

## **STATISTICAL INDICATORS FOR RELIGIOUS STUDIES: INDICATORS OF LEVEL AND STRUCTURE<sup>1</sup>**

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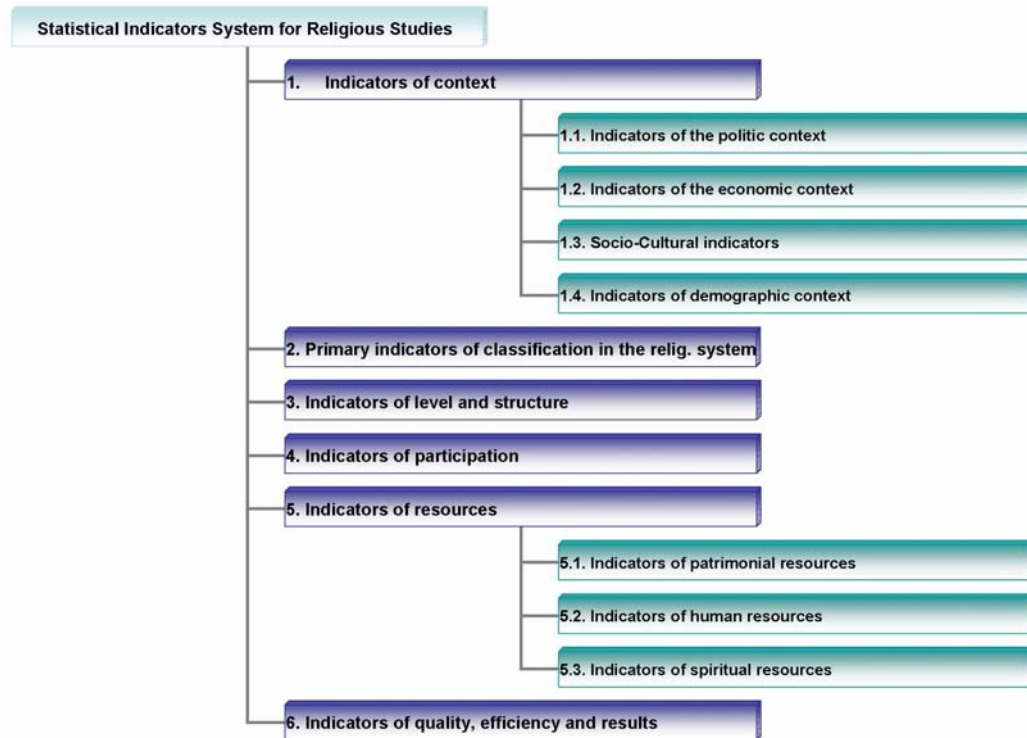
**Abstract:** *Using statistic indicators as vectors of information relative to the operational status of a phenomenon, including a religious one, is unanimously accepted. By introducing a system of statistic indicators we can also analyze the interfacing areas of a phenomenon. In this context, we have elaborated a system of statistic indicators specific to the religious field, which highlights the manner of positioning, evolving, interfering and manifesting of this field in society.*

**Key words:** *statistical indicators; religious studies; indicators of level; indicators of structure; indicators' descriptors; indicator card*

### **Context**

Statistic indicators systems have been build to be applied in various areas: education, environment, etc. Depending on the destination of these systems, their complexity and dimension can be smaller or larger. In the followings, we present a few descriptive elements for a component of the system of statistic indicators proposed for the analysis of the religious phenomenon. The diagram below presents the general context and structure of the system of indicators for the analysis of the religious phenomenon. The indicators system is structured in six sub-systems (some of them divided in other categories), and has multiple approaches of the religious phenomenon: i) the use of different reporting coordinates, ii) the analysis based on various aggregation/depth levels, iii) the use of various measurement scales, iv) the definition of both primary (absolute as well as relative) and derived indicators, etc.

Not all presented indicators are innovative. Some of them (e.g. the structure of the population by declared religious affiliation) are generally used by most of the researchers, and contribute to obtaining the general image of the pursued phenomenon.



**Figure 1.** The structure of indicators' system for religious studies

This article is intended to detail the third sub-system of indicators: Indicator of level and structure, the indicators of this sub-system are the following: **Indicators of level an structure.** The indicators of this subsystem are the following:

1. Number of existing religious groups (NRG)
2. Structure of the population from viewpoint of the religious affiliation (RLG)
3. Minimum number of religious groups for the establishment of religious oligopoly (OLIG)
4. The structure of the population from viewpoint of the active religious affiliation (ACTRLG)
5. The balance of legally constituted families (LEGFAM)
6. The balance of multi-confessional families (MCONFAM)

**Indicators' descriptors**

Indicator	1. Number of existing religious groups
<b>Characteristics</b>	
Definition	Represents the total number of religious groups legally constituted and recognized "as is" in a distinct geographical area (usually a country).
Scope	The indicator measures the level of flexibility and easiness in obtaining a "license" for a certain communion. It reflects the degree of religious freedom, compatibility and interest on which raises a certain communion within a country.
Symbol	<b>NRG</b>
Calculus method	It counts the number of religious groups recognized by an authority.

Formula	NRG = max(i) (1.) where: i – the numbers of order in the list of confessions legally recognized by the authorities
Necessary data	The list of legal confessions as recognized by the authorities.
Data source	The Ministry of Culture and Cults
Type	From the data type point of view : absolute From the measurement scale point of view: interval From the calculus point of view: primary From the time evolution point of view: moment
Class/ category	Indicators of level and structure
Aggregation level	National, regional, continental, worldwide, etc
Interpretation	It characterizes the degree of attractiveness and freedom within a country or region from the religious activities point of view.
Quality standards	One must consider the differentiation between the various phases a cult/church/movement must cover until the complete recognition or until the stage of legally accepted or tolerated group.

<b>Indicator Characteristics</b>	<b>2. Structure of the population from viewpoint of the religious affiliation</b>
Definition	The weights of religious institutions from the perspective of the number of self-declared believers, in a certain geographical region.
Scope	The indicator is a classical one and maybe the most commonly used indicator for the study of religious phenomena. Based on its results, international comparisons can be made or it can characterize the existent type of "religious market".
Symbol	<b>RLG</b>
Calculus method	It is calculated by relating the total number of persons affiliated to a religious denomination to the total population investigated. Facultative, the result can be expressed as a percentage by multiplication with 100.
Formula	$RLG_i = \frac{B_i}{\sum B_i} \cdot [100] \quad (2.)$ <p>Where:  <math>B_i</math> – the number of believers affiliated to the o confession  <math>\sum B_i</math> - the volume of the investigated population</p>
Necessary data	The number of believers for each existing confession in the studies population (the C indicator within the indicators characterizing human resources).
Data source	NIS <sup>3</sup> , Religious Institutions, Censuses <sup>4</sup>
Type	From the data type point of view : relative From the measurement scale point of view: continuous From the calculus point of view: derived From the time evolution point of view: moment
Class/ category	Indicators of level and structure
Aggregation level	Local, by county, regional, national, continental, worldwide, by gender, by residence environments, etc.
Interpretation	We can also measure and make comparisons between the existing situation regarding religious affiliation in various geographical areas or in population structures by various aggregation criteria (gender, education, nationality, etc).
Quality standards	In order to give a good interpretation of the results, one must also consider the fact that at a certain moment in time, a person can belong to a single church. Also, the denominator and the numerator of the fraction must be specific to a population synchronized spatially and timely. Another issue is given by the fact that this indicator is almost always based on the free statement of the individuals.

<b>Indicator Characteristics</b>	<b>3. Minimum number of religious groups for the establishment of religious oligopoly</b>
Definition	The number of confessions, calculated on a descending sorted scale depending on the ratios obtained, assuring a limit percentage ( $\varepsilon$ ) of the total number of believers. The limit percentage can be set, for example, to a level of 80%.
Scope	The indicator measures the degree of saturation/ diversification existent on the "religious market" in a certain location.
Symbol	<b>OLIG</b>
Calculus method	The weights obtained for each confession are determined and are cumulated increasingly. OLIG is the rank of the confession for which the value of $\varepsilon$ is outran for the first time.
Formula	$OLIG = \min(i) \mid F_i \in B; B = \{F_i \geq \varepsilon\} \quad (3.)$ <p>Where:  <math>F_i</math> - are the cumulative frequencies sorted decreasingly  <math>\varepsilon</math> - is the minimum level set for constituting oligopoly.</p>
Necessary data	The number of believers for each confession in the studied population.
Data source	NIS, Religious Institutions
Type	From the data type point of view : absolute From the measurement scale point of view: interval From the calculus point of view: primary From the time evolution point of view: moment
Class/ category	Indicators of level and structure
Aggregation level	Local, by county, regional, national, continental, worldwide, by gender, by residence environments, by ethnicity, etc.
Interpretation	If the minimum limit ( $\varepsilon$ ) can be assured by 2-3 confessions a church – cartel can become the representatives in the relations between State and Church. If OLIG=1 than we are in the situation of monopoly.
Quality standards	The indicator characterizes the religious market in a certain location. Even if at a national or regional level the situation is in a certain way (one confession dominates the market) there can be other locations where another confession dominates the religious market, locally.

<b>Indicator Characteristics</b>	<b>4. The structure of the population from the viewpoint of active affiliation</b>
Definition	The weights that religious institutions have within a population active from a religious point of view.
Scope	It is calculated from the balance of religious institutions and the active religious population, taking into consideration the IRI <sup>5</sup> .
Symbol	<b>ACTRLG</b>
Calculus method	It is calculated by dividing the total number of persons affiliated to a religious confession to the total investigated population. Facultative, the result can be expressed as percentage, by multiplication with 100. The declaration of a person as belonging to a category of active believers s accomplished by using the AB <sup>6</sup> indicator (presented in the human resources indicators section).
Formula	$ACTRLG_i = \frac{AB_i}{\sum AB_i} \cdot [100] \quad (4.)$ <p>Where:  <math>AB_i</math> - the number of active believers belonging to confession ranking i.  <math>\sum AB_i</math> - The volume of the population of active believers.</p>
Necessary data	AB indicator- active believers.
Data source	Statistical investigations, Religious institutions, NIS.
Type	From the data type point of view : relative From the measurement scale point of view: continuous From the calculus point of view: derived

	From the time evolution point of view: moment
Class/ category	Indicators of level and structure
Aggregation level	Local, by county, regional, national, continental, worldwide, by gender, by residence environments, etc.
Interpretation	Measurements and comparisons can be made between the existing situation regarding active religious affiliation in various geographical locations, or in population structured according to several aggregation criteria (gender, education, nationality, etc).
Quality standards	The illustration precision of the existing situation for a certain location increases if this indicator is utilized. Taking into consideration the secularization manifested in religion, sometimes there can be situations when a religious minority (according to RLG) becomes the leader of a certain religious market (using ACTRLG as study method).

<b>Indicator Characteristics</b>	<b>5. The balance of legally constituted families</b>
Definition	The specific weight of families legally registered as against to the total number of families.
Scope	The indicator shows, from a quantitative perspective, how the concept of "family –basic cell of society" is perceived in the daily practice.
Symbol	<b>LEGFAM</b>
Calculus method	The total number of legally constituted families is divided to the total number of families. The result can also be expressed as percentage, by multiplication with 100.
Formula	$LEGFAM = \frac{LF}{TNF} \cdot [100] \quad (5.)$ <p>Where: LF – the total number of legally constituted families. TNF – the total number of families.</p>
Necessary data	The number of legally constituted families, as well as the total number of families.
Data source	Statistical investigation, NIS, censuses.
Type	From the data type point of view : relative From the measurement scale point of view: continuous From the calculus point of view: derived From the time evolution point of view: moment
Class/ category	Indicators of level and structure
Aggregation level	Local, by county, regional, national, continental, worldwide, by confessions, by residence environments, etc.
Interpretation	The more the indicator is closer to 1 (or 100%) the more the studied population has the tendency to register legally constituted families.
Quality standards	Various interpretations can be given to the way of registration. Most of the times, religious institutions don't recognize a family unless it has also been registered by a religious institution. There are also situations in which legal registration is sufficient for religious registration <sup>7</sup> .

<b>Indicator Characteristics</b>	<b>6. The balance of multi-confessional families</b>
Definition	The number of families that consist of at least two believers of another religious institution compared to the total number of families.
Scope	It intends to illustrate the degree of opening, freedom, and overcome of confessional barriers within a family.
Symbol	<b>MCONFAM</b>
Calculus method	The number of multi-confessional families is divided to the total number of families. The result can also be expressed as percentage by multiplication with 100.

Formula	$MCONFAM = \frac{MCF}{TNF} \cdot [1000] \quad (6.)$ <p>Where: MCF – the number of multi-confessional families TNF – the total number of families</p>
Necessary data	The number of multi-confessional families, as well as the total number of families.
Data source	Statistical investigations, NIS
Type	From the data type point of view : relative From the measurement scale point of view: continuous From the calculus point of view: derived From the time evolution point of view: moment
Class/ category	Indicators of level and structure
Aggregation level	Local, by county, regional, national, continental, worldwide, by residence environments, by confessions, by ethnic groups, etc.
Interpretation	The interpretation can be performed by comparison to other countries or by study of confessions where the multi-confessional families are more frequent.
Quality standards	Religious institutions usually tolerate but don't encourage multi-confessional families. This is the reason why the indicator will not register a high level. The analysis can be refined by using the information regarding the religion chosen by the children of the multi-confessional families.

## Conclusions and future work

Without a doubt, the description within a standardized system and the creation of a unitary and comprehensive conceptual context is merely the methodological foundation necessary for the following phases: i) implementing improvements (after receiving feed-back from the interested academic community), ii) collecting statistic information for the alimentation and operationalization of this system, iii) analyzing, processing and disseminating the results towards the scientific community and interested public.

We hope that this methodological process will be followed by the implementation of the other phases necessary to finalize the scientific process initiated by this material.

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<sup>3</sup> National Institute of Statistics

<sup>4</sup> In Romania, in the communist period, the censuses in 1956, 1966 and 1977 have no record of religious affiliations, which makes time comparisons difficult.

<sup>5</sup> It is about the Intensity of Religious Implication indicator.

<sup>6</sup> It is about Active Believer indicator.

<sup>7</sup> The case of the USA procedures, where in many states, the marriage license is given after the religious ceremony.