and in further developing it into a special entity—a hierarchical corruption network (HCN).

The basics for the idea of a hierarchical system of corruption was considered by Juan D. Carillo (2000). He provides a model of corruption as a three-tier system: “client-agent-superior”. On the base of it the specific features of the HCN can be described (Table. 1)

Hierarchical corruption network is neither “an organization of corrupt individuals” nor “a corrupt organization” as considered by Jonathan Pinto et al. (2008). It is distinctly possible to be termed as highly organized corrupt individuals with their unique technologies, procedures, constraints and rewards. It could appear in any legal organization where the clients face the natural or artificial barriers to provide desired actions and there are the possibilities to overcome it.

The structure of the corruption network. In the context of vertical links, such a structure is a tree-like hierarchy consisting of a leader (“principal”) and corruption “modules” that are at different hierarchical levels – fig.2 (a).

The task of the principal is to establish and support informal “rules of the game” inside the organization and with the external environment. These rules are sufficiently flexible and exist as the principles of functioning at any hierarchical level: (a) ensuring the transfer of money to the top at the established quota, (b) acting within reasonable risk parameters so as not to harm the system, (c) relying on protection in the case of been disclosed.

Table 1.

Three-tier organization	Hierarchical corruption network
I) At each period, agents compute their present discounted value of accepting a bribe (if they do, hereafter they are called “ <i>corrupt</i> ”) and refusing it (hereafter “ <i>honest</i> ”) and behave accordingly.	In the organization there are both “corrupt” agents and “honest” ones. The first are members of the built-in corrupt system, the second are not. They only serve as a background in which, for a third-party observer, the corruption activities are hidden. Corrupt agents make decisions within the established rules of the game: not to be disclosed and to comply with the specified quota. They can take the bribe or refuse depending on their “qualification” and characteristics of clients.
II) The organization has a hierarchical structure. Superiors monitor the actions of agents who can engage in corrupt activities with clients. Corrupt agents should be denounced and fired. But corruption can propagate within the hierarchy. We capture this recursive property of corruption by assuming that agents can share the bribe with their superiors in exchange for not being denounced.	In hierarchical corruption system there are some levels with “agents” at the lower ones. At the next level there are superiors (1) who monitor the actions of subordinate agents and collect money to transfer it further to the next level (2). Of course, corrupt agents should be denounced and fired if they violate the rules of the game. If not, they may rely on protection from their superior. At the same time the superiors are under the protection of higher levels of the system. Any link from the agent to the principal is associated with appropriate cash flow moving upside and appropriate protection from above.
III) There is heterogeneity both among agents and among superiors, who have different personal moral costs of engaging in corrupt activities (or, equivalently, different willingness to pay for keeping their job). As a result, two officials facing the same situation may behave differently.	There is homogeneity both among agents and among superiors, because personal moral costs of engaging in corrupt activities appear when the individual must make a choice. Within the HCN there is no room for it and the decision is guided only by the rules of the system. As a result, members of the network ought to behave the same way.
IV) The possibility of promotions within the hierarchy. Instead of hiring agents and superiors from different external populations, the organization replaces departing superiors with incumbent agents. Then, promotions serve the purpose of screening agents and inducing honesty of those who desire to rise in the hierarchy.	System participants have two incentives to be faithful to the system. The first is because a part of the bribe remains with the participant and thus leads to his enrichment. The second is the possibility of career advancement, where the income is significantly increased at each level. In this way, the system provides itself with proven personnel that maintains its viability.
V) Finally, we extend the analysis to include a cost of monitoring in terms of effort.	The HCN does not involve any tangible monitoring costs.

The basic “production forces” of the HCN are the agents at lowest-level modules. Each module comprises of an agent who, using the right to “permit or not permit”, creates for client incentives to bribe. Guided by established rules and personal experiences, he accepts the risk of being disclosed and shares it with the upper levels. His risks are reduced if he acts not in personal interests but follows the established rules and fulfills the quota. Incentives are comprised of self-enrichment due to the part of the amounts received, and the possibility of moving to the higher levels of the hierarchy with a corresponding increase in “earnings”. The agents and superiors operate with the clientele at appropriate levels according to their competence. More “powerful” clients should be redirected to the superior of a higher level.

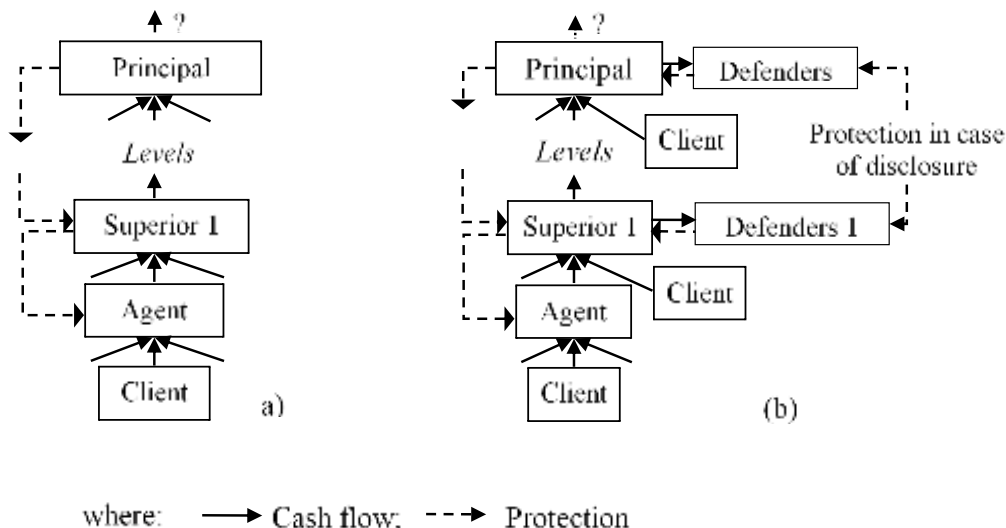


Fig 2. The structure of (a) Hierarchical Corruption System and (b) Hierarchical Corruption Network

Figure 2 (b) shows that at the lowest level each module is presented with a “client-agent” link, where the agent creates incentives for and receives the amounts of money and transfers their corresponding parts above. It has only vertical connections—with the higher-level module (“1”).

The “1” level module performs a larger range of tasks serving a number of agents: (a) supervising the fulfillment of the rules by the lower-level modules that are included in its “jurisdiction”, (b) organizing bribes at its level of competence, (c) receiving assigned amounts from the lower-level modules plus the sums obtained directly as bribe from its clients and transferring part of them to the higher level, (d) and providing protection for the agents and lower-level superiors / agents in case of conflict situations.

How it operates. It is supposed that vertical integration takes the form of payments by subordinate echelons to their superiors (a percentage of the bribes they extort) (Sara Chayes, 2016). But the system could be more successive when the agents / superiors set the norms in an absolute term, since the upper echelons have the same obligations to their supervisor. In addition, setting the percentage quota creates incentives for the destructive behavior of agents. This reduces the overall security level of the system.

Therefore, officials (agents), according to informal rules, are set the quota (as the fee to be paid “upstairs” in exchange for taking up a position, keeping it, and being defended if exposed). It makes such a system of regulation quite flexible. The agent himself determines from whom and how much to take as a bribe. At the same time, he sets this sum based on his own interests plus a quota. His own interests increase the amount, but in the end, it should not exceed a certain critical level, which is established by the official empirically—based on experience, characteristics of the client segment, content of the service, “individual assessment” of the client gain, etc.

Relative excess in amount of bribe is associated with a significant increase in the probability of being uncovered by an external supervisory authority and dismissed from the position. If disclosure is the consequence of the mistake made in assessing the client but doesn't go out of the critical frame, an official can rely on the protection from the organization at a higher level.

Such protection requires additional expenses, the cost of which, considering the probability of disclosure, is included into the quota. The higher the level of the organization, where the official was uncovered, the higher costs should be borne by the appropriate level of the organization, but also the higher officials receive larger sums of the illegal proceeds.

The greatest risk of been exposed occurs at the lowest level, where client behavior is not controlled enough. To diminish this risk the practice offers using the intermediaries who work personally with the clients selected and has direct contact with the agent.

Obviously in such structures there is no need for rigorous monitoring.

The member of the HCN, acting within the established norms, on the one hand, becomes richer, on the other hand – he is protected by a higher organizational level. Therefore, he has no incentives to violate the “rules of the game”. Offenders are fired, and their place, more often than not, is given to “proven” officials of the lower level. Thus “corporate values” are supported. The ability to move in the hierarchy and the associated benefits create additional incentives for officials to adhere to the rules.

Researchers often discuss the issue of competition within a corrupt system, asking to what extent does competition exist within the dominant network? (Sarah Chayes, 2016) A higher position in the system means, on the one hand, greater earnings, on the other, greater security from disclosure, provided that the rules of organizational behavior are followed. This creates incentives for competition, which is also regulated by the rules of the game: everything is allowed if it does not go against the purpose of the system functioning—rhythmic cash flows of the amount needed, and support of the security level. The prize in this competition means moving to a higher position in the case of personnel rotation within the system. In this way the system provides a reserve and selects personnel.

Facts of bribery may be disclosed by an external supervisory authority that relates to this level of the hierarchy. Or it may be a result of the efforts of higher-level body. In the first case, the protection is carried out through controlled channels, providing one of the functions of the head of the corresponding level, which requires certain expenses, which are included in the quota. In the second case, the head of a higher level solves the issue of protection, using his “own” channels.

A hierarchical system of corruption can be comprised of many modules at every level. However, their large number significantly increases the risks and thereby the system maintenance costs become significantly higher.

The two-tier corruption system (“client–principal”) and even the three-tier system (“client–agent–principal”) seem to be generally known (Carrillo Juan, 2000). We only added some horizontal links to the model. It not directly reflects the phenomenon of “horizontal corruption” in its accepted understandings as the collusions involving groups of officials (Wim Wensink, Jan Maarten de Vet et al, 2013) or as corruption committed purely among private entities (Preventing, 2012). These horizontal links turn the hierarchical system of corruption into a network and make it much more persistent. The horizontal relations could be established on appropriate hierarchical levels with the representatives or organizations whose activities concern the situations of corruption disclosure: law enforcement agencies, mass-media, government bodies, informal leaders and sometimes organized criminals.

To the point, from the perspective of corruption networks, organized crime doesn’t differ dramatically from bureaucratic networks. It functions in the same manner and its sources of cash flow are also of illegitimate character. At the same time part of this flow is directed vertically and horizontally for the support to be received from the bureaucrats.

The emergence and functioning of hierarchical corruption systems involves the constant need to overcome permissive barriers to obtaining certain resources. Therefore, often these networks appear as kleptocratic. But this is not always the case. Here we agree with S. Chayes (2016), who generalizes them as the operating systems of sophisticated and successful networks, which involve a wide range of corruption relations. And these relations take different forms as it was described by José G. Vargas-Hernández (2011). He lists eleven types of corruption activities: bribery, collusion, embezzlement of public funds and theft, fraud, extortion, abuse of discretion, favoritism, clientelism, nepotism, the sale of government property by public officials, patronage.

HCNs are created for players’ personal enrichment, so the main type of “vertical” operations in them is bribery i.e. exchange: a permission (or help in receiving it) against money. This is what determines the condition for meeting quota requirements. All other corruption actions that don't connect directly with the cash transferring, are carried out at the expense of the person who produces them, reducing his share of personal income. The players who engaged in “horizontal” relations are freer in choosing the form of interactions.

Different networks through horizontal relationships can exchange providing the appropriate services, involving their own vertical links. In this way, corruption is expanding to the level of hyper networks, covering multiple spheres of social relations. Concurrently, the links within the systems of corruption become stronger significantly.

In such a situation, the fight against corruption is limited to public declarations against the backdrop of the issuance of agents that have been exposed because of their destructive behavior with respect to the system. This creates an additional incentive for others to follow established rules and supports the persistence of the corruption network.

Salary increasing. In this section we will show how the increase in the salaries of officials is reflected in their incentives to work honestly.

Scientific publications on reducing corruption often analyze the use of such a tool as a salary increase. Until now, there is no unambiguous assessment of its effectiveness, and this is understandable, if

we imagine the variety of conditions in which corrupt relations take place (Abbink, K. 2002, Gong Ting and Wu Alfred M. 2012, Rijckeghem, C. V., & Weder, B. 2001). Here we would like to give a preliminary explanation of how much a salary increase allows to achieve the expected effect in reducing corruption for the case of hierarchical corruption networks. As it is shown below, using this tool, on the contrary, can contribute to the strengthening of corrupt relations.

We use the modified “work-leisure” model where a rational official who seeks to maximize income is limited by the fixed working hours. His choice is based on the perceived level of “value of his own efforts”. Let’s denote variables as: I_0 – initial level of income (salary) of the official; L – normative time of work (for example, 8 hours); w – official “wage” in the format of the fixed salary per hour of working time, $I_0/L = w$; b – the additional corrupt income (bribe).

Under the condition of initial equilibrium (1), the situation looks like it is shown in Fig.3.

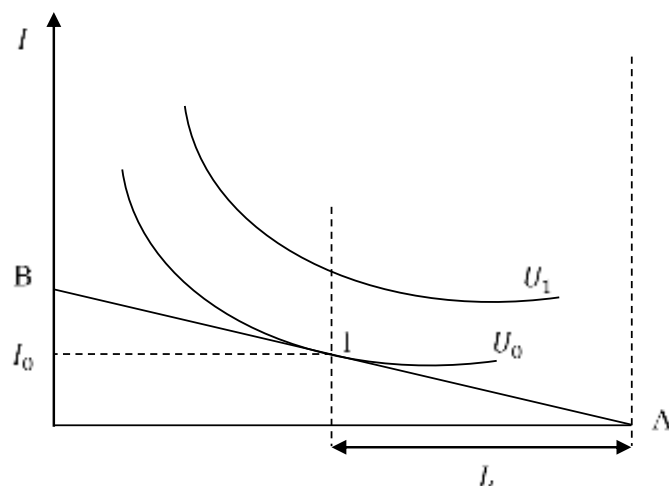


Fig. 3. The initial equilibrium

Under this condition the official, performing his professional duties, works at the normal level of efforts maximizing his income.

Corrupt behavior requires appropriate incentives, that are created by the possibility of increasing personal gaining by corrupted income (b) – fig.4.

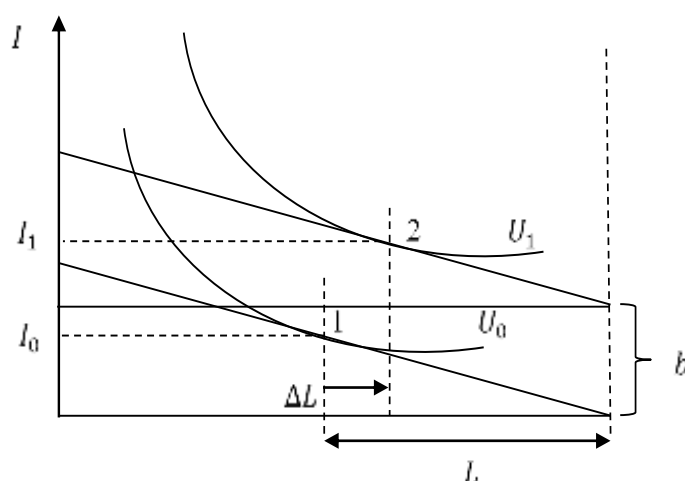


Fig. 4. Equilibrium of an official under the condition of obtaining additional corrupt income (b)

Obviously, receiving of additional income (b) has two effects: on the one hand, an increase in the level of personal income ($I_1 = I_0 + b$), on the other hand, – an increase in the “value of his own efforts” (k_1) that is responsible for the quality of the “production tasks” execution:

$$k_1 = \frac{I_0 + b}{L - \Delta L}$$

In this case the official is motivated to transfer the part of his professional functions to subordinates and spent the working times to strengthen informal corruption relations. Thus, both the first and second effects reinforce each other and create incentives for further corruption.

Finally, the equilibrium option with the bribe and the increase in wages – fig. 5. Under this condition it is possible for the official to increase income through corrupt activities to level I_2 . At the same time, the level of the “value of efforts” returns closer to the norm.

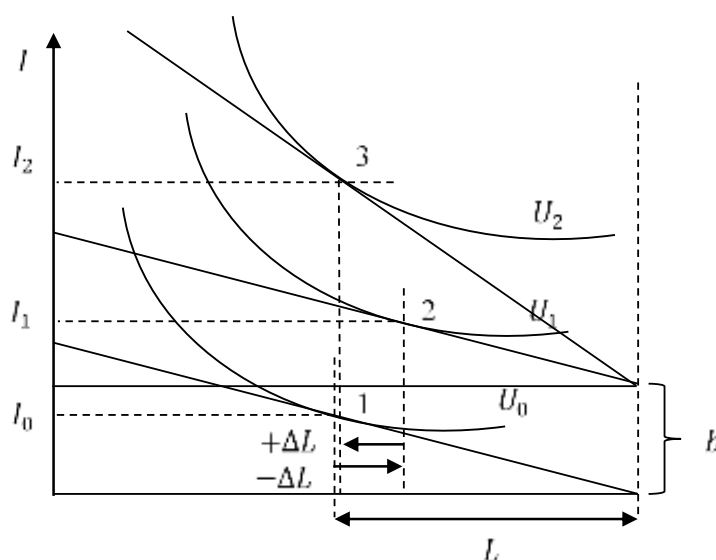


Fig. 5. The equilibrium of an official under the condition of increase in salary and possibility of obtaining additional corrupt income

Increasing salary, provided that the possibility of obtaining additional corrupt incomes remains, can not in itself be considered an effective tool for reducing the level of corruption. Behavior, of course, can be adjusted through the strengthening of punishment, which compensates the attractiveness of additional income. However, in the hierarchical corruption network the punishment, as shown above, cannot also present a sufficiently effective tool.

Conclusions. Among the whole variety of structures and systems of corruption, hierarchical corruption networks are prominently distinguished. These formations are much more complex. At the same time, they can be described both at the level of community of elementary two or three-tiers structures, and also as kleptocratic organizations. Identifying them as distinct “organisms” allows us to develop an idea of the reasons for the viability of corruption and to understand why the anti-corruption efforts undertaken are not sufficiently effective in many cases.

Hierarchical corrupt network is a ramified hierarchically organized structure, the functioning of which is ensured by rather simple and at the same time rigid rules of behavior of its participants:

- to provide, in established quotas, periodic “upward” transfers of funds collected in the form of bribes;
- to act carefully so as not to harm the system and not be disclosed;
- to rely, in case of disclosure, on been protected from punishment.

As a rule, vertical network ties are associated with cash flows. Horizontal interaction at each hierarchical level is carried out as an exchange of protection (covering-up) for money or services in any possible form: collusion, extortion, abuse of discretion, favoritism, clientelism, nepotism, patronage etc.

Through stable horizontal interactions, the networks coalesce, forming more complex formations.

Hierarchical corruption networks do not represent any particular formal organization but appear and function within it and at the expense of it. The participants of the network (trusted corrupt agents) perform their functions alongside honest agents who have a choice or try to deserve the right to participate in corrupt activities and thereby increase their income, or not pay attention to illegal activity, or be fired.

Despite the fact that salary increases are mentioned as one of the possible tool in reducing corruption, for the case of hierarchical corruption networks it does not have the expected effect, and, conversely, can contribute to strengthening corruption relations.

REFERENCES

1. Abbink, K. (2002). Fair salaries and the moral costs of corruption. Retrieved from <http://www.nottinghampublications.com/economics/cedex/papers/2002-05.pdf>
2. Ajit Mishra (2006). Corruption, hierarchies and bureaucratic structure. In *International Handbook on the Economics of Corruption* / edited by Susan Rose-Ackerman (pp. 189-215). Cheltenham, UK; Northampton, MA, USA: Edward Elgar Publishing, Inc.
3. Carrillo Juan D. (2000) Corruption in Hierarchies. *Annales D'Économie et de Statistique*. 59, 37-62.
4. Chayes, S. (2016, June). The Structure of Corruption: A Systemic Analysis Using Eurasian Cases. *Carnegie Endowment for International Peace*. 79.
5. Gjalte de Graaf. (2007) Causes of Corruption: Towards a Contextual Theory of Corruption. *Vrije Universiteit Amsterdam. Public Administration Quarterly*, Vol. 31, No. 1, p.39-86. Retrieved from <https://spaef.org/article/751/Causes-of-Corruption:--Towards-a-Contextual-Theory-of-Corruption>
6. Gong Ting and Wu Alfred M. (2012) Does Increased Civil Service Pay Deter Corruption? Evidence from China. *Review of Public Personnel Administration*. 32(2) 192–204. DOI: 10.2139/ssrn.2158530
7. Mashal, A. & Shafiq, S. (2014) The Impact of Organizational Culture on Organizational Performance: A Case Study of Telecom Sector. *Global Journal of Management and Business Research: Administration and Management*. 14, 3, 1.0, 21-30.
8. Pinto, J., Leana C. R. & Pil, F. K. (2008). Corrupt Organizations or Organizations of Corrupt Individuals? Two Types of Organization-level Corruption. *Academy of Management Review*. 33, 3, 685–709.
9. Prevention of fraud, corruption and bribery committed through legal entities for the purpose of financial and economic gain. Comparative Overview (2012, October 26). *Center for International and European Law. The Polish Institute of International Affairs*. (121) 20. Retrieved from <http://www.asser.nl/upload/documents/20121205T032523-Comparative%20Overview%2026%20Oct%202012%20final.pdf>
10. Rijckeghem, C. V., & Weder, B. (2001). Bureaucratic corruption and the rate of temptation: Do wages in the civil service affect corruption, and by how much? *Journal of Development Economics*, 65(2), 307-331.
11. Schein, E. H. (1990). Organizational culture. *American Psychological Association*, 45(2), 109-119.
12. The Most Corrupt Countries in the World (2018). *Ranker*. Retrieved from <https://www.ranker.com/list/the-most-corrupt-countries-in-the-world/info-lists>
13. The World Bank. Country Indicators (2018). Retrieved from <https://data.worldbank.org/indicator/>
14. Transparency International (2018/1). Corruption Perception Index 2017. Retrieved from <https://ti-ukraine.org/cpi2017/#/>
15. Transparency International (2018/2). What is corruption? Retrieved from <https://www.transparency.org/what-is-corruption>
16. Vannucci Alberto (2015). Three paradigms for the analysis of corruption. *Labour and Law Issues*. 1, 2, 31.
17. Vargas-Hernández J. G. (2009, October 21). The Multiple Faces of Corruption: Typology, Forms and Levels. *SSRN Electronic Journal*. 20. · doi: 10.2139/ssrn.1413976.
18. Wensink, W, Maarten de Vet, J. et al. (2013, June 30) Identifying and Reducing Corruption in Public Procurement in the EU. Development of a methodology to estimate the direct costs of corruption and other elements for an EU-evaluation mechanism in the area of anti-corruption. *PwC*. 371, 20. Retrieved from https://dspace.library.uu.nl/bitstream/handle/1874/309580/identifying_reducing_corruption_in_public_procurement_en.pdf?sequence=1&isAllowed=y