



Albanian Energy Regulatory Entity

# Analysis of factors influencing Investor's decision making on RES (SHPP) (preliminary results)

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# Content;

- Background
- Aim of the study
- Methodology
- Preliminary results
- Follow up



# Background

- Domestic demand for power in constant increase
- Insufficient installed power generation capacities.
- Government willing to support investments in power generation, particularly RES (hydro)
- Interest from private businesses to invest in power generation
  - Local Entrepreneurs mainly present in SME;
  - Foreign investors interested in large scale investments, but also in medium and small scale.
- Need to maintain and improve the investor's interest



# Aim of the Study!

- **Attracting private sector in power generation;**
  - critical importance for the security of supply and meeting domestic demand.
- **To help in Drafting more efficient policies to attract investments**
  - knowledge of essential factors that condition the decision making of companies to invest in the power sector – **identification of Factors**
  - Knowledge of the **relative importance** of Factors – by assessing the investor's perception of the relative importance of each identified factor in the decision making process.
  - **Measurement** – through a questionnaire designed for this purpose.

# Methodology



- **Focus Group:**
  - Domestic and foreign investors in possession of a **concession agreement** for the construction of (SHPP);
  - Domestic and foreign investors that have already obtained **ownership or exploitation rights** for SHPP..
- **Collection of primary data :**
  - Standard questionnaire
  - Listing of **81 factors** supposed to influence the decision making of investors.
- **Time period:**
  - Projects approved until end of year 2011
- **Primary instrument for the assessment of Factor's relative importance in the decision making process :**
  - Likert Scale of 5 levels
- **Questionnaires replied so far :**
  - 47 companies or nearly 70% of targeted group (70).

# Structure of the Questionnaire (question Nr 8)



- *Considering a 5 levels scale of impact, as shown in the table, please make an assessment of the impact of each the listed factors in your decision making process*

1	<i>No impact</i>
2	<i>Little impact</i>
3	<i>Moderate impact</i>
4	<i>High impact</i>
5	<i>Fundamental role</i>

- .... *by please making a circle in the number corresponding to your choice.*
- Mark number 1 if the absence or the worst quality of that factor **is not an obstacle** for you to decide to invest. Mark number 5 if the absence or **the worst quality** of that factor influences you **not to undertake the investment**. So the number 5 shows that the factor is the reason for you not to invest in electricity generation.
- For **example** for the factor ‘**Terrain**’, you will mark with number 1, if the bad ground with slopes didn’t impede you to invest. On the contrary, if you think that, because of the bad grounds with slopes, you will not decide to invest, ‘Terrain’ has to be marked with number 5. Numbers between 1 to 5 will express your assessment for the opinion between two extremes.
- To understand better the factors you may consult the notes in “Table and Clarifications” which will be given attached to the questionnaire.



# Question 8.1

8.1. Geographical Impacts (first sub group of Factors)		How much, the elements of this factor had impact on the decision taken for investing in electricity generation <i>(Circle a number to select the option for each row)</i>				
		No impact	Little impact	Moderate impact	High impact	Fundam ental role
8.1.1.	Availability and adequacy of source or characteristic in nature (water, sun, wind, etc.)	1	2	3	4	5
8.1.2.	Terrain of the plant construction	1	2	3	4	5
8.1.3.	The distance from the main roads	1	2	3	4	5
8.1.4.	The distance to the network	1	2	3	4	5
8.1.5.	The distance to the border line	1	2	3	4	5
8.1.6.	The existence and the quality of the access roads (up to the plant)	1	2	3	4	5



# Descriptive Statistics

## Ranking of Factors according to relative importance :

- The indicators that will be used for the comparison of the results of investor's perception for each of the Factors will be;
  - Arithmetic Mean ;
  - Mode (the choice/number with the highest frequency);
  - Percentage indicator of the of the assessment of the “Fundamental Role” (score of 5-es) for that factor on the decision making process to invest in RES/SHPP according to investor's perception. This indicator is calculated by dividing the Fundamental Role score (i.e. nr of 5's) with the number of valid replies for that factor multiplied by 100).
- Consideration is also given to the level (%) of factors that are under the direct or indirect control of Government. (assess whether Government can intervene or it's outside its influence)



# Government Control on the Listed Factors



Factors under;	Nr of Factors	%	Factors directly or indirectly linked with Govern.	%
<b>Direct</b> control of Government	36	<b>44.4</b>	56	<b>69.1</b>
<b>Indirect</b> control of Government	20	24.7		
<b>Neutral</b> or outside the Govern. control	25	30.9	25	30.9
Total:	81	100	81	100



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## **Results of the Assessment of Factors according to Preliminary Groupings**

## Group 1: Geographical Impacts

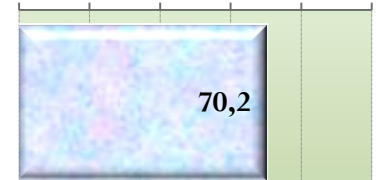
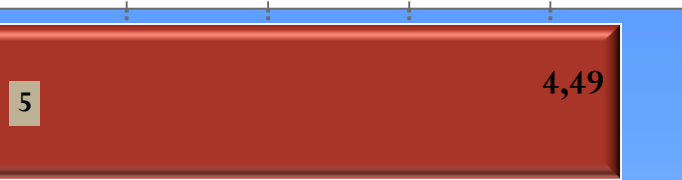
■ Arithmetic Mean

Mode

Share (%) of  
"fundamental  
role" factor

0 20 40 60 80 100

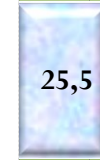
**Availability and adequacy of source or characteristic in nature (water, sun, wind, etc.)**



**The distance to the network**



**Terrain of the plant construction**



**The distance from the main roads**



**The existence and the quality of the access roads (up to the plant)**



**The distance to the border line**

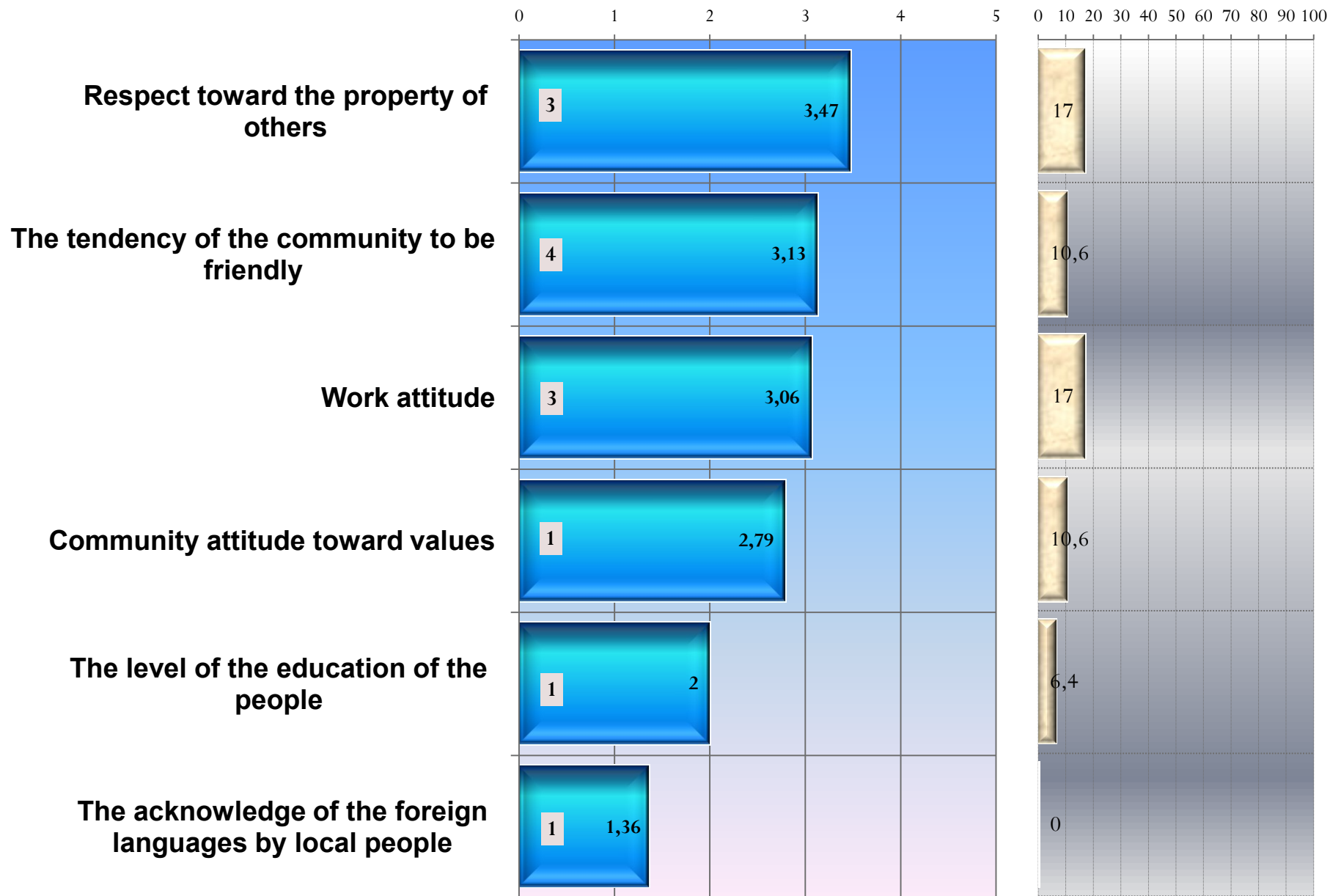


0 1 2 3 4 5

## Group 2: Social Cohesion And Cultural Level

Arithmetic Mean Mode

Share (%) of  
"fundamental role"  
factor



## Group 3: Political Environment And The Government

■ Arithmetic Mean
 Mode

Share (%) of  
"fundamental role"  
factor

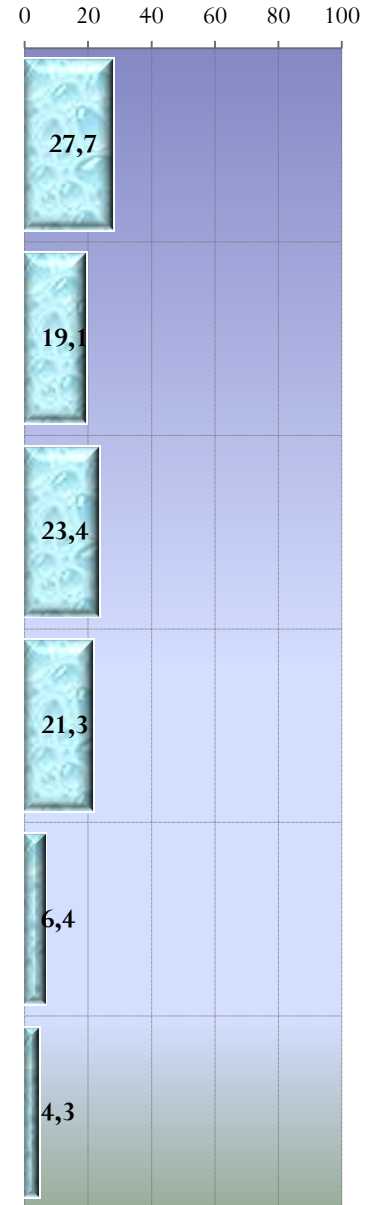


## Group 4: General Economic Conditions

Arithmetic Mean Mode

Share (%) of  
"fundamental role"  
factor

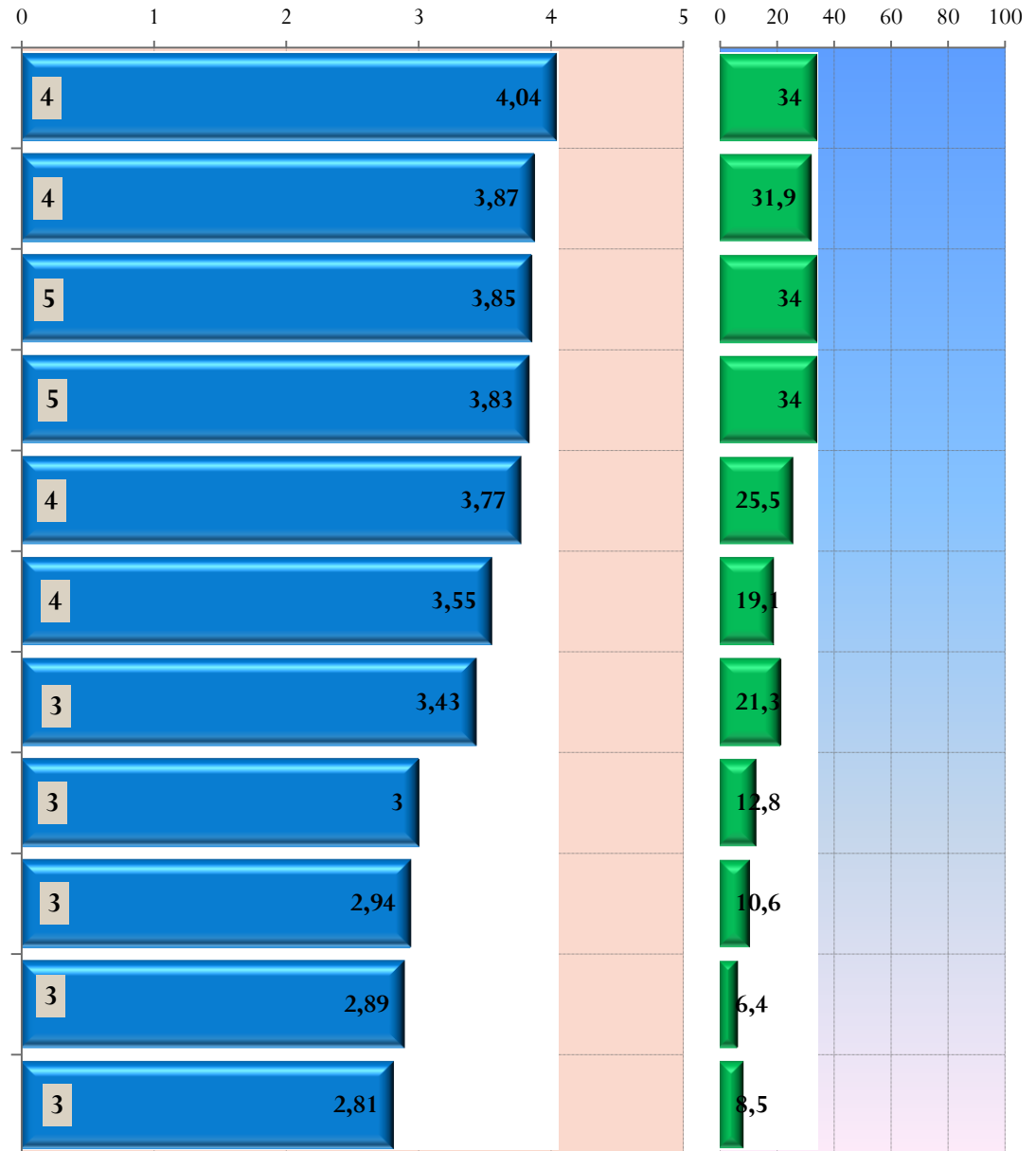
The possibility of sailing the certified  
product as renewable in Italy etc.



## Group 5: Market Conditions And Competition

■ Arithmetic Mean      Mode

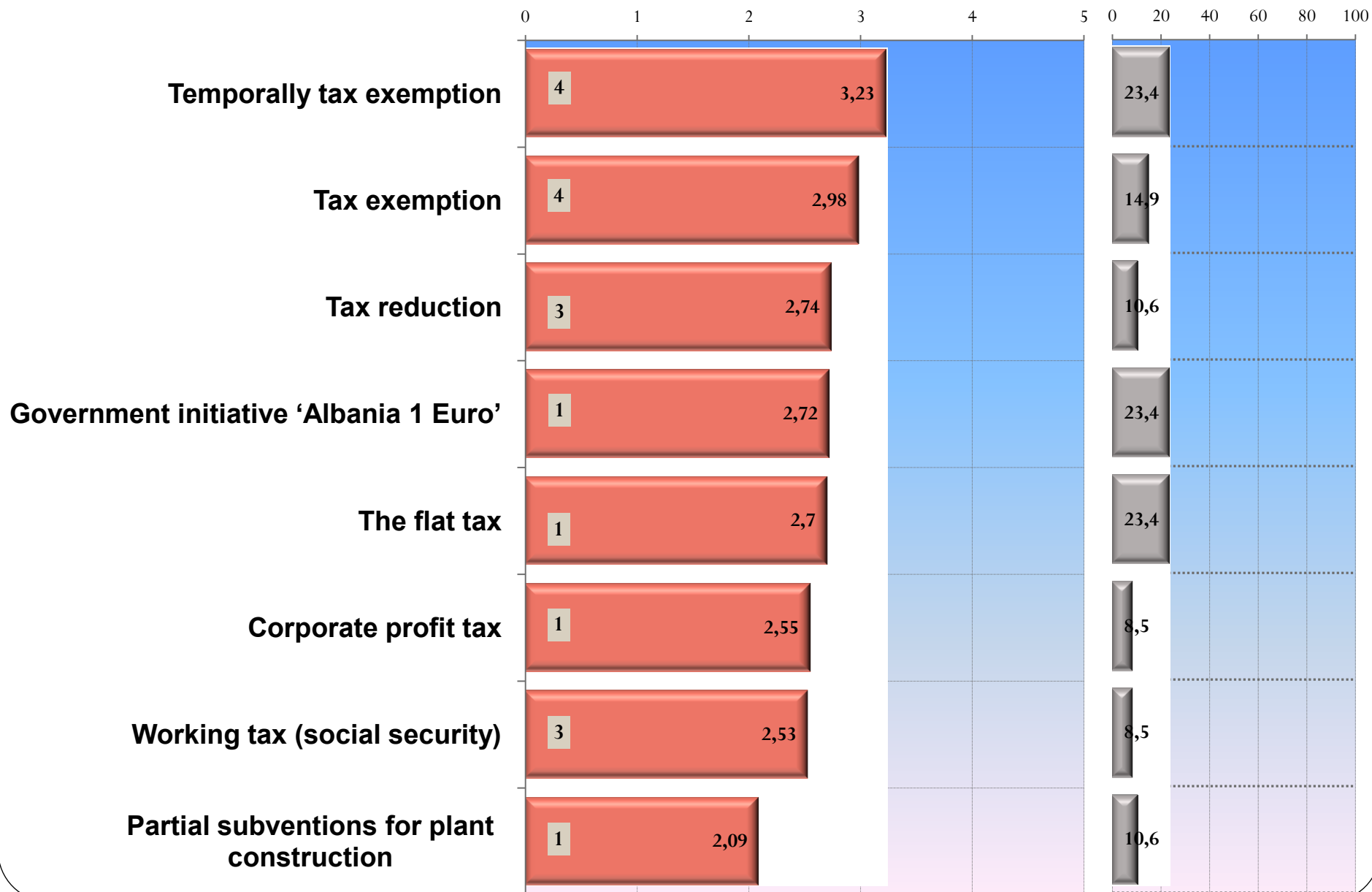
Share (%) of  
"fundamental role"  
factor



## Group 6: Instruments Of Fiscal Policy

Arithmetic Mean Mode

Share (%) of  
"fundamental role"  
factor



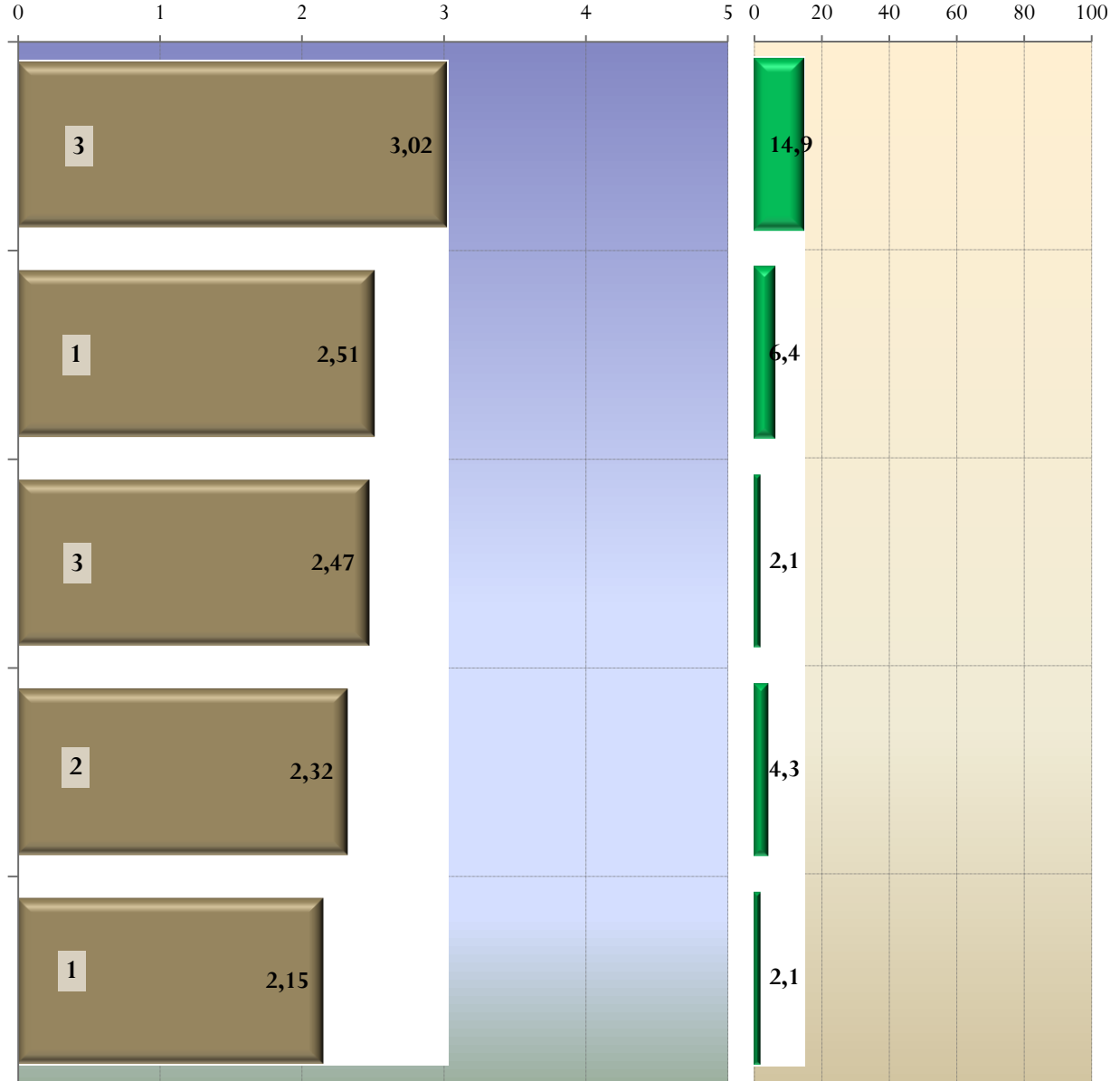


## Group 7: Instruments Of Monetary Policy

■ Arithmetic Mean

■ Mode

Share (%) of  
"fundamental role"  
factor



## Group 8: Legal Framework

Share (%) of  
"fundamental role"  
factor

■ Arithmetic Mean

■ Mode

0 1 2 3 4 5 0 20 40 60 80 100

Long term purchase of the product

5

4,47

68,1

Obligation of the Whole Sale Supplier to purchase in different resources

5

4,3

55,3

Law on Concessions and other acts (CMD-s)-what offer

5

4,28

55,3

Application of the Concession Law and other (CMD-s)

4

4,02

36,2

Conditions laced by the government for carrying out the investment

3

3,21

12,8

Investors are informed

4

3,13

8,5

The right of the investors to keep more than one place (for construction of the plant).

3

3,04

19,1

Establishment of the rent for natural resources

3

2,89

8,5

Number of the institutions involved in the process

3

2,87

10,6

The right expropriation

3

2,85

17

The bureaucratic procedures

3

2,85

8,5

The right solution for disagreements

3

2,51

6,4

Law for Protection of Foreign Investments

1

2,3

10,6

Repatriation of the profit

1

2,26

2,1

Difficulties for PPA negotiation.

1

2,26

2,1

The right litigation

2

2,11

2,1

The right confiscation

1

2,02

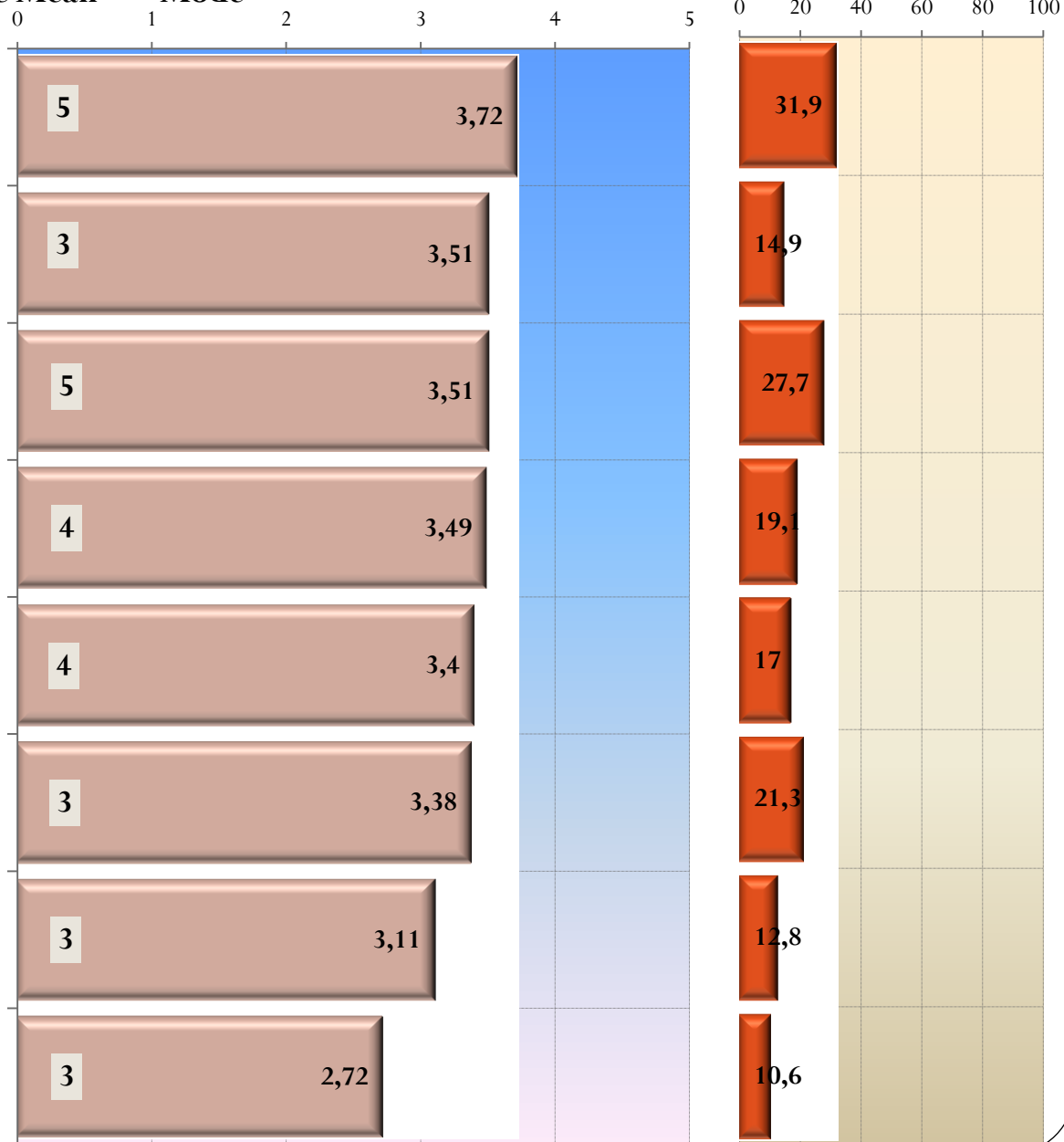
6,4

## Group 9: Regulating Framework

Arithmetic Mean

Mode

Share (%) of  
"fundamental role"  
factor



## Group 10: Data From Agencies Dealing With Investment, Specialized Institutes, Local Authorities

Share (%) of  
"fundamental role"  
factor

Arithmetic Mean Mode

0 1 2 3 4 5 0 20 40 60 80 100

Position of local authority

4

3,4

23,4

Establishment of One-stop-shop for  
license permissions

3

3,13

12,8

Long term, Well organized, Credible  
technical data

3

3,09

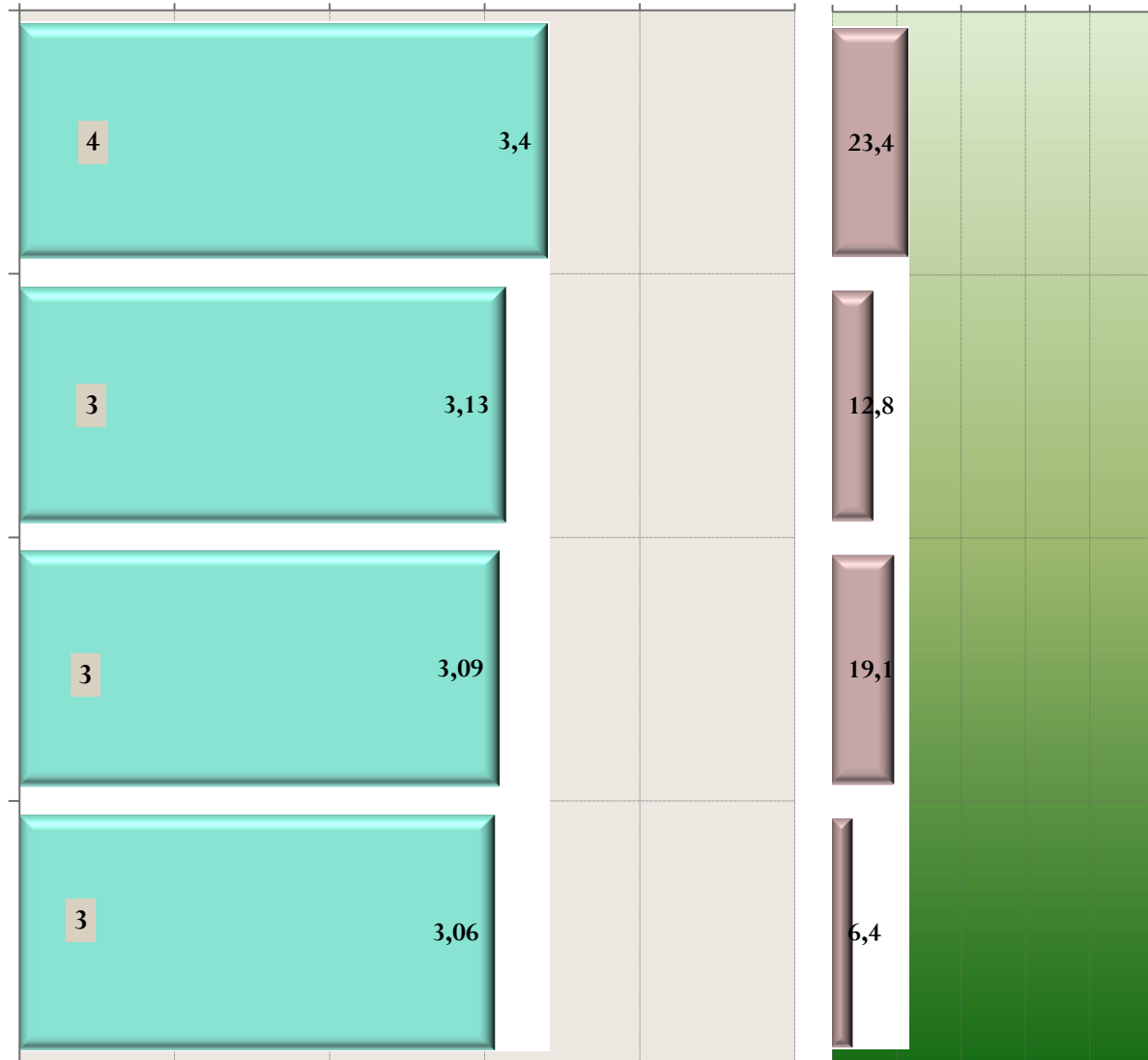
19,1

The cost of Feasibility Study

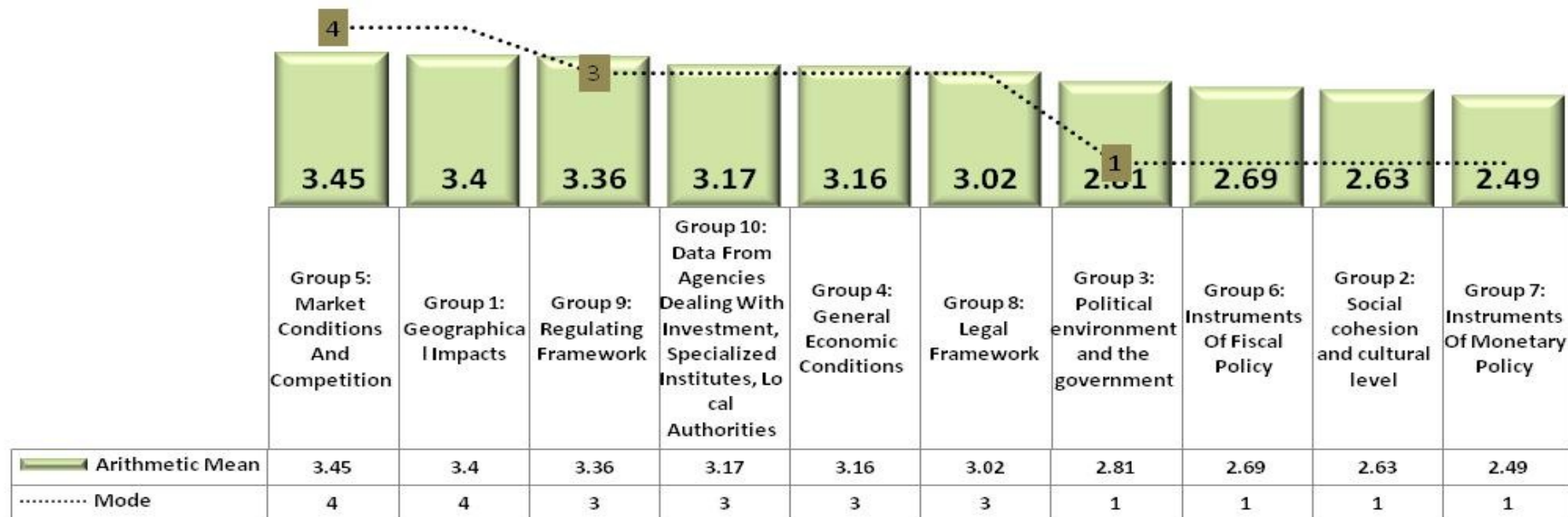
3

3,06

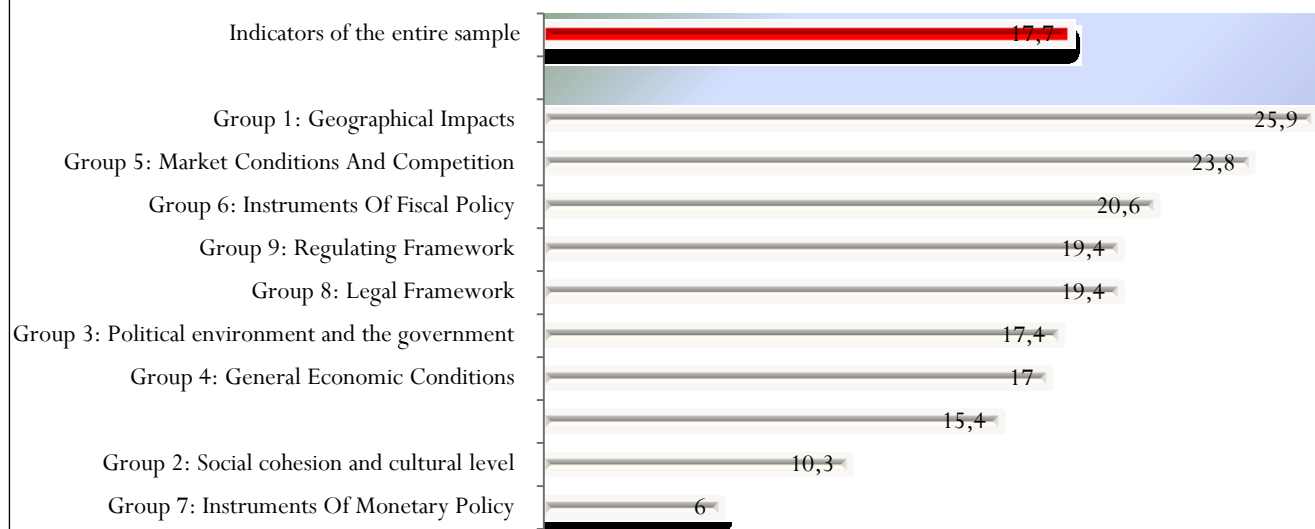
6,4



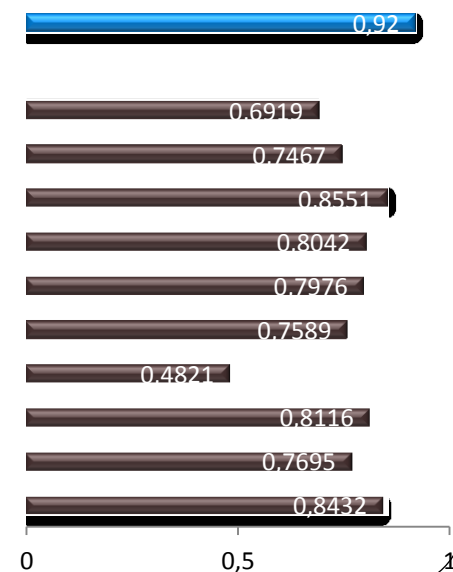
## Ranking of groups by arithmetic average



## Share (%) of "fundamental role" factor



## Cronbach's Alpha





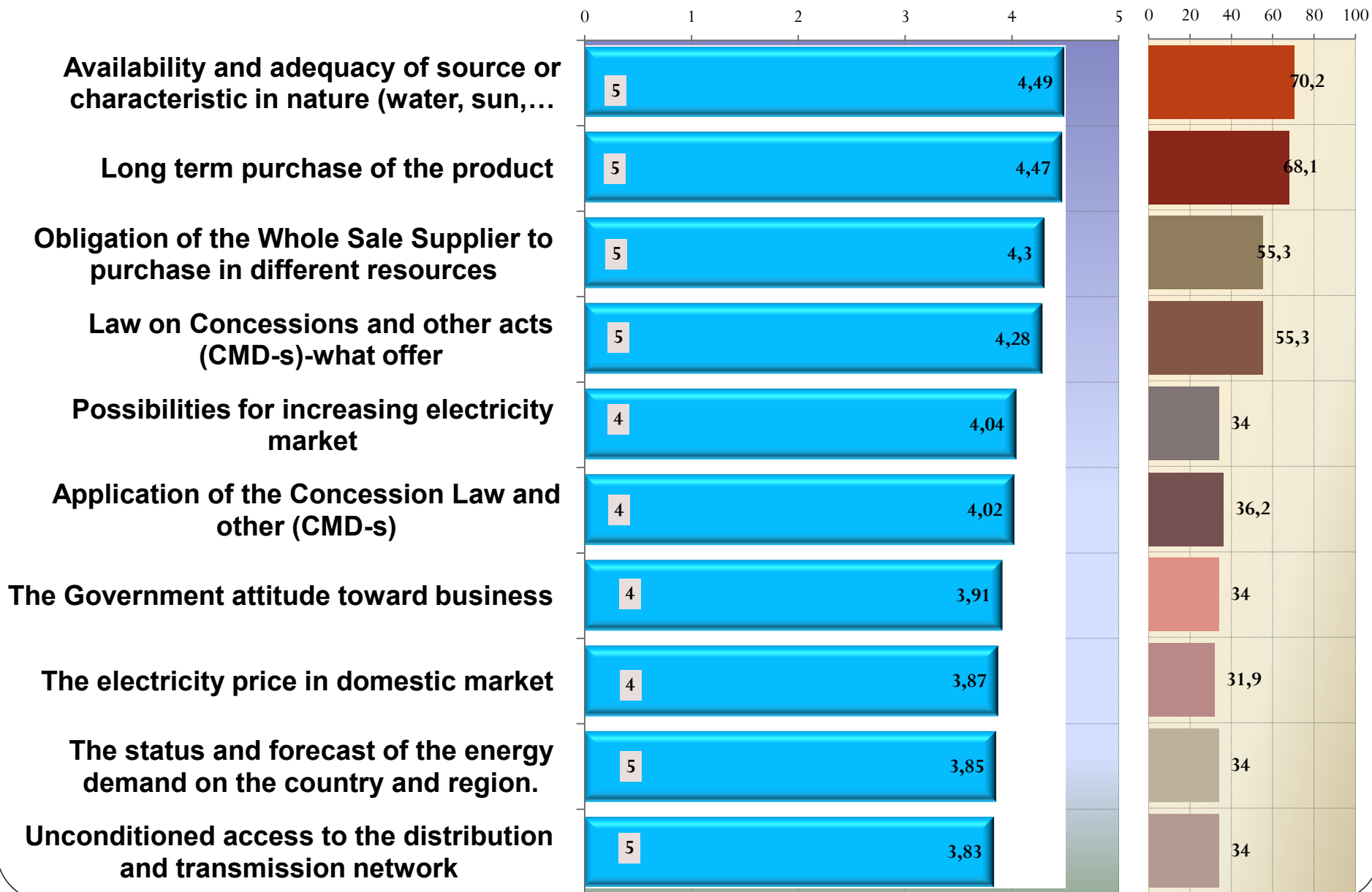
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## **Results of the Assessment without considering the preliminary Groupings**

## First 10 Factors out of a total of 81 factors assessed

■ Arithmetic Mean    Mode

Share (%) of  
"fundamental  
role" factor



# Government control and their distribution according to Preliminary Groupings



Ranking As assessed without preliminary Grouping	Groups of Factors of Preliminary defined									
	Market Conditions And Competition	Geographical Impact	Regulating Framework	Data From Agencies Dealing With Investment, Specialized	General Economic Conditions	Legal Framework	Political Environment And The Government	Instruments Of Fiscal Policy	Social Cohesion And Cultural Level	Instruments Of Monetary Policy
	1	2	3	4	5	6	7	8	9	10
1	1									
2								2		
3								3		
4								4		
5					5					
6								6		
7			7							
8					8					
9					9					
10					10					
The number of factors for each group	1	0	1	0	4	0	0	4	0	0

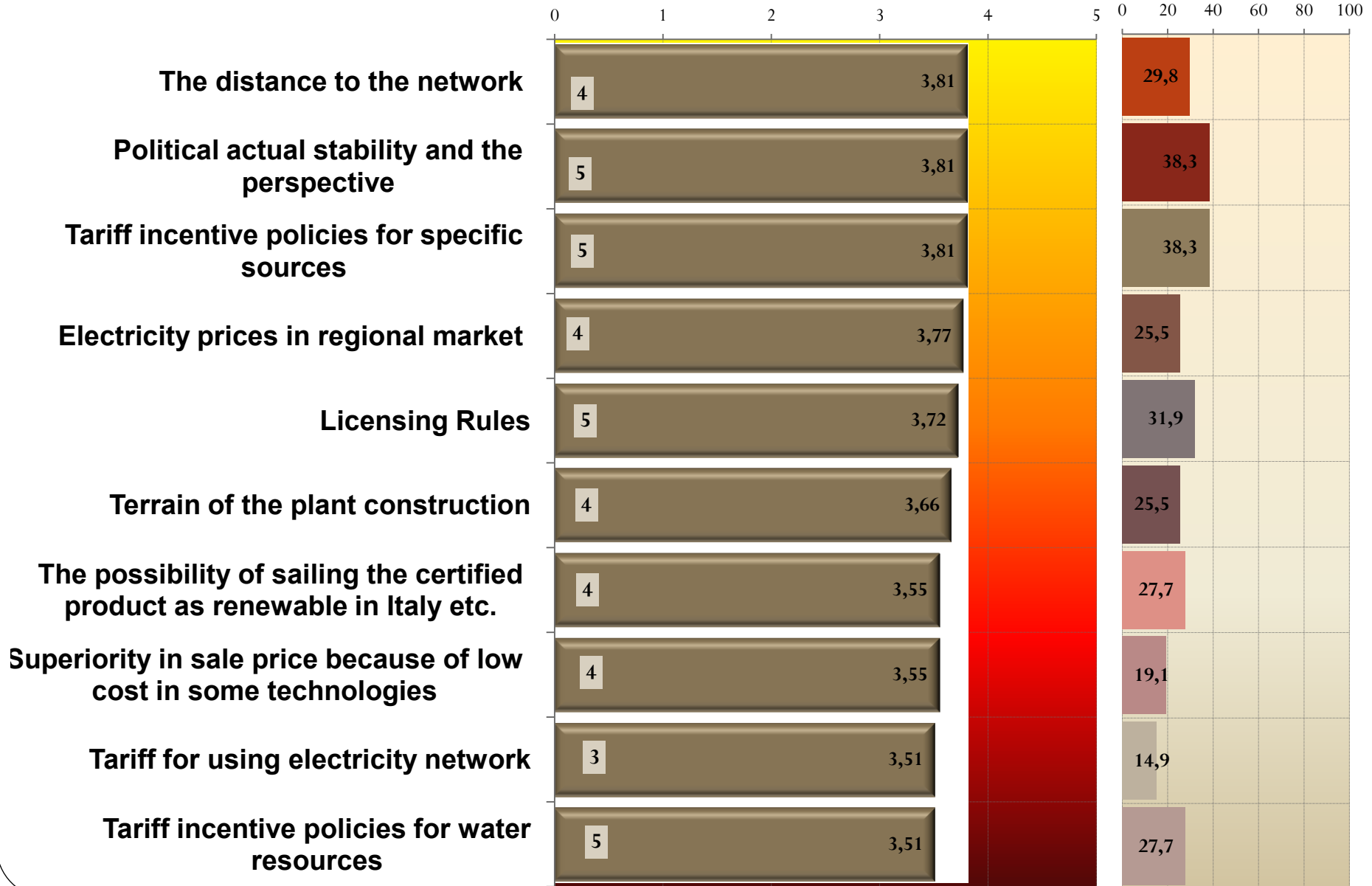
	FACTORS IN DIRECT GOVERNMENT CONTROL	6	60%
	FACTORS IN INDIRECT GOVERNMENT CONTROL	1	10%
	NEUTRAL OR OUTSIDE THE GOVERN. CONTROL	3	30%



# Indicators of the factors ranked between 11 - 20 out of a total of 81 factors assessed

Share (%) of  
"fundamental role"  
factor

■ Arithmetic Mean    Mode



# Government control and their distribution according to Groups

Ranking As assessed without preliminary Grouping	Groups of factors as defined by Preliminary Grouping									
	Market Conditions And Geographic al Impact	Regulating Framework	Data From Agencies Dealing With	General Economic Conditions	Legal Framework	Political Environmen t And The	Instruments Of Fiscal Policy	Social Cohesion And	Instruments Of Monetary Policy	
	1	2	3	4	5	6	7	8	9	10
11	11									
12										
13										
14										
15										
16	16									
17										
18										
19										
20										
The number of factors for each group	2	0	2	1	2	0	0	0	3	0

	FACTORS IN DIRECT GOVERNMENT CONTROL	2	20%
	FACTORS IN INDIRECT GOVERNMENT CONTROL	2	20%
	NEUTRAL OR OUTSIDE THE GOVERN. CONTROL	6	60%



# Research follow up!

- Factor Analysis for the concentration of the information in a smaller number of variables by avoiding or minimizing loss of original information.
- Regression analysis with dummy variables; dependent variable being the presence or absence of investment in the already subcontracted projects (by concession or in ownership) and the independent variables being the factors as assessed from the investors/factor's analysis .



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# Thank You!

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