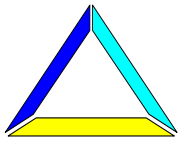
INSTITUTE FOR ECONOMIC RESEARCH AND POLICY CONSULTING IN UKRAINE
GERMAN ADVISORY GROUP ON ECONOMIC REFORM

Reytarska 8/5-A, 01034 Kyiv, Tel. (+38044) 228-6342, 228-6360, Fax 228-6336
E-mail: institute@ier.kiev.ua, http://www.ier.kiev.ua



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How to improve public investment efficiency in Ukraine?

Executive Summary and Policy Recommendations

Public investment can both serve socially useful purposes and be growth enhancing, if sufficient levels are allocated efficiently and if budgeting is managed properly.

Public investment in Ukraine has recently risen from low to sufficient levels. Private participation in investment for socially useful purposes, such as road construction and other infrastructure investment, is still small.

Activities with doubtful rationale for long-term state intervention (economic activities, utilities) receive one third of all public capital expenditure. More than half of this is aid in form of capital transfers to public enterprises, allocated in long bargaining processes.

Public investment budgeting rules suffer from a lack of integrated treatment with respect to decision-making bodies, components of capital expenditures, and planning horizons.

At current public investment levels, the impact on the economy can nevertheless be increased.

- Socially useful investment can be boosted by more private sector involvement in the financing of roads and other infrastructure, including utilities, by concession schemes.
- Improved investment budgeting requires
  - transparent priorities and rules-based selection criteria (cost-benefit analysis);
  - smoother integration of capital expenditures in the budgeting process; capital and maintenance budgeting can be harmonized by multi-year controls.
  - Resource ceilings in project selection should be set early, to minimize demand for public funds and to avoid long bargaining processes for public aid.
- In the medium term, state aid in form of capital transfers to public enterprises can be re-allocated towards core public activities, education, and health.

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1. Definitions and recent trends

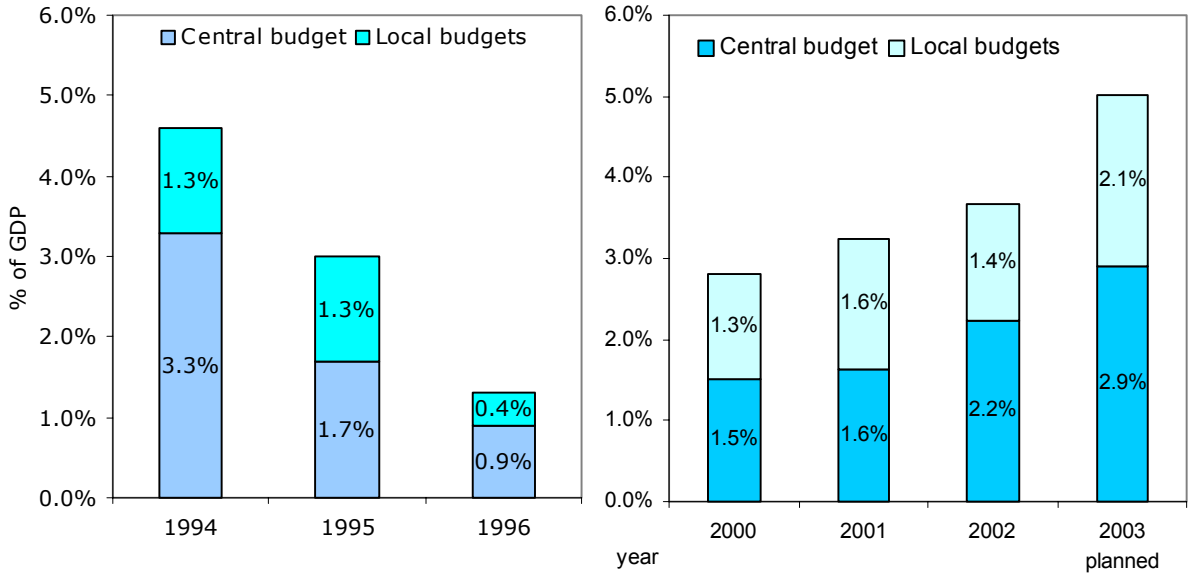
1.1. Definitions

Throughout the paper *public investment* is defined as *capital expenditure financed out of the central or local budgets*, in the Treasury definition. This comprises purchases of fixed assets including repairs and reconstruction, the creation of state reserves, purchases of land and intangibles, and capital transfers to enterprises, other levels of government, the population, or abroad. This differs from Derzhkomstat's definition of *public capital investment*, also used in this paper.[1]

1.1. Recent public investment levels in Ukraine

Income losses during the nineties implied substantial revenue shortfalls for public budgets. Ensuing fiscal austerity had a much more severe impact on public investment than on current expenditures, implying some deterioration of the infrastructure (energy transmission and distribution, telecommunications, transport, water and sanitation).

Chart 1: Public investment as a share of GDP, in %



Data sources: "Ukraine. Public Investment Review", Report No 16399-UA, World Bank, Washington, DC, 2001, for 1994–96, and Treasury reports since 2000.
Note: World Bank and Treasury data follow different definitions and are not readily comparable.

Following macroeconomic stabilization, the GDP share of public investment has recovered (chart 1). The evolving picture appears to be consistent with a shrinking role of government: while total (private and public) fixed capital investment has increased from 13.3% in 1997 to 16.8% of GDP in 2002,[2] the share of publicly financed fixed investment in the total has decreased by nearly 3.2 percentage points to 8.7% during

[1] Derzhkomstat data don't include maintenance, purchase of land and intangibles, and are not accurate in reporting the source of finance. The Treasury uses cash methods of accounting, while Derzhkomstat statistics are based on accrual methods.
[2] Source: Derzhkomstat, Statistical Yearbook 2002.

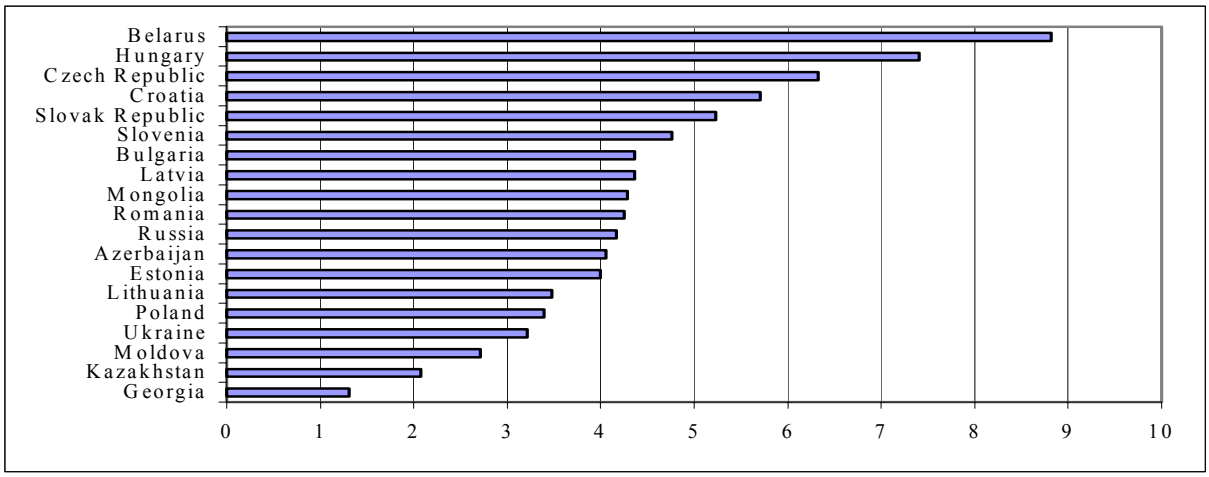
the same period. Although post-2000 total public investment data shown in Chart 1 are not readily comparable to earlier data, one can infer that since 2001 there has been a shift of public investment away from local levels to the central government.

1.2. Public investment levels in an international perspective

At 20.3%, Ukraine's share of (private and public) fixed capital formation in GDP was in 2002 fairly low, but still within reasonable limits for a transition economy.[3] With respect to public investment, the gap appeared more significant (chart 2), especially when taking into consideration austerity-induced investment needs in infrastructure.

There is no statistically significant relationship between per capita GDP and public investment. The size of government, e.g. depending on private versus public ownership in infrastructure, matters. Also, public investment often involves large projects creating vested interests with inefficient outcomes. Sufficient shares of public investment in GDP are thus certainly much smaller than the highest levels indicated in Chart 2.

Chart 2: Public investment as a share of GDP
Selected transition economies, 1999–2001 averages, in %



Note: Most OECD countries' public investment to GDP ratios are between 3 and 5 per cent.
Data sources: IMF, *Government Finance Statistics* and *International Financial Statistics*, World Bank, *World Development Indicators 2003,* and IER calculations.

On the basis of recent increases (chart 1), current public investment levels in Ukraine are comparable to OECD levels and do not appear to be insufficiently low.

Further raising public investment in Ukraine, however, meets fiscal constraints. The major restriction on central government investment stems from high subsidies and current transfers (Table 1).[4] Local government investment is hampered by a lack of own financial resources.[5] Thus, raising the impact of public investment on the economy is less

[3] The UN Economic Commission for Europe's Common Database reveals a median of 21.1% for a sample of 25 transition economies in 2002, or most recent.
[4] Most of which is transition-related social transfers to households. Current transfers to local governments made up 20% of total current transfers and subsidies in 2001.
[5] Cf. IER, *Openness and Transparency of Public Finance in Ukraine: Analysis and Recommendations*, December 2003.

a problem of the amount but rather of the efficiency of public investment expenditure.

Table 1: Shares of central government expenditures, in % of total

	Goods and services		**Wages and salaries**		**Interest payments**		**Subsidies & other current transfers**		**Capital expenditures**	
Region/Country	1990	2000	1990	2000	1990	2000	1990	2000	1990	2000
World	39	37	23	18	10	9	23	31	13	13
Low and middle income		39		21		9		26		16
Transition economies	31	31	9	12	3	9	57	49	10	10
Central Europe and Baltics	26	28	10	13	2	6	54	57	10	8
Southeastern Europe	38	32	12	14	3	13	51	43	8	11
CIS	37	35	2	12	2	11	46	44	16	11
Ukraine		**30**		**13**		**7**		**57**		**6**
High income	25	29	13	11	11	7	56	59	7	5

Notes: Wages and salaries are part of goods and services. Ukrainian figures are for 2001.
Data source: World Bank, *Word Development Indicators 2003.*

2. How to allocate public investment in a market economy?

The decision whether an investment project should be publicly or privately financed, must be based on a clear understanding of the role of the state in a market economy. The limits of useful state intervention are in principle well defined, and follow from two arguments: markets may fail to supply some goods in efficient amounts, or market outcomes may be in conflict with agreed upon notions of equity within society.

- *Public goods and services*. Their consumption by one person does not diminish availability to others, while nobody can be excluded from consumption. These goods are not supplied in efficient amounts on markets. There are very few "pure" public goods, defining the core public activities (defense, public order, justice, general public services, social protection). Infrastructure only partly fulfills these criteria: e.g., an individual can be excluded from using a road, and Kyiv traffic jams are vivid proof of temporary rivalry in consumption.
- For *some private goods,* market structures make unregulated competition deliver inefficient outcomes. These include natural monopolies or network industries in infrastructure, e.g. energy distribution, telecommunications, water and sanitation. Recent advances in regulatory practices have weakened the argument for public provision of many of these goods in favor of publicly regulated private provision.[6]

[6] IER/GAG, "Multi-utilities: Panacea or barrier to competition?", Advisory Paper T16, Kyiv, December 2003.

- *Transition* may temporarily justify public restructuring on private markets to attract subsequent private investment. The Ukrainian coal sector could be a case in point.

All this implies that the market failure argument for direct long-term state intervention is not strong, and that the state certainly need not completely replace private markets in investment into commercial activities and infrastructure on efficiency grounds.

- *Equity considerations* may make market outcomes socially unacceptable and provide strong ground for public investment to ensure equal access to a socially agreed upon catalogue of goods and services. Examples include health care and education, which also exhibit spillover effects of *merit goods*: individuals often ignore the social return of human capital investment or health care.

3. The allocation of public investment in Ukraine

3.1. Government objectives

Two sources[7] list five priorities for investment support: (1) the fuel and energy complex and the implementation of energy and resources saving technologies, (2) the social sphere, production of consumer goods and services, and competitive export-oriented products, (3) agriculture, (4) the medical and microbiological complex, (5) overcoming the consequences of the Chornobyl catastrophe.

Measured against the list of goods and services with potential for government intervention in section 2, these priorities appear dominated by intervention on private markets or only temporarily valid transition-specific concerns [(1), (3), and (4)]. Only (5) is undoubtedly a case of public intervention based on equity concerns, while (2) does not include a workable definition to begin with. The Concept disregards priorities for local government investment, and also leaves it unclear whether it implies public investment priorities or public support for private investment policies in whichever form, from capital transfers to investment tax expenditures.

Thus, the Concept is a rather unreliable benchmark for the actual allocation of public investment in Ukraine.

3.2. Public investment by function

With the new budget code, a new functional budget expenditures classification in full conformity with IMF standards was introduced in 2001. Accordingly, pre- and post 2001 expenditure data are not comparable. Chart 3 shows 2002 central and local consolidated budget capital expenditures reflecting all general functions on both levels of government.

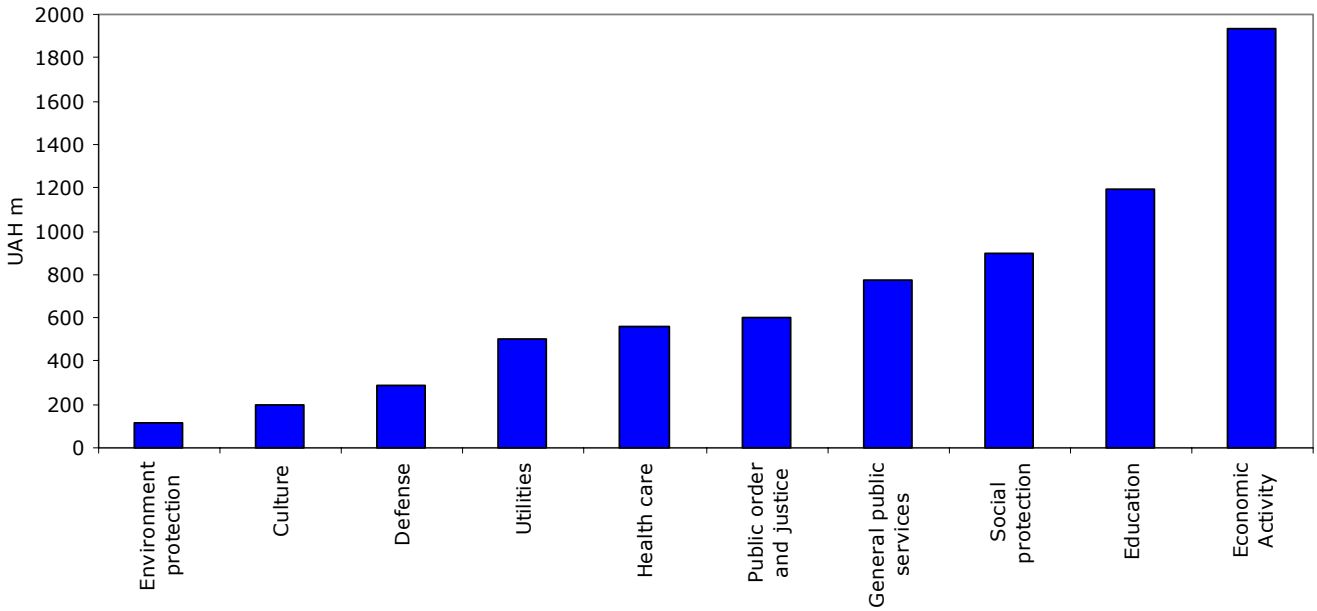
In the majority of functions, public budgets are not the only sources of investment finance. In fact, from the discussion in section 2, it is clear that they should not be except for the four public goods cases of defense, public order and justice, general public services, and social protection. These core public activities, however, cover only roughly one third (36.3%) of all public capital expenditures in 2002. Another third is made up by investment in environment, health, education, and culture, much of which rightly responds to equity considerations and spillover effects of merit goods.

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[7] The Concept of Regulating Investment Activity under the Conditions of Market Transformation of the Economy as of January 1, 1995, #384, with amendments of February 15, 2002, and the MoE Order On Approving the Decree on Assessment and Selection of Investment Projects.

Capital expenditures on functions with doubtful rationale for long-term state intervention (the broad sector of all economic activities and utilities) receive public investment in the same order of magnitude (34.5%). *More than half of this is state aid in form of capital transfers to publicly owned enterprises. The share of all capital transfers to enterprises in consolidated public investment was 24% in 2002* (on the selection process, see section 4.2).[8]

Chart 3: Consolidated budget capital expenditures, 2002 (UAH m)



Notes: Utilities include other (minor) housing and communal services capital expenditures. According to the Budget Code, public investment in utilities is financed out of local budgets. Most economic activity expenditures are financed out of the central budget, while road financing is split between central and local budgets according to relevance. On the allocation of tasks between state and local government, see IER/GAG, "Setting up a framework for efficient local budget expenditures", Advisory Paper T20, Kyiv, February 2004.
Data source: Statistical Bulletin, Capital Investments in Ukraine for the Year 2002.

Detailed figures on central government capital expenditure on economic activity reveal that the 2004 state budget will establish road financing as a new core activity (43% of capital expenditure for economic activity, up from 6.5% in the 2003 draft budget), along with the established areas agriculture (3.2%), coal (34.3%), and electricity generation (13.6%).
Given the need for infrastructure upgrading, the shift towards road construction appears to go in the right direction. However, the size of the shift is debatable and would have offered an opportunity to substantially increase private sector involvement in the provision of socially useful purposes while at the same time easing the pressure on public budgets.

Private sector involvement

[8] Most of central government capital transfers go to coal mining, while capital transfers to utilities are financed out of local budgets.

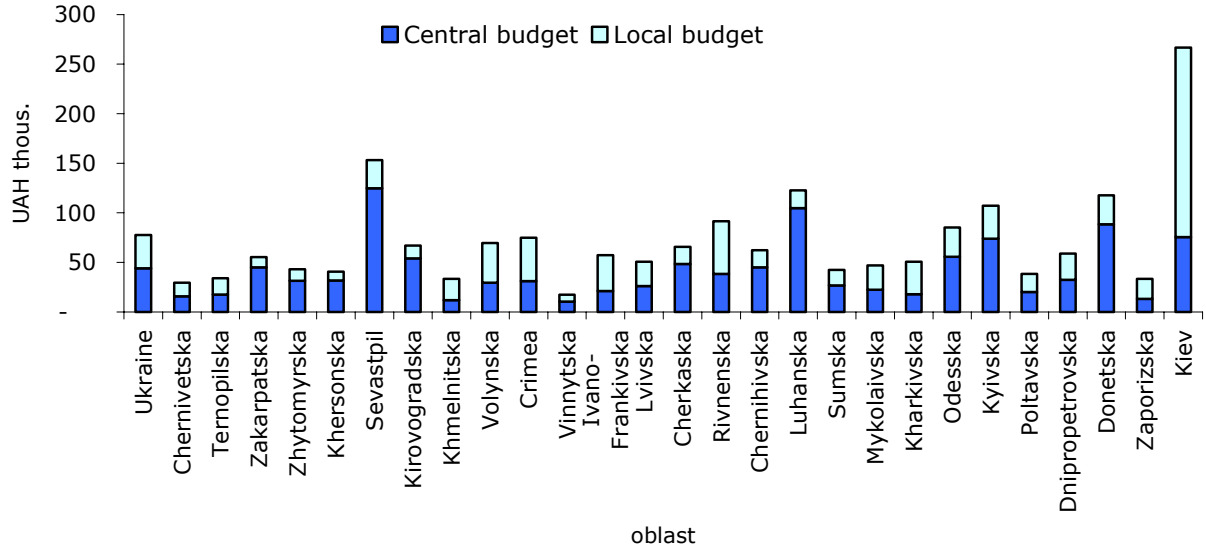
Private sector involvement in public investment activities is most promising in infrastructure: it serves socially useful purposes and has a potential for revenue generation. The financing of road construction provides a classic opportunity, usually involving concession schemes through which private firms finance and build the project and then operate it for a pre-defined period of time, recovering the investment by collecting user tolls. This can be an efficient instrument for increasing investment in infrastructure and simultaneously concentrating limited budget resources on investment in core public activities, education, and health.[9]

Although the legal basis for using concessions exists in Ukraine, World Bank data indicate that between 1997 and 2002 the sum of private and public investments in completed infrastructure projects with private participation totaled only USD 338.5 m. None of this was in road construction, but in natural gas and electricity transmission.[10]

Attempts at making use of road concession schemes have only started in 2002 when concession agreements were reached concerning construction and use of roads between Lviv and Brody and Krakivets and Lviv. Especially, the construction of the Kyiv-Odesa highway, to be completed as a toll road by December 2004, envisages private co-financing. However, this particular private involvement seems less effective, as much of it originates with the NBU, which refinances commercial banks' buying corporate bonds of Ukrzaliznytsya at lower than market rates.[11]

3.3. Regional distribution

Chart 4: Per capita public capital investment (UAH) by oblast, ranked by GDP per capita



[9] For Chilean experiences, see A. Gómez-Lobo and S. Hinojosa, "Broad roads in a thin country", World Bank, Policy Research Working Paper No. 2279, Washington, DC, January 2000.
[10] Hungarian projects totaled some USD 1.4 bn in the same period. See the World Bank's Private Participation in Infrastructure database, http://rru.worldbank.org/PPI/index.asp
[11] This is within the framework of NBU credits for "innovative investment", criticized in GAG/IER, "The NBU decree on long-term refinancing: good intention, questionable approach", Advisory Paper S9, Kyiv, 2002.

Source: Derzhkomstat, *Statistical Bulletin of Capital Investments for the Year 2002*, pt. I, p. 8

On equity grounds, public goods provision may aim at equalizing living conditions. In a regional perspective, this would imply public investment per capita to be higher in regions with lower income. Ranking oblasts by average 2000–2 per capita GDP reveals that this is not the case in Ukraine (chart 4). In fact, things are rather the other way round: the simple correlation coefficient between per capita GDP and per capita public capital investment across all 27 oblasts is 0.71, i.e., most public capital investment flows into rich regions. Much of this, however, is due to very high local budget capital investment in the city of Kyiv with a GDP per capita more than 2.5 times as high as the Ukrainian average. Disregarding Kyiv, the correlation coefficient drops to 0.15 (0.20 and 0.10 for local versus central government capital expenditures per capita, respectively).

Central government capital investment in Ukraine does not serve regionally re-distributive purposes from rich to poor oblasts.

4. Rules for investment budgeting

4.1. General features

Numerous acts influence public investment budgeting, and recent improvements are closely connected to the overall improvement of budget legislation.[12] Despite this progress, capital expenditure budgeting still suffers from shortcomings.

Decisions on capital expenditures are not yet integrated with respect to the decision making bodies, the different components of capital expenditures, capital versus current expenditures, and planning horizons.

- As a part of the *Program of Social and Economic Development*, on the basis of regional (drafted by local administration and self-government bodies) and industry-specific development programs (drafted by respective ministries), the Ministry of Economy (MoE) drafts and monitors the d*evelopment budget*, which covers central government financed fixed capital investment and investment in R&D. At the same time, the Ministry of Finance (MinFin) is responsible for drafting both *capital and current budget expenditures*. However, capital expenditures require an integrated treatment within overall budgeting. Separating investment from current expenditures makes it difficult to see trade-offs and may result in an inefficient allocation of funds.
- Due to fragmented decision making, decisions on various components of capital expenditures are not made in accordance. *Maintenance and repair expenditures* are not included in the development budget but are decided on by the MinFin upon proposals of key spending units. *Still, the comparatively high share of repairs in all public investment (19% in 2002) makes economic sense.*[13]

[12] This concerns the implementation of the Budget Code (2002, marking the turn to program-based public budgeting), the Law on Public Procurement (2000), the Law on Concessions (2000) and the CMU Decree on Approving the Methodology of Calculating Payments for Granting Concessions for the Construction and Use of Roads (2003), the cancellation of the majority of privileges with the approval of the State Budget Law 2004, and restrictions on providing state guarantees.

[13] MinFin, Budget Statistical Book Budget 2002. Although state capital transfer rules to local budgets to not encourage maintenance and repair on local level: priority is given to those budgets

- Creating future liabilities, capital expenditures require a multi-year planning horizon, while the budget as well as the Program of Economic and Social Development are approved yearly. As investment is discretionary, there is a danger of project interruption according to budget pressure. In a long-term perspective, delays, cost increases, and under-investment in long-term projects are inefficient.
- Due to fragmented decision making, capital expenditures financed out of the central government budget often differ from the approved development programs. However, development programs are not properly updated.[14]

Planning and decision making on capital expenditures lack transparency.

- There is no discussion of alternative development programs.

4.2. A closer look at capital transfers: state budget financed project selection

Before including a project into the development budget, it is subject to project competition.[15] This involves a three-stage decision process defined in the CMU Decree (1999) on the Order of Evaluation of Investment Projects that requires fund-sharing between enterprises and the central government budget.

- Enterprises submit a project proposal to a ministry for fund-sharing in an investment project.[16] Priority setting, evaluation, and first-stage selection are all done within this ministry, and its selections cannot be appealed.[17] Selection is rather discretionary: criteria include efficiency and social aspects, but there are no transparent, centrally pre-defined rules-based criteria to ensure overall efficient use of budget funds.
- The MoE decides on submitting first-stage selections as part of the Development Program to the MinFin for inclusion in the draft budget.
- Within 20 days of budget approval, the final project selection is done by the MoE, with the total amount of budgeted capital expenditures as an *ex-post* ceiling. Fund-sharing with a public firm results in a capital transfer, with a private firm the result is an investment grant (which is a very rare case[18]).

Due to the late stage of setting resource ceilings, capital transfer decisions are prone to drawn-out bargaining. The process is biased towards creating excess demand for public funds during the first stage, and in a long-term perspective results in too much state aid to loss-making public enterprises.

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where expenditures on maintenance of budget entities were lowest for the preceding 3 years. In Russia, that figure dropped from 17% in 1997 to about 8% in 2000. World Bank, Russia: "Improving the efficiency of public investment expenditures", Report No. 22693-RU, World Bank, Washington, DC, 2001.

[14] The Ukrainian Coal program envisages fixed capital investment of UAH 2.3 bn and UAH 2.25 bn during the years 2003 and 2004, respectively. Approved state budget capital transfer figures for this purpose amount to UAH 1.26 bn for 2003 and UAH 1.7 for 2004.

[15] This also holds for government procurement as one type of state capital investment, to be conducted by open tender except for very small amounts.

[16] E.g., the Ministry of Energy may formulate an investment project within the Ukrainian Coal Program to improve employment conditions, solving environmental and social problems, improve equipment, or, very generally, further the financial recovery of coal mining enterprises.

[17] Cf. IER, *Openness and Transparency of Public Finance in Ukraine: Analysis and Recommendations*, December 2003.

[18] Direct communication with MoE, Department of Investment.

5. Policy recommendations

At current levels of public investment, their impact on the economy can nevertheless be increased. This requires above all a clear definition of public investment priorities and objective rules-based selection criteria. Deviations from rules-based decisions have to be made explicit.

5.1. Immediate recommendations

Increase efficiency and transparency of project decision making

- *Raise information availability.* This will facilitate better informed political discussions on alternative uses of funds.[19]
- Make the use of objective and transparent procedures such as *cost-benefit analysis* a standard input to efficient program selection, in order to at least eliminate the poorest projects from the selection process.
- In all project selection processes, set *resource ceilings* at an early stage, to minimize demand for public funds and avoid drawn-out bargaining processes for state aid.

Increase private sector involvement in infrastructure projects

- Socially useful investment can be increased by more private sector involvement. On central government level, this concerns concession schemes for road financing and other infrastructure.[20] On local level, this could involve utilities and local transport.

Improve the integration of capital expenditure in the budgeting process

- Improve the *division of tasks between the MoE and the MinFin* in terms of linking decisions on new projects versus maintenance. Regularly update multi-year period development programs against actual budgets.
- Implement a medium-tem planning procedure requiring medium-term budget estimates for spending units. Combined with efficient project selection, this helps policymakers to see the long-term consequences of their decisions. To begin with, harmonize capital and maintenance decisions by introducing multi-year controls.[21]

5.2. Medium-term recommendations

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[19] E.g., publish info on investment tax expenditures, the functional allocation of local public investments, or on the regional distribution of total public investment, which the authors were unable to find when preparing this document. Also, cf. IER, *Openness and Transparency of Public Finance in Ukraine: Analysis and Recommendations,* December 2003.

[20] These can prepare for later privatization subject to public regulation. GAG/IER, "Public-private Partnership as Alternative to Privatization, with an Application to OJSC Ukrtelecom", Advisory Paper S20, Kyiv, 2003.

[21] As has recently been done in the Czech Republic, where a "Program Financing Initiative" was designed to allow government to commit funding to investment projects beyond the annual budget. Project proposals must include a work description, a statement of financial resources required over its life, and a cost-benefit analysis. A newly devised database helps to monitor spending and progress of multi-year projects.

- In the medium term, lower state aid on capital transfers (incl. to coal mining[22] and utilities). Social liabilities can be more efficiently dealt with by temporary transfers to households rather than sustained capital transfers to enterprises.
- Raise investment in core public activities and merit goods, such as education and health. This could also make central government investment more re-distributive from richer to poorer regions, which is justifiable on equity grounds.

R.F., N.L., Lector: I.A.

[22] See also GAG/IER, "Ukrainian steam coal: Not competitive or just mismanaged?", Advisory Paper T19, Kyiv, December 2003.