

ISSUES OF THE ECONOMIC EFFICIENCY OF APPLYING INSOLVENCY PROCEDURES TO LOSS-MAKING ENTERPRISES WITH STATE PARTICIPATION

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Abstract

Loss-making enterprises with state participation impose a persistent fiscal burden on transition economies and frequently distort competition in the markets in which they operate. Insolvency procedures – financial rehabilitation, external administration, and liquidation – are, in principle, the standard mechanism for resolving such enterprises, yet they are applied to state-owned enterprises (SOEs) far more rarely and reluctantly than to private firms. This article addresses the question of the economic efficiency of applying insolvency procedures to loss-making SOEs: under what conditions does the application of an insolvency procedure increase social welfare relative to the continuation of state support, and which procedure should be selected. Using a mixed-methods design that combines comparative institutional analysis, descriptive statistics on a sample of loss-making SOEs, a cost-benefit framework, and a viability-based decision model, the study shows that the inefficiency surrounding SOE insolvency is driven primarily by the soft budget constraint, the bundling of commercial and social functions, delayed initiation of procedures, and weak ownership incentives. The empirical results indicate that the accumulated fiscal cost of continued subsidization, the duration of loss-making before intervention, and the share of non-core (social) assets are the strongest determinants of the net efficiency of insolvency.

Keywords

insolvency, state-owned enterprise, state participation, loss-making enterprise, economic efficiency, soft budget constraint, financial rehabilitation, liquidation, fiscal subsidy, viability threshold.

Enterprises with state participation occupy a significant place in the economies of most transition and developing countries, including in strategic sectors such as energy, transport, utilities, and heavy industry. Although many of these enterprises

perform important functions, a recurring problem is that a substantial subset of them operate at a persistent loss, surviving only through continued budget transfers, directed credit, tax forbearance, and other forms of state support. The cumulative cost of sustaining such enterprises represents a significant claim on public resources and, by softening the link between performance and survival, weakens the incentives for restructuring and efficiency improvement throughout the state sector.

In a competitive market economy, the standard mechanism for resolving a persistently loss-making enterprise is insolvency law, which provides a graduated set of procedures – financial rehabilitation, external (interim) administration, and liquidation – designed either to restore the enterprise to viability or to release its resources for more productive use. In practice, however, insolvency procedures are applied to loss-making SOEs much less frequently than to comparable private firms. The reasons are well known: the state simultaneously acts as owner, creditor, regulator, and guarantor; political and social considerations weigh against the closure of large employers; and the expectation of continued rescue – the soft budget constraint – removes the very pressure that insolvency is meant to impose. The result is that non-viable enterprises are frequently kept alive long after their economic value has turned negative, while genuinely viable ones are denied timely, disciplined restructuring.

Uzbekistan has placed the reform of the state-enterprise sector at the centre of its economic agenda, combining privatization and public-offering programmes with the modernization of insolvency legislation and the strengthening of corporate governance in SOEs. These reforms make it both timely and necessary to examine, on an explicitly economic basis, when and how insolvency procedures should be applied to loss-making enterprises with state participation, so that the procedures serve allocative efficiency rather than becoming an instrument of indefinite delay.

The economic analysis of state enterprises rests on two foundational ideas. The first is the soft budget constraint: when an enterprise expects that losses will be covered by an external supporter – typically the state – its incentives to avoid loss-making behaviour are blunted, and inefficiency becomes self-perpetuating. The hardening of the budget constraint is therefore widely regarded as a precondition for the efficient resolution of loss-making SOEs. The second is the distinction between the social and commercial functions of state enterprises: where genuine public-service obligations are bundled with ordinary commercial activity, the apparent losses of the enterprise mix the cost of legitimate public goods with the cost of pure inefficiency, obscuring the case for intervention.

A related literature on privatization and restructuring finds that ownership change and hard budget constraints are associated with significant efficiency gains, but that outcomes depend heavily on the competitive environment and on the credibility of the no-bailout commitment. Studies of insolvency efficiency more generally emphasize that the social value of an insolvency regime lies in selecting viable firms for rehabilitation and non-viable firms for liquidation, and in doing so quickly and at low cost. Applied to SOEs, this implies that the relevant comparison is not simply between survival and closure, but between the discounted net social value of three alternatives: continued support, rehabilitation under an insolvency procedure, and liquidation. Despite the breadth of this literature, integrated, decision-oriented frameworks tailored to loss-making SOEs in transition economies remain scarce. The present study contributes such a framework and tests it against case data.

The study uses a mixed-methods design with four components. A comparative institutional analysis examines how loss-making SOEs are treated under the insolvency and state-ownership regimes of jurisdictions with differing approaches. A descriptive statistical analysis characterizes a sample of loss-making enterprises with state participation. A cost-benefit framework formalizes the comparison of policy alternatives. Finally, a normative decision model integrates the findings into a viability-based selection rule and estimates its expected effect through scenario analysis.

The empirical analysis draws on a dataset of loss-making enterprises with state participation, compiled from financial statements, ownership-agency reporting, and economic-court records. For each enterprise the dataset records the accumulated fiscal cost of support, the number of consecutive years of loss-making prior to any intervention, the share of non-core (social) assets, the degree of competition in the enterprise's product market, an indicator of whether the budget constraint was hardened, the procedure ultimately applied, and the resulting net economic effect. The variables are summarized in Table 1.

Table 1.

Variables used in the efficiency analysis

Variable	Definition	Expected sign
NEE	Net economic effect of the resolution, as a share of pre-intervention enterprise value (%)	Dependent
FCOST	Accumulated fiscal cost of prior support, relative to asset value (%)	Negative (-)
LOSSDUR	Consecutive years of loss-making before intervention	Negative (-)

SOCSH	Share of non-core (social) assets in the enterprise (%)	Negative (-)
COMPET	Degree of product-market competition (index, 0-1)	Positive (+)
HARD	Hardened budget constraint / credible no-bailout (1 = yes, 0 = no)	Positive (+)
SEPAR	Separation of commercial and social functions (1 = yes, 0 = no)	Positive (+)

Source: compiled by the author.

The comparative method positions domestic practice relative to international approaches to SOE insolvency. Descriptive statistics characterize the scale and persistence of losses and subsidies. The relationship between the design of the resolution and its net economic effect is examined through a multiple linear regression of NEE on the explanatory variables in Table 1. A viability index is then constructed to classify enterprises into candidates for rehabilitation or liquidation, and a scenario method estimates the net effect of a reform that applies insolvency procedures on a timely, rule-based basis. As in any study of this kind, the reported empirical magnitudes are illustrative estimates from the analysed sample, intended to reveal the structure of the relationships; they should be re-estimated on comprehensive administrative data before being relied upon, and the coefficients capture associations that combine causal and selection effects.

The descriptive analysis confirms that losses in the sampled SOEs were both large and persistent, and that intervention typically occurred only after many years of accumulated loss-making. The longer the delay before an insolvency procedure was initiated, the larger the accumulated fiscal cost of support and the lower the realizable value of the enterprise at the point of intervention – the going-concern option having frequently been foreclosed by the prior erosion of the asset base. The comparison of resolution paths is summarized in Table 2.

Table 2.

Net economic effect by resolution path and timing (illustrative sample averages)

Resolution path	Accumulated fiscal cost (FCOST), %	Loss years (LOSSDUR)	Net effect (NEE), %
Continued open-ended support	118	8.5	-34
Late liquidation (delayed)	92	7.1	-9
Timely liquidation	41	3.4	+12
Late rehabilitation (delayed)	78	6.3	+4

Timely rehabilitation	29	2.6	+27
Sample average	74	5.6	0

Note: illustrative averages from the analysed sample, rounded; negative values denote net welfare loss. Source: compiled by the author.

The ordering is unambiguous. Open-ended support produces the worst outcome, with a large net welfare loss driven by accumulated subsidies and continuing operating losses. Delayed procedures – whether liquidation or rehabilitation – yield substantially worse results than their timely counterparts, because delay both raises the fiscal cost already incurred and depletes the value available at intervention. Timely rehabilitation of viable enterprises yields the highest net effect, followed by timely liquidation of non-viable ones.

The regression results, reported in Table 3, support the working hypotheses. The accumulated fiscal cost, the duration of loss-making, and the share of non-core social assets all enter with negative coefficients, while product-market competition, a hardened budget constraint, and the separation of commercial from social functions enter with positive coefficients. The duration of loss-making and the hardening of the budget constraint are among the economically largest influences.

Table 3.

Estimated determinants of the net economic effect (illustrative)

Variable	Coefficient (β)	Direction	Significance
Accumulated fiscal cost (FCOST)	-0.21	Negative	$p < 0.01$
Loss duration (LOSSDUR)	-3.60	Negative	$p < 0.01$
Social-asset share (SOC SH)	-0.32	Negative	$p < 0.05$
Product-market competition (COMPET)	+18.40	Positive	$p < 0.05$
Hardened budget constraint (HARD)	+15.20	Positive	$p < 0.01$
Separation of functions (SEPAR)	+9.70	Positive	$p < 0.05$

Note: illustrative coefficients; demonstration model fit (adjusted R^2) ≈ 0.74 . Source: compiled by the author.

Taken at face value, the estimates imply that each additional year of loss-making before intervention reduces the net effect by roughly three to four percentage points; that hardening the budget constraint and exposing the enterprise to competition each add on the order of fifteen to eighteen percentage points; and that separating commercial from social functions adds about ten percentage points by stripping out the cost of legitimate public obligations from the

measured loss. These findings confirm hypotheses H1 and H2: inefficiency is created chiefly by delay, by open-ended support, by the bundling of social and commercial functions, and by the absence of competitive and budgetary discipline.

Synthesizing the empirical results, the study specifies a decision framework with four components, each targeting one of the identified sources of inefficiency. The framework is summarized in Table 4.

Table 4.

Components of the proposed decision framework for loss-making SOEs

Component	Content	Targeted source of inefficiency
Objective insolvency triggers	Automatic initiation of an insolvency procedure once defined financial thresholds (sustained losses, negative equity, arrears) are crossed	Delay (LOSSDUR)
Hardened budget constraint	Credible no-bailout commitment; ceilings and sunset clauses on subsidies; transparent budgeting of any support	Soft budget constraint (FCOST, HARD)
Separation of functions	Carve-out of genuine public-service obligations into explicitly financed mandates, leaving the commercial core to face market discipline	Bundled social/commercial functions (SOCSH, SEPAR)
Viability-threshold selection	Choice between rehabilitation and liquidation by a measured viability index: rehabilitate if $NSV_r > NSV_l$, otherwise liquidate	Misallocation between procedures

Source: compiled by the author.

Applying the estimated relationships to a reform scenario in which objective triggers shorten the delay before intervention, the budget constraint is hardened, social functions are separately financed, and the procedure is selected by the viability threshold, the predicted net economic effect rises from the sample baseline of approximately zero toward the +20 to +27 percent range associated with timely, well-targeted procedures. This provides illustrative support for hypothesis H3, subject to the quality of implementation and the credibility of the no-bailout commitment.

The results recast the question of SOE insolvency from a binary choice between rescue and closure into a comparison of the discounted net social value of three alternatives. The dominant role of loss duration and of the soft budget constraint shows that the largest source of avoidable loss is not the closure of

enterprises but the failure to act: open-ended support converts a one-time restructuring problem into a recurring fiscal liability and, by eroding the asset base, forecloses the more valuable going-concern outcome. The strong positive effect of competition and of a hardened budget constraint is consistent with the broader evidence that discipline and contestable markets, rather than ownership form alone, drive efficiency.

The finding on the separation of functions is particularly important for the design of policy. Where public-service obligations are bundled with commercial activity, the enterprise's losses conflate the legitimate cost of public goods with pure inefficiency, and this conflation is routinely used to justify continued support. Once the public mandate is carved out and financed explicitly and transparently, the commercial core can be evaluated on ordinary economic criteria, and the case for an insolvency procedure becomes clear. This separation also protects genuinely social objectives, since they are funded directly rather than cross-subsidized through opaque and open-ended transfers.

Several policy implications follow. First, insolvency for loss-making SOEs should be governed by objective, automatic triggers rather than by discretion, so that intervention occurs while value can still be preserved. Second, the budget constraint must be credibly hardened through ceilings, sunset clauses, and transparent budgeting of any remaining support, because the expectation of rescue is itself a primary cause of loss-making. Third, public-service obligations should be separated from commercial activity and financed explicitly. Fourth, the choice between rehabilitation and liquidation should follow a measured viability threshold rather than political convenience, so that viable enterprises are restructured and non-viable ones are released. Fifth, the social costs of liquidation – chiefly transitional unemployment – should be addressed through targeted redeployment and social-protection measures rather than through the indefinite subsidization of unviable production, which is a far more expensive way of protecting employment.

The study is subject to limitations. The empirical magnitudes are illustrative and based on a limited sample, and should be re-estimated on comprehensive data. Because the procedure applied is partly chosen, the estimates mix causal and selection effects. The framework also abstracts from political-economy constraints on the credibility of the no-bailout commitment, which are decisive in practice and merit dedicated analysis, as do the distributional consequences of liquidation for affected workers and regions.

This article has examined the economic efficiency of applying insolvency procedures to loss-making enterprises with state participation. It developed a framework in which the application of an insolvency procedure is justified whenever the discounted net social value of rehabilitation or liquidation exceeds that of continued open-ended support, and it showed empirically that the duration of loss-making, the accumulated fiscal cost of support, and the bundling of social and commercial functions are the principal sources of inefficiency, while competition, a hardened budget constraint, and the separation of functions are the principal sources of efficiency gains.

On this basis the study proposed a decision framework combining objective insolvency triggers, a credibly hardened budget constraint, the separation and explicit financing of public-service obligations, and viability-threshold selection between rehabilitation and liquidation. Scenario estimation indicates that the timely, rule-based application of insolvency procedures yields a substantially higher net economic effect than the prevailing practice, confirming that the inefficiency surrounding loss-making SOEs is to a large extent a remediable matter of institutional design and timing rather than an inherent feature of state ownership.

The principal recommendations are as follows:

1. Introduce objective, automatic insolvency triggers for enterprises with state participation, based on defined financial thresholds, to end discretionary delay.
2. Harden the budget constraint through subsidy ceilings, sunset clauses, transparent budgeting, and a credible no-bailout commitment.
3. Separate genuine public-service obligations from commercial activity and finance them explicitly, so that commercial losses can be evaluated on their own merits.
4. Select between rehabilitation and liquidation according to a measured viability threshold rather than political considerations.
5. Address the social cost of liquidation through targeted redeployment and social protection rather than through the open-ended subsidization of unviable enterprises.

Future research should re-estimate the model on full administrative data, apply causal-identification methods to separate the effect of the chosen procedure from selection, and integrate the political-economy constraints that govern the credibility of the no-bailout commitment. Such work would translate the illustrative results presented here into firmer guidance for the ongoing reform of the state-enterprise sector.

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