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Short Research Article

Should Water Resources be Managed as a Public or as a Private, Economic Good – the Croatian Dilemma

ABSTRACT

The dominant megatrend in global economic development at the beginning of the 21st century was and still is the private sector's takeover of originally public jobs i.e. the conversion of public goods into private, economic goods. The areas of these takeovers and thus the new source of profits for transnational corporations already include telecommunications and power supply ... health care and education are being taken over..., and the takeover of water supply, i.e. water, as a strategic resource vital for future survival and economic development is in process. The change in the perspective i.e. from defining water as a human right - the public good, to the argumentation of the positive effects of its treatment as an economic good, leads, like the ocean currents deep beneath in the stormy sea of debates, to a large-scale privatization of water resources on global level. The Republic of Croatia possesses a great water potential, placing it among the potentially richest countries in the world. However, the current economic situation and the actions of world capital will force it to relinquish this strategic resource i.e. to privatize water in order to enable present survival. Franchising imposes itself as a model that Croatia could apply to satisfy both sides i.e. transferring management rights over individual water supply systems, for a certain amount of exploitation and for a certain time.

Keywords: water, public good, economic good, privatization, franchise

1. INTRODUCTION

The hydrological cycle, implying water democracy, is the natural state of things on planet Earth - a system of water redistribution to all living species - from the Amazon rainforests to the desert life in the Sahara. Nature does not equally distribute water, but it is impartial in doing so. An equal distribution of water resources would mean that each part of the globe has precipitation of consistent quality and quantity. This in turn, would result in a balanced flora and fauna and the nonexistence of the diverse vegetation and animal world we know today. Yet, nature has created, and throughout its history maintained, this diversity, thus also

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implying diversity in the water system. However, within each ecosystem, each agro-climatic zone, the water is fairly distributed - all species are allocated their share of drinking water. Nature does not make distinctions between microbes and mammals, plants or humans. All people, as well as all species, have access to their basic need – water.

The fact is that over one billion people in the world still have no access to safe drinking water raises numerous economic and political questions directly associated with the system of water supply. Therefore, it is necessary to find answers to questions such as: who finances the water supply system; who organizes it; and does it contribute to everyone equally. It may be noted that "there is no doubt that the water supply problem is becoming a political issue in the 21st century ... an urbanized planet, with nearly 8 billion inhabitants by the year 2020 water will be as strategically vital for living as petroleum (De Rivero, 2001).

The manner in which the issue of water privatization is presented to the public and the relation towards previous privatization practices are of great importance for the people in the developing countries. This paper examines the change within the international discussion, which has, after many private takeovers of originally public operations, opened up to the possibility of transnational corporations' (TNC) takeover of the water supply systems in developing countries. The recent interpretation of the water supply system has its stronghold in the mere definition of water, which is no longer seen as a human right - public good, but as an economic, commercial good.

With this perspective coming into force, the needs of the globalized private business and the local people diverge. Private corporations are guided by their interests in maximizing the return on invested capital. The local communities are against putting the focus on meeting the needs of the richer as it disregards the existential needs of the poorer citizens. It seems that, although it is socially and economically unjustifiable, it is inevitable to define the place and the role of private entrepreneurship in water management.

2. WATER AS A PUBLIC GOOD

From an economic point of view, a public good is every good that is characterized as non-rivalrous and non-excludable - the use of a good by one individual does not exclude and does not deprive the other of the use thereof. In reality, however, there is no such good that is absolutely non-rivalrous and non-exclusive. Public goods are all goods that serve a larger number of users, and their use is dispersed throughout the community, regardless of whether some individuals want it or not, and what is very important is that they are those goods in which the inclusion of a new user does not reduce neither the satisfaction of the previous users nor their level of use (Jurković, 2002 and Samuelson, 1992). Can it therefore be inferred that water is a public good?

The traditional argument was that, since the provision of public services imply the use of a public infrastructure, in this case the water supply, these services are characterized as a public good. Therefore, the cost of the connection of an extra water network user is equal to 0. However, this also implies that, with some exceptions, consumers tend to underestimate the privilege of using a particular good. In other words, consumers are not willing to bear the cost which ensures them marginal benefit from a particular good (Musgrave and Musgrave, 1973). This is called the "free riders" problem which occurs in cases when the number of users is very large, and the market price of a particular good or service is not determined. Certain infrastructures like roads, street lights and air control depart from this rule. In practice, the free rider problem is explained by the very small incentives to private companies for their investment into public goods because the return from such investments is difficult to accomplish. Being this so, it is logical that the Governments provide for the infrastructure to increase productivity and the economic well being of its citizens (Gomez-Ibanez, 1995). In addition to the above mentioned, there are other important factors that speak in favor of treating the infrastructure as a public good. The presence of the economies of scale, high sunk costs and barriers to entering the market have led to the fact that many

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infrastructure services, particularly water supply systems, were treated as natural monopolies that do not allow competitive conditions in terms of production and delivery of services (Kahn, 1988). If the market works on a purely profit basis, such a situation can lead to a long-term increase in the level of prices. A natural monopoly in cases of fundamental goods, such as water supply, results in public sector management or private initiative, but under strong state regulation. Secondly, the value of these services to the society and the lack of the same may result in the public sector maintenance of control over them in order to avoid the possibility of undervaluing those services which do not bring high yield. Governments can decide not to charge for a service or charge it at a reduced rate in order to meet the fundamental needs and individual rights. Moreover, the government plays a key role in preventing externalities such as a poor public health system or reduced productivity resulting from the absence of water supply services (Jacobson and Tarr, 1996). Finally, public services can also serve as a redistributive policy which would lead to a reduction of the number of unemployed in a country. According to some indicators, the Republic of Croatia belongs to the group of those countries having a high number of employees in state administration. Such a policy often results in a slow and ineffective system that has difficulties in surviving in the market competition.

However, there has also been a great theoretical change in the way academics and policymakers define public infrastructure. According to recent literature, many authors argue that the large number of public goods must be redefined as economic goods. In this sense, water can serve as an illustrative example. During water shortages in the summer period, a consumer can leave the water to uncontrollably run from the tap, whereas a second consumer has no water at all (Kessides, 1993). The case of water is particularly interesting because water is, according to some authorities, the least "public" of all public goods. Indeed, with extensive use of water and increased awareness of the scarcity of water in many regions, water is almost always a rivalrous and excludable good. The fact that some industries showing features of pure monopoly can be reorganized to simultaneously achieve high performance and generate honest relationship with its consumers also speak in favor of this thesis. The goal of market reorganization is vertical sales and the introduction of public procurement in the isolated functions within the industry (Guislain, 1997).
These arguments are in favor of the privatization of water supply systems in different regions. However, many critics believe that privatization is not a cure against an inefficient system and that it can have negative social and economic consequences, because private entrepreneurs, even if they work under “competitive conditions” may be insensitive to population needs.

3. WATER AS AN ECONOMIC GOOD – ARGUMENTS FOR AND AGAINST

Analyzing the arguments that lead to the definition of water as an economic good and are in favor of the privatization of water, it should be noted that the issue of privatization of natural resources has been in existence since ancient times. Aristotle had already observed that “the least concern is devoted to that which is most common." Namely, people are mostly concerned about their own, and they worry less about the things that are common, or just to that extent which affects them as individuals (Ostrom, 1990). Currently, there is an ongoing privatization process of natural resources that were formerly under common ownership. Strongholds for this and similar considerations can already be found during the 1960s when strong ideas were put forward demanding the imposition of private property rights wherever

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resources were under common ownership (Demsetz, 1967; Johnson 1972). Ostrom et. al. (1988) suggests that "the only way to avoid the tragedy of the commons, when it comes to natural resources and wildlife, is to end the system of common ownership and establish a system of private ownership rights." Moreover, they also emphasize "that treating resources as common property was exactly what condemned these resources to inexorable destruction." The most recent literature, under the term privatization, includes all forms of property and / or operations that are transferred from the public to the private sector. In fact, privatization, in the true sense of the word, understands the actual transfer of overall property and responsibilities to the private sector, whereas all other variations can be categorized as "private sector participation" (PSP) (Fauconnier, 44). There are several models of PSP that are being applied instead of total privatization of public property. Management contracts imply a partnership between the public ownership of the infrastructure and private management services. The period of such a contract is two to five years. PSS can also be realized through a lease contract (5-10 years) and through concession (10-30 years). The BOT model (build, operate, transfer) involves the cooperation of local governments and private investors in which the private investor agrees to build the infrastructure, and in turn, the government gives the investor the right to exploit and collect charges for infrastructure services for a certain period of time (15-20 years) (Dowall, 1995).
The reasons for the privatization of services and infrastructure differ from country to country, and the consequences of privatization are not the same in all countries. However, the commonly cited key reasons for privatization are as follows:
a) improvement of public service efficiency through cost reduction, increased billing and collection, improvement of service quality, adjustment of tariffs to production costs, departure from slow bureaucratic processes, independence from political options (Hyman, 1995);
b) state inefficiency and bad management raise the prices of public services and
c) development of market economy with strong competition ensures production and provision of goods and services at the lowest possible cost.
One of the strong reasoning for the privatization of water and water supply systems is given by Barlow and Clark: If water access is a right, as recently confirmed by the United Nations, then it is governments' responsibility to make water available as efficiently as possible; if mobilization of private investment is the only way that water systems can be put in place to meet community needs, then governments have a duty to do precisely that… (Bremer, 2003)

3.1. Arguments "for" - positive examples of water privatization

Various authors, who have explored this area, point out that in the privatization of water and water supply systems yielded more negative than positive results for the population. So far in practice there have been only a few positive examples of privatization, with the note that even these positive examples in certain structures had questionable impact on the economy. The case of Argentina and Great Britain could be classified as positive examples.
1st case - Argentina
The privatization of water and water systems and of sanitation services in Argentina in the 1991-1999 period was one of the largest privatization programs in the world at that time (Galiani and Gertler, 2002). Concessions for water and sanitation services were contracted in 28% of the municipalities thus providing private sector services to 60% of Argentinean population. The biggest concession was given to the French company Suez in 1993 to provide water supply services to the wider district of Buenos Aires. So far, no comprehensive study has been conducted to establish the impact of the Argentinean water supply system privatization, but some partial results can be put forward. For example, in 2002, households were involved in a survey whose aim was to determine the correlation between the privatization of the water supply system and infant mortality. The survey results were as follows: between 1991 and 1997, the infant mortality rate dropped by 5-7% in those areas where privatization took place in relation to those, where water supply was still under public

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authority management. Moreover, the survey results also showed that infant mortality fell by 24% in the poorest regions (Ringskog and Idelovitch, 1995). The reason for this lies in the fact that, prior to the privatization of the water supply system, the poor areas simply did not have access to drinking water. The concession, however, was revoked in 2006 and, to this day, this revocation is controversial and stands before the international arbitration institute, the International Centre for Settlement of Investment Disputes (ICSID).

According to Suez, during the 13-year concession, the company extended access to water (2 million people) and access to sanitation (1 million people) despite the economic crisis (Solanes, 2006). Between 2003 and 2005 about 100,000 inhabitants were connected in the poorest areas and suburbs through the "participatory management model". This model was adjusted for the area of La Matanza, where 400,000 people were connected to water and utility services by means of the "Water plus work" project (Suez Environment, 2008).

The reasons for such high efficiency of private companies were pointed out in the World Bank analysis. In comparison to the previous state, 40 000 meters of pipelines had been installed; water leakages significantly reduced, the water quality improved and the relations with the consumers had become much better. Moreover, it is noted that the biggest shift occurred in the relations towards the employees i.e. significant changes occurred in “increasing their efficiency" and in their drastic layoffs.

2nd case – Great Britain

In the last four decades, there have been several reforms of the water system in Great Britain. In 1973, a large number of government agencies responsible for water supply and sewage were consolidated into ten regional administrations whose job was to manage ten river tributaries. The tasks of these public agencies included water supply, waste management, prevention of possible flooding and sewer system monitoring. The same activity was carried out by several companies in private ownership whose services were used by approximately 25% of the population. These companies underwent reorganization and purchased water supplies from the public companies that had previously exercised control over them (Guislain 1997 and Neal et al. 1996). The system worked well and was praised even beyond the GB borders. However, it was necessary to introduce higher standards regarding water quality as well as standards that defined the quality of the environment. New standards brought about additional investment in part of the utility services, which were ultimately reflected in the price of utilities (Neal et al.).

In 1989, the Margaret Thatcher administration initiated the process of privatization of the water supply sector with the aim of raising its quality and efficiency. According to the Government, the privatization of the sector was to result in the following benefits: 1) private companies would operate without state intervention and would be independent in making business decisions without any political pressure; 2) competition in the financial market would result in a market competition between companies, which would consequently lead to the improvement of services and greater benefits for the end consumer; 3) economic regulation would ensure that the benefits of increased efficiency were converted in the lower price of services for the end consumer; 4) private companies would recruit more professional staff than state administration (GB Secretary of State for Environment et al. 1986). The proposed reform was part of a larger privatization program which included changes in the organization of telecommunications and airline industry.

The newly privatized companies successfully achieved some of the goals, among which, the big reduction in operating costs, which was achieved at the expense of labor, is mostly stressed. Shortly upon privatization, there were bigger layoffs, followed by a rise in the price of water which was being justifies by the high price of investment that had to be recovered (McClurg, 1996 and Guislain, 1997). In the first five years of privatization, water prices grew considerably, but also the profit margins and the awards to the managers in private companies (McClurg, ibid). The abolishment of public companies resulted in the fact that water become unavailable to the lower levels of society, and there was no uniform system of water pricing (Neal et al., ibid.).

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Consumers felt betrayed and disappointed, and some foreign observers expressed doubts about the effectiveness of this model of privatization. However, the Water Services Regulation Authority (OFWAT), the body responsible for economic regulation of the privatized water and sewerage industry, imposed price classes in 1996 so as to limit the arbitrary pricing and to toughen the impose stricter conditions for concessionaires. Such a regime meant an attack on the former monopoly held by private companies (Guislain, 1997). Many analysts have concluded that such a regime is necessary in order to enable consumers to protect themselves from uncontrolled imposition of prices by private companies that having a monopoly in a particular industry. This example had inspired a debate worldwide that sought to answer the question of how to develop a system of public goods supply that would be satisfactory to both sides of the spectrum - market incentives and government regulations.

3.2 Arguments “against” the privatization of water- water supply system

The World Bank has predicted that by 2025, 2/3 of the world population will be without drinking water. It is therefore not surprising that the Fortune magazine called water - "the Oil of the 21st Century" (Fortune, 2000). In order to avoid such a scenario we should protect the existing water stock, help those nations who have a problem with water supply and raise general awareness of the impending crisis that could endanger the lives of hundreds of millions and even billions of people. A crisis of such magnitude can lead to a natural cataclysm from which the world may never recover. It is not exaggerated to say, that the survival of all humanity depends on the decisions made, on a daily basis, behind the closed doors of large corporations and government offices. Defining water as an economic good and its radical privatization in the today’s globalized economy may have unforeseeable negative consequences for humanity. In this work, the authors singled out the most important arguments that have been shaped among those opposed to the privatization of water and water supply systems.

1) Privatization, in the long run, results in an increase in the price of water supply services

This is one of the most common consequences that have become a rule when it comes to water privatization. The goal of every company is to maximize profit, and this goal is achieved by raising the price and by lowering the quality of the service provided. The firms today, therefore, are only focused on the most profitable areas (Zekić and Samaržija, 2013) . Companies have no obligation to provide access to water or service if it is defined as a commodity rather than a human right. As a result, if a consumer cannot pay for a service he/she is simply disconnected from the system. Privatization with such consequences demonstrated it maximum destructive power in the developing countries, where citizens had to choose between food and water, which resulted in the outbreak of various diseases. In South Africa for example, the price of water increased by more than 400% between 1995 and 2000, resulting in an epidemic of cholera, because the population was forced to drink contaminated river water (AEFJN, 2003). The prices agreed upon among the national governments and private companies providing water services are an obvious example of the care for such companies. This simply implies that the companies are guaranteed to generate profits at minimal risk. Ironically, such a practice is against the fundamentals of the market system, and this is, the abolition of the state's role in business operations.

2) Privatization, in the long run, decreases water quality

Since the primary goal of every private company is maximization of profit, preservation of the environment has recently seriously been compromised. In the U.S., the National Association of Water Companies (NAWC) represents private concessionaires and intensively lobbies in Congress and the Environmental Protection Agency (EPA) to prevent the adoption of additional standards. The NAWC continually requires that the regulation is based on the cost-benefit analysis. The way in which the population views this, is that the primary concern

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of the company is generating profit and not their health. A representative proof of such a practice is Walkerton, a town in Ontario, Canada where 7 people died and 2300 people were infected with E. coli from the drinking water. Later on, it turned out that A & L Laboratories, a private company responsible for testing the quality of water had actually known that the water was contaminated. Since the company had signed a contract supporting the privatization of the water supply system they were asked to cover up the case to avoid negative publicity (Gillis. C, 2001).

3) Private financing of the water infrastructure is more expensive than state financing

The privatization of water services creates a false perception that the financing has been transferred form state to private budget. During the negotiation process, the companies undertake the obligation to repair, modify and upgrade the infrastructure, with the aim to make the greatest possible savings for the consumers. In reality, citizens end up paying for these changes through their monthly bills (www.psiru.org). Public financing is generally intended for funding low-cost projects. In private financing, the citizens end up paying for more expensive projects, dividends to stockholders as well as company loans. A comparison of the Swedish public management model and the British private model showed that the Swedish model had significantly lower operating and maintenance costs and that the Swedish citizens were paying water half the price of what the British did.

4) Privatization my cause the poor to lose access to water

It is a generally believed that the IMF and the World Bank are helping developing countries to privatize their water supply systems in order to enable the poor citizens to gain access to water. Unfortunately, the truth is completely different. Namely, these organizations in carrying out their "structural adjustment programs" *force* national governments to privatize their water systems in exchange for loans. Weakened countries are not in a position to refuse the conditions imposed by the IMF and WB, because if they do so, it is almost certain that their debts will not be reprogrammed and that they will end up in debt slavery. As a result, the IMF and the WB can secure lucrative contracts without much risk to transnational corporations. An example of this practice is the Bolivian water supply system. As a precondition for obtaining a loan from the World Bank, Bolivia had to privatize its water supply system. The concessionaire immediately doubled the price of water once it was granted concession (Maude, 2001). The new bills represented a significant expenditure for a large number of Bolivian families and those that could not cover it, i.e. the poorest, were disconnected from the system. Riots broke out and the company withdrew from Bolivia. It is now suing the state for $ 40 million in losses that was generated during its stay in Bolivia.

5) Privatization can result in excessive exploitation and export of water

As already mentioned, according to WB's estimates, 2/3 of the world population will have no access to drinking water by 2025. Even today, a large number of people have no access to clean water. The increase in population alongside the dwindling of water supplies will, in the long run, result in an unsustainable state in which the TNC will have countless opportunities to create large profits by trading in the "Petroleum of the 21st century". Whoever holds control over this resource of vital importance, will gain economic and political power of unimaginable proportions. Despite black predictions, corporations continue to compete to gain access to drinking water and thus ensure generating high profits. Excessive exploitation of water resources can have frightening consequences. An example of TNC relations to local water resources is that of Coca Cola in a small Indian village, the Plachimada, where Coca Cola's excessive exploitation of water and its lack of concern for the environment lead to drinking water shortages thus forcing the local population to migrate from a region that had up to then been abundant in water resources (Shiva, 2006).

4. THE POTENTIAL OF CROATIAN WATER RESOURCES AND MANAGEMENT DILEMMAS

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According to the UNESCO report on water supplies, the Republic of Croatia disposes of a high 32,818 cubic meters of renewable water supply per capita per year, which ranks it among the thirty water-richest countries in the world, i.e. third place in Europe after Iceland and Norway (www.matica.hr). If the Croatian water wealth was calculated as the sum of the total amount of water that falls to the ground and the amount of water that comes from other countries, Croatia, according to its surface area, would be first in Europe and third in the world in terms of water supplies. In Croatia, about 80 percent of the population has access to water from the public water supply. According to the national project for expanding the water supply network, about 94 percent of the population will have access to drinking water by 2015, which will bring Croatia closer to the standards present in most EU countries (Glas Slavonije, 2011). The average consumption of tap water amounts to 138 liters per capita per day. Taking into account the fact that Croatia has sufficient quantities of drinking water for the future (if well managed), and the estimates that further increase in world population will decrease the amount of available drinking water, drinking water is probably becoming the most important Croatian resource of the 21st century, a resource, that could significantly impact the security and the geopolitical position of the country, and have an effect on the development of its economy and society. However, if in the 21 century, drinking water has the same role in international relations as oil does today, then drinking water will be followed by economic, demographic and security challenges still following oil (wars, economic and political pressures, terrorism). Croatia belongs to those countries that have an above-average supply of drinking water, but it is also geographically relatively close to already today partly thirsty countries of the Southern Mediterranean and the thirsty and politically unstable countries in the Middle East. What is certain is that, in the near future, Croatia will face completely new challenges in the area of sovereignty, national security and the economy, primarily related to the model of water resources management.

4.1 Privatization of water-water supply systems

The Croatian Water Act regulated the legal status of water and water resources as well as the terms and conditions for water management. The most important provisions include: 1) Establishment of *Hrvatske Vode* - the public water management company; 2) Water is defined as a public good, which, due to its natural properties, cannot be under anyone's ownership; 3) Water, as a common good, is under special protection of the Republic of Croatia. The management of water is based on the following principles: 1) Water is an indispensable condition of life and work – all are obligated, with utmost care, to preserve its quality, use it cost-effectively and rationally, under the same statutory requirements and 2) Water is to be managed according to the principles of unity of the water system and that of a sustainable development which meets the needs of the present generation and does not jeopardize the right and possibility of future generations to do equally (Water Act, 1995).
However, the Utility Services Act which is also in force defines (...) utility services as a sector of the economy concerned with the performance of utility activities, in particular with the provision of utility services of interest to natural persons and legal entities and with financing the construction and maintenance of utility infrastructures as an integrated system within the respective local government area. The utility system is integrated and governed by the Utility Services Act (...).The special features of this system include: defining a particular service as a utility service; determining the way in which service provision is organized; setting the prices of utility services and their control; financing utility services from special sources and the means of financing the construction of facilities and infrastructure. The supply of drinking water is also considered a utility under the Utility Service Act. All utilities services are performed as public service. These services can be performed by: a company or a public institution established by a local government unit, services own facilities, natural or legal person on the basis of a concession agreement and a legal person under a contract entrusting them to perform utility operations. Based on the foregoing, it is clear that the

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ability to grant concessions and to entrust utility operations to companies and individuals opens the door to the privatization of utilities, i.e. privatization of water supply systems.

4.1.1 The possibility of privatizing the public company Hrvatske Vode

Recently, there have been pressures to privatize water in both developed and the underdeveloped countries. However, while in the developed countries these pressures are the result of internal politics and lobbying by powerful corporations, the pressure in the undeveloped countries comes from abroad. Institutions with the highest capacity and application of pressure are the International Monetary Fund and the World Bank. There are several tactics used by these institutions which include imposing privatization as a precondition for obtaining credit and loans, giving priority to the financing of private projects rather than to public sector initiatives, and sometimes even directly urging the Governments of underdeveloped countries to privatize water in order to reduce external debt. But these two supranational institutions are not the only ones actively pushing the privatization of water resources; this process is also high on the priority lists of the European Bank for Reconstruction and Development and the European Union. With Croatia's upcoming accession to the European integration, it would be miraculous if the process of privatization skirted its water resources.

Croatia has large renewable water resources, which makes it very exposed, and poorly protected in the global neoliberal market where rich countries and their TNCs look for ways to acquires ownership over new resources at all costs. It is thus inevitable that the economically fragile, over-borrowed and politically dependent Croatia is confronted with the privatization scenario, but which model to apply is still not defined. There are several options available. One of these is the privatization of the public company *Hrvatske vode*. However, since the public opinion on this issue is currently very negative, it is not possible to apply this, for the Croatian citizens, daunting model. As the second-best solution that imposes itself is the privatization of utility companies. This model is currently the most promising because it leaves room for legal possibilities of granting concessions to private companies for conducting drinking water supply. Why should Croatia cede the right to manage its water to a private company? One of the pretexts is the aforementioned indebtedness which is preventing additional borrowing; hence privatization is needed in order to provide fresh capital to fill the state budget and to direct surplus funds into new development investments. However, if the problem is presented in this way, it will not encounter the approval of the general public. Some past examples suggest that it is better to explain to the local people that the privatization of water is "good for them" and that they, as well as future generations, are the ones who will actually benefit from it. But how to put it into action? There are all those arguments that have already led to the privatization of water supply systems in a number of countries… (Argentina, Great Britain ...).

4.1.2 The consequences of the water supply system privatization in Croatia

Unfortunately, it is almost impossible to know in advance the consequences that could be caused by the privatization of the Croatian water supply system. The aforementioned consequences could also apply to Croatia. What is almost certain and what has occurred in most cases came about as a consequence of the following: 1) A company can not and will not defend the public interest in the water sector - the goal of the company is to make profit, not to act in public interest; 2) Privatization will almost certainly result in price increase and lower water quality, as prerequisites of profit maximization; 3) Privatization will result in the lay off of a large number of employees as a result of economizing water resources and 4) Privatization will almost certainly result in excessive exploitation and export of water

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resources with the aim of maximizing the profits of private entrepreneurs. The geopolitical location and small population make Croatia an extraordinary opportunity in the global water market. The Croatian market is, in terms of population, small and dispersed so it is not economically feasible for a single company to privatize the Croatian public company *Hrvatske vode* as it requires high unit costs, but it is very profitable to privatize individual strategic resources – the water supply system, which will freely export water from Croatia. The cruelty of privatization, which the Croatian citizen might experience are visible in the examples of Great Britain and Colorado, USA where it is illegal for citizens to collect rainwater in their own wells! The explanation provided is that the rain filling the well would otherwise flow into the water supply system and since the water supply is under the private ownership, the citizen ought to indemnify the holder of the water right. These and many other similar examples show how something that was considered as a basic human necessity and a public good has become scarce and private, an economic good. The road to hell is also paved with good intentions. Excessive exploitation and the unreasonable attitude towards the basic resources make these resources more valuable, thus making this the main goal of the corporation - to make resources scarce and thus be able to charge higher rates to consumers. It is obvious that privatization does not bring anything good in the long run, and the citizens can only hope that they will avoid it. But if privatization is not the right model, and if treating water as a public good does not result in satisfactory effects, the question that poses itself is whether there is a model that would benefit both the state and its citizens.

4.2 Franchising water supply system rights as an alternative to privatization

The water franchising model is already in use in France as a clean alternative to privatization. France was among the first countries that started undergoing the process of water privatization already in the Napoleon times. The degree of success in managing their own, as well as foreign waters, can be seen in the fact that the French companies Suez and Vivendi are the leading companies in water management in the world, providing water to over 230 million users (Luoma, 2002). Nevertheless, the City of Paris refused to sign a contract with Suez and has entrusted its water supply to a local utility company. In France, the water franchising model has been perfected and is being implemented successfully in several smaller provinces. It is precisely due to its flexibility that this model could be applied in the Republic of Croatia. The basic idea is to grant the franchise to that company which offers the best conditions in a public tender – provision of drinking water of a specified quality at lowest costs. The Buenos Aires' example shows that a private company which obtained the franchise can bid an even a 20% lower price than the state's public company. The body granting the franchise simply commits itself to assign the franchise to the company that has bid the lowest price for a demanded quality and quantity of products. According to the water franchise model, the investor does not acquire the right of ownership of the facilities and equipment, but only the right to manage the water supply system in a certain period of time (Dnes, 1995). Such a model can be applied on a year to year basis to ensure that the users get the best price for the service. Fully developed franchise agreements are probably the best alternative to the natural monopoly. Franchising has great advantages over purely public or private ownership of water resources because it balances between and comprises both, the private company's efficiency and the regulatory role of the state. Namely, the fundamental aim is to find a balance between meeting one' interests, as a private manger of the water supply system, the state's interests, as the owners of the water resources and the people's interests, as the users of the provided service i.e. to create value added for everyone involved in the franchised business of water supply.

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5. CONCLUSION

Currently there are numerous discussions on water privatization going on around the world. Water is a vital need and should thus be treated as a human right and therefore, the possibility of restricting it should not even be considered. The mere fact that water is the basis of life on Earth defines it as a public good. No person or organization should deprive another of the ability to consume water. Unfortunately, only 2.5% of all water on Earth is fresh water. Therefore, its capacities are limited. Although water has the characteristics and therefore is a public good, it is its scarcity that excludes its non-rivalry feature, and provides the "right" for the powerful corporations to privatize it and thus limit its use. If water resources are reduced, they become scarcer thus increasing their value and the units of currency consumers are willing to pay for them. The reasons for the privatization of water can be found in those areas where water is scarce. Water shortages can be caused by natural or human-induced factors. According to this, Croatia does not need to privatize its water as it is third in the world in terms of water supply. Why then do countries undergo privatization of the water supply system? Privatization is carried out in cases when the state's management of water supply resources is ineffective. The aim of these privatization processes are to achieve: a) a larger number of water users in those areas where the state has not been able to provide water supply, b) a more efficient management of water supply resources, which include lower prices and better service, c) lower costs of a large and inefficient state apparatus and d) limited government intervention and political pressures. Unfortunately, these benefits have been achieved just in a small number of cases. The privatization of the water supply most commonly resulted in: a) an increase in water prices for the end-users, b) a reduction of water quality and the quality of its supply due to the owners' private interests, c) minimization of local control and public rights, d) loss of jobs, e) deprivation of the poorest citizens' rights to use water and f) excessive export of water depleting local resources.

Croatia is currently in an unenviable position regarding its large indebtedness and the need for foreign capital. Its water resources are huge and represent a strategic advantage in Croatia's future economic development. The aim of privatization is neither to modernize the water supply network nor to improve service quality but to cover budget deficit and repay old debts. The privatization of strategic resources, principally water, will likely become the world capital's focal area. Currently, the privatization of *Hrvatske vode* has been abandoned, but there are indications that local utility companies will be privatized, and it is precisely them who hold the right to distribute water.

Due to the negative connotations that the privatization of water entails, it is necessary to search for and explore more appropriate solutions that could balance the interests of all involved. The adoption of the franchising model, as an alternative to pure privatization, imposes itself as one of the potential solutions. Within the franchising model, the company which is granted the right to manage water resources is obliged to bid the lowest price for the service of a specified quality and quantity in a relatively short time period (up to 3 years). In this manner, the private sector does not acquire the right of ownership over equipment and facilities, but simply implements its know-how. It is certain that this model also has its

REFERENCES

1. Hilly M, Adams ML, Nelson SC. A study of digit fusion in the mouse embryo. Clin Exp Allergy. 2002;32(4):489-98.

References:

1. Demsetz, H. 1972. Toward a Theory of Property Rights. American Economic Review 62: 347-59

2. Dnes, A. 1995. Franchising and privatization The world bank (40)

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3. Dowall, D. 1995. An Overview of Private Sector Financing of Urban Infrastructure Services IURD Working Paper No. 653, University of California at Berkley
4. Fauconnier, I. 1999. The Privatization of Residential Water Supply and Sanitation Services: Social Equity Issues in the California and International Contexts, Berkley Planning Journal 13.
5. Gillis, C. 2001. Cabinet Knew About Risks National Post. 27 June
Gomez-Ibanez, Mayer, R. 1995. Going Private: The International Experience, Washington D.C.: Brookings Institution
6. Guislain, P. 1997. The privatization Challange: A strategic, Legal and Institutional Analysis of International Experience. World Bank Regional and Sectoral Studies Series, Washington D.C
7. Glas Slavonije, 2011. www.glas-slavonije.hr/mvijest.asp?rub=3&ID VIJESTI=9556 (Retived 18.04.2011.)
8. Idelovitch, E. and Ringskog, K. 1995. Private Sector Participation in Water Supply and Sanitation in Latin America. Directions in Development Series, Washington D.C.: The World Bank
9. Jacobson, C. and Tarr, A. 1996. No single path: Ownership and Financing of Infrastruture in 19th and 20th Centuries“ in Ashoka Mody, ed, Infrastructure Delivery: Private Iniative and the Public Good. Washington D.C.: Development Institute of World Bank.
10. Johnson, O.E.G., 1972. Economic Analysis, the Legal framework and Land Tenure Systems. Journal od Law and Economics (15) p 259-76
11. Jurković, P. 2002. Javne financije, Masmedia, Zagreb.
12. Kahn, A. 1988. The Economics of Regulation: „Principles and Institutions“. Boston: Massachusetts Institute of Technology
13. Kessides, C. 1993 Institutional Options for the Provision of Infrastructure“, World Bank Discussion Paper No. 212, Washington D.C.: World Bank
14. Luoma, J. R. 2002. Mother Jones magazine Nov./Dec. p .2
15. Maude, B. 2001. Blue Gold International Forum on Globalization, San Francisco
16. McClurg, S. 1996. Privatization of Water: Split Opinions, in Western Water. Water Education Foundation, Jul./Aug
17. Musgrave, R. and P. Musgrave, 1984. Public Finance in Theory and practice, McGraw Hill, New York
18. Musgrave, R. and P. Musgrave, 1973. Public Finance in Theory and Practice, McGraw-Hill: New York
19. Samuelson, P. and. Nordhaus, W, 1992. Ekonomija, Mate, Zagreb.
20. Shiva, V. 2006. Resisting water privatization, building water democracy“, World water forum, Mexico City
21. Solanes, M. 2006. Efficiency, Equity, and Liberalisation of Water Services in Buenos Aires, Argentina. Industry, Services & Trade (Organisation for Economic Co-operation and Development (OECD)) 2006 (22): 124–148., p. 168
22. Suez Environment, Argentinean official website, Retrieved 2008-02-18, 2010.
www.cro.time.mk/cluster/1c290cb1ca/nakon-pritiska-vlada-povukla-izmjene-zakona-vodama.html (Retrived 26.04.2011.)
www.psiru.org (Retrived 13.03.2011.)
www.tportal.hr/vijesti/hrvatska/112170/tko-tolobira-za-privatizaciju-coda.html (Retrived 18.04.2011.)
23. Water act, 2003. Narodne novine 26.
24. Zekić, Z and Samaržija L, 2013. Logistic concept of management: A systematic approach to dynamic optimatization of a firm`s business performance. PRABANDHAN: Indian Journal of Management, 6 (3): 15-26.