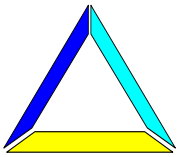
INSTITUTE FOR ECONOMIC RESEARCH AND POLICY CONSULTING IN UKRAINE
GERMAN ADVISORY GROUP ON ECONOMIC REFORM

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



T37

Developing the Public Utility Sector in Ukraine: Towards a Concrete Strategy

Executive summary

Public utilities in Ukraine operate under unreliable economic conditions due to generic failures in the institutional and economic environment. As a consequence, they have accumulated losses and thus failed to attract sufficient investments, which in turn has lead to a serious deterioration of the existing infrastructure. At present, the Verkhovna Rada discusses a reform program aimed at providing a legal basis for improving performance of public utilities. This program correctly identifies the main technical problems and also suggests the relevant general directions for economic and institutional reforms, in particular towards cost-covering tariffs and sufficient regulation. While those intentions are definitely necessary, the program must go beyond the proclamation of intentions and suggest concrete measures of how to achieve them. Without such a more concrete agenda, necessary pre-conditions for attracting private capital are not satisfied, so that necessary investments can hardly be financed. To overcome this problem, we suggest the following measures, which can be implemented within two stages:

At the first stage:

- Set up an independent regulator to supervise activities of the three main sectors (water supply, sewerage and heating).
- The regulator sets specific tariffs for all enterprises at 'sufficient' levels relative to initial cost levels ('price cap regulation').
- Burden from duty of provision of social services to households must be removed from utility providers and shifted to central and local governments instead. Initially, such measures might be supported by a 'lifeline consumption scheme'.

At the second stage:

- The regulator proceeds with advanced techniques of regulation sufficient to stimulate competition.
- The state further stimulates private participation in the sector, e.g. through Public Private Partnerships.

Outline:

1. Introduction

2. Current Problems of Public Utilities

2.1 Institutional problems

2.2 Economic problems

2.3 Technical problems

3. The National Program

4. Recommendations

5. Measures

Appendix

1. Introduction

Currently, the Verkhovna Rada discusses a National Program for Reforms and Development of the Housing and Communal Sector. This program also discusses the future framework for operations of public utilities[1], a sector that in the past had to operate under unclear legal conditions without possibilities for enforcing overdue payments, and with 'administered' losses since tariffs had to be set at below-costs levels. Accordingly, the program offers the opportunity to improve regulatory conditions for this sector and thereby to enable a sustainable provision of utility services, a necessary precondition for economic and social development. However, while the program correctly addresses the most urgent needs for technological improvement, it does not suggest concrete measures capable to guarantee a sustainable economic performance of public utilities in the future. Hence, the program does not provide sufficient incentives for private investments in the public utility sector. Without such investments the sector will be unable to develop.

In this paper we first describe the current problems of public utilities. Then, we present the relevant parts of the National Program for Reforms as it is currently discussed in parliament and point out its weak parts. Based on this criticism, we develop our recommendations of how to improve the program and close with suggesting concrete measures.

2. Current Problems of Public Utilities

Provision of utility services is one of the least developed sectors in Ukraine. In principle, problems of utility providers can be distinguished into three categories - institutional, economic, and technical problems. Together, they form a vicious circle where unreliable economic conditions due to the widespread perception of utilities services as essential and therefore free

[1] Throughout this paper we mean by 'utilities' the three main services, supply of drinking water, sewerage and district heating.

goods, rather than as economic goods that are costly to produce, have created severe problems such as uncompensated losses of operation and accumulation of debts. Under such conditions, necessary investments could not be financed any more, which has led to a steady worsening of the technical state of service providers. The absence of a consistent and appropriate reform agenda for state policies has further worsened the situation. In the following we describe those key problems in more detail.

2.1 Institutional problems

Providing utility services is very costly since it needs substantial infrastructure and resources. At the same time, a secure provision of such services is of high social importance, as well as it is an essential pre-condition for sound economic growth. From the consumers' point of view utilities services should be priced as low as possible. Service providers, on the other hand, seek high prices since they need large enough profits for paying their own obligations and attracting capital for necessary investments. Unfortunately, competition cannot simply balance consumers' and providers' interests because markets are locally separated and limited availability and access rights to the necessary infrastructure create several bottlenecks. Thus public utility providers are in a monopoly position and regulation of tariff setting is necessary to prevent abuse of market power.

In Ukraine, local administrations perform this task. However, as elected authorities they are tempted to follow their own political considerations rather than to impose socially and economically acceptable balances between consumers and suppliers. Since almost all utilities are in communal ownership, populistic decisions are rather easily implemented. Indeed, the discussion on tariff setting in the next section will show that this constellation has so far failed to sufficiently balance the interest of all stakeholders. Thus poor regulation and the ambiguity of government policies are the main institutional problems of the sector.

2.2 Economic problems

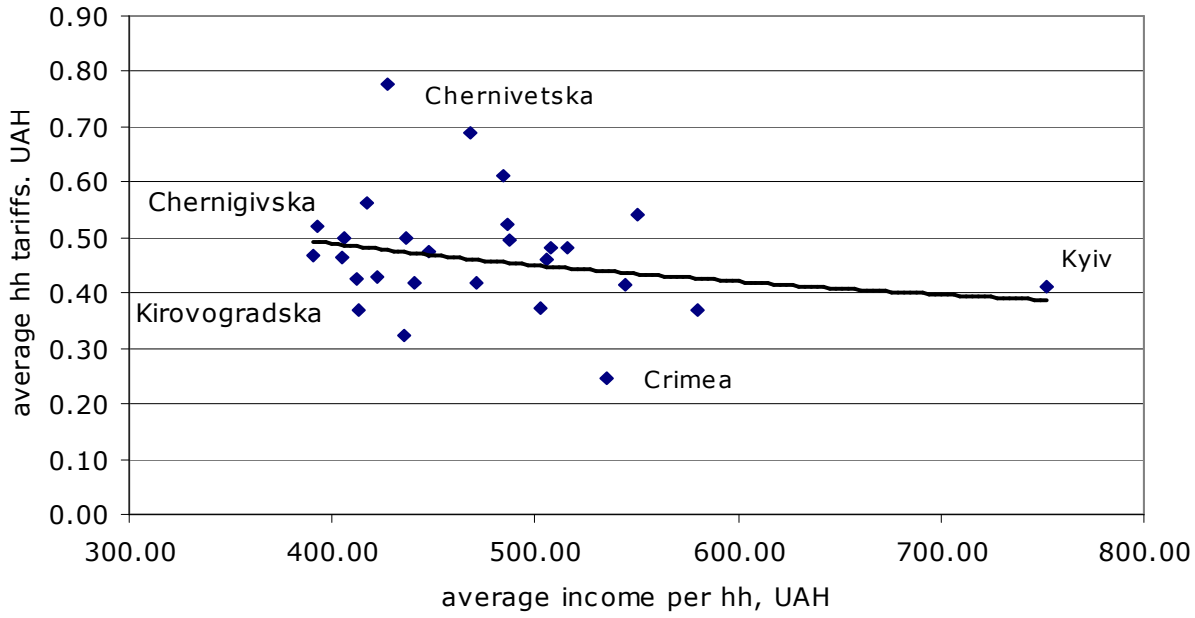
From an economic perspective, the main problems stem from tariff setting at below-cost levels, the overall low payment discipline, and generously granted privileges to a wide range of consumers.

Tariff setting:

Tariffs for utilities services for households are set by local administrations at a level that is assumed to be 'affordable'. Typically, it is argued that utilities services should be "universally affordable and available". Hence, providers (and authorities) are considered to have no moral right to raise their tariffs until

relevant indicators such as a minimum wage reaches the 'cost of living' level[2]. Given that such logic dominates the pricing policy of utility services,[3] tariff rates in different regions should be comparable to regional income levels. In particular, regions with lower income per capita should also have relatively low tariff levels. However, figure 1 shows that this is not the case. Instead, in low-income oblasts such as Chernivetska, Zhytomyrska and Kirovogradska we observe the highest tariff levels for water. Tariffs for heating and sewerage have a similar pattern (see figures A-1 and A-2 in the appendix).

Figure 1. Average income per month per household versus water supply tariffs for households, 2002 (UAH)



Source: State Statistics Committee, The State Committee for Housing and Communal Economy, own calculations

Although tariff levels for utility services do not reflect the economic conditions of the respective region, they also do not cover all costs of service supply in almost all oblasts. The comparison of average household tariffs[4] and average costs[5] demonstrates this in figure 2 for the case of water where the situation is especially difficult. For sewerage and heating the problems are similar (see figures A-3 and A-4 in the appendix). As a result of such tariff setting

[2] Initiative of Draft Law On Amendments to the Law On Prices and Pricing, No 3635, June 18, 2003

[3] A position that we not support as will be outlined below.

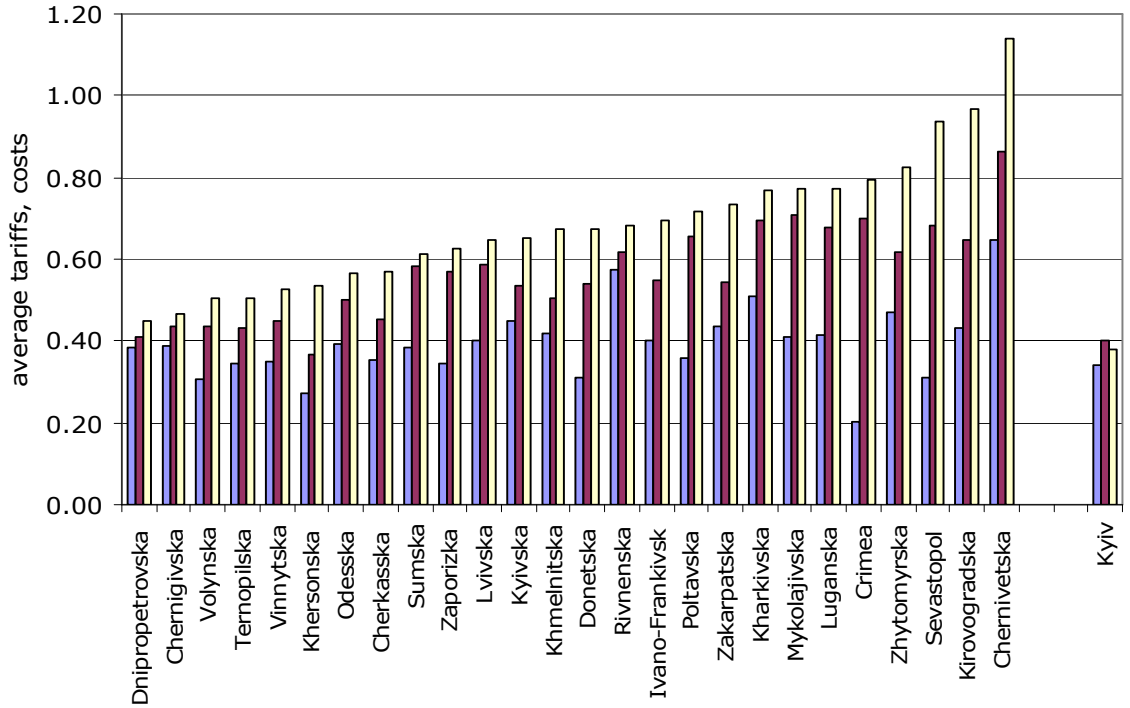
[4] Calculated as total revenue of utilities divided by a total amount of service produced.

[5] Here and hereafter by a term 'costs' we mean the sum of material costs, labor costs, social payments, depreciation and other costs of production as stated by the State Committee for Housing and Communal Services.

enterprises are forced to cross-subsidize service provision to households through higher tariffs for industrial consumers.

However, cross-subsidization is an ineffective way to solve this problem as it puts an extra burden on industries while failing to provide targeted benefits to poor households (instead, it benefits all households alike). In extreme cases, it even gives incentives for industrial consumers to avoid centrally supplied services and build up their own systems instead. Nevertheless, in spite of such cross-subsidization, average tariffs for all consumers (including households, budget institutions, and industry) cover average costs in very few cases only, as figure 2 again demonstrates for the case of water (as well as figures A-3 and A-4 in the appendix for heating and sewerage).

Figure 2. Average tariff and cost of water supply by regions, 2002, (UAH / m3)



Source: The State Committee for Housing and Communal Economy

Payment discipline and privileges:

As a result of such inappropriate tariff setting, almost no enterprise breaks even. Since at the same time the state and local governments fail to compensate the losses, enterprises are forced to either not pay their input

suppliers (mostly energy suppliers)[6] or to reduce service provision or both. At the same time, firms can neither invest in improving their technology and infrastructure, nor have they sufficient funds for maintenance of the existing installations, so that service quality further deteriorates while costs increase.[7] The most dramatic example for this development is the case of water provision. In several regions of Ukraine water supply to households is repeatedly interrupted because energy suppliers stop providing vodokanals with power if they fail to pay their bills. As a consequence, water is often supplied less than 24-hours per day[8] and the quality of drinking water in many regions of Ukraine has deteriorated dramatically[9].

In addition to tariff levels below the costs of operation, the financial situation of utility providers is further worsened by low payment discipline of service consumers and week payment enforcement policy. In 2003 the total receivables of utility providers accounted for UAH 8,6 b. The main debtor are households with outstanding debts of UAH 7,5 b in early 2004. As a result, the utility enterprises themselves accumulated debts against their suppliers of around UAH 8,3 b in 2003.

Additionally, the state still grants extensive privileges to consumers – 20-30% of consumers are eligible for subsidies and/or privileges[10]. Often these privileges are not fully compensated from public budgets, i.e. the total debts of the budgets to the utilities accounted for UAH 73.12 m in early 2004.[11]

2.3 Technical problems

Since utility service providers had to operate under non-cost-covering tariff levels for many years, their current technology is rather obsolete and characterized by deteriorated equipment and very low levels of energy efficiency. The situation in the water and wastewater sector is the most dramatic and permanently results in worsening of the service quality. For example, the State Committee for Housing and Communal Services considers 30% of street water pipes and 24% of wastewater pipelines to be

---

[6] For example, in the beginning of 2004 gas supplier Gas of Ukraine (Gas Ukrajiny) limited supply of natural gas to Kyiv's utility Kyivenergo due to non-payments.

[7] Even for utility services and regions where average tariffs appear to be cost-covering it is still questionable whether enterprises have sufficient funds for investments into their infrastructure since costs as reported in the previous figures only account for operational expenditures and do not include other costs such as reserves for investments.

[8] In 2000 the scheduled supply in cities was in the range of 25-30%, when in small cities it is about 43%. Only 18 of 26 oblast centres have 24 hours water supply. In smaller towns a normal supply is 3 hours or 4 hours a day

[9] According to the WHO poor water quality poses a health hazard for 25% of the Ukrainian population. Non-compliance for chemical and bacteriological parameters is almost constant (in centralised urban water network it is average 12% for chemical and average 5% for bacteriological pollution, in rural centralised water network it is 15% and 8% correspondingly with 25% of chemical non-compliance for water supply from open sources).

[10] On average the subsidy is 50% of the total water bill of those households.

[11] Express information of the State Statistics Committee.

in 'emergency condition'. The average level of leakages is 39% and reaches even 54% in some networks. Water supply pipelines breakdown 1-4 times per km per year, which is more than 5 times higher than in Western Europe, and the number of emergency incidents in wastewater pipelines is 1.4 per km per year. According to the committee 38% of boilers are outmoded.

Besides the depletion of existing equipment and networks, the biggest problem from a technical perspective is very low energy efficiency with correspondingly high share of energy consumption in the total costs of operation. Comparing to developed countries energy efficiency of heat production, for instance, is 16% lower[12]. For water, energy consumption in one third of the regions in Ukraine exceeds the internationally relevant threshold of 1 kWh per m^3 of water, while by the same standards only for three oblasts[13] it can be considered as sufficiently efficient (<0.7 kWh per m^3). Consequently, energy consumption accounts for the biggest part in total costs of utility providers with shares of 57.2% for heat operation, 32.1% for water supply and 30.7% for sewerage.[14] Given the unstable regulatory environment and not cost-covering tariffs in most regions, considerable investments in energy-saving technologies have not yet been undertaken.

3. The National Program

Recently the Verkhovna Rada approved in the first reading a National Program for Reforms and Development of the Housing and Communal Sector for the period from 2004 till 2010[15]. In general, the program correctly identifies the main technical problems, suggests appropriate investment initiatives, and introduces some regulatory changes. However, it does not suggest concrete measures for overcoming the real economic and institutional problems of the sector and therefore fails to provide clear incentives for urgently needed private investments.

The main part of the program is devoted to technical problems, which are to be solved through substantial investment of about UAH 34.3 b. Naturally, the financing of this large sum is problematic:

First, with an intended share of public financing of about 45.4% and a planning horizon of 7 years, the intended annual contributions from public budgets account for around UAH 2.2 b (or 2.7% of the consolidated budget of 2004). Given planned budget expenditure on utilities in 2004 of 1,8% of the consolidated budget, and previous budget expenditures on utilities of 2.3% of

[12] In Ukraine 171 tons of coal equivalent is needed to produce 1 Gkal while in developed countries 145 tons is needed.
[13] Donetska, Dnipropetrovska, Kirovogradska.
[14] State Committee for Housing and Communal Services
[15] No 4235, registered on July 10, 2003.

the consolidated budget in 2003 and 2.4% in 2002, this appears to be at the upper end of what realistically can be expected.

Second, the remaining costs of investment are supposed to be financed from internal financial resources of the enterprises (about 30%) and from outside sources such as private capital, grants, and loans of international organizations (about 25%). Such progressive intentions need further support. In particular, the state's strategy needs to guarantee reliable future conditions sufficient to improve long-run profitability of utility operations. In this respect, the program formulates the following two intentions:

- The existing tariff-setting procedure shall be changed to establish full cost-covering tariffs that provide incentives for efficient operations and energy savings.
- The role of the state shall be improved by separating responsibilities and functions of local administrations and local councils together with introducing state monitoring of the sector.

Both intentions are necessary for creating stable conditions of operation for utility providers. Nevertheless, the program should go beyond the proclamation of intentions and instead suggest concrete measures of how to achieve them. Without that such details are provided, it is difficult to imagine how the government's utility policy can ever move beyond the current state of simple proclamations and, in particular, can guarantee reliable future conditions for utility operators without which no private investment will occur.

Summarising, the government's reform agenda intends to solve several important problems of the sector. However, the developed strategy concentrates too much on the technical condition of the utilities while it does not suggest concrete measures of how to solve the underlying institutional and economic problems.

4. Recommendations

Solving the institutional and economic problems of the sector requires separating social problems from a general economic task of balancing the interests of all stakeholders. Only in this way a flexible, self-governing system can be generated to ensure profitable operation of service providers and sufficient incentives to improve efficiency, while prices for all consumers are set at reasonable levels and essential social needs are covered. In particular, such a strategy requires the following measures:

To **balance the interests of all stakeholders** regulatory power must be transferred from local state authorities to a separate **central institution** that will be in charge for price setting and performance control of all utility providers in Ukraine. This institution must be **independent** from political interference (both from central Ministries as well as from local governments and other authorities), endowed with the legal power necessary to implement its

instructions on the market, and obliged to make its decisions in a clear and transparent way so that they are accepted as fair and legitimate. Endowed with such a support, this central regulator balances the interests of consumers and service providers by guaranteeing economically justified cost-covering tariff levels and providing sufficient incentives for improving efficiency through appropriate regulation schemes.[16] Only this establishes **reliable conditions** for future operations of utility provision, which is the main pre-condition for **attracting investments** from the private sector.

Solving the **social problem** of providing essential services such as drinking water and heating to poor households requires an effective mechanism to ensure well-targeted support for households in need at minimum economic costs. At best, this can be achieved through direct transfers to households below a certain income threshold so that only consumption of indigent households is subsidized. At the same time, utility providers and local industries no longer have to cover all costs alone while direct monetary transfers to households also stimulate an economically responsible use of utility services. If direct income targeting is not (yet) possible, a 'lifeline consumption scheme' is an easy alternative. In this case, tariffs for a pre-specified 'essential' amount of services are cross-subsidized by higher tariffs for consumption in excess of the minimum threshold. While such a scheme also ensures a sufficient distribution of social responsibilities on all service consumers alike, it is of course much less precise in targeting the truly indigent households. Hence, it should be seen as a temporary scheme only, which is simply easier to implement than direct income transfers.

5. Measures

Based on the above recommendation we suggest reforming the public utility sector in two stages:

At the first stage:

- Set up an independent regulator to supervise activities of all three sectors (water supply, sewerage and heating) as outlined in section 4 above[17]. Since privatisation of utility providers is currently not an option, only the

[16] For example, simply fixing cost levels plus a normative profit rate ('profit cap regulation') provides no incentives for reducing costs to service providers. On the other hand, a fixed maximum price ('price cap regulation') stimulates cost-reducing investments in order to increase profits. Also, competition between locally separated providers can be stimulated by comparing relevant performance indicators and imposing concrete measures to improve their levels ('Yardstick competition'). For more information on regulatory schemes see GAG-IER (2003): Development of Domestic Markets in Ukraine. Welfare through Competition, Kyiv, May 2003, (http://www.ier.kiev.ua/English/books/dev_of_dom_eng.pdf)

[17] Although a general regulator has not so deep knowledge of a specific regulated industry comparing to a branch one, it is less vulnerable for the vested branch specific interests. Moreover, it is cheaper to set up one single regulator.

shift of regulation to an independent institution can guarantee a sufficient balance between the interests of all stakeholders. The regulator sets specific tariffs for all enterprises at 'reasonable' levels relative to initial costs ('price cap regulation'). This gives incentives for cost-reducing (=energy-saving) investments that – if necessary – are supported by initial investment provisions during the first years of regulation. The saved 'tariff-costs' difference will guarantee attractiveness of the enterprise for private investors, while independence of the regulator ensures a reliable long-run perspective.

- The burden of having to provide social services through tariffs at below-cost levels must be removed from utility providers. Instead, central and local governments must be held responsible for providing direct transfers to indigent consumers within their social policies. Initially, such measures might be supported by a 'lifeline consumption schemes'.

At the second stage:

- The regulatory method is subsequently changed to more advanced techniques that stimulate competition on the market (e.g. Yardstik competition, benchmarking schemes). In this way, the regulator can transparently revise the established price caps and thereby stimulate competition. [18]
- The state further stimulates private participation in the sector through e.g. PPP schemes[19]. This can be done by open discussions of PPP initiatives to avoid public resistance, institutional and legal support of such initiatives, assistance in the preparation of tenders for private investment etc.

A.C., F.P. Lector: A.K., CvH

Kyiv, June 2004

[18] For ways to stimulate competition in network industries by means of regulation see GAG-IER (2003): Development of Domestic Markets in Ukraine. Welfare through Competition, Kyiv, May 2003, (http://www.ier.kiev.ua/English/books/dev_of_dom_eng.pdf).

[19] For more information about PPP see GAG-IER (2003), Public Private Partnership as Alternative to Privatization, With an Application to OJSC "Ukrtelecom", Kyiv, January 2003.

Appendix

Figure A-1. Average income per month per household versus heating tariffs for households, 2002 , UAH

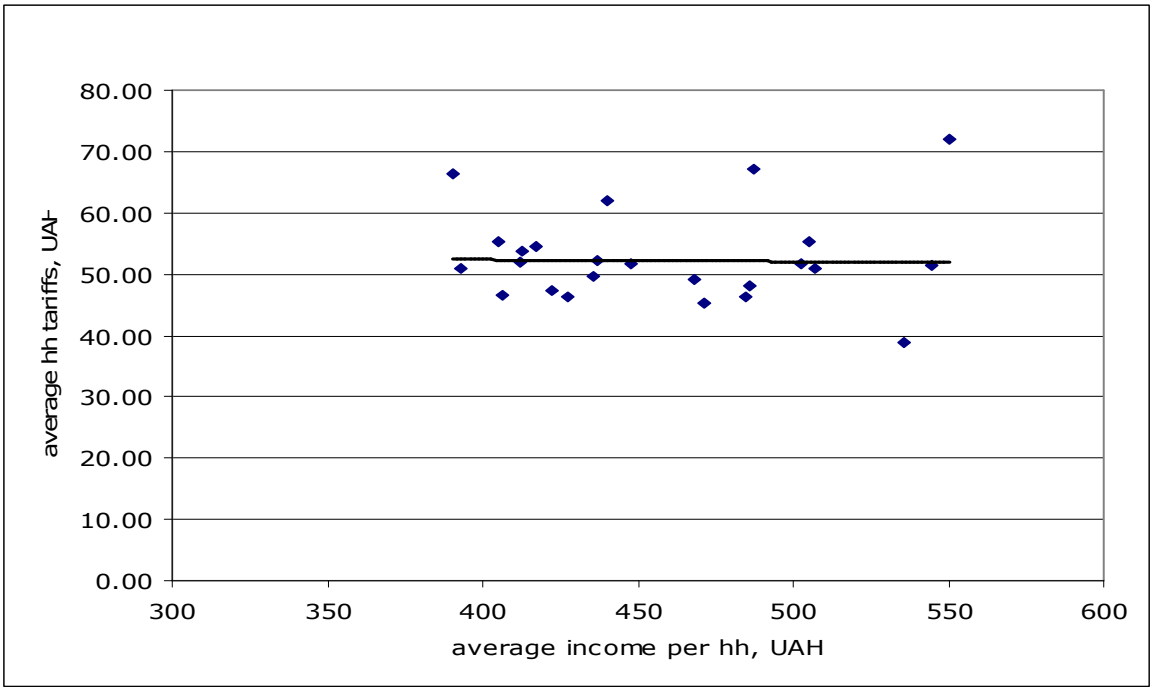


Figure A-2. Average income per month per household versus sewerage tariffs for households, 2002 , UAH

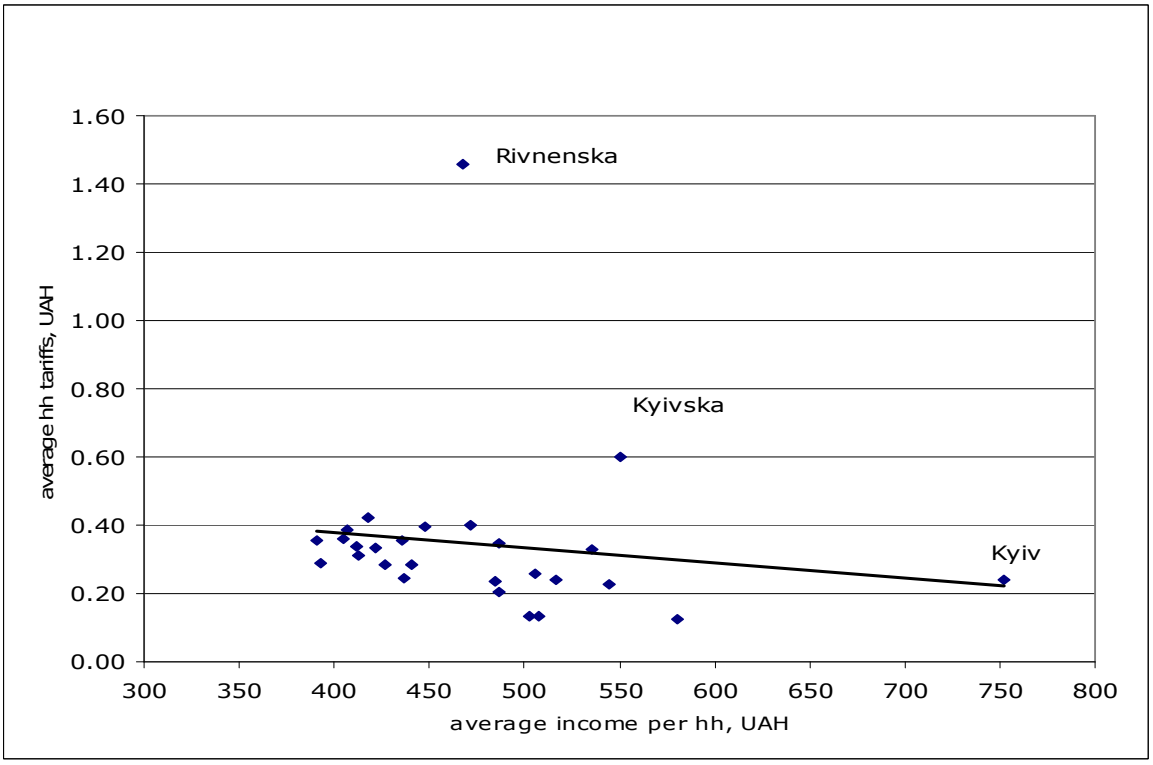


Figure A-3. Average tariffs and costs of heating by regions, 2002, UAH / m^3

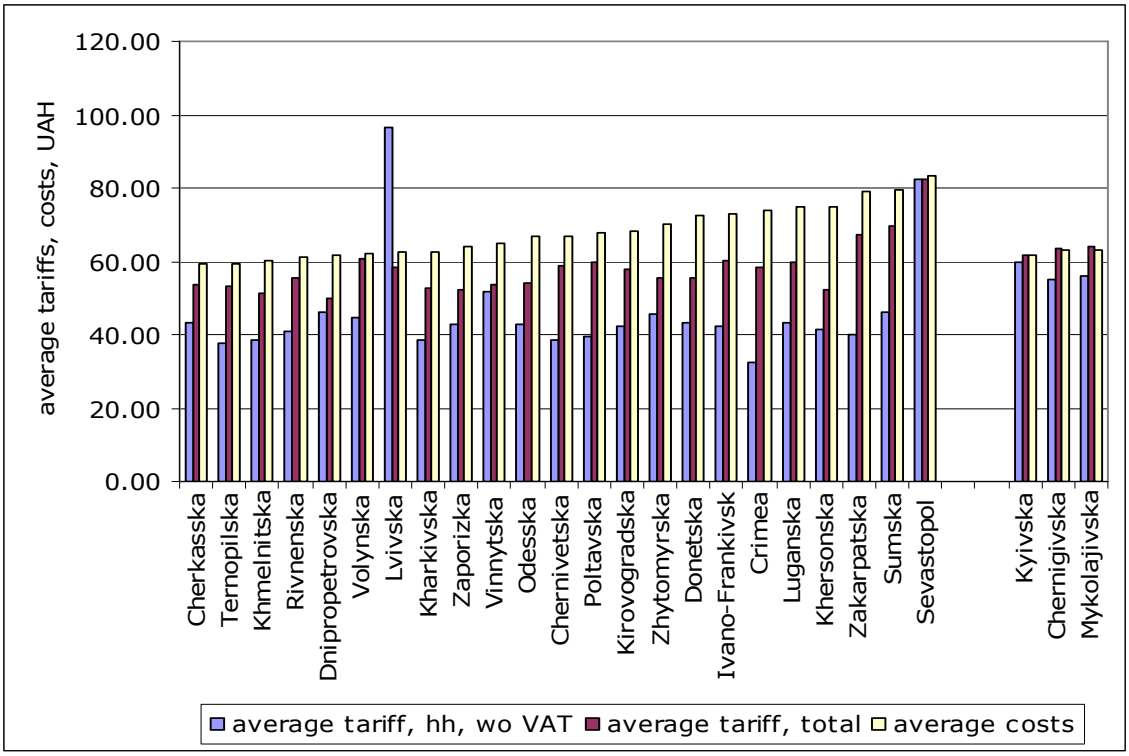
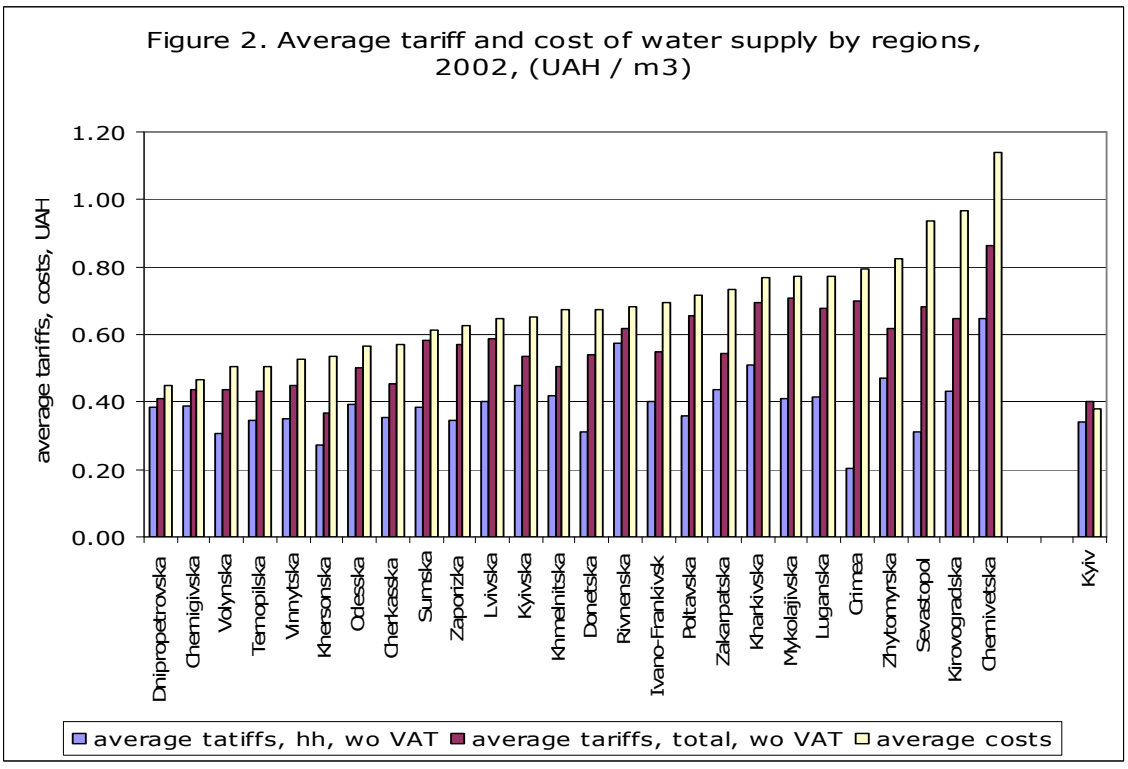


Figure A-4. Average tariffs and costs of sewerage by regions, 2002, UAH / m^3



Source of all figures: State Statistics Committee, The State Committee for Housing and Communal Economy, own calculations