

6. Загальні проблеми економіки

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ANALYSIS OF OPTIMAL LIABILITY STRUCTURE FOR CORRUPTION

Relevance of research. State corruption is present in any of the current public governance systems and in both developed and emerging economies. The drawbacks of corruption, leading to non-optimal resource allocation and shifts in economic decisions, are extensively studied, and various anti-corruption measures have been proposed by scholars, governments and international development institutions [1, 2]. Designing an efficient policy is impossible without outlining the structure of liability for corruption wrongdoings. The economy of crime provides some valuable insight, which, combined with more traditional policymaking models, is useful to answer the question of the optimal liability regime for corruption.

Presenting main material. In order to study the economy's response to corruption and the necessity to introduce anti-corruption controls, a simple static general equilibrium model for the closed competitive economy is set up. The economy consists of one producer making the good X while utilizing two factors – labor and capital, quantities of each of those are external; furthermore, the labor supply is split into private and public sector workers. The producer pays taxes to the government depending on its output, which amount to $G(X)$. The government uses its proceeds to pay wages to the workers employed in public sector. The producer, therefore, maximizes his profit function $pX - C(X) - G(X) \rightarrow \max$, that leads to the equilibrium price $P = C'(X) + G'(X)$. The profit maximization problem under the assumption of perfect competition is equal to minimization of the producer's costs $C(X) + G(X) \rightarrow \min$ [3].

In order to analyze corruption, the public servants are split into corrupt and honest ones, both being paid by the government from the proceeds of taxes $G(X)$. If there are no corruption payments present, the income of the honest civil servants amounts to $(1 - corr) * G(X)$, and the income of the corrupt ones, respectively, to $corr * G(X)$, where the parameter $0 < corr < 1$ is the share of the corrupt civil servants within the whole labor force employed by the government.

As corruption by all means is a voluntary incentive crime and cannot be caused by impulse or negligence, for the purpose of the model presented the only difference between corrupt and honest civil servants is that the honest ones will not accept any bribes under any circumstances, while the corrupt ones will accept payments only if the benefit obtained is larger than anticipated costs of committing crime. The producer as well will have the incentive to pay bribes to corrupt civil servants only in case the payment B is lower than the cost cuts obtained from the act of corruption. As the government employees within the analyzed model have no power to influence the costs of labor or capital, the only benefit they are able to provide to the producer is the “discount” in the payments to the government, amounting to ΔG . So, the producer's cost minimization function becomes $C(X) + G(X) + B - \Delta G \rightarrow \min$, and the bribe will be paid only if $B < \Delta G$. The government receives less payment; therefore, it will cut the income of both corrupt and honest civil servants.

The income of the corrupt civil servant will equal to $corr * [G(X) - \Delta G] + B$, and the bribe will be accepted only if it exceeds the loss of income due to lower government's revenues, meaning that $B > corr * \Delta G$. There exists an equilibrium bribe amount, defined by the inequality $corr * \Delta G < B < \Delta G$, which is always held due to corruption share parameter definition $0 < corr < 1$. One important consequence of this inequality is that under any fixed level of ΔG the equilibrium bribe value is growing with the growth of the share of corrupt civil servants, thus providing explanation to such phenomena as corruption cartel formation and peer pressure among the civil servants to accept bribes [4].

In the given setting, both the producer and the corrupt civil servants benefit from the act of bribery. The ones who are losing are the honest servants, whose income is $(1 - corr) * [G(X) - \Delta G]$, and the loss amounts to $(1 - corr) * \Delta G$. They are the agents internally encouraged to report corruption and to impose some penalties on the parties benefiting from wrongdoing to increase government revenues and thus compensate the loss of income. For the sake of simplicity, it is assumed that the honest civil servants have the full authority to impose such monetary penalties and to allocate the distribution of the corresponding government income to themselves. In order to compensate the loss of income, the minimum expected fine should be equal to

$$F = E [\text{probability of conviction} * \text{monetary sanction}] = (1 - corr) * \Delta G.$$

If the fine for bribery is imposed only on the official and not on the producer, the income of the corrupt

civil servant is equal to $corr * [G(X) - \Delta G] + B - F$, and committing the act of bribery is justified only when $B > corr * \Delta G + F$, which under the condition of minimum expected fine value simplifies to $B > \Delta G$. On the other hand, as noted previously, the act of corruption is profitable to the producer only if $B < \Delta G$; therefore, assuming that corruption creates no utility other than monetary, there is no stable equilibrium value if the corrupt civil servant is being prosecuted with at least minimum expected fine.

To conclude, imposing liability only on the recipient of bribes at least in theory may be an efficient way to deter corruption. Real policy design based on this principal conclusion will although be difficult. First, it is necessary to accurately estimate the value of the minimum expected fine. As the unstable equilibrium bribe value still exists, underestimating the expected fine will create the possibility of a stable equilibrium; therefore, the policymakers (and in the model these are the honest civil servants who directly benefit from receiving monetary penalty) will have clear incentives to overestimation of the expected fine value. Other reasons for overestimation are the limitations of the government budgets where clearly not the full amount of proceeds from fines will directly benefit the non-corrupt civil servants; the additional compensation demanded by the honest civil servants for fighting corruption; as well as the overestimating mistake being generally more favorable. As the expected value is the product of the monetary fine and the probability of detection, in case of overestimation the monetary value of the fine will grow rapidly, as the probability of detection and conviction, which is commonly small for the white-collar crime, will only decrease in case of large nominal monetary fines. Another matter of concern is the ability to collect the fine from the corrupt individual, whose assets might be insufficient or thoroughly hidden. Generally, if the monetary fines are difficult to impose in the efficient way, non-monetary sanctions such as criminal conviction, prison sentence or professional debarment might be the solution. Still, within the current analysis framework, the cost of imposing non-monetary sanctions will be held by the government, thus the problem of honest civil servants' decline in income will become even more severe.

Similarly, if the fine is imposed only on the producer and not on the official, the minimized cost function becomes $C(X) + G(X) + B - \Delta G + F \rightarrow min$, and the bribe will be paid only if $B < \Delta G - F = \Delta G - (1 - corr) * \Delta G = corr * \Delta G$ under the minimum expected fine assumption. The act of corruption is profitable for the civil servant only if $B > corr * \Delta G$, so there, similarly to the case where only the official is liable, exists no stable equilibrium bribe value satisfying the inequality $corr * \Delta G < B < corr * \Delta G$.

First of all, it is worth noting that under the producer's liability regime the bribe value is restricted at a lower level, than under the corrupt official's liability at any given level of corruption share. The problem of the optimal fine estimation remains the same as in the analysis of the corrupt officials' liability, so again high stated monetary fines will rapidly decrease the probability of detection and conviction. The availability of assets for fine collection in the producer's liability case is generally better than in case of an individual civil servant, though corporations will tend to decrease it by resorting to thin capitalization.

As both the producer and the corrupt officials benefit from the bribery, it is natural to suggest that both the parties should be held liable for the unlawful activities. In this case, the minimum expected fine equation is formulated to include both the fines on the producer FP and corrupt civil servants FC :

$$FP + FC = E(\text{probability of conviction} * \text{monetary sanction}) = (1 - corr) * \Delta G.$$

The producer's cost function becomes $C(X) + G(X) + B - \Delta G + FP \rightarrow min$, and the bribery is profitable when $B < \Delta G - FP$. The corrupt civil servant's income is $corr * [G(X) - \Delta G] + B - FC$, and the bribe is accepted if $B > corr * \Delta G + FC$. The equilibrium bribe value is defined by the inequality:

$$corr * \Delta G + FC < B < \Delta G - FP,$$

which, when substituted for the value of fines from the minimum expected fine equation, leads to two mathematically equal formulations of the equilibrium bribe value:

$$\begin{aligned} corr * \Delta G + FC < B < corr * \Delta G + FC, \\ \Delta G - FP < B < \Delta G - FP. \end{aligned}$$

These formulations may help to address the problem of estimation of the optimal expected fine size and rapid decrease of the probability of detection of the by switching the focus from establishing accurate constraints for the equilibrium bribe value to assuring the unstable equilibrium value is negative, so there are no economic intentions for corruption payments. The producer's expected fine should be more than the value obtained through corrupt actions, and the exact monetary sanction can be estimated by dividing the producer's cost decrease by the probability of detection. This expected fine is more than sufficient to cover the

government's revenue loss caused by corruption, so there are additional costs available to impose the non-monetary persecution on the corrupt civil servant. The negative value of the expected fine FC is justified in this case, shifting the equilibrium bribe value to below zero.

Though presented model shows some ability to provide insights into optimal regime of liability for the state officials' corruption, it does not address several important issues arising from the presence of corruption, such as the change in the cost of factors (especially capital) for the producer, the decrease of both the domestic and foreign investment flows in the economy, the additional cost of protection of their property rights for the factors' owners, and the availability and quality of the public goods produced by the government for the population [5]. Additionally, this model may be used as the basis for the analysis of tax avoidance by removing the bribe payment from it.

Conclusions. To conclude, the modified simple general equilibrium model with inclusion of the corrupt civil servants suggests that the optimal liability regime for the corruption wrongdoings is the joint liability of both the bribe-paying entities and the bribe-receiving officials. It is shown that the reasonably high monetary sanction upon the bribe payer reduces the equilibrium bribe value under any given corruption level, and if set high enough, makes bribe payments not profitable. As for the bribe taker, non-monetary sanctions are preferred, and their additional costs of application are covered by the fine paid by the bribe payer, therefore leaving the government's budget balanced.

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ВЕДЕННЯ УПРАВЛІНСЬКОГО ОБЛІКУ НА ПІДПРИЄМСТВАХ АГРОПРОМИСЛОВОГО КОМПЛЕКСУ

Актуальність дослідження. Агропромисловий комплекс в Україні стрімко розвивається. Дана галузь є стратегічно важливою, тому що на неї припадає лівова частка експорту країни та великий відсоток залучення іноземних інвестицій. Але відсутність правильного ефективного управління може призвести до кризової ситуації.

Аналіз останніх досліджень і публікацій. Тематику впровадження управлінського обліку на підприємствах досліджували у своїх роботах ряд вітчизняних та зарубіжних вчених. Серед них варто виділити праці П. Й. Атамаса, Ф. Ф. Бутинця, С. Ф. Голова, М. Ф. Огійчука, З. В. Гуцайлюка, К. Друри, Р. Ентоні, М. Г. Чумаченко, Д. Фостера та ін. Загальним теоретичним питанням розвитку управлінського обліку в сільському господарстві присвятили свої роботи В. М. Жук, В. В. Вольська, О. О. Довжик [2], Т. Г. Камінська, В. Б. Моссаковський, Н. В. Тлучкевич та ін.

Мета статті. Мета даного дослідження полягає у виявленні та обґрунтуванні ефективності ведення управлінського обліку на аграрних підприємствах для прийняття ними необхідних управлінських рішень.

Виклад основного матеріалу. Незважаючи на більш ніж двадцятирічну практику існування поняття «управлінський облік» у вітчизняній обліковій науці та масу публікацій, які доводять його необхідність і присвячені окремим аспектам його впровадження й розвитку, більш ніж 2/3 підприємствам цілком достатньо даних бухгалтерського фінансового обліку. Бухгалтери мало цікавляться науковими працями у царині управлінського обліку, що пов'язано як із завантаженістю цих фахівців рутинною роботою, так і зі слабкою практичною спрямованістю таких публікацій [3].

Ефективність управлінського рішення, перш за все, визначається ступенем його виваженості, який в свою чергу обумовлений якістю інформації. Збір, обробку та своєчасне її отримання забезпечує