



USAID
FROM THE AMERICAN PEOPLE



FOUNDATION ФОНДАЦИЈА
OPEN OTBORENO
SOCIETY OPIITESTBO
MACEDONIA MAKEDONIJA

C Center for Civil Communications
Центар за граѓански комуникации

Index of Rationality

11.

Skopje, August 2014

This report is made possible by the generous support of the American people through the United States Agency for International Development (USAID) within the USAID Civil Society Project. The contents of this publication are the responsibility of the Foundation Open Society – Macedonia and the Centre for Civil Communications and do not reflect the views of USAID or the United States Government.

TABLE OF CONTENTS

1. GOALS AND METHODOLOGY.....	4
2. INDEX OF RATIONALITY.....	6
2.1. Index of Rationality for Electricity.....	7
2.2. Index of Rationality for Tetanus Vaccines.....	10
2.3. Index of Rationality for Street Resurfacing	13
2.4. Index of Rationality for Engaging Machinery for Demolition of Illegally Constructed Buildings	16
2.5. Index of Rationality for Hiring Labour Force for Demolition of Illegally Constructed Buildings	19
3. GENERAL CONCLUSION.....	21

1. GOALS AND METHODOLOGY

Centre for Civil Communications from Skopje is the only non-governmental organization in the Republic of Macedonia that implements direct and comprehensive monitoring of public procurement procedures in the country. In an attempt to make additional contribution to advancing state-of-affairs in this field, the Centre initiated development of so-called Index of Rationality in public spending. It aims to introduce a new instrument that will be used to assess effectiveness of public spending, to identify bottlenecks in the system and, ultimately, to contribute to institutions' cost-effective spending of budgets sustained by taxpayers.

Index of Rationality is developed by comparing prices under which different institutions have purchased same goods, services or works. In addition to enabling comparison of prices, analysis of same types of products, services or works provides different patterns of behaviour on the part of state institutions when implementing same type of procurements.

The Index is envisaged to serve state institutions as an indicator against which they will improve rationality in public procurements, i.e. public spending. Given that the index-included prices are the average value of those paid by institutions and do not imply actual or market prices, state institutions should, whenever possible, pursue attainment of lowest prices and spend public funds in a more rational manner, moreover knowing that other institutions have attained more favourable prices for same type of procurements.

Differences in price paid by institutions for same type of products and services indicate the need for a thorough market research prior to tender announcement and harmonized approach on the part of contracting authorities when procuring same type of products.

The sample used to develop the Index includes all contracting authorities on national and local level, from line ministries and municipalities, public enterprises and agencies, to schools and kindergartens.

Development of the Index of Rationality relies on primary and secondary data sources.

Primary data collection is pursued by means of:

- attendance at public opening of bids submitted by economic operators in specific public procurement procedures, in order to obtain data on prices bided; and
- direct contacts with contracting authorities, in order to obtain data on the selection of the most favourable bid.

These activities enabled direct sources of data on prices under which given products, services or works have been procured.

Secondary data sources include:

- the Electronic Public Procurement System (EPPS); and
- Freedom of Information (FOI) applications.

It should be noted that the Index of Rationality will disclose contracting authorities monitored, but not companies with whom contracts have been signed (although data thereof is available), in particular due to the fact that responsibility for rational public spending primarily lies with contracting authorities.

2. INDEX OF RATIONALITY

Index of Rationality no. 11 is developed for the following types of goods or services:

- **electricity;**
- **tetanus vaccines;**
- **street resurfacing;**
- **engaging machinery for demolition of illegally constructed buildings; and**
- **hiring labour force for demolition of illegally constructed buildings.**

Development of the Index of Rationality for these types of goods and services includes national and local institutions that have organized public procurements for these types of goods or services in the course of 2013 and 2014.

Initially, the Index of Rationality targeted 58 institutions on national and local level, but due to objective and subjective reasons, it relies only on data related to prices of goods and services paid by a total of 35 institutions.

2.1 Index of Rationality for Electricity

In the context of legal provisions whereby from 1 April 2014 eligible consumers will purchase electricity on the open market, as early as January 2014 some state institutions started announcing calls for procurement of electricity. Right to purchase electricity on the open market was approved for more than twenty public enterprises, i.e. enterprises with more than 50 employees or annual turnover exceeding 10 million EUR. Having in mind that, for the first time, national and local state institutions have the possibility to purchase electricity on the open market by means of public procurements, development of this Index of Rationality presented a major challenge. Main goal of this Index is to analyse initial effects of electricity market liberalisation. As shown in the table below, significant differences are noted in price attained by individual contracting authorities for procurement of electricity. In that, prices range from 3.46 MKD to 6.25 MKD per KWh. The ratio between the lowest and the highest price is 1:1.81, which means that the price attained by PE Macedonian Railways “Infrastructure” is by 81% higher than the price paid by PE “Macedonian Broadcasting”.

Index of Rationality for electricity
(price per 1 KWh electricity)

Contracting authority	Price in MKD (VAT included)	Difference against the average
PE “Macedonian Broadcasting”	3.46	-23.62%
PE “Water Supply and Sewage” – Skopje	3.53	-22.07%
JSC on Management of Business Property in State Ownership – Skopje	3.93	-13.24%
PCE “Derven” – Veles	4.27	-5.74%
PCE “Water Supply” – Kocani	4.43	-2.21%
PCE “Komunalec” – Bitola	4.47	-1.32%
PCE “Komunalec” – Strumica	4.48	-1.10%
Public Transportation Enterprise – Skopje	4.52	-0.22%
Average*	4.53	0.00%
PE “Communal Hygiene” – Skopje	5.18	+14.35%
PE “Strezevo” – Bitola	5.29	+16.78%
PE Macedonian Railways “Infrastructure” – Skopje	6.25	+37.97%

*Average is calculated from the individual prices paid by the institutions included in this Index of Rationality.

Development of this Index targeted all 16 contracting authorities that have published calls for procurement of electricity in the first four months of 2014. However, the

Index was developed on the basis of electricity prices disclosed by 11 contracting authorities, due to the fact that PE “Macedonian Forests”, PE “Macedonia Road” and PE “Water Supply” – Kumanovo annulled their tender procedures, while PE Macedonian Railways “Transport” and PCE “Tetovo” did not respond to our FOI applications.

All institutions implemented tender procedures for the purpose of purchasing electricity to meet their demands for a period of 12 months.

As shown in the table above, the average price paid by institutions for *1 KWh* electricity is 4.53 MKD. In that, eight institutions attained electricity prices lower than the average price, while three institutions attained electricity prices higher than the average calculated for this Index. The lowest price is by 23.62% lower than the average, while the highest price is by 37.97% higher than the average price calculated.

Great differences in price cannot be justified by the type of procurement procedures organized, but they can be explained by the number of bidding companies and the possibility for tender procedures to be completed with e-auctions, as initially planned. Namely, all institutions organized so-called open procedures for public procurement contract awarding, which anticipated organization of e-auctions and without exception used “lowest price” as the selection criterion for the most favourable bid. However, despite the fact that all contracting authorities organized same type of procurement procedures, differences were noted in terms of the number of bidding companies and the possibility to organize e-auctions as downward bidding. In that, total of 4 bids were received and e-auctions were organized in tender procedures organized by PE “Macedonian Broadcasting”, PE “Water Supply and Sewage” – Skopje and JSC on Management of Business Property in State Ownership – Skopje, which attained the lowest prices for procurement of electricity. As regards tender procedures organized by three remaining institutions (PE “Communal Hygiene” – Skopje, PE “Strezevo” – Bitola and PE Macedonian Railways “Infrastructure” – Skopje) which attained the highest electricity prices, only one bid was assessed as acceptable, which resulted in non-organization of e-auctions. In the tender procedure implemented by PE Macedonian Railways “Infrastructure” – Skopje, the only bidder assessed as acceptable refused to reduce its initial price after being invited to submit a final price. In that, it should be noted that eligibility criteria defined by PE Macedonian Railways “Infrastructure” – Skopje required bidding companies to

demonstrate business operation without losses in the last three years. Maybe this requirement was the limiting factor that prevented greater competition among companies licensed to perform energy activities on electricity trade and electricity supply.

Prices attained for procurement of electricity cannot be correlated with electricity quantities purchased.

Planned quantity of electricity

Contracting authority	Quantity of electricity (in KWh) ¹	Difference of individual price against the average
PE "Macedonian Broadcasting"	10,000,000	-23.62%
PE "Water Supply and Sewage" – Skopje	43,000,000	-22.07%
JSC on Management of Business Property in State Ownership – Skopje	204,060	-13.24%
PCE "Derven" – Veles	1,300,000	-5.74%
PCE "Water Supply" – Kocani	5,000,000	-2.21%
PCE "Komunalec" – Bitola	3,000,000	-1.32%
PCE "Komunalec" – Strumica	1,500	-1.10%
Public Transportation Enterprise – Skopje	1,430,000	-0.22%
PE "Communal Hygiene" – Skopje	1,500,000	+14.35%
PE "Strezevo" – Bitola	383,280	+16.78%
PE Macedonian Railways "Infrastructure" – Skopje	9,300,000	+37.97%

As shown in the table above, the institutions (PE "Macedonian Broadcasting" and PE Macedonian Railways "Infrastructure" – Skopje) which paid the highest and the lowest price for procurement of electricity purchased almost identical quantities. At the same time, PCE "Komunalec" – Strumica, which purchased the lowest quantity of electricity, attained a price slightly lower than the average. Hence, it is more than obvious that quantity of electricity purchased did not affect prices attained.

¹ Calculations for the quantities purchased by PE "Macedonian Broadcasting", PE "Water Supply and Sewage" – Skopje, PCE "Water Supply" – Kocani and PE "Communal Hygiene" – Skopje was made on the basis of procurements' estimated value.

2.2. Index of Rationality for Tetanus Vaccines

Prices at which individual institutions purchased one tetanus vaccine in dosage of 0.5 ml range from 37.14 to 74.87 MKD. The ratio between the lowest and the highest price is 1:2.02, which means that the General Hospital “8th September” – Skopje paid a price that is by 102% higher than the price paid by the Clinical Hospital – Tetovo for the same vaccine. The highest price for procurement of tetanus vaccine recorded under this Index is equal to retail prices in pharmacies.

Analysis of data shows that differences in price for procurement of tetanus vaccine cannot be justified with the type of procurement procedures organized or the quantity purchased.

Index of Rationality for tetanus vaccines (price per 1 tetanus vaccine in dosage of 0.5 ml)

Contracting authority	Price in MKD (VAT included)	Difference against the average
Clinical Hospital – Tetovo	37.14	-35.22%
University Clinic for Infectious Diseases and Febrile Conditions – Skopje	44.43	-22.50%
Average*	57.33	0.00%
Public Health Centre – Ohrid	60.50	+5.53%
Public Health Centre – Kocani	63.52	+10.80%
Sector for Logistics at the Ministry of Defence	63.52	+10.80%
General Hospital “8th September” – Skopje	74.87	+30.59%

*Average is calculated from the individual prices paid by the institutions included in this Index of Rationality.

For the purpose of developing this Index, all health institutions (9) that have announced calls for procurement of this type of vaccines in 2013 and the first four months of 2014 were addressed with relevant FOI applications. However, the Index was developed on the basis of information for vaccine procurements provided by six contracting authorities, because the Ministry of Health and PHI “Public Health Centre” – Veles did not disclose requested information, while PHI “Public Health Centre” Skopje annulled the public procurement procedure.

As shown in the table above, two health institutions purchased the vaccines at prices that are by 35.22% and by 22.50% lower than the average price calculated. On the

other hand, four institutions purchased the vaccines at prices higher than the average, by 5.53% to 30.59%.

Differences observed in terms of prices attained cannot be explained by the type of procurement procedures organized. Namely, as regards type of procurement procedures, three health institutions (University Clinic for Infectious Diseases and Febrile Conditions – Skopje, Public Health Centre – Kocani and Sector for Logistics at the Ministry of Defence) organized open procedures on public procurement contract awarding, two institutions (Clinical Hospital – Tetovo and General Hospital “8th September” – Skopje) organized bid-collection procedures in the value of up to 20,000 EUR, whereas small-scale bid-collection procedure in the value of up to 5,000 EUR was organized by the Public Health Centre – Ohrid. This means that all institutions organized and implemented transparent public procurement procedures with previously announced call for bids. In that, all procedures anticipated organization of e-auctions and used “lowest price” as the selection criterion for the most favourable bid. However, analysis of information disclosed by institutions and data available in EPPS, shows that although planned in all tender procedures, due to low competition in relevant tender procedures, e-auctions were organized only in tender procedures implemented by the University Clinic for Infectious Diseases and Febrile Conditions – Skopje and the Public Health Centre – Kocani. Hence, it turns out that the tender procedure under which the lowest price for procurement of this type of vaccine was attained had not been completed by means of e-auction. These insights undoubtedly provide the conclusion that the type of procurement procedures organized did not affect differences in price observed under the Index of Rationality for tetanus vaccines.

Moreover, quantity of vaccines purchased did not have major effect on prices attained. Evidence in support of this statement is identified in the fact that the institution that purchased the highest quantity did not attain the lowest price or, vice versa, the institution that purchased the lowest quantity did not attain the highest price.

Quantity of tetanus vaccines procured

Contracting authority	Quantity (individual dosage)	Difference of individual price against the average
Clinical Hospital – Tetovo	1,200	-35.22%
University Clinic for Infectious Diseases and Febrile Conditions – Skopje	3,000	-22.50%
Public Health Centre – Ohrid	100	+5.53%
Public Health Centre – Kocani	470	+10.80%
Sector for Logistics at the Ministry of Defence	1,000	+10.80%
General Hospital “8 th September” – Skopje	970	+30.59%

At the same time, as shown in the table on quantities purchased, the Public Health Centre – Ohrid purchased ten times less vaccines compared to the General Hospital “8th September” – Skopje, but paid a price that is by 5.53% higher than the average price, unlike the General Hospital in Skopje which attained a price that is by 30.59% higher than the average price calculated.

2.3. Index of Rationality for Street Resurfacing

In order to secure comparability of data, this Index of Rationality was not developed for street construction, but for street resurfacing. Namely, construction cost of streets greatly depends on conditions in the terrain.

On this account, this Index of Rationality was developed for street resurfacing (procurement, transport and layering asphalt in thickness of 7 cm) and shows that prices paid by municipalities for this service range from 757 to 1,239 MKD per m². The ratio between the lowest and the highest price is 1:1.64, which means that the highest price paid by the Municipality of Ohrid for street resurfacing is by 64% higher than the price attained by the Municipality of Karbinici for procurement of same services.

Under the Index of Rationality no.11, the highest level of competition was observed in regard to tender procedures implemented for street resurfacing. In that, total of 6 bidding companies participated in the tender procedure that attained the lowest price and was completed by e-auction, which resulted in reduction of prices, whereas only one construction company participated in the tender procedure that attained the highest price, and hence there were no conditions for scheduling e-auction.

Index of Rationality for street resurfacing
(price for procurement and layering of 1 m² asphalt)

Contracting authority	Price in MKD (VAT included)	Difference against the average
Municipality of Karbinici	757	-15.61%
Municipality of Kocani	801	-10.70%
Municipality of Bitola	819 ²	-8.69%
Municipality of Struga	850	-5.24%
Municipality of Mogila	872	-2.79%
Average*	897	0.00%
Municipality of Probistip	906	+1.00%
Municipality of Resen	929	+3.57%
Municipality of Ohrid	1.239	+38.13%

*Average is calculated from the individual prices paid by the institutions included in this Index of Rationality

² The price is weighted average of three different prices attained for construction of three different roads.

Initially, development of this Index targeted all contracting authorities that published call for bids in EPPS for this type of procurement in the period May 2013 - May 2014 defined as “street resurfacing and construction”. In cases of contracting authorities that have implemented several procurement procedures of this type, only the last procurement procedure was taken into consideration, i.e. was included in the Index of Rationality. In that, for the purpose of developing this Index, we addressed 18 institutions (16 municipalities and 2 public enterprises) with relevant FOI applications inquiring about prices they paid for procurement and layering of asphalt, asphalt layer thickness and length of streets being resurfaced. 14 institutions responded to these information requests. In that, although they disclosed the information requested, Municipalities of Valandovo and Rosoman were excluded from the Index because relevant thickness of asphalt layers in these municipalities was lower than 7 cm, which was established as standard thickness of asphalt layers in most municipalities. Namely, in the Municipality of Valandovo streets were resurfaced with asphalt layer of 6 cm, while in the Municipality of Rosoman streets were resurfaced with asphalt layer of 5 cm. PE “Stipion” – Stip informed us that the tender procedure in question had been annulled, while Municipalities of Delcevo and Veles indicated that they installed behaton paving elements for street resurfacing and did not use asphalt. Municipality of Zelenikovo responded by disclosing the contract signed for street resurfacing and patching potholes, however the contract did not include breakdown of services/costs per items, which prevented calculation of prices paid for street resurfacing. Municipalities of Cair, Krivogastani and Zrnovce, as well as PCE “Niskogradba” – Bitola, did not disclose information requested. On this account, the Index of Rationality for street resurfacing with asphalt layer is developed on the basis of prices attained by eight municipalities.

As shown in the table above, five municipalities attained prices that are by 2.79% to 15.61% lower than the average price calculated. On the contrary, three municipalities attained prices that are by 1.00% to 38.13% higher than the average price.

As regards the type of procurement procedures organized for procurement of street resurfacing services, dominant share of contracting authorities, i.e. 6 from total of 8 index-targeted municipalities (Bitola, Struga, Mogila, Probistip, Resen and Ohrid) opted for open procedures. Remaining two municipalities (Karbinci and Kocani) organized bid-collection procedures in the value of up to 50,000 EUR.

All municipalities used “lowest price” as the selection criterion and planned to finalize their procurement procedures with e-auctions. However, due to low competition in tender procedures, electronic downward bidding was not scheduled in procedures organized by Municipalities of Struga and Ohrid. This provides the conclusion that competition played a major role in prices attained.

At the same time, it should be emphasized that tender procedures which attained prices higher than the average, organized by Municipalities of Probistip, Resen and Ohrid, required bidding companies to have 20, i.e. 30 employees. As regards tender procedure implemented by the Municipality of Struga, which received only one bid, key factor of competition restriction can be identified in the fact that bidding companies were required to be in possession of own asphalt base located within 50 km distance from the Municipality of Struga.

As shown in the table below, relevant values of contracts signed for street resurfacing did not affect prices attained.

Value of contracts signed for street resurfacing

Contracting authority	Contract value (in MKD)	Difference of individual price against the average
Municipality of Karbinici	2,393,087	-15.61%
Municipality of Kocani	2,118,644	-10.70%
Municipality of Bitola	8,551,579	-8.69%
Municipality of Struga	19,822,073	-5.24%
Municipality of Mogila	3,373,620	-2.79%
Municipality of Probistip	10,303,153	+1.00%
Municipality of Resen	4,054,298	+3.57%
Municipality of Ohrid	20,590,624	+38.13%

It turns out that the Municipality of Karbinici, whose contract is marked by the lowest value, actually attained the lowest price, which is not the case with the Municipality of Ohrid, whose public procurement contract has the highest value.

2.4 Index of Rationality for Engaging Machinery for Demolition of Illegally Constructed Buildings

For the purpose of demolition of illegally constructed buildings, municipalities announced tender procedures on engaging particular type and number of machinery from construction companies (truck, crane truck, dump truck, bulldozer, compressor, backhoe loader, crawler excavator – Liebherr, electric grinder, suburban utility vehicle, etc.), as well as relevant labour force. In order to secure comparability of data, this Index of Rationality for engaging machinery for demolition of illegally constructed buildings includes price data for the most frequently used machinery, i.e. 8-ton crane truck.

This Index of Rationality shows that prices attained by individual institutions for engaging 8-ton crane truck per hour range from 2,588 to 7,678 MKD. The ratio between the lowest and the highest price is 1:2.97, which means that the price attained by the Municipality of Butel is by 197% higher than the price paid for the same service by the Municipality of Gjorce Petrov. Differences in price cannot be justified with the type of procurement procedures organized nor by the number of bidding companies participating therein. Namely, tender procedures that resulted in the lowest and the highest price were presented with only one bid each.

Index of Rationality for engaging machinery for demolition of illegally constructed buildings

(price for engaging 8-ton crane truck per hour)

Contracting authority	Price in MKD (VAT included)	Difference against the average
Municipality of Gjorce Petrov	2,588	-47.26%
Municipality of Gazi Baba	3,729	-24.01%
Municipality of Ohrid	3,834	-21.87%
Municipality of Kavadarci	4,484	-8.62%
Average*	4,907	0.00%
Municipality of Kisela Voda	5,900	+20.24%
Municipality of Makedonski Brod	6,136	+25.05%
Municipality of Butel	7,678	+56.47%

*Average is calculated from the individual prices paid by the institutions included in this Index of Rationality.

Development of this Index of Rationality targeted all municipalities that have announced calls for bids for this type of service in the period May 2013 - May 2014.

However, two municipalities (Radovis and Struga) did not disclose information requested, whereas information provided by 7 of the remaining 16 municipalities allowed comparative analysis. In this context, it should be noted that some municipalities did not calculate costs for this type of services on basis of prices paid for engaging machinery per hour. Thus, the Municipality of Ilinden required bidding companies to offer prices for mechanical and manual demolition per m², and similar approach was applied also by the Municipality of Vevcani. Municipality of Gostivar calculated engagement hours per specific activity, such as cutting reinforced concrete, breaking concrete, cutting and removing metal fence, etc. Municipality of Tetovo disclosed information that price paid for demolition of buildings per hour is 25,250 MKD without VAT, but failed to provide desegregated pricing information per 1 hour machinery engagement. Municipality of Cair responded that prices per 1 hour engagement of construction machinery and per 1 hour hiring of labour force depends on size of buildings being demolished and machinery used for that purpose, and therefore only reported on contract's total value in the amount of 1,416,000 MKD without VAT. Having in mind that relevant tender documents for this procurement procedure are not available in EPPS, unknown is how bidding companies developed their bids and how did the Municipality of Cair assess and evaluate them, especially knowing that it did not define in advance machinery needed.

As shown in the table above, four municipalities attained prices for engaging machinery for demolition of illegally constructed buildings (8-ton crane truck) that are by 8.62% to 47.26% lower than the average price calculated, while three municipalities attained prices that are by 56.47% higher than the average price.

Such differences in price attained by individual municipalities for same type of procurements cannot be justified with the type of procurement procedures organized. Namely, all municipalities organized publicly announced tender procedures. In that, bid-collection procedures in the value of up to 5,000 EUR were organized by Municipalities of Ohrid, Butel and Kavadarci and bid-collection procedure in the value of up to 50,000 EUR was organized by the Municipality of Gazi Baba. Three remaining municipalities (Gjorce Petrov, Kisela Voda and Makedonski Brod) organized open procedures. All municipalities used "lowest price" as the selection criterion. Competition level cannot be indicated as strength in dominant share of tender procedures organized and implemented. Namely, tender procedures organized by Municipalities of Gjorce Petrov, Kisela Voda, Makedonski Brod and

Butel received only one bid each. Highest competition level (three bidding companies) was observed under tender procedure organized by the Municipality of Gazi Baba, but the e-auction organized as final stage in this procedure did not result in reduction of initial prices. Tender procedures implemented by Municipalities of Ohrid and Kavadarci were presented with two bids each. In that, it should be noted that e-auction organized as final stage of procurement proceedings in the Municipality of Ohrid is the only one that resulted in reduction of initial prices. In addition to the type of procurement procedures organized, differences in price attained by individual municipalities cannot be justified with contract's value.

***Value of contracts signed for demolition of illegally constructed buildings
(machinery and labour force)***

Contracting authority	Contract value (in MKD)	Difference of individual price against the average
Municipality of Gjorce Petrov	1,947,000	-47.26%
Municipality of Gazi Baba	1,500,000	-24.01%
Municipality of Ohrid	354,000	-21.87%
Municipality of Kavadarci	100,000	-8.62%
Municipality of Kisela Voda	7,000,000	+20.24%
Municipality of Makedonski Brod	1,300,000	+25.05%
Municipality of Butel	141,600	+56.47%

As shown in the table above, contract signed by the Municipality of Kisela Voda is marked by the highest value, but the price attained is higher than the average. At the same time, the Municipality of Butel - which attained the highest price - is not the contracting authority that has signed the contract with the lowest value. Namely, the Municipality of Kavadarci signed the contract with the lowest value, but it attained a price lower than the average calculated for this type of services.

2.5. Index of Rationality for Hiring Labour Force for Demolition of Illegally Constructed Buildings

Prices paid by municipalities for hiring labour force (one general worker) for demolition of illegally constructed buildings per hour range from 177 to 512 MKD. The ratio between the lowest and the highest price is 1:2.89, which means that the price for hiring workers for demolition of illegally constructed buildings paid by the Municipality of Butel is by 189% higher than the price paid by the Municipality of Berovo for the same type of services.

Index of Rationality for hiring labour force for demolition of illegally constructed buildings

(price for hiring labour force per hour)

Contracting authority	Price in MKD (VAT included)	Difference against the average
Municipality of Berovo	177	-43.63%
Municipality of Gazi Baba	248	-21.02%
Municipality of Ohrid	255	-18.79%
Municipality of Aerodrom	256	-18.47%
Municipality of Kisela Voda	260	-17.20%
Average*	314	0.00%
Municipality of Kavadarci	330	+5.09%
Municipality of Gjorce Petrov	337	+7.32%
Municipality of Makedonski Brod	354	+12.74%
Municipality of Negotino	413	+31.53%
Municipality of Butel	512	+63.06%

*Average is calculated from the individual prices paid by the institutions included in this Index of Rationality.

Development of this Index targeted the same municipalities included under the Index of Rationality for engaging machinery for demolition of illegally constructed buildings. In that, comparison was possible in terms of prices attained by 10 municipalities.

As shown in the table above, five municipalities attained prices for hiring labour force for demolition of illegally constructed buildings that are by 17.20% to 43.63% lower than the average, while five municipalities attained prices that are by 5.10% to 63.06% higher than the average price calculated.

Great differences in price attained by individual municipalities cannot be justified with the type of procurement procedures organized, because both, Municipality of Berovo

and Municipality of Butel, which attained the lowest and the highest price respectively, organized the same type of procurement procedure, i.e. bid-collection procedure in the value of up to 5,000 EUR. Only significant difference worth noting is the fact that the Municipality of Berovo signed the contract for demolition of illegally constructed buildings with the Public Communal Enterprise “Services” – Berovo, whereas remaining index-included municipalities awarded these contracts to private construction companies.

Again, contract’s total value did not affect prices attained under this Index of Rationality.

***Value of contracts signed for demolition of illegally constructed buildings
(machinery and labour force)***

Contracting authority	Contract value (in MKD)	Difference of individual price against the average
Municipality of Berovo	200,000	-43.63%
Municipality of Gazi Baba	1,500,000	-21.02%
Municipality of Ohrid	354,000	-18.79%
Municipality of Aerodrom	2,237,280	-18.47%
Municipality of Kisela Voda	7,000,000	-17.20%
Municipality of Kavadarci	100,000	+5.09%
Municipality of Gjorce Petrov	1,947,000	+7.32%
Municipality of Makedonski Brod	1,300,000	+12.74%
Municipality of Negotino	354,000	+31.53%
Municipality of Butel	141,600	+63.06%

It should be stressed that a common problem observed under both Indices of Rationality for demolition of illegally constructed buildings, i.e. engagement of machinery and hiring of labour force, is that respective technical specifications defined by all municipalities, with the exception of Municipality of Aerodrom, did not include precise description of number of hours for machinery engagement and labour force hiring. Namely, in cases where anticipated engagement or hiring is of greater intensity and scope, more detailed technical specifications would have allowed bidding companies to develop and submit more competitive bids, which ultimately contribute to cost-effective public spending.

4. GENERAL CONCLUSION

This Index of Rationality, developed for a new group of products (electricity and tetanus vaccines) and services (street resurfacing, engaging machinery for demolition of illegally constructed buildings and hiring labour force for demolition of illegally constructed buildings) shows major differences in price attained by individual institutions for procurement of same type of goods/services.

Greatest differences in price were observed in terms of engaging machinery for demolition of illegally constructed buildings (8-ton crane truck), whereas the smallest differences in price were observed in terms of procurement of services for street resurfacing.

In summary, the Index of Rationality provides the following findings and conclusions:

- **electricity** was purchased at prices ranging from 3.46 to 6.25 MKD per KWh, where the highest price is by 81% higher than the lowest price;
- health institutions purchased **tetanus vaccines in dosage of 0.5 ml** at prices ranging from 37.14 to 74.87 MKD, where the highest price is by 102% higher than the lowest price;
- prices paid by municipalities for **street resurfacing** range from 757 to 1,239 MKD per m², which means that the highest price is by 64% higher than the lowest price;
- prices paid by municipalities for **engaging machinery for demolition of illegally constructed buildings (8-ton crane truck)** range from 2,588 to 7,678 MKD per hour, which means that the highest price paid for this service is 2 times higher than the lowest price; and
- prices paid by municipalities for **hiring labour force for demolition of illegally constructed buildings** range from 177 to 512 MKD per hour, which means that the highest price is by 189% higher than the lowest price.

Having in mind that 10 contracting authorities refused to disclose information requested (PE Macedonian Railways “Transport” and PCE Tetovo in the Index of Rationality for electricity; Ministry of Health and PHI “Public Health Centre” – Veles in the Index of Rationality for tetanus vaccines; Municipalities of Cair, Krivogastani and Zrnovce, as well as PCE “Niskogradba” – Bitola in the Index of Rationality for street resurfacing; and Municipalities of Radovis and Struga in the Indices of Rationality for

engaging machinery and hiring labour force for demolition of illegally constructed buildings), the question whether differences in price attained by individual contracting authorities would have been even higher than those established is still valid.

Great differences recorded in terms of prices attained for same type of products or services confirm the fact that implementation of public procurement procedures in compliance with the Law on Public Procurements does not necessarily guarantee that contracting authorities will obtain the best market terms and conditions for procurement of particular products or services.

Series of insights obtained from the Index of Rationality no. 11 confirm the rule that greater competition is of crucial importance for attainment of more favourable prices. First, the Index of Rationality for street resurfacing, which is marked by lowest differences in price by 64%, is characterized by the highest level of competition in relevant procurement procedures (4 from total of 8 tender procedures analysed were presented with 6 bids). Moreover, the municipality from this Index which attained the highest price for street resurfacing received only one bid.

Second, the lowest level of competition was observed under the Index of Rationality for engaging machinery for demolition of illegally constructed buildings, which is also marked by highest differences in price attained by individual institutions by 197%. 4 from total of 7 tender procedures analysed under this Index received only one bid each.

Third, the rule whereby absence of competence negatively affects prices attained is confirmed by the fact that the highest prices recorded in the Index of Rationality no. 11 were attained in tender procedures that were presented with only one bid (tender procedure for procurement of tetanus vaccines implemented by the General Hospital “8th September” – Skopje, tender procedure for street resurfacing implemented by the Municipality of Ohrid, tender procedure for engaging machinery and hiring workers for demolition of illegally constructed buildings implemented by the Municipality of Butel) or only one bid was assessed as acceptable (tender procedure for procurement of electricity implemented by PE Macedonian Railways “Infrastructure” – Skopje).

On this account, the first key recommendation defined on the basis of findings presented in the Index of Rationality no. 11 is for contracting authorities to focus on increasing competition in tender procedures they are organizing. In that regard,

relevant tender documents should be developed with a view to stimulate, instead of restrict competition, as established in some tender procedures analysed.

Furthermore, the fact that this Index established differences in price by around 200% for procurement of same type of services, but contracting authorities still signed contracts at such prices, undoubtedly shows that institutions are not knowledgeable of the situation on relevant markets. Namely, according to Article 169, paragraph 1, line 6 of the Law on Public Procurements, contracting authorities have the right to annul procedures on public procurement contract awarding in cases when bidding companies have offered prices and terms and conditions for contract performance that are less favourable than actual market prices and conditions. Having in mind that index-targeted contracting authorities did not assess offered prices as unacceptable, the second key recommendation implies that contracting authorities must assume serious approach to public spending and undertake relevant preparations prior to announcement of tender procedures (exchange of information with other contracting authorities or market research) which, in turn, would provide solid basis for assessment whether prices bided are realistic and acceptable. Actually, this is the main goal for development of the Index of Rationality: in addition to raising public awareness on the need for greater prudence in public spending, the Index should also help state institutions improve cost-effectiveness of their public spending.