Approaching the eGovernment as a Strategic Driver for Improving the Ethical Model: An Empirical Analysis From Business Economics

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Abstract: The paper presents a research regarding the effective correlation between innovation (where the eGovernment processes are included) and ethical behaviour model. The final result applied in European Union States (approximately the final results is 0,90, as average value for the period of six years 2003-2008) shows us that is possible to approach the eGovernment as a strategic driver for improving the ethical model shared by the people in a nation, as well as in a business company or - in general terms - in a community.

Keywords: business economics, eGovernment, ethics, innovation, information system

1. Introduction to the research methodology

The first part of the paper presents the research regarding the effective correlation between two clusters: innovation and ethical behaviour model : the empirical research studies the European Union States and covers a six years period (2003-2008). The innovation cluster includes eGovernment processes, Information Communication Technologies (ICT), Research & Development Expenditure, Education Investment, (etc.), while the second one (ethical behaviour model) contains elements such as e-Governance processes, ethical values, the observance of the law, merit rating system, social cohesion, (etc.). The research of the indicators was carried out by consulting the data sources offered by the following international bodies: European Commission, Eurostat, Transparency International, World Bank and Ethical Rating Agencies (Agenzia Europea di Investimenti Standard Ethics). The contribution of this research has had, as prerequisite, the identification in the current processes for improvement and development of models of eGovernment (Mofleh et al., 2009), where the crucial role is represented by the share of the underlying reference model value, measured by ethical parameters. In the model, the issue of governance (Power, 2010; Spirakis et al., 2010) and their criticality, has been pressing an action that often, as we have already registered, leading to inefficient results, or in some cases, insufficient demand, born spontaneously the reasoning above is whether there are other ways in addition to that legislation, the improvement of these imbalances: the alternative way (followed in this study) was designed to measure the level of innovation, cluster where the eGovernment processes are located. In a short period study the eGovernment processes represent a right way to introduce efficiency and effectiveness in the public sector management and innovation improve the ethical behaviour model; while in a long period study, it can be argued that there is an exchange on dependence between the two variables: the ethical behaviour model can improve the innovation level standard, including, therefore, also an optimization of the processes of eGovernment (Kumar et al., 2007). The first part of the paper presents the research regarding the effective correlation between two clusters: innovation and ethical behaviour model: the empirical research studies the European Union countries area and covers a six years period (2003-2008).

To achieve the above mentioned goal, two baskets of indicators have been identified:

- The first basket (basket of innovation indexes) is the Summary Innovation Index (SII), that is an arithmetic weighted average of 33 innovation indexes (data sources: European Commission/Eurostat);
- The second basket (basket of ethical indexes) includes the following seven ethical indexes: 1) AEI Standard Ethics (data source: Agenzia Europea di Investimenti Standard Ethics); 2) Corruption Perception Index (CPI) (data source: Transparency International); 3) Control of corruption (data source: World Bank); 4)Voice and accountability(data source: World Bank); 5) Government effectiveness (data source: World Bank); 6) Political stability and absence of violence (data source: World Bank); 7) Regulatory quality (data source: World Bank) and 8) Rule of law (data source: World Bank).

Each index has presented the following characteristics:

- Availability for the period 2003-2008;

- Applicability to almost all of the 27 European Union countries;
- Representativeness of the country;
- Possibility of comparison between them.

1.1 Presentation of the basket of innovation indexes

The basket of innovation indexes includes the Summary Innovation Index (SII), that is an arithmetic weighted average of 33 innovation indexes (data sources: European Commission/Eurostat). The indicator is composed of a basket of sub-indicators that vary over time. This composite index measures the "innovation performance" through three innovation inputs [A1) drivers of innovation, A2) creation of new knowledge, A3) innovation and entrepreneurship] and two innovation outputs [B1) applications, B2) intellectual property]: the sub-indicators considered for the purposes of this study have the characteristics specified below.

A1) Drivers of innovation (7 indexes).

- 0Graduates in science and engineering per 1,000 population (age group 20-29 years) - S & E graduates (% of population aged 20-29).
- Population with tertiary education in the field (age 25-64) - Population with tertiary education (% of population aged 25-64).
- Rate of broadband penetration (number of broadband lines per 100 inhabitants) - Broad-band penetration rate (number of broadband lines per 100 population).
- Participation in a long training period (age 25-64) - Participation in life-long learning (% of population aged 25-64).
- Level of education achieved at a young age (% of population aged 20-24 years who have completed university) - Youth education attainment level (% of population aged 20-24 having completed at least upper secondary education).
- Internet Access or domestic - Level of Internet access of households.
- Share or SMEs with a website - Level of Internet access of enterprises.

A2) Creation of new knowledge (6 indexes).

- Public expenditure on research and development (% of GDP) - Public R & D expenditures (% of GDP).
- Private expenditure on research and development (% of GDP) - Business R & D expenditures (% of GDP).
- Share of R & D in medium-high and high technology (% of expenditure in R & D in Industry) - Share of medium-high-tech and high-tech R & D (% of manufacturing R & D expenditures).
- Proportion of firms that receive public funds for innovation - Share of enterprises receiving public funding for innovation.
- University R & D financed by the private sector - University R & D expenditures financed by business sector.
- Share of venture capital investments in High-tech venture capital (% of venture capital invested).

A3) Innovation and entrepreneurship (6 indexes).

- Industrial products and services, created in SMEs (% product and service).
- Proportion of Early-stage venture capital (% of GDP).
- SMEs innovating in cooperation (% product and service).
- Expenditure on innovation - Innovation expenditures (% of turnover).
- ICT expenditure (% GDP) - ICT expenditures (% of GDP).
- Share of SMEs that do not change on a technical level - SMEs using non-technological change (% of SMEs).

B1) Applications (7 indexes).

- Employees in high-tech services (% of the workforce) - Employment in high - tech services (% of total workforce).

- Employed in the production of high-or medium-high technological content (% Labour Force) – Employment in medium/ high and high - tech manufacturing (% of total work-force).
- Exports of high technology products as a share of total exports.
- Sales of new products (% of sales) - Sales on new market products (% of turnover).
- Sales of new products for the firm, but not new to the market (% of turnover).
- Value-added in high-tech manufacturing (% of manufacturing value-added).
- SMEs Rate of volatility (sum of birth rate and death rate).

B2) Intellectual property (7 indexes).

- European habitants: this indicator brings together the number of high-tech patents validated by the European Patent Office, with the total population.
- American habitants. (New) USPTO high-tech patents: this indicator is the U.S. equivalent, of the above described for Europe.
- EPO patents: this indicator brings together the number of patents approved by the European Patent Office (EPO) with the total population.
- USPTO patents per million Americans: this indicator brings together the number of patents approved by the U.S. Patent Office (USPTO) with the total population.
- New Triadic patent families per million population: this indicator brings together the number of patents of the "triad", with the total population. A patent is the triad if and only if it was lodged with the European Patent Office (EPO), the Japanese Patent Office (JPO) and the U.S. Patent and Trademark Office (USPTO).
- Number new domestic community trademarks (CTM) per million population.
- Number of (new) domestic community industrial designs per million population.

1.2 Presentation of the basket of ethical indexes

The second basket (basket of ethical indexes) includes the following seven ethical indexes: 1) AEI Standard Ethics (data source: Agenzia Europea di Investimenti Standard Ethics); 2) Corruption Perception Index (CPI) (data source: Transparency International); 3) Control of corruption (data source: World Bank); 4)Voice and accountability(data source: World Bank); 5) Government effectiveness (data source: World Bank); 6) Political stability and absence of violence (data source: World Bank); 7) Regulatory quality (data source: World Bank) and 8) Rule of law (data source: World Bank).

AEI Standard Ethics (data source: Agenzia Europea di Investimenti Standard Ethics). Evaluations in terms of ethical Rating (national or regional) have as a reference the concept of Ethics and Social Responsibility issued according to parameters set by international bodies like the UN, OECD and the European Union. The final evaluations of the EEA Ethics Standards are expressed in the form of a rating to eight levels (EEE, EEE-, EE+, EE, EE-, E+, E, E-). The rating is the result of statistical and scientific activity carried out with the intention of photographing the world of business in relation to ethical principles promoted by large international organizations.

Corruption Perception Index (CPI) (data source: Transparency International). The index of perceptions of corruption in English Corruption Perception Index (CPI) is an indicator published annually since 1995 by Transparency International ordering the countries of the world on the basis of the level that the existence of corruption is perceived among public and political office.

Control of corruption (data source: World Bank). The indicator provided by the World Bank measures the ability of the political, legal and judicial systems to prevent and combat corruption.

Voice and accountability(data source: World Bank). This index provided by the World Bank measures the degree of civil liberties and political rights and influence of the effective population in the election of political leaders, so far, to the level of independence of the media from political pressure.

Government effectiveness (data source: World Bank). The indicator published by the World Bank that measures the quality of public services, the credibility of the Government on the measures to be implemented, the quality of the bureaucracy and the independence of civil servants from political pressure.

Political stability and absence of violence (data source: World Bank). The index published by the World Bank, which measures the perceptions of the likelihood that destabilize the government or be removed by unconstitutional or violent means, including domestic violence and terrorism.

Regulatory quality (data source: World Bank). Indicator published by the World Bank, which measures the ability of the government to formulating and implementing policies that can enable and promote the development of the private sector.

Rule of law (data source: World Bank). Indicator published by the World Bank, which captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

2. Standardization original data

In order to compare these indexes, their values have been standardized, and traced back to a single scale in terms of cents: the process used is explained below.

Innovation Indicators. Summary Innovation Index (SII) (data sources: European Commission/Eurostat). Summary Innovation Index standardization was obtained by multiplying by 100 the original data, according to the following proportion: Since the original: Given standardized (x) = 1:100.
Ethics Indicators.

AEI Standard Ethics (data source: Agenzia Europea di Investimenti Standard Ethics). Cents in the conversion of this quality indicator is obtained through the following conversion scale: EEE=100; EEE-= 85.71428571; EE + =71.42857143; EE=57.14285714; EE-=42.85714286; E +=28.57142857; E=14.28571429 and E-=0.

Corruption Perception Index (CPI) (data source: Transparency International). The indicator in question is represented by a scale from 0 to 10, its conversion into cents was realized through the following proportion: since the original: Given standardized (x) = 10:100. Control of corruption, Voice and accountability, Government effectiveness, Political stability and Absence of Violence, Regulatory quality and Rule of Law (data source: World Bank). The six indicators of the World Bank are expressed on a scale whose values range from -2.5 to +2.5. Cents in the conversion has been obtained through the following conversion scale: since normalized (x) = (as original + 2.5) * 20.

For achieving the aim and the scope of the research, the calculation of the correlation was obtained by the following indicators:

- The independent variable “Innovation”: the indicator is calculated as a result of several sub-indicators and corresponds to the Summary Innovation Index;
- The dependent variable “Ethics”: the data used is the value that results from the average of the basket composed of the seven indicators described above;
- The values that derives from the process of normalization of the original data bases.

In the following pages the research presents the tables “Calculation of correlation between “Innovation” (x) and “Ethics” (y), Years 2003, 2004, 2005, 2006, 2007 and 2008” (see Tables: 1, 2, 3, 4, 5 and 6): once completed these Tables the correlation index has been calculated, separately for each year, using the Pearson index model.

Table 1: Correlation between “innovation” (x) and “ethics” (y) – year: 2003

Nations	x	y	(x – mx)	(y – my)	$(x – mx)^2$	$(y – my)^2$	(x – mx)*(y – my)
Austria	47	82,19	8,48	10,11	71,91	102,21	85,73
Belgium	51	76,69	12,48	4,61	155,75	21,25	57,53
Bulgaria	20	50,91	-18,52	-21,17	342,99	448,17	392,07
Cyprus	29	67,77	-9,52	-4,31	90,63	18,58	41,03
Denmark	68	89,40	29,48	17,32	869,07	299,98	510,59
Estonia	35	68,60	-3,52	-3,48	12,39	12,11	12,25
Finland	69	89,46	30,48	17,38	929,03	302,06	529,74
France	48	74,94	9,48	2,86	89,87	8,18	27,11

Germany	59	79,79	20,48	7,71	419,43	59,44	157,90
Greece	26	63,80	-12,52	-8,28	156,75	68,56	103,67
Ireland	50	79,89	11,48	7,81	131,79	61,00	89,66
Italy	32	65,28	-6,52	-6,80	42,51	46,24	44,34
Leetonia	16	61,34	-22,52	-10,74	507,15	115,35	241,86
Latvia	23	63,89	-15,52	-8,19	240,87	67,08	127,11
Luxemburg	50	84,65	11,48	12,57	131,79	158,00	144,30
Malta	27	76,37	-11,52	4,29	132,71	18,40	-49,42
Netherlands	50	84,96	11,48	12,88	131,79	165,89	147,86
Poland	21	58,72	-17,52	-13,36	306,95	178,49	234,07
Portugal	21	73,48	-17,52	1,40	306,95	1,96	-24,53
United Kingdom	57	82,04	18,48	9,96	341,51	99,20	184,06
Czech Republic	32	63,90	-6,52	-8,18	42,51	66,91	53,33
Romania	16	45,91	-22,52	-26,17	507,15	684,87	589,35
Slovakia	23	59,84	-15,52	-12,24	240,87	149,82	189,96
Slovenia	32	68,49	-6,52	-3,59	42,51	12,89	23,41
Spain	32	75,34	-6,52	3,26	42,51	10,63	-21,26
Sweden	82	88,83	43,48	16,75	1890,51	280,56	728,29
Hungary	24	66,60	-14,52	-5,48	210,83	30,03	79,57
European Average	38,52	72,08	===	===	310,69	129,18	174,06
Correlation Index	0,87						

Table 2: Correlation between “innovation” (x) and “ethics” (y) – year: 2004

Nations	x	y	(x – mx)	(y – my)	$(x – mx)^2$	$(y – my)^2$	(x – mx)*(y – my)
Austria	46	82,79	7,63	11,09	58,22	122,99	84,62
Belgium	49	78,66	10,63	6,96	113,00	48,44	73,98
Bulgaria	21	51,63	-17,37	-20,07	301,72	402,80	348,62
Cyprus	29	65,63	-9,37	-6,07	87,80	36,84	56,88
Denmark	66	90	27,63	18,3	763,42	334,89	505,63
Estonia	34	69,37	-4,37	-2,33	19,10	5,43	10,18
Finland	68	89,59	29,63	17,89	877,94	320,05	530,08
France	48	75,74	9,63	4,04	92,74	16,32	38,91
Nations	x	y	(x – mx)	(y – my)	$(x – mx)^2$	$(y – my)^2$	(x – mx)*(y – my)
Germany	59	80,16	20,63	8,46	425,60	71,57	174,53
Greece	26	63,4	-12,37	-8,3	153,02	68,89	102,67
Ireland	49	79,69	10,63	7,99	113,00	63,84	84,93
Italy	33	63,53	-5,37	-8,17	28,84	66,75	43,87
Leetonia	16	60,26	-22,37	-11,44	500,42	130,87	255,91
Latvia	24	63,03	-14,37	-8,67	206,50	75,17	124,59
Luxemburg	50	84,75	11,63	13,05	135,26	170,30	151,77
Malta	27	74,2	-11,37	2,5	129,28	6,25	-28,43
Netherlands	49	84,91	10,63	13,21	113,00	174,50	140,42
Poland	21	56,72	-17,37	-14,98	301,72	224,40	260,20
Portugal	24	72	-14,37	0,3	206,50	0,09	-4,31
United Kingdom	57	82,36	18,63	10,66	347,08	113,64	198,60
Czech Republic	33	62,93	-5,37	-8,77	28,84	76,91	47,09
Romania	15	46,51	-23,37	-25,19	546,16	634,54	588,69
Slovakia	22	60,59	-16,37	-11,11	267,98	123,43	181,87
Slovenia	34	68,29	-4,37	-3,41	19,10	11,63	14,90
Spain	31	74,19	-7,37	2,49	54,32	6,20	-18,35
Sweden	80	88,8	41,63	17,1	1733,06	292,41	711,87

Hungary	25	66,15	-13,37	-5,55	178,76	30,80	74,20
European Average	38,37	71,70	===	===	288,97	134,44	176,07
Correlation Index	0,89						

Table 3: Correlation between “innovation” (x) and “ethics” (y) – year: 2005

Nations	x	y	(x – mx)	(y – my)	$(x – mx)^2$	$(y – my)^2$	(x – mx)*(y – my)
Austria	48	82,61	9,44	11,64	89,11	135,49	109,88
Belgium	49	77,39	10,44	6,42	108,99	41,22	67,02
Bulgaria	20	51,38	-18,56	-19,59	344,47	383,77	363,59
Cyprus	30	66,17	-8,56	-4,8	73,27	23,04	41,09
Denmark	65	88,88	26,44	17,91	699,07	320,77	473,54
Estonia	35	69,03	-3,56	-1,94	12,67	3,76	6,91
Finland	65	88,86	26,44	17,89	699,07	320,05	473,01
France	48	75,69	9,44	4,72	89,11	22,28	44,56
Germany	59	80,64	20,44	9,67	417,79	93,51	197,65
Greece	26	62,23	-12,56	-8,74	157,75	76,39	109,77
Ireland	50	80,59	11,44	9,62	130,87	92,54	110,05
Italy	33	60,12	-5,56	-10,85	30,91	117,72	60,33
Leetonia	17	60,6	-21,56	-10,37	464,83	107,54	223,58
Latvia	24	62,89	-14,56	-8,08	211,99	65,29	117,64
Luxemburg	53	83,3	14,44	12,33	208,51	152,03	178,05
Malta	28	72,63	-10,56	1,66	111,51	2,76	-17,53
Netherlands	49	83,69	10,44	12,72	108,99	161,80	132,80
Poland	22	55,01	-16,56	-15,96	274,23	254,72	264,30
Portugal	23	71,63	-15,56	0,66	242,11	0,44	-10,27
United Kingdom	56	80,39	17,44	9,42	304,15	88,74	164,28
Czech Republic	33	62,37	-5,56	-8,6	30,91	73,96	47,82
Romania	16	46,86	-22,56	-24,11	508,95	581,29	543,92
Slovakia	23	61,51	-15,56	-9,46	242,11	89,49	147,20
Slovenia	34	67,37	-4,56	-3,6	20,79	12,96	16,42
Spain	32	73,39	-6,56	2,42	43,03	5,86	-15,88
Sweden	78	86,93	39,44	15,96	1555,51	254,72	629,46
Nations	x	y	(x – mx)	(y – my)	$(x – mx)^2$	$(y – my)^2$	(x – mx)*(y – my)
Hungary	25	63,97	-13,56	-7	183,87	49,00	94,92
European Average	38,56	70,97	===	===	272,77	130,78	169,41
Correlation Index	0,90						

Table 4: Correlation between “innovation” (x) and “ethics” (y) – year: 2006

Nations	x	y	(x – mx)	(y – my)	$(x – mx)^2$	$(y – my)^2$	(x – mx)*(y – my)
Austria	48	82,84	8,85	11,76	78,32	138,30	104,08
Belgium	48	77,69	8,85	6,61	78,32	43,69	58,50
Bulgaria	22	51,36	-17,15	-19,72	294,12	388,88	338,20
Cyprus	32	67,54	-7,15	-3,54	51,12	12,53	25,31
Denmark	64	89,33	24,85	18,25	617,52	333,06	453,51
Estonia	37	70,46	-2,15	-0,62	4,62	0,38	1,33
Finland	67	88,84	27,85	17,76	775,62	315,42	494,62
France	48	75,19	8,85	4,11	78,32	16,89	36,37
Germany	59	80,79	19,85	9,71	394,02	94,28	192,74
Greece	25	61,93	-14,15	-9,15	200,22	83,72	129,47
Ireland	49	80,74	9,85	9,66	97,02	93,32	95,15
Italy	33	62,26	-6,15	-8,82	37,82	77,79	54,24
Leetonia	18	62,11	-21,15	-8,97	447,32	80,46	189,72

Latvia	26	61,97	-13,15	-9,11	172,92	82,99	119,80
Luxemburg	57	79,53	17,85	8,45	318,62	71,40	150,83
Malta	29	73,51	-10,15	2,43	103,02	5,90	-24,66
Netherlands	48	83,41	8,85	12,33	78,32	152,03	109,12
Poland	23	54,38	-16,15	-16,7	260,82	278,89	269,71
Portugal	25	69,85	-14,15	-1,23	200,22	1,51	17,40
United Kingdom	55	82,29	15,85	11,21	251,22	125,66	177,68
Czech Republic	34	63,14	-5,15	-7,94	26,52	63,04	40,89
Romania	17	48,33	-22,15	-22,75	490,62	517,56	503,91
Slovakia	24	61,13	-15,15	-9,95	229,52	99,00	150,74
Slovenia	36	68,51	-3,15	-2,57	9,92	6,60	8,10
Spain	32	70,41	-7,15	-0,67	51,12	0,45	4,79
Sweden	76	87,23	36,85	16,15	1357,92	260,82	595,13
Hungary	25	64,27	-14,15	-6,81	200,22	46,38	96,36
European Average	39,15	71,08	===	===	255,76	125,59	162,71
Correlation Index	0,91						

Table 5: Correlation between “innovation” (x) and “ethics” (y) – year: 2007

Nations	x	y	(x – mx)	(y – my)	(x – mx)2	(y – my)2	(x – mx)*(y – my)
Austria	48,00	83,04	9,00	11,82	81,00	139,71	106,38
Belgium	47,00	77,56	8,00	6,34	64,00	40,20	50,72
Bulgaria	23,00	51,53	-16,00	-19,69	256,00	387,70	315,04
Cyprus	33,00	67,49	-6,00	-3,73	36,00	13,91	22,38
Denmark	61,00	89,53	22,00	18,31	484,00	335,26	402,82
Estonia	37,00	70,31	-2,00	-0,91	4,00	0,83	1,82
Finland	64,00	87,49	25,00	16,27	625,00	264,71	406,75
France	47,00	74,59	8,00	3,37	64,00	11,36	26,96
Germany	59,00	80,64	20,00	9,42	400,00	88,74	188,4
Greece	26,00	61,45	-13,00	-9,77	169,00	95,45	127,01
Ireland	49,00	81,49	10,00	10,27	100,00	105,47	102,7
Italy	33,00	60,04	-6,00	-11,18	36,00	124,99	67,08
Leetonia	19,00	59,11	-20,00	-12,11	400,00	146,65	242,2
Nations	x	y	(x – mx)	(y – my)	(x – mx)2	(y – my)2	(x – mx)*(y – my)
Latvia	27,00	62	-12,00	-9,22	144,00	85,01	110,64
Luxemburg	53,00	84,13	14,00	12,91	196,00	166,67	180,74
Malta	29,00	73,49	-10,00	2,27	100,00	5,15	-22,7
Netherlands	48,00	84,29	9,00	13,07	81,00	170,82	117,63
Poland	24,00	59	-15,00	-12,22	225,00	149,33	183,3
Portugal	25,00	69,65	-14,00	-1,57	196,00	2,46	21,98
United Kingdom	57,00	81,59	18,00	10,37	324,00	107,54	186,66
Czech Republic	36,00	63,09	-3,00	-8,13	9,00	66,10	24,39
Romania	18,00	49,21	-21,00	-22,01	441,00	484,44	462,21
Slovakia	25,00	61,52	-14,00	-9,7	196,00	94,09	135,8
Slovenia	35,00	68,6	-4,00	-2,62	16,00	6,86	10,48
Spain	31,00	70,31	-8,00	-0,91	64,00	0,83	7,28
Sweden	73,00	88,45	34,00	17,23	1156,00	296,87	585,82
Hungary	26,00	63,29	-13,00	-7,93	169,00	62,88	103,09
European Average	39,00	71,22	===	===	223,56	127,93	154,35
Correlation Index	0,91						

Table 6: Correlation between "innovation" (x) and "ethics" (y) – year: 2008

Nations	x	y	(x – mx)	(y – my)	(x – mx)2	(y – my)2	(x – mx)*(y – my)
Austria	53	82,71	10,33	11,83	106,78	140,04	122,28
Belgium	51	76,21	8,33	5,33	69,44	28,45	44,45
Bulgaria	22	51,23	-20,67	-19,65	427,11	386,02	406,05
Cyprus	47	67,03	4,33	-3,85	18,78	14,80	-16,67
Denmark	57	88,57	14,33	17,69	205,44	312,99	253,58
Estonia	45	69,20	2,33	-1,68	5,44	2,82	-3,92
Finland	61	85,70	18,33	14,82	336,11	219,67	271,73
France	50	75,07	7,33	4,19	53,78	17,58	30,75
Germany	58	80,10	15,33	9,22	235,11	85,03	141,40
Greece	36	60,26	-6,67	-10,62	44,44	112,75	70,79
Ireland	53	81,36	10,33	10,48	106,78	109,80	108,28
Italy	35	58,85	-7,67	-12,03	58,78	144,76	92,24
Leetonia	24	60,60	-18,67	-10,28	348,44	105,68	191,89
Latvia	29	61,13	-13,67	-9,75	186,78	95,00	133,20
Luxemburg	52	81,78	9,33	10,90	87,05	118,72	101,66
Malta	33	71,17	-9,67	0,29	93,51	0,08	-2,77
Netherlands	48	84,33	5,33	13,45	28,41	180,90	71,69
Poland	30	61,86	-12,67	-9,02	160,53	81,33	114,27
Portugal	36	70,32	-6,67	-0,56	44,49	0,32	3,74
United Kingdom	55	79,50	12,33	8,62	152,03	74,33	106,30
Czech Republic	40	64,11	-2,67	-6,77	7,13	45,89	18,09
Romania	28	50,44	-14,67	-20,44	215,21	417,91	299,90
Slovakia	31	62,85	-11,67	-8,03	136,19	64,50	93,73
Slovenia	45	69,30	2,33	-1,58	5,43	2,50	-3,68
Spain	37	69,42	-5,67	-1,46	32,15	2,14	8,30
Sweden	64	87,77	21,33	16,89	454,97	285,32	360,29
Hungary	32	62,76	-10,67	-8,12	113,85	65,89	86,61
European Average	42,67	70,88	===	===	138,30	115,38	114,97
Correlation Index	0,91						

3. Research results and final conclusions

The aim and the scope of this research has been to investigate - by a Business Economics approach - the potential correlation between two clusters (or variables): innovation and ethical behaviours related to the life standards in a country or inside a public institution. The first cluster (innovation) includes Information Communication Technologies (ICT), Research & Development Expenditure, Education Investment, (etc.); while the second one (ethical behaviours) contains elements such as ethical values, the observance of the law, education, meritocracy, (etc.) (Barzelay, 2000).

In the public sector management it is necessary to introduce the related concepts of eGovernment and e-governance (or e-democracy) to improve the ethical model by innovation (Northrop, 2002). The concept of eGovernment (or e-administration) is referred to the use of modern Information and Communication Technologies (ICT) linked to the development of electronics and the Internet in the modernization process of the Public Administration (Rahm, 1999; Hood, 1983). The different processes of eGovernment may be analyzed with reference to the various models, that the Public Institution may adopt during the modernization process of the structure (Layne et al., 2001; Reschenthaler et al., 1996). The development of the eGovernment processes (conditioning processes or causes) determines an improvement in the governance processes of the Public Institution that – using highly technological solutions – now called e-governance processes (conditioned processes or effects) (United Nations, 2008). Consequently, the e-governance is the second aspect of technological innovation applied to Public Administration processes (Kettl, 2000; Aucoin, 1990): that is to say the possibilities to improve of the democratic participation processes offered by the new technologies (Milward et al., 1996; Pollifroni, 2003). In recent years, in addition to the implementation and development of technological innovation, it has been developed a

parallel process of attention to ethics, as a related discipline (Landsbergen et al., 2001); some studies have sought to show how innovation is able to influence the ethical behaviour (Osborne et al., 1992).

With reference to the EU Countries Area in the following pages the paper has tried to achieve this goal: measuring the possible correlation between the indicators that consider the level of innovation (independent variable) and ethical behaviours (dependent variable).

The contribution of this research has had, as prerequisite, the identification in the current process of improvement and development of governance models of the crucial role of the underlying share represented by the reference model of values, measured by ethical parameters (Freeman, 1984).

Looking at the Italian model the governance of the public institutions has been the subject of several actions that have often led to inefficient and inadequate results (the same problem concerns the private business sector): the question then arises spontaneously from the reasoning outlined here and if there are other ways, in addition to legislation, for the improvement of these imbalances: the alternative way followed in the present study was aimed at measuring the level of innovation.

The final part of the paper is dedicated to comment the research result that shows the several actions of eGovernment processes. According to the empirical evidence outlined above it was possible to measure a significant positive correlation (ranging between 0.87 and 0.91, for the six years 2003-2008) between the values and ethical behaviour, and implementation of variable "innovation" of a Country. The results of the research have shown that in countries where the economy is more oriented to innovative practices (such as, for example, Sweden, Finland and Denmark) it is possible to find the highest ethical standards. These results lead us to theorize new profiles of analysis applicable to the concept of innovation (Chung, 2002; Carter et al., 2004), such as, e.g.:

- The profile of innovation financing, which should be systematic, stable and continuous (strategic view of the resource in the long term) (Kim et al., 1994),
- System making (synergy in knowledge management, for example, between enterprises located in the same economic sector or between subjects located both in the public sector and the private one) (Rocheleau et al., 2002; Bajjaly, 1998).

So it is possible to say that implementing innovation (defined above), may represent a right way for the growth of the ethical shared model; environmental sustainability and social responsibility (McWilliams et al. 2001; Orlitzky et al., 2011) are the areas of contact between the two variables considered and the corporate durability depends on them: innovation and ethics are thus highly correlated to each other, forming at the same time, essential "driver" for the durability of the public institution also oriented to environmental sustainability and social responsibility (Grimsley et al., 2008). The research results could shows the biphasic action of eGovernment processes (Chourabi et al., 2009): these processes represent a right way to introduce efficiency and effectiveness in the public sector management (Heeks, 1999; Moon et al., 2005) and eGovernment applications can have a useful effect on the ethical shared behaviours, such as tax evasion control, observance of the law, reengineering a public merit rating system, (etc.). It is also possible to observe various roles for eGovernment in addressing the ongoing world financial and economic crisis (United Nation, 2010). The United Nation eGovernment Survey 2010 - above mentioned - explains that: "(…) *the ability of eGovernment to handle speed and complexity can also underpin regulatory reform. While technology is no substitute for good policy, it may give citizens the power to question the actions of regulators and bring systemic issues to the fore. Similarly, eGovernment can add agility to public service delivery to help governments respond to an expanded set of demands even as revenues fall short* (…)".

In conclusion, following a Business Economic approach, the research result (the value of the correlation detected) shows us that it is possible to state that the implementation of the component of innovation (a cluster that includes Information Communication Technologies, Research & Development Expenditure, Education Investment, etc.) is one way to improve the ethical model shared by the people in a nation, as well as in a business company or - in general terms - in a community: on the other hand, the processes of eGovernment (included inside the innovation cluster) are also a strategic tool to contrast the present crisis, as the United Nation report (mentioned above) has explained us.

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