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**THE WELFARE STATE, BETWEEN THE CHRISTIAN MERCY
AND THE ORGANIZATIONAL PRAGMATISM OF BEES**

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Abstract: The social policies effectiveness as a component of government revenue redistribution policies is an essential element of modern capitalist society. In history, social assistance has sometimes been exerted by the church, being a derivative of a profound human feeling - Christian mercy. The evolution of society and the integration of social assistance as a public policy presupposes a high dose of pragmatism, derived also from the managerial internal control standards. The study aims to analyze the relationship that might exist between Christian mercy and the effectiveness of social assistance programs. The research is based on a descriptive analysis that consists of a comparison of the bee behavior and a quantitative evaluation that uses correlation analysis, artificial intelligence techniques and fuzzy logic. The results of the paper confirm the reverse dependency of the social assistance effectiveness policies on income inequality and on the poverty degree. The conclusions of the study reveal that, in the short term, Christian mercy is reversing the effectiveness of social programs by confirming Nietzsche's criticisms of Christianity. In the long run, the return to the faith values prevails over the efficiency targets that seem to have a more and more ephemeral character in the contemporary world. This reaction of approaching religion is considered by the authors as the need for emotional support that people feel in the early stages of the development of capitalist societies. Later, in the second stage described by Kuznets' U-curve, people become aware of the capital's capacity to be altruistic and of the increased role of social responsibility. Therefore the need for support decreases.

Key words: income redistribution, social assistance, behavioral finance, social responsibility, income inequality, religion, social policy, redistribution, welfare state.

Journal for the Study of Religions and Ideologies, vol. 19, issue 55 (Spring 2020): 121-141.

ISSN: 1583-0039 © SACRI

1. Introduction

The Church has played an important role in serving both the spiritual and the physical needs of the poor. Since ancient times, the churches have set up hospitals, schools, houses for unmarried mothers and charitable societies. The social government programs has led the church to move away from many of its crucial roles in poverty alleviation. This phenomenon may be a component of what some economists call the deterrent effect of private spending on government spending ("the exclusion effect"), which is the subject of the state aid issues. The views are different on the desirability of granting poverty aid as part of the public revenues redistribution. We can mention that many electoral campaigns make this topic a nodal point.

We also have to note that states and communities are addressing differently the social welfare management policies. For example, some countries grant them in kind, others in cash (Sen 1976, 219-231).

A similar system of transfers also exists in the bee communities, methodically organized in hives, where it can be observed a similar honey redistribution process between productive bees and male bees. At the same time, the bees organization is exemplary, as well as the prompt information analysis. Therefore, in developing a qualitative analysis, the authors considered their behavior as a guide in addressing the effectiveness of the social policies on Christian mercy.

The hypothesis from which the present study starts is that the bee's reaction only considers efficiency (there is no divine spirit of the bees). This starting point is especially important because if bees can achieve organizational efficiency in fulfilling goals, for humans, in addition, there is an essential feeling - mercy - given by the existence of religion.

A primary feature of religion is Christian mercy. However there are some criticisms (Nietzsche 1976) about mercy and its role in the effective development of a society. Faith teaches us that the deeds of mercy are both fleshy (to satisfy the hungry one, to give drink to the thirsty, to dress the naked, to welcome a guest in your house, to cure the sick, to search the one in the prison, to bury the dead), but also for the soul (to direct the sinners, to teach the uninformed, to advise the doubtful, to comfort those who are sorrowful, to patiently endure injustice, to forgive those who have wronged you, to pray for the living and for the dead).

When we practice the facts of body and soul mercy, we do nothing but fulfill the words of the Holy Apostle Paul, who says, "Do your duties one to another, and so you will accomplish the law of Christ" (Galatians 6:2), and in another verse: "... serve one another by love. For all the law is contained in one word: love your neighbor as yourself " (Galatians 5:13-14).

Religious critics, like Nietzsche, say that mercy acts depressively. Man is losing power when he is compassionate. The philosopher believes that mercy opposes the very law of evolution itself, which is that of natural selection (also based on efficiency). Natural selection in the case of human communities can mean, in practice, the choice of the future road on the basis of what proved to be best in the past in terms of maintaining a good standard of living for the population (see the welfare state). As outlined above, states build social welfare programs to help disadvantaged classes. At the same time states need to consider increasing the operational efficiency and effectiveness (Alkire and Foster 2008).

Regarding the sustainable economic growth or maintaining the efficiency over a long period of time, the economic cycle theories confirm that this can not be continued. Poplars do not grow up to the sky. Economists like Nikolai Kondratiev (Korotayev and Tsirel 2010, 3-57) pointed out that the economic cycles are inherent in the development of a capitalist economy. Marx (Wayne, Michael 2012), Piketty (2014), or Roubini (2010) have exposed, in general, a cause that stimulates crises and why capitalism regularly fails - human greed. The trend of the economic growth, improvement or even performance maintenance and the assurance of a welfare state are not, at all times, two convergent notions.

Recently, King Willem-Alexander sent a message to the Dutch people from the government that "the welfare state of the twentieth century has disappeared" (Independent Newspaper, 2013). Instead, the monarch believes there "will be a participatory society in which people have to take responsibility for their own future and create their own social and financial safety net, with less help from the national government" (Independent Newspaper, 2013). We can assume that this statement also leads to the need for a secular and pragmatic approach.

Many social welfare specialists, such as Arup Banerji (2012), Regional Director for the European Union at the World Bank, considers that the social protection system must be appropriate and specific. Specifically, it means the development regime, both economic and, above all, social.

If we return to the work of a beehive, we can assume that in this case there is a honey transfer process (redistribution) between productive bees and male bees similar to some social assistance policies. The male bees are practically maintained by bees (those who really work) for a while and provide them with nectar and pollen. When the summer is over and the honey is less and less in the hives, the working bees stop feeding the male bees and isolate them in the hive's corners or drive them out of the hive.

In the bee families there are also exceptions to the rule, which make the redistribution policy of the hive to have a specific character. For example, if the colony has an old mat (specific aspect), the working bees accept hibernating with the male bees. Obviously, the particular aspects do not refer to bees mercy.

At the same time, it has been noticed that the total absence of the

male bees makes the working bees become more anxious and less productive. When the working bees destroy the honeycomb cells to create honeycomb cells for the male bees, it means that the colony faces an important imbalance that affects its development, productivity, vitality and immunity. Manifestations of concern for income redistribution are also found in the bee families in the sense that the strong ones take care of the weak ones to ensure their own happiness, thus developing the income redistribution processes.

In the economy, there are optimal revenue redistribution models derived from optimal taxation models: Akerlof (1987), Mirrlees (Diamond and Mirrlees 1971), Ramsey (1927), which use utility functions. The design of a social security system corresponds to an optimal redistribution policy and it is based on the increase of the global utility function at the entire society's level.

The social security systems ensure income redistribution through different payment channels and use distinct identification methodologies for groups of people in need (provided in normative acts). For example, social aid when helping the poor or the needy or state allowance when helping the children, which are specific to the social administration processes.

Regarding the inclusion of persons in need of social assistance in the modern states in aid classes, tagging is used by defining eligibility criteria in order to strictly quantify certain facts (Bourguignon and Chakravarty 2003, 25-49).

Taking the example of quantifying poverty policies, the World Bank studies state that it is difficult to find certain patterns and labels and that poverty is a complex phenomenon. This is very eloquently highlighted by the claim of a Kenyan man in a high-poverty state: "Do not ask me what poverty means because you have met it outside my house. Look at the house and count the holes. Look at my utensils and the clothes I wear. Look at everything and write what you see. What you see is poverty" (The World Bank 2001, 16).

Besides the fact that the policy of labeling people in disadvantaged groups is difficult to achieve, it is noticed that determining the efficiency of a transfer policy is even more complicated if we consider other social, emotional or psychological factors. When it comes to determining the efficiency of a specific aggregate transfer for different social groups (e.g for the disabled, the elderly etc.), it is much harder to quantify what a good social policy is (Bossert et al. 2009).

In any case, an important element that intervenes in the set of factors influencing social policies is Christian mercy. This is the reason why the religion and the effectiveness of social protection in the welfare state are the subject of this paper. Similar research studies are found in the scientific work of some authors such as Barker (1984), Manow (2004, 2006), Tawney (1922), Weber (1950), who have performed exceptional qualitative analyzes on this subject.

2. Data sources and the model

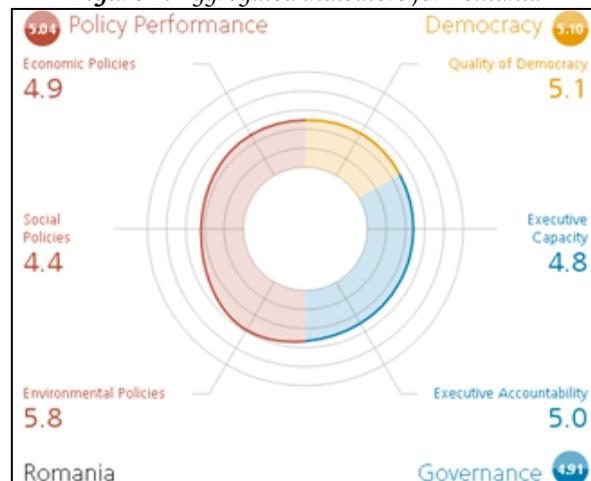
From the multitude of measurement systems (Antony and Rao 2007, 578-587) in order to achieve the objective of observing the influence of Christian mercy on the efficiency of social assistance programs, the authors considered a compact large volume database, the Sustainable Governance Indicators (SGI), which can reveal multiple comparison possibilities, including social and economic policy.

SGI is in itself a comparative transnational study aimed at identifying and promoting successful factors in developing an effective policy and analyzing how governments are targeting sustainable development. SGI helps a variety of OECD and EU stakeholders to analyze governments in terms of specific indicators. SGI examines how well the policies have been designed to achieve the objectives, analyzing the results in 16 public policies areas and over 200 indicators as outlined in Annex 1.

In order to conduct the study, the authors first took the data from the SGI website, respectively the annual indicators for the period 2014-2017 for the 41 states (Annex 2). From these indicators, the authors chose as an output variable an aggregate indicator that quantifies the social assistance, e.g the social policy indicator. In fact, according to the site authors, the indicator answers the question: Does social policy facilitate a fair and just society? The indicator is aggregated and represents an average of several indicators.

For a global presentation of the indicators system used, we mention that Romania is at the international level on the 39th position regarding the social policies with a 4.4 social policy score.

Figure 1. Aggregated indicators for Romania



Source: SGI Network.

The website's authors motivate Romania's social policy score, among other things, that the education system suffers from low public spending, high dropout rates, low tertiary performance, poor labor market relevance, and the fact that poverty rates are very high, especially among Roma.

Analyzing only the data collected from SGI, it was not possible to examine the relationship between the efficiency of social assistance in relation to Christian mercy and it is necessary to aggregate another dataset to cover this issue. For this reason, the authors identified another data source reflecting certain characteristics related to religion and contained in the 2010 Eurobarometer on Spirituality in the EU. The publication presents a comparative study of various states that characterize the population's faith either in a spirit or in a religious entity.

The results are presented graphically below:

Figure 2. Eurobarometer on spirituality within the EU - 2010

Country	Atheist	A spirit / A force	God
Bulgaria	15	43	36
Croatia	7	22	69
Cyprus	3	8	88
Czech Republic	37	44	16
Denmark	24	47	28
Estonia	29	50	18
Finland	22	42	33
France	40	27	27
Germany	27	25	44
Greece	4	16	79
Hungary	20	34	45
Iceland	18	49	31
Ireland	7	20	70
Italy	6	20	74
Latvia	11	48	38
Lithuania	12	37	47
Luxembourg	24	22	46
Malta	2	4	94
Netherlands	30	39	28
Norway	29	44	22
Poland	5	14	79
Portugal	12	15	70
Romania	1	7	92
Slovakia	13	23	63
Sweden	34	45	18
Switzerland	11	39	44
Turkey	1	1	94
Austria	12	38	44
Belgium	27	31	37

Source: Q Magazine.

The authors combined both sets of data into a single table that includes the existing indicators in the SGI database for 2014 and the ones in the Figure 2 above. Concatenation of the data was possible only for the countries that were in the two databases. Another limitation of the study is the observation that the oldest database of SGI is from 2014 and the database of religion is from 2010.

Therefore, the authors had to carry out the research under the assumption that the data did not have a high dynamics. Obviously, an extensive analysis for panel data allows for other specific developments that will be subject to future studies (spatial data mining, pool time series etc.).

On the basis of the data used it was performed a correlation analysis between all the data characterizing the economic condition, included in the SGI indicators and data on religious beliefs. The correlation analysis is fully presented in Annex 3 for the indicators concerning the religion. Correlation coefficients closer to 1 or to -1 indicate higher correlations (direct or inverse).

The table below shows the data for pairs of indicators (religion-specific and other SGI indicators) for which a correlation coefficient is recorded in the mode close to 1. The data is displayed on a scale from red (highest) to green (the smallest value) for each indicator.

Table 1. The database

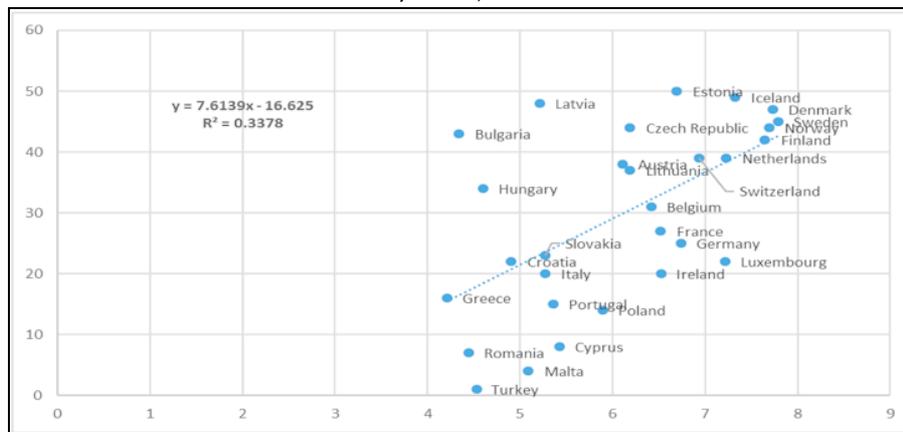
Country	Atheist	A spirit	God	Social Policies	Social Inclusion	Poverty Rate	Gini Coeff.	Child Poverty	Global Inequalities
Bulgaria	15	43	36	4.34	3.82	3.72	4.18	2.93	2.54
Croatia	7	22	69	4.91	4.22	4.14	5.07	4.82	2.43
Cyprus	3	8	88	5.43	5.63	6.67	5.04	7.61	3.04
Czech Republic	37	44	16	6.19	6.18	7.88	7.06	7.52	4.59
Denmark	24	47	28	7.73	7.69	7.26	6.53	8.02	9.50
Estonia	29	50	18	6.70	5.44	5.47	4.54	6.58	5.70
Finland	22	42	33	7.65	7.66	7.51	6.72	8.59	7.41
France	40	27	27	6.52	6.50	7.13	5.20	7.24	6.21
Germany	27	25	44	6.74	6.84	6.01	5.93	7.55	6.05
Greece	4	16	79	4.21	3.19	3.35	3.94	3.53	2.54
Hungary	20	34	45	4.60	4.76	6.51	6.29	5.51	2.54
Iceland	18	49	31	7.33	7.38	8.00	7.35	8.12	4.74
Ireland	7	20	70	6.52	6.05	5.97	5.20	6.76	6.98
Italy	6	20	74	5.27	4.28	4.85	4.57	4.41	3.42
Latvia	11	48	38	5.21	4.67	4.39	3.48	4.19	2.43
Lithuania	12	37	47	6.19	5.49	5.30	4.71	5.45	4.59
Luxembourg	24	22	46	7.22	7.79	7.05	6.03	6.80	9.50
Malta	2	4	94	5.09	5.97	6.92	6.33	6.83	3.08
Netherlands	30	39	28	7.23	7.75	7.84	6.89	8.05	7.11
Norway	29	44	22	7.70	8.40	7.71	7.85	8.77	9.00
Poland	5	14	79	5.89	6.03	5.64	5.07	5.92	4.04
Portugal	12	15	70	5.36	4.86	5.26	3.88	4.91	4.24
Romania	1	7	92	4.44	3.81	3.14	4.04	1.93	2.88
Slovakia	13	23	63	5.27	5.25	6.76	6.92	5.73	3.99
Sweden	34	45	18	7.79	8.23	6.76	7.09	7.11	9.50
Switzerland	11	39	44	6.93	7.33	6.01	5.76	6.86	5.98
Turkey	1	1	94	4.53	3.70	2.89	1.13	2.12	5.16
Austria	12	38	44	6.11	6.94	6.51	6.16	7.33	4.46
Belgium	27	31	37	6.42	6.79	6.55	6.53	6.86	5.43

Source: authors own research results.

The analysis of the data in the above table was first performed on the basis of a scatter chart containing unified regression analysis elements between each of the religion-specific indicators and the social policy indicator. This type of analysis aims, in fact, to address the objective of the study, namely the answer to the question: What type of link is established between the effectiveness of social policies towards Christian mercy?

The first graph expresses the direct dependence between the social policy indicator and the percentage in which a country's population finds it inclined to believe in a divine spirit or force. The regression is not very significant from the model's point of view, the coefficient of determination being low (0.3378).

Figure 3. Dependence between the effectiveness of social policies and belief in a divine spirit or force

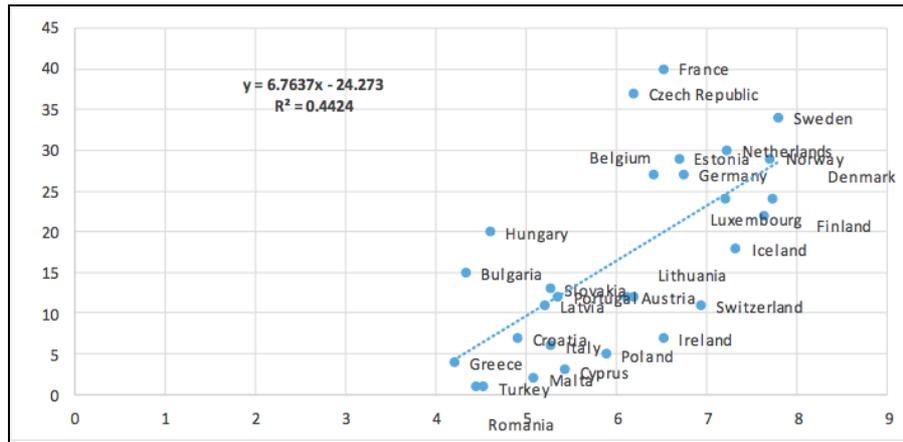


Source: authors own research results.

Based on the data from the graph we can notice that the Nordic countries, the Czech Republic, Estonia, have a high efficiency of social policies, as they have a high faith in a divine spirit or force.

From the analysis of the chart below, another conclusion is drawn, namely that the effectiveness of social policies is rather achieved among the countries where the percentage of atheism is higher. The conclusion of the quantitative analysis also presents a high degree of error due to the low regression determination coefficient (0.3378).

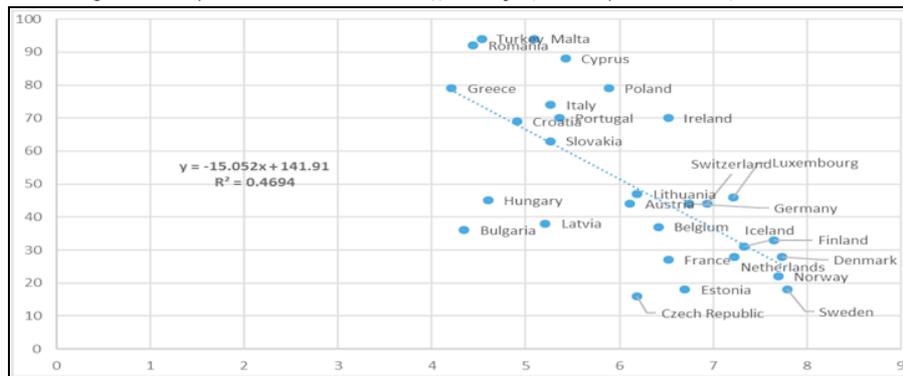
Figure 4. Dependence between social policy effectiveness and atheistic proportion



Source: authors own research results.

The graph below outlines a straight line of regression between the efficiency of the social policies and the belief in God, which is characterized by a higher determinant (0.4694), but still reduced, to give accurate quantitative conclusions. Thus, we can rather state, with a very large margin of error, that faith in God characterizes the states that do not have well-rated social policies such as Greece, Turkey, Romania, Malta.

Figure 5. Dependence between the efficiency of social policies and faith in God



Source: authors own research results.

In the desire to use other analysis tools to formulate an opinion, the authors used the fuzzy rules technique which is a key tool for expressing knowledge elements in "fuzzy logic" (Han et al. 2012). The bees have an exceptional ability to analyze the sounds of other bees. People are also on the verge of a new industrial revolution based on artificial intelligence techniques to recognize and analyze certain patterns (data mining).

The Generic Rules Generation (GRI) node as a data mining procedure is part of the techniques involving fuzzy logic, revealing the rules of data association (Dubois and Prade 1992). In order to create GRI association rules are required one or more input and output fields. The output fields must be symbolic (yes, no, or 1, 2) (Marghny and Shakour 2005). The motivation to use the association rules is that they are usually fairly easy to interpret, unlike other methods, such as neural networks (Olson and Delen 2008). Rules in a dataset may overlap so that some records can trigger more than one rule (Zadeh 1992, 23-27).

The database in Table 1 was analyzed by processing the existing records by choosing only the full part of the records plus one unit. The processing resulted in a new database containing notes from 1 to 10. In order to obtain a dummy variable for the social policies efficiency, the authors considered that up to 7 will be assigned a value of 1 to the output variable and above 7 the value 2 will be assigned.

Records were later filtered by the value of the indicator that determines the public policies effectiveness, with a red color for lower and greener color for higher efficiency listings.

Table 2. Effectiveness of social policies towards different factors

Country	Social policies efficiency Output variable	Social policies	Atheist	A spirit	God	Poverty rate	Gini coefficient	Poverty among children	Global inequalities
Turkey	1	5	1	1	9	3	2	3	6
Latvia	1	6	2	5	4	5	4	5	3
Portugal	1	6	2	2	8	6	4	5	5
Greece	1	5	1	2	8	4	4	4	3
Romania	1	5	1	1	9	4	5	2	3
Bulgaria	1	5	2	5	4	4	5	3	3
Italy	1	6	1	3	8	5	5	5	4
Cyprus	1	6	1	1	9	7	6	8	4
Croatia	1	5	1	3	7	5	6	5	3
Poland	1	6	1	2	8	6	6	6	5
Hungary	1	5	3	4	5	7	7	6	3
Malta	1	6	1	1	9	7	7	7	4
Slovakia	1	6	2	3	7	7	7	6	4
Estonia	2	7	3	6	2	6	5	7	6
Lithuania	2	7	2	4	5	6	5	6	5
Ireland	2	7	1	3	8	6	6	7	7
France	2	7	3	3	3	8	6	8	7
Germany	2	7	3	3	5	7	6	8	7
Luxembourg	2	8	3	3	5	8	7	7	10
Austria	2	7	2	4	5	7	7	8	5
Belgium	2	7	3	4	4	7	7	7	6
Denmark	2	8	3	5	3	8	7	9	10
Finland	2	8	3	5	4	8	7	9	8
Netherlands	2	8	3	4	3	8	7	9	8
Czech Republic	2	7	3	5	2	8	8	8	5
Sweden	2	8	3	5	2	7	8	8	10
Iceland	2	8	2	5	4	9	8	9	5
Norway	2	8	3	5	3	8	8	9	10

The table above reveals that the states which have a greater proportion of the atheist population or people who believe in a spirit or a divine force are more effective than the states where the belief in God has a greater weight. Another conclusion is that, along with the rising poverty levels, including children, and the rising income inequality, social policies efficiency generally declines.

In the next stages of the study it was used the GRI fuzzy logic tool which also highlights the rules resulting the following conclusions:

Table 3. Association rules determined by the GRI method

Consequent	Antecedent
Efficiency of social policies = 2.0	Poverty rate = 8.0
Efficiency of social policies = 2.0	Atheist = 3.0
Efficiency of social policies = 2.0	Atheist = 2.0 and God = 4 or 5

Source: authors own research results.

The interpretation of the first rule is given by the fact that the social policies effectiveness is high if the poverty rate is low. The second and third rule confirms that social policies are more effective in the countries where it is a high proportion of the atheistic population or where the faith in God is not very high.

The quantitative study reveals that, in the short term, the relationship between faith in God and the efficiency of social assistance programs is reversed, while a developed pragmatism will lead to higher efficiency of social assistance programs. If we look at things in dynamics, the economic cycles theory, capital greed, and even the beehive comparison reveals that the trend of increasing efficiency through pragmatism is very difficult to maintain in the long run.

Just as working bees sometimes destroy honeycomb cells to feed the male bees, otherwise they face an imbalance that affects their development, productivity, vitality and immunity, likewise mankind must find other levers to ensure well-being. Identifying new levers to secure other safety nets is necessary, as the theory of economic cycles shows that nature and society need to re-establish common values after some time.

If we analyze the economic theory of the relation between economic growth and inequality, (from Marx to Kuznets or from apocalypse to fairy tales) we mention that if Marx apologizes for self-destruction of capitalism due to the increase of inequalities, Kuznets (1971) notices the two stages of the development of capitalism (the development phase and the consolidation phase).

If in the first phase of the development the growth is very important, which is similar to the flow that alters all the boats and the rest matters less (inequalities increase, social policies may be inefficient). In the second phase the responsibility of capital enters its natural role (the increased efficiency of the social policies).

In other words, if in the first phase the people need the support offered by the faith in order to achieve that balance, in the second stage, the role of the capital's social responsibility becomes more and more altruistic (thus the need for external support decreases accordingly).

3. Conclusions

Based on a qualitative comparative analysis and a quantitative assessment that uses correlation analysis, artificial intelligence techniques and fuzzy logic, the paper confirms the inverse dependence, in the short term, between the social assistance policies effectiveness compared to income inequality and poverty.

In the short run, the Christian mercy is reversing the effectiveness of social programs by confirming Nietzsche's criticisms of Christianity. In the long run, invisible spirits make the return to the faith values to prevail over the efficiency that is, however, ephemeral.

This increased efficiency of social policies in the phase of the consolidation of capitalism is reflected in the study by the decrease of the need for support, which may be the consequence of the awareness of the effective capacity of the capital to be altruistic.

The conclusion of the paper is that if pragmatism can make a policy effective, it does not happen indefinitely. Therefore, periodically, the society, as well as nature, has to return to universal values. The limitations of the study stem from the dataset used, which made it impossible to dynamically analyze the data, but also from the statistical analysis methods used. The authors will continue the research on the examination of relevant indicators in search of coherent solutions for designing safety nets appropriate to the current situation.

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Annex 1. The set of indicators used

Policy Performance	Education	Environmental Policies	Governance
Rank among 41 countries	Education Policy	Environment	Executive Capacity
Economic Policies	Upper Secondary Attainment	Environmental Policy	Strategic Capacity
Economy	Tertiary Attainment	Energy Productivity	Strategic Planning
Economic Policy	PISA Results	Greenhouse Gas Emissions	Scholarly Advice
GDP per Capita	PISA, Socioeconomic Background	Particulate Matter	Interministerial Coordination
Inflation	Pre-primary Expenditure	Water Usage	GO Expertise
Gross Fixed Capital Formation	Social Inclusion	Waste Generation	GO Gatekeeping
Real Interest Rates	Social Inclusion Policy	Material Recycling	Line Ministries
Potential Output, Growth Rate	Poverty Rate	Biodiversity	Cabinet Committees
Labor Markets	NEET Rate	Renewable Energy	Ministerial Bureaucracy
Labor Market Policy	Gini Coefficient	Global Environmental Protection	Informal Coordination
Unemployment	Gender Equality in Parliaments	Global Environmental Policy	Evidence-based Instruments
Long-term Unemployment	Life Satisfaction	Multilateral Environmental Agreements	RIA Application
Youth Unemployment	Health	Kyoto Participation and Achievement	Quality of RIA Process
Low-skilled Unemployment	Health Policy	Quality of Democracy	Sustainability Check
Employment Rate	Spending on Health Programs	Electoral Processes	Societal Consultation
Low Pay Incidence	Life Expectancy	Candidacy Procedures	Negotiating Public Support
Taxes	Infant Mortality	Media Access	Policy Communication
Tax Policy	Perceived Health Status	Voting and Registration Rights	Coherent Communication
Tax System Complexity	Families	Party Financing	Implementation
Structural Balance	Family Policy	Popular Decision-Making	Government Efficiency
Marginal Tax Burden for Businesses	Child Care Density, Age 0-2	Access to Information	Ministerial Compliance
Redistribution Effect	Child Care Density, Age 3-5	Media Freedom	Monitoring Ministries
Budgets	Fertility Rate	Media Pluralism	Monitoring Agencies, Bureaucracies
Budgetary Policy	Child Poverty	Access to Government Information	Task Funding
Debt to GDP	Pensions	Civil Rights and Political Liberties	Constitutional Discretion
Primary Balance	Pension Policy	Civil Rights	National Standards
Debt Interest Ratio	Older Employment	Political Liberties	Adaptability
Budget Consolidation	Old Age Dependency Ratio	Non-discrimination	Domestic Adaptability
Research and Innovation	Senior Citizen Poverty	Rule of Law	International Coordination
R&I Policy	Integration	Legal Certainty	Organizational Reform
Public R&D Spending	Integration Policy	Judicial Review	Self-monitoring
Non-public R&D Spending	FB-NUpper Secondary Attainment	Appointment of Justices	Institutional Reform
Total Researchers	FB-NTertiary Attainment	Corruption Prevention	Executive Accountability
Intellectual Property Licenses	FB-NUemployment		Citizens' Participatory Competence
PCT Patent Applications	FB-NEmployment		Policy Knowledge
Global Financial System	Safe Living		Voicing Opinion to Officials
Stabilizing Global Financial Markets	Safe Living Conditions		Voter Turnout
Tier 1 Capital Ratio	Homicides		Legislative Actors' Resources
Banks' Nonperforming Loans	Thefts		Parliamentary Resources
Social Policies	Confidence in Police		Obtaining Documents
	Global Inequalities		Summoning Ministers
	Global Social Policy		Summoning Experts
	ODA		Task Area Congruence
			Audit Office
			Ombuds Office
			Media
			Media Reporting
			Newspaper Circulation
			Quality Newspapers
			Parties and Interest Associations
			Intra-party Democracy
			Association Competence (Business)
			Association Competence (Others)

Source: SGI indicators.

Annex 2. Countries for which the data was analyzed

Australia, Austria, Belgium, Bulgaria, Canada, Chile, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Malta, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Great Britain, United States of America.

Source: SGI indicators.

Annex 3. Correlation analysis

	Atheist	A spirit / A force	God
Atheist	1		
A spirit / force	0.650576971	1	
God	0.886431459	-0.923498343	1
Policy Performance	0.65404247	0.686380171	-0.747678248
Rank among 41countries	0.690653711	-0.703729162	0.779913453
Economic Policies	0.552839793	0.585239131	-0.64222547
Economy	0.47051527	0.528837999	-0.567218057
Economic Policy	0.347096623	0.514082245	-0.493330064
GDP per Capita	0.441683303	0.287684849	-0.417490887
Inflation	0.443522899	0.334321187	-0.412660734
Gross Fixed Capital Formation	0.283350229	0.270166895	-0.320244455
Real Interest Rates	0.540247942	0.449388617	-0.550737718
Potential Output Growth Rate	0.036218645	-0.126666511	0.082708348
Labor Markets	0.436497816	0.409665745	-0.47575743
Labor Market Policy	0.38171238	0.412641121	-0.449211846
Unemployment	0.463946579	0.387500755	-0.474510953
Long-term Unemployment	0.434664692	0.352155593	-0.438763154
Youth Unemployment	0.416987234	0.43655003	-0.488280798
Low-skilled Unemployment	0.147159243	-0.00793936	-0.076382399
Employment Rate	0.57024048	0.685429028	-0.699370879
Low Pay Incidence	0.331574476	0.092948549	-0.229899833
Taxes	0.373661279	0.526976793	-0.50914419
Tax Policy	0.364067136	0.544088458	-0.517266804
Tax System Complexity	0.124074106	0.091305846	-0.12685422
Structural Balance	0.170376505	0.207380549	-0.209456576

Marginal Tax Burden for Businesses	-0.419312071	-0.259783736	0.36027671
Redistribution Effect	0.57236937	0.514293801	-0.576010378
Budgets	0.365187977	0.594066632	-0.561585136
Budgetary Policy	0.380911139	0.623875221	-0.589105663
Debt to GDP	0.243715259	0.391523136	-0.372276304
Primary Balance	0.110175679	0.154247283	-0.153594921
Debt Interest Ratio	0.489245495	0.522887638	-0.578365444
Budget Consolidation	0.079575616	0.033168684	0.02165287
Research and Innovation	0.623585689	0.538873687	-0.637944617
R&I Policy	0.578139539	0.493015461	-0.588600666
Public R&D Spending	0.619986824	0.556137949	-0.644765119
Non-public R&D Spending	0.579804645	0.546363923	-0.620386871
Total Researchers	0.600462527	0.534169768	-0.622802037
Intellectual Property Licenses	0.456298262	0.289145657	-0.391015755
PCT Patent Applications	0.496576209	0.465140637	-0.535981943
Global Financial System	0.562137985	0.464396317	-0.577488376
Stabilizing Global Financial Markets	0.443137463	0.343290636	-0.436358036
Tier1Capital Ratio	0.149172337	0.343964983	-0.297960942
Banks Nonperforming Loans	0.575188088	0.422532395	-0.560682655
Social Policies	0.665126957	0.581169911	-0.685123345
Education	0.475909695	0.649768396	-0.622077011
Education Policy	0.3926596	0.524006922	-0.504401776
Upper Secondary Attainment	0.392386565	0.602451845	-0.558186915
Tertiary Attainment	0.423427869	0.488553198	-0.519867011
PISA results	0.442647561	0.389169961	-0.456532697
PISA, Socioeconomic Background	-0.12132394	0.078038708	0.02606264
Pre-primary Expenditure	0.370556828	0.512044045	-0.481677515
Social Inclusion	0.625778601	0.48767841	-0.613133507
Social Inclusion Policy	0.549456695	0.374613715	-0.515700803
Poverty Rate	0.633393679	0.432218047	-0.562951279
NEET Rate	0.585624373	0.545506408	-0.626427055
Gini Coefficient	0.571039547	0.485903552	-0.557816446
Gender Equality in Parliaments	0.529337805	0.573299668	-0.611291152
Life Satisfaction	0.504621724	0.39483571	-0.494472045
Health	0.54565205	0.366055381	-0.49675953
Health Policy	0.500903241	0.342729607	-0.468926393

Spending on Health Programs	0.355292978	0.409769944	-0.410131956
Life Expectancy	0.300684942	0.076186692	-0.198643736
Infant Mortality	0.468954203	0.344716768	-0.433059225
Perceived Health Status	-	0.211960623	-0.23570302
Families	0.747033997	0.597823313	-0.733867051
Family Policy	0.725571643	0.590562189	-0.722989462
Child Care Density, Age 0-2	0.486134467	0.332835036	-0.440612997
Child Care Density, Age 3-5	0.53667838	0.491456482	-0.554374048
Fertility Rate	0.324830662	0.199281164	-0.292908926
Child Poverty	0.60181434	0.459306168	-0.569252861
Pensions	0.577675546	0.63726599	-0.671493395
Pension Policy	0.523358179	0.637881006	-0.655078172
OlderEmployment	0.492657022	0.713040063	-0.66591975
Old Age Dependency Ratio	-	0.279302368	-0.344839916
Senior Citizen Poverty	0.549538438	0.346705605	-0.449902439
Integration	0.399437627	0.532433523	-0.509895819
Integration Policy	0.548958078	0.420387624	-0.536031147
FB-N Upper Secondary Attainment	0.223473252	0.408532958	-0.338720967
FB-N Tertiary Attainment	0.341887058	0.508665292	-0.468963835
FB-N Unemployment	-	0.472791519	-0.37771185
FB-N Employment	-	0.495584863	-0.215197596
Safe Living	0.27875333	0.307076568	-0.327532055
Safe Living Conditions	0.209780878	0.335376089	-0.319540718
Homicides	0.309659633	0.154820025	-0.244175294
Thefts	-	0.241659987	-0.153080613
Confidence in Police	0.33612827	0.303580509	-0.353848163
Global Inequalities	0.607398825	0.365278485	-0.534884955
Global Social Policy	0.619028376	0.41320958	-0.562836019
ODA	0.514598285	0.279643697	-0.440260196
Environmental Policies	0.553036405	0.698086586	-0.698957911
Environment	0.427238516	0.677374766	-0.630403737
Environmental Policy	0.495517202	0.745571537	-0.706239889
Energy Productivity	-	0.376185957	-0.456451008
Greenhouse Gas Emissions	-0.36779752	-0.205370224	0.322538493
Particulate Matter	0.218541168	0.305033052	-0.300295639

Water Usage	-0.116530208	-0.280546719	0.219419993
Waste Generation	-0.048269229	-0.004721742	0.044589859
Material Recycling	0.543450465	0.486284917	-0.579454671
Biodiversity	0.134260598	0.11647941	-0.123367351
Renewable Energy	0.183491087	0.562918921	-0.429414367
Global Environmental Protection	0.594951055	0.635357837	-0.676195286
Global Environmental Policy	0.47443048	0.489472264	-0.533773503
Multilateral Environmental Agreements	0.482587721	0.383989544	-0.473504632
Kyoto Participation and Achievements	0.248004185	0.440662667	-0.37410459
Quality of Democracy	0.486713294	0.586653188	-0.599636857
Electoral Processes	0.483339869	0.550304462	-0.577884512
Candidacy Procedures	0.451139644	0.47578791	-0.511931868
Media Access	0.414099659	0.347987881	-0.416586904
Voting and Registration Rights	0.439162225	0.379495625	-0.443096083
Party Financing	0.471623121	0.368392201	-0.466081083
Popular Decision-Making	0.046247851	0.304699769	-0.166385165
Access to Information	0.433523854	0.585002797	-0.568152609
Media Freedom	0.479644529	0.533768957	-0.559746393
Media Pluralism	0.282437255	0.33560886	-0.342156731
Access to Government Information	0.327435386	0.630387709	-0.543903824
Civil Rights and Political Liberties	0.4946693	0.561083828	-0.583080544
Civil Rights	0.459321727	0.50370942	-0.528507489
Political Liberties	0.499650824	0.62370679	-0.618312666
Non-discrimination	0.382449432	0.407817956	-0.441722937
Rule of Law	0.417616351	0.491633258	-0.51409492
Legal Certainty	0.42320718	0.578801199	-0.557029369
Judicial Review	0.465119119	0.413762769	-0.48807275
Appointment of Justices	0.122850232	0.114032844	-0.142681725
Corruption Prevention	0.377072776	0.515867491	-0.512195017
Governance	0.539065336	0.579124791	-0.626088686
Executive Capacity	0.455159222	0.543927337	-0.564705424
Strategic Capacity	0.262558645	0.470050177	-0.416906858
Strategic Planning	0.240894862	0.4821305	-0.410779543
Scholarly Advice	0.219522526	0.325602939	-0.31110806
Interministerial Coordination	0.36000103	0.276717935	-0.346153156

GO Expertise	0.33416928	0.294755361	-0.335123545
GO Gatekeeping	0.071489251	-0.129492525	0.057068577
Line Ministries	0.400254219	0.304146031	-0.384663724
Cabinet Committees	0.068896284	-0.028013609	-0.012569298
Ministerial Bureaucracy	0.261417567	0.381896288	-0.374189702
Informal Coordination	0.442395489	0.397487587	-0.472202898
Evidence-based Instruments	0.306301318	0.393073208	-0.379779869
RIA Application	0.213933061	0.35331551	-0.309370251
Quality of RIA Process	0.319704349	0.407644333	-0.391482271
Sustainability Check	0.336939649	0.355249314	-0.378418676
Societal Consultation	0.469187216	0.559094917	-0.590698783
Negotiating Public Support	0.469187216	0.559094917	-0.590698783
Policy Communication	0.387773681	0.374077847	-0.424544917
Coherent Communication	0.387773681	0.374077847	-0.424544917
Implementation	0.457268726	0.555377276	-0.580407858
Government Efficiency	0.194655533	0.433899224	-0.374627268
Ministerial Compliance	0.442666236	0.521692718	-0.534477361
Monitoring Ministries	0.179134601	0.408917452	-0.338301233
Monitoring Agencies, Bureaucracies	0.338771868	0.250059175	-0.332418749
Task Funding	0.315075393	0.445750911	-0.446607319
Constitutional Discretion	0.407533411	0.487447558	-0.515703161
National Standards	0.445693099	0.318406086	-0.433204353
Adaptability	0.354098291	0.303237009	-0.369235111
Domestic Adaptability	0.180256694	0.282913474	-0.263558234
International Coordination	0.44484933	0.257885503	-0.39149259
Organizational Reform	0.228073734	0.40703776	-0.357941748
Self-monitoring	0.211926402	0.395843874	-0.33918103
Institutional Reform	0.164210737	0.271656711	-0.249720836
Executive Accountability	0.548735304	0.529107346	-0.597665996
Citizens' Participatory Competence	0.378325084	0.311050688	-0.375047173
Policy Knowledge	0.394363566	0.482063949	-0.490214374
Voicing Opinion to Officials	0.327996721	0.272103417	-0.32361826
Voter Turnout	0.165888036	-0.022215734	-0.067739225
Legislative Actors' Resources	0.476837745	0.441602608	-0.510710937
Parliamentary Resources	0.495611331	0.158371666	-0.341311532
Obtaining Documents	0.419790275	0.445216969	-0.493326021
Summoning Ministers	0.408007303	0.46378266	-0.483415437

Summoning Experts	0.316183486	0.236969035	-0.317183056
Task Area Congruence	0.257384962	0.298253434	-0.317749461
Audit Office	0.196004628	0.252042065	-0.262067228
Ombuds Office	0.259765602	0.295205565	-0.300048933
Media	0.536767128	0.618480259	-0.652000242
Media Reporting	0.51163676	0.522114848	-0.570330103
Newspaper Circulation	0.438906365	0.477060652	-0.522907836
Quality Newspapers	0.403881192	0.532325556	-0.532911099
Parties and Interest Associations	0.476488306	0.479046938	-0.527840368
Intra-party Democracy	0.355840664	0.435547557	-0.4387225
Association Competence (Business)	0.345676128	0.42343933	-0.438428947
Association Competence (Others)	0.508201049	0.337637165	-0.449904375

Source: authors own research results.