

## IDENTIFYING THE EXISTING CONNECTIONS BETWEEN TAX EVASION AND CORRUPTION AND DETERMINING A FUNCTIONAL LINK BETWEEN THE TWO PHENOMENA

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**Abstract:** *Informal economic exchanges are based on agreements that are inaccessible in the formal system, the object of which is to translate into restricted goods, access to decision-makers, influence on administrative decisions, or the enjoyment of preferential treatment in the bureaucratic system. Individuals have access to social connections within the institutional hierarchy through a system of „intercessions, acquaintances and relationships”. Favors start from getting a job, eventually in a government agency, priority in legal matters, preferential position in problem solving, and end to brokering in obtaining licenses, certificates, passports, driving licenses, identity cards, tax amnesty and so on. Corruption, a phenomenon specific to the underground economy, is a deliberate deviation from the legal standards materialized in the misuse of public resources by official persons for private purposes. It is a deviant phenomenon with important economic consequences whose motivation and mechanisms reside in the inner tensions of the individual who is unable to access legal ways of achieving personal goals. However, it should be pointed out that in most cases, tax evasion and corruption go hand in hand. Tax evasion does not exclude corruption, while reciprocal is also valid.*

**Keywords:** Corruption, tax evasion, theories and models of corruption.

**JEL Classification:** E26

The relationship between the state and civil society clearly defines the nature of the underground economy, and this relationship is steadily flowing. The geometry of informal / underground economic activities is changing, being influenced by the character of the state authority, and by this we point to the existence of economic practices that violate or avoid the regulations established by the state, practices that vary according to the evolution of the state-society relationship.

The nature of the relationship between bureaucratic corruption and underground economic activities seems to be a taboo subject. It is difficult, if not impossible, to determine whether the underground economy and corruption are complementary phenomena or not, since we can not clearly establish whether firms become informal and act in the underground economy to avoid bureaucratic corruption or to bribe officials. However, the positive relationship between the two phenomena seems to have a common denominator: the weakness of the legal system.

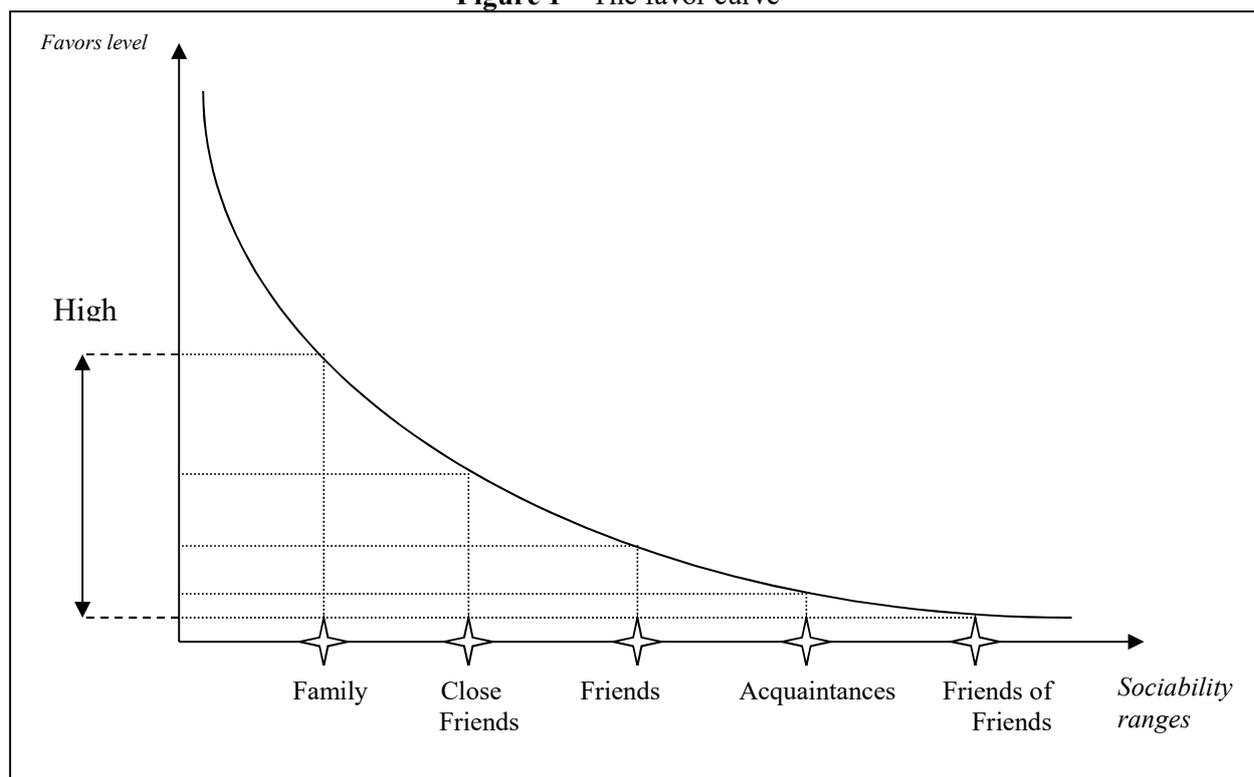
The informal exchanges (bureaucracy, favors, clientelism, different forms of corruption, parallel production and marketing systems) demonstrate that economic legislation is not sufficient to understand the logic of the underground economy. It depends on policy makers if exchanges of this kind are tolerated or severely punished. "Reciprocity" seems to create an informal social security system designed to ensure the survival of its members.

Activities such as those mentioned above are characteristic for members of groups in the elite of the formal system. They are neither random nor chaotic, but they are based on informal networks that operate on principles of friendship, loyalty and trust. Often, such networks operate under the protection and in parallel with a certain formal hierarchy. They represent intrinsic elements of bureaucratic structures, whose mechanisms are modeled in simultaneous and vicious cycles, in response to various inadvertences, forcing the gaps of the formal system.

The more the bureaucracy in the formal social system becomes more emphasized, it becomes incapable of satisfying social needs, and as a result, the tendency to create informal mechanisms that eschew the control of the formal system intensifies. In this context, informal economic exchanges develop, intensify and perpetuate by generating interest groups within the system. The underground activities of this nature are based on a symbolic-cultural logic, totally different from the economic concept of rationality or the formal ideology of the rule of law. The rules of "sociability" differ according to culture, the characteristics of the formal system, the purpose of the activity, the application of punitive measures, the social tolerance to the bureaucratic rules, etc.

Informal economic exchanges are based on inaccessible agreements in the formal system, the object of which is to translate into restricted goods, access to decision-makers, influence on administrative decisions or the enjoyment of preferential treatment in the bureaucratic system. Individuals have access to social connections within the institutional hierarchy through a system of „intercessions, acquaintances and relationships”. Favors start from getting a job, eventually in a government agency, priority in legal matters, preferential position in problem solving, going through brokering in obtaining licenses, certificates, passports, driving licenses, identity cards, tax amnesty and so on.

**Figure 1 – The favor curve**



*Source:* Adaptation from Adler Lomnitz Larissa – Social Networks and the Subteran Economy in Post-communist Societies - Subteran Exchange Networks in Formal Systems: A Theoretical Model, WP, 2004, pag. 13.

Such services, if made by individuals with the same social status, usually do not involve compensation, but rather a future consideration, being a duty of honor to be paid later. Payment of money

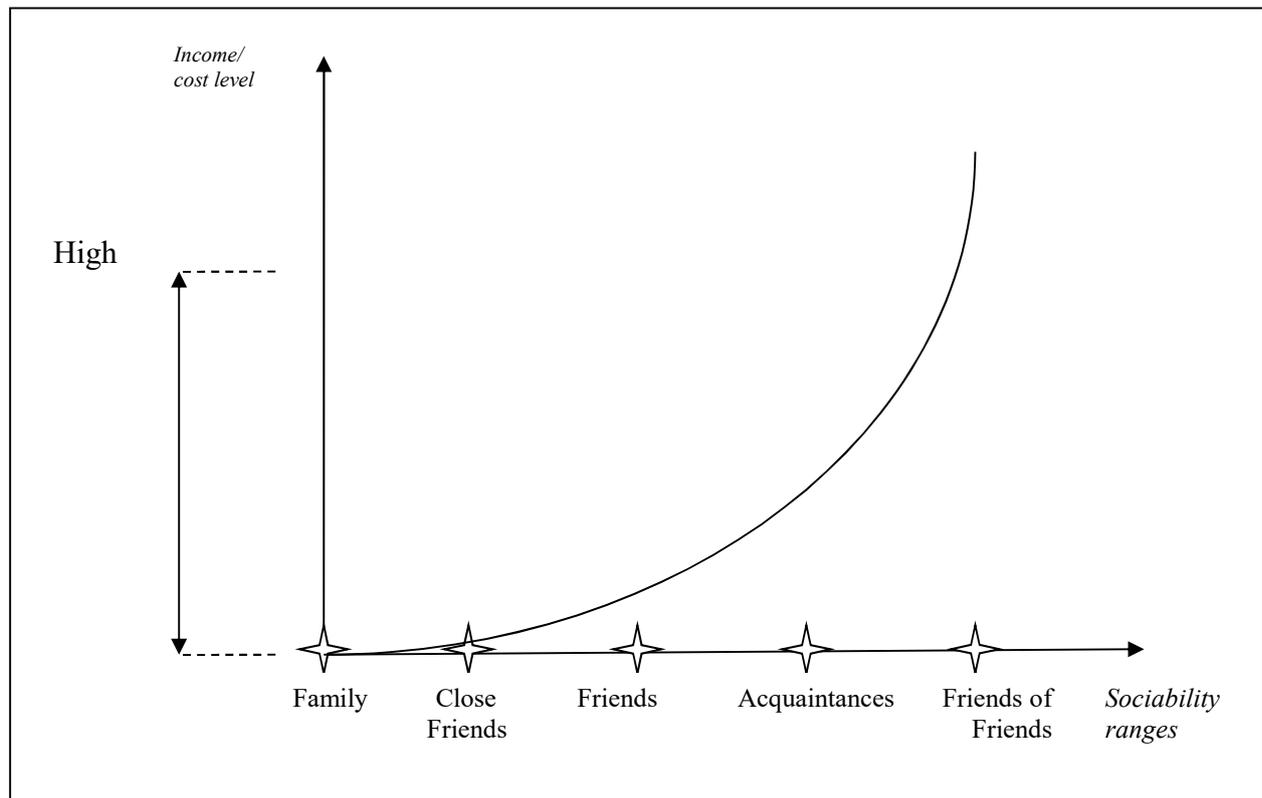
as a reward of favor falls within the sphere of corruption, and accepting the bribe is in fact a recognition of social inferiority. Most bureaucratic favors are suspected of bribery.

Interpersonal relationships developed over the years allow individuals to be categorized according to their social distance: family, close friends, friends, friends of friends, etc. These categories are not static, an individual may move from one category to another, but the movement is conditioned by the intensity of reciprocal exchanges. Here, of course, there is confidence that facilitates the exchange between the person who asks for and the one who offers the favor and ensures the extension of these networks: starting from the family, where the level of trust normally reaches maximum odds, extends to close friends, then to acquaintances etc. (Figure 1).

If formal systems operate on fair-play principles, equality before the law, and economic rationality, informal systems, whatever their nature, are based on a complex of ideological components: gentleman's spirit, „noblesse oblige”, family, belonging to a group, etc.

It is interesting to analyze the level of income a corrupt person can get within a certain time frame (5-10 years). The level of this income is sensitively equal to the costs borne by those who corrupt, ie those who pay bribes. Figure 2 shows the CCCI curve, which highlights the evolution of corrupt income according to sociability ranges.

**Figure 2** –The Corruptors' Cost – Corrupted's income (CCCI curve – own vision) curve.



As a result, we can use the *Discounted Cash Flow (DCF) method*, a method taken from the revenue-generating property methodology, in the assessment of the cash-flow that occurs in the corrupt corrupt system. The method is of particular complexity, but the advantage of its application lies in supporting the two partners (corrupted and corruptor) in quantifying the parameters needed to ensure the success of the negotiations. In other words, the method allows an in-depth analysis of the economic efficiency of a transaction having as a parameter the corruption, depending on the option of the two partners on the bribery cashing scheme, which can take one of the following forms:

- a global amount covering several agreements;

- an initial amount followed by annual subscriptions,
- a minimum or maximum annual amount;
- an ascending or descending amount, depending on the evolution of their calculation base, etc.

Using the DCF method involves going through several steps:

- determining of the cash-flow over the forecast and the continuous (terminal) value, which is the present value of the cash-flow that is obtained after the explicit forecasting period;
- calculating the weighted average cost of capital (WACC) which is identified with the discount rate;
- calculating the present value of corrupt capital.

Cash-flow is the most important indicator because it effectively represents the income generated by the "investment" of the corrupt. It is a reproducible annual income that will remain at the same level or increase at a constant perpetual annual rate. The value of the corruptor's "invested" capital is calculated directly by updating the cash-flow with the discount rate. Updating will be done with the real cost of capital. The capitalization rate is a real rate because it does not include the inflationary component of the annual growth of annual income subject to capitalization.

Establishing the capitalization rate<sup>1</sup>, required in applying the annual and maintainable long-term cash flow capitalization method is an example of an assertion confirmation included in several valuation standards. From the perspective of the capitalization rate relationship with the discount process, capitalization can be defined as the discount of a future revenue stream of an annuities or an ascending annuities stream with a constant annual rate ( $g$ ) that can not be higher than the expected rate the increase in income generated by corruption. In the infinite horizon, the two mentioned indicators can not increase by more than 2-4% because the inclusion in the Gordon-Shapiro formula of a higher rate than this would mean from a strictly mathematical point of view that the level of income generated by corruption would exceed even and the country's GDP. In this case, the Gordon - Shapiro discount rate capitalization formula can be applied, where the discount rate is lower with the perpetual annual rate than the discount rate. We consider that this formula is appropriate because we are considering mature corruption and the future evolution of the realized revenues will be part of the general trend of the phenomenon.

Continuous value (terminal or residual) is an expression of the net cash-flow obtainable during the non-explicit prediction period (which characterizes the entry of the corrupted - corruptible system in a state of stability) and can be calculated using the classic net cash-flow capitalization formula (the Gordon – Shapiro formula):

$$VR = \frac{CF_{p+1}}{k - g}$$

unde:

VR – terminal value;

$CF_{p+1}$  – the net cash flow from the first year following the explicit forecasting period;

$k$  – discount rate

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<sup>1</sup> Stan Sorin - Capitalization rate for unlisted companies, ANEVAR, Newsletter no. 1 - 2000, p. 10.

g - expected annual rate of increase in corrupt income (constant perpetual rate).

$CF_{p+1}$  is calculated on the basis of the forecast for this indicator in year p+1, and the net cash flow to be capitalized is the one for the year p + 1 and not the one for the final year of the forecasting term. The magnitude of the terminal value is significantly influenced by the level of g and the perpetual annual growth of the net cash-flow after the expiry of the explicit forecasting period (from year p to infinity).

In order to establish the level of g, the following factors must be taken into account:

- general economic conditions;
- the predicted increase of corruption in the sector where the corrupted assessed income is registered;
- the rise in the past of the corrupted cash-flow;
- The corrupted's / corruptible's predictions of future revenue growth.

Another method that provides the possibility to make the necessary estimates of the probabilities of achieving different incomes is the continuous probabilistic analysis. The average discounted net income (VNA) is obtained by determining the average or most probable value of the cash-flow. The standard deviation of the total bribe income in a given industry / industry is obtained by combining the expected standard deviations of individual cash-flows using the statistical sum.

$$\sigma_{VNA}^2 = \sum \frac{\sigma_i^2}{1+r^{2i}},$$

where: r – capital cost discount factor.

The disadvantage of the method is represented by the fact that it introduces a subjective estimation element,  $\sigma_{VNA}$ .

Remaining in the sphere of corruption, we must mention some of the models of corruption dynamics, models developed by Richard Dudley<sup>2</sup> of Oregon University in the United States of America. These theoretical models attempt to highlight the causes of corruption by reporting the variables that occur in the evolution of the phenomenon at different reference levels.

1. *The bureaucratic model* targets four coordinates: corruption - bureaucracy - economic opening - the power of the judiciary system. Each of these coordinates is marked with a value between 0 and 10. Depending on the changes in the variables at a given moment, the corruption diagram also changes, ensuring a reasonable representation of reality. For average values (value 5 describes an average corrupted country) the model is in an unstable balance, which denotes the complexity of the phenomenon.

2. *the bribe probability model* reflects the magnitude of the already existing corruption. Similar to the previous model, four coordinates are considered: the size of the bribe - the strength of the legal / judicial system - the probability of giving a bribe - the probability of requesting / accepting a bribe. It is interesting to note that the likelihood of paying a bribe is conditioned by the likelihood of it being demanded, and the likelihood of it being offered. Decreasing the probability of punishment leads to increased corruption, as the increase in the severity of punishment generates the increase in the average

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<sup>2</sup> Quoted by Abraham Paul in Corruption. Causes - Mechanisms - Effects - Solutions, Detective Ed., Bucharest, 2005, pp. 183 - 198.

size of the bribe because its acceptance becomes more risky. Moving any coordinate to a more corrupt situation places the system in a steady state.

3. *Business owner-employee relationship* model analyzes the influence of the corrupt employer on the employees. As a rule, if the employer is corrupt, then the employee, in the probable situation of losing his job, will develop cordial relations with the employer and will necessarily support corruption. In turn, the employer will encourage the corruption of his employees.

4. *The power and control model* is specific to individuals in hierarchically superior public positions. Such individuals have sufficient power and ability to control future or ongoing economic actions so they can resort to illicit methods to achieve their personal goals.

The models presented above presuppose the existence of static corruption and focus on internal effects and processes. An alternative explanation for changes in corruption attempts to provide an analytical model based on agent behavior<sup>3</sup>, developed by Ross Hammond (2000). The model puts citizens and bureaucrats together in a game with determined strategies: the Corrupt (C) strategy and the Non-Corrupt (NC) strategy that targets honest pay or non-payment of taxes. In the first case, both citizens and bureaucrats are involved in a secret arrangement whereby the citizen pays the bureaucrat a sum of money as a bribe, significantly lower than the taxes owed to the state, in order to "eliminate" these debts. The second case involves the honest payment of taxes by the citizen and their transfer to the system of the bureaucrat. Each player will choose the strategy and reward system in relation to the intensity of the threat of a penalty.

### Conclusions

Modern theories describe the underground economy as belonging to traditionalist economic systems (the source of minimal survival means), lacking the prospect of global development. In this context, we can conclude that both informal economic operations and participants in this kind of activity have aversion to change, the processes they involve are involutive or cramped undesirably in the past. Nevertheless, the phenomenon is one of the great challenges of contemporary times, as demonstrated not only by the wide spread of informal economic activities but also by their interconditioning with the formal economy. As a result, a series of models were developed to facilitate the assessment of the causes and effects of economic activity, and to estimate the size and dynamics of the underground economy.

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