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RESEARCH AND EXPLICATION OF THE QUANTITATIVE CHARACTERISTIC OF LEGISLATION, USING THE EXAMPLE OF THE LEGISLATION OF THE CR

Abstract:

The article deals with possibilities of quantitative description of legislation and its quantitative representation and then analyses especially on the example of the Czech legislation and its development in the 20th century. First of all it describes the basic methodology especially specific operational variables used for this reason and in the next step it shows tablets with real data obtained by such analysis for the year 2010 and their comparison with the data and results of the analysis from last years.

1. Parametrization of the laws of the CR

In the beginning of our contemplation let lis consider the fact that the law is a complicated and elaborate conglomerate of phenomenona and connections, ideas and relations, which are hard to grasp due to their staggering numbers and complexity. The phenomenon of the law as a whole is hard to define and hard to crack and approach in terms of rational organization and explanation. We accept this fact with humility and try, while being fully aware of the scientific imperfections and incompleteness of our effort, to at least partially grasp certain part and form of the phenomenal existence of the law, represented in our opinion mainly by the sources of the law and, in modern codes of law, individual legislative forms, i.e. legislative (written) documents. These documents can be understood as material carriers of legal standards[1]) and as such they are certainly open for empirical scrutiny.

The initial quantitative description of the legislation in the CR is in certain way an analogy to the state statistics, which have been used for a very long time as a method of gathering basic information necessary to run the state and influence social processes. These statistics cover many different areas. After

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[1]) See KNAPP, V., *Teorie práva* [Theory of Law], Praha, 1995, pg. 131. Authors mention here "material medium".

all, also in the sphere of justice and criminology we find statistical methods to be quite common. So the primary question is how to define, specify or choose the basic characteristics (attributes) of legislative forms and define their quantitative basis, their measures and dimensions. In other words; to specify certain parameters as measurable, quantifiable quantities and variables, whose observing at regular time intervals provides summary information about the system as a whole and about the changes taking place inside of it. These variables and their values can in our opinion, especially in certain scenarios, bring substantial information about otherwise hidden properties of the system, in this case the legislation of the CR.

The basic element of interest in our approach is **legislative document,** which we understand as any independently existing document published (printed) in the official registers - statute books (Statute Book of the CR and the Collection of International Agreements of the CR). Based on the analysis of these documents, published since these registers were founded (in case of the Statute Book since 1918) we defined the basic quantitative characteristics as categories, which describe the individual legislative documents. Using these categories we recorded each legislative document in specific information database. All the laws are thus quantitatively and continuously described - parameterized.

The database of the legislation of the CR has been systematically built since the end of the 1980s. Analytical articles have been published on regular basis since 2007 in journal Právník (The Lawyer), monitoring the state and development of the legislation within the CR using selected quantitative indicators and characteristics.[2])

2. Methodological basis - quantitative variables

Variables, that we can define on a given structure of legislative documents and which are in our opinion fit to fix and capture in a relevant way the basic quantifiable and measurable properties of the Czech legislation can be classified in three categories:

a) Basic or primary (primarily descriptive, simple).

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[2]) See NOVÁK, F., *Legislativa ČR v roce 2007 - kvantitativní přehled* [Legislation in the CR in 2007 -quantitative overview], Právník No. 2, 2009; NOVÁK, F., *Legislativa ČR v roce 2008 - kvantitativní přehled* [Legislation in the CR in 2008 - quantitative overview], Právník No. 9, 2009; NOVÁK, F., *Legislativa ČR v roce 2009 - kvantitativní přehled* [Legislation in the CR in 2009 - quantitative overview], Právník No. 12, 2010; NOVÁK, F., *Legislativa ČR v roce 2010 - kvantitativní přehled* [Legislation in the CR in 2010 -quantitative overview], Právník No. 10, 2011; NOVÁK, F., *Legislativa ČR v roce 2010 - analytický a komparativní pohled* [Legislation in the CR in 2010 - analytical and comparative view], Právník, No. 12, 2011.

b) Secondary (compound, derived from the primary or built on them - synthetic).

c) Comparative.

2.1. Basic variables capture simple properties observable in legislation documents of the CR, which can be quantitatively expressed using numbers of defined units. They are initial, descriptive in nature; they are simple, not complex. These variables are constructed to potentially become building blocks for the construction of compound, complex variables – synthetic. This includes in particular:

– the form of the document (defined based on document's formal name - "act", "government act", "public ordinance" etc.)

– author of the document (parliament, government, ministry etc.)

– size of the document (defined as the number of pages in printed register, number of paragraphs, sentences, words etc.)

– functional and content characteristics (new legislation, amendment, derogation document, informing document etc.

– characteristic of the content (classification within traditional branches of law distinguished in the Czech legal theory - constitutional, administration, criminal, civil, commercial, family, labor, financial laws etc. in total 12 branches)

– time coordinates (date the document was received, date it becomes effective, date it expires etc.)

– validity, effectivity of the legal provision.

2.2. Secondary (compound, synthetic) variables are created "artificially", based on the primary variables and their internal structure. They cannot be observed directly, they are not directly identified in the observed objects (legislation documents). They are important in **theoretical level,** expressing **deeper structural properties** of the system. We can call them coefficients:

– **Coefficient of legal relevance** expresses primarily the quantitative **ratio** of documents carrying legislative information (legal standards) and "accompanying" documents, which are also included in the official registers (e.g. parliament resolutions, provisions of the Central Bank).

– **Coefficient of the weight of an act,** weight of the primary legal provision represents the quantitative ratio between the primary and secondary legislative documents (basically government acts and public ordinance). This coefficient clearly reflects e.g. the principle of sovereignty of the law, especially in comparative perspective (inter¬state and international).

– **Coefficient of external influence** explicates the quantitative ratio between inter-state legislative documents and published international agreements, ac-

cepted and ratified by the Czech Republic, thus becoming a part of the Czech code of law. A specifically monitored parameter is also the quantitative indicator of **transformation of the EU legislation into the Czech legislation.**

– **Coefficient of amendment** or changes reflects the ratio of legislative documents bringing changes to current legislation (actively changing it) and all legislation documents approved; i.e. the share of amending law in all legislative documents. This variable, characterizing the dynamics and development of legislation, is very closely followed not only at its current value, but also in comparison with other time periods and other countries.

2.3. Comparative variables are constructed for comparative purposes and to solve comparatively focused tasks in the legislation. They are based on the comparison of the **degree** or size of certain properties, on the **time** and **branch** viewpoint.

2.3.1. From the time point of view it is possible to compare certain periods (1 year, 5 years, parliament election period) or stages, e.g. using the following parameters:

– **Time-defined development characteristics of the formal structure of legislation:** Shows e.g. ratios (shares) of individual legislation forms, as they were employed in the monitored periods or stages (1 year, 5 years, 20 years etc.). The key point here is again the ratio of the primary and secondary legislative forms.

– **Time-defined development characteristics for the external influences in legislation:** Similar to the previous case we obtain comparative information about the intensity of the external foreign political influence and factors, as it is manifested in the legislation within the monitored periods or stages.

– **Development stability and variability of the law** provides information about the developments in the legislation within the monitored periods or stages. This type of information indicates time periods (or individual years) characteristic by increased or minimized intensity of innovation efforts and tendencies within the legislation and through legislation. It clearly evokes other historical and political connections.

– **Time-defined development characteristics of the branch structure** of Czech legislation reveals the peculiarities in the development of legislation and law as such at the level of individual **branches of law.** We can also compare summary categories of **private and public law** in the monitored periods and stages.

All these comparative variables and their values are mutually comparable. So we can for example assess the application of legislation's formal structure not only from the time perspective (development), but also in terms of international influence and its distribution into individual branches of the law and vice versa.

2.3.2. **The branch point of view** brings comparative information about the branch structure within the legislation. It can be applied to the formal structure of legislation, i.e. observe the degree, to which individual branches of the law are represented in individual legislative forms; the branch point of view can be also projected into the degree of stability and variability of legislation. It is certainly interesting also as an indicator for comparing foreign influences within the branches of Czech legislation.

It is clear that here presented synthetic (compound) and comparative variables are more than just descriptive characteristics. We believe that they can reflect deeper and latent characteristics and aspects of legislation and in this sense exceed the scope of bare quantitative description. They are becoming **qualitative indicators.** At the same time they provide a large playground to search for other connections - be it in the sphere of law or in sociology, politology, history etc.

It would be certainly interesting and scientifically very relevant to compare these indicators on an international level. This article is therefore also intended as an encouragement and motivation for such initiatives. To be more concrete the following part contains brief summary of the results of monitoring within the Czech legislation in 2010.

3. Quantitative overview of certain aspects of the legislation in the CR in 2010 and a comparison with the previous years

3.1. An overview of legislation documents according to individual types[3]) can be found in the following three tables with a legend providing explanation of abbreviations used. Comparative studies will certainly require unification of terminology of individual types of legislation existing in the selected countries (Poland, Hungary, Slovakia and the Czech Republic).

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[3]) Abbreviations used for individual types of legislation documents are in fact sufficiently instructional and intelligible, nevertheless particularly for translation into English we define them as follows: CL (UZ)-constitution, constitutional laws; Laws (Zák.); GA (NV) - government acts; PO (Vyhl.) - public ordinance (from ministries); LP (ZO) - legal provisions; FV (UZZ) - full versions of the act published in the Statute Book of the CR; Notif. (Sdél.) - notifications (published); EN (RS) - editorial notifications of errors; N1A (MS) - notifications about concluded international agreements; (NEIA) (MS-RS) - editorial notification about error in an international agreement; FCC (NUS) - findings of the Constitutional Court (published in the Statute Book of the CR); CCP (US-PS) - resolution of the Parliament of the CR (about re-approval of an act returned by the president); DP (Rozh.p.)-decision of the president of the Republic.

Tab. No. 1 - Types of legislation documents - numbers

Type	CL	Laws.	GA	PO	FV	Notif.	EN	NIA	NEIA	FCC	CCP	DP	Total[4]
Numbers	0	66	62	199	11	61	3	91	11	30	7	3	544 442 102

Tab. No. 2 - Types of legislation documents - shares

Type	UZ	Laws.	GA	PO	FV	Notif.	EN	NIA	NEIA	FCC	CCP	DP	All
Number	0	66	62	199	11	61	3	91	11	30	7	3	544
Share	0	0.121	0.114	0.366	0.02	0.112	0.006	0.167	0.02	0.055	0.013	0.006	1
Share in %	0	12.13	11.40	36.58	2.02	11.21	0.55	16.73	2.02	5.51	1.29	0.55	100

Tab. No. 3 - Summary categories according to legal relevance and their ratios (SB and CIA)[5]

	Total all	Total Statute Book	Total NIA	Legal[6]	Other
Number	544	442	102	448	96
Share from total	1	0.8125	0.1875	0.824	0.176
% from total	100	81.25	18.75	82.353	17.647

The total number of documents published or notified (registered) in the Statute Book in 2010 is 544, of which 422 in the Statute Book of the CR and the Collection of International Agreements 102 documents. In comparison with the previous year (2009) we notice decline (544 compared to 617 in 2009), which is observed in case of the Statute Book (442 compared to 492), as well as the Collection of International Agreements (102 compared to 125). In relative terms this decline means that only 88.17 % of legislation documents were passed in 2010 compared to 2009 (89.84 and 91.6), or we could say that in 2010 we observe decline of the number of published (announced) legislation documents in official registers by almost 12 % (10 % the Statute Book and 18 % Collection of International Agreements).

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[4]) Total counts include all these documents (544), documents from the Statute Book of the CR (442, of which 3 are editorial notifications without serial numbers) and international agreements (102, including MS-RS)

[5]) Abbreviations refer to the Statue Book of the CR and the Collection of International Agreements of the CR.

[6]) The term "legal" refers to those legislative forms (documents), which we consider carriers of legal standards, i.e. CL, Laws, GA and PO, MIA and FCC. The ratio is based on the overall count, including NIA. Other documents are technical and in terms of legal normative (legislative) regulation they are less relevant, additional; summarized under "other". The term "legal" also does not include FV, EN nor NEIA.

The total number of documents labeled in our methodology as "legal" is 448 (in both; Statute Book and Collection of International Agreements), compared to 526 in the previous year. Other documents here represent the additional group to 100 %, i.e. 17.65 % compared to 82.35 % of legal documents. At the level of the Statute Book of the Czech legislation documents the ratio of "legal" and "other" is 357:85, i.e. 80.77 % compared to 19.23 %. Comparison with 2009 does not bring much change (81.5 % compared to 18.5 %).

The monitored **coefficient of legal relevance** is therefore 0.823 - legally relevant documents comprise 82.3 % of the total number of legislative documents in official Statute Books and Collection of International Agreements; 80.77 % at the level of the Statute Book. In comparison with the previous year we notice certain difference in the level of all documents (85.25 % in 2009, compared to 82.30 in the following year), however not in the number of documents from the Statute Book: 81.5 % and 80.77 %. The difference of a few percentage points is likely given by the increase in the number of corrections notifications in the NIA (11 compared to 1 in 2009).

When comparing the number of documents from both Statute Books we see ratio 442 to 102. The documents from the Statute Book of the CR comprise therefore 81.25 % of all documents, NIA 18.75 %. When looking only on "legal" documents we see the ratio of 257 to 91, i.e. 79.69 % to 20.31 %. In comparison with the previous year there is very slight increase of inter-state legislation (influenced by the overall decline in NIA compared to 2009), which brings year 2010 close to the situation from 2008.

3.2. The primary and secondary legislation documents and their proportions when compared to the previous year can be found in table 4:

Tab. No. 4 - Legally relevant types of legislation documents included only in the Statute Book of the CR and their ratios with respect to the number of all legislation documents from the Statute Book, divided for primary and secondary[7])

Type	CL	Laws	PRD	GA	PO	SEC	FCC	Total	Without FCC
Number	0	66	66	62	199	261	30	357	327
Share in total	0	0.185 0.202	0.185 0.202	0.174 0.190	0.557 0.609	0.731 0.798	0.084	1	1
Share in total in %	0	18.49 20.18	18.49 20.18	17.37 18.96	55.74 60.86	73.11 79.82	8.40	100	100

[7]) Primary documents (PRD) include constitutional laws and laws (standard or customary), secondary (SEC), government regulations and public ordinances. Findings of the Constitutional Court represent *sui generis* category, which is not significant in terms of the overall proportions.

Comparison of the primary and secondary legislation documents between 2009 and 2010 reveals that the number (114 compared to 66) and share of the primary documents decreased considerably (27.9 % and 29.9 % in 2009, 18.5 % and 20 % in 2010) by almost 10 %. On the other hand, the number of secondary documents increased from 66 % and 70 % in 2009 to 73 % and 79,8 % in 2010, i.e. again by almost 10 %.[8])

Legislative documents split by type (only "legal") in recent years can be found in the following table:

Tab. No. 5 - Legislative documents split by the type ("legal") in the last three years

	2008	%	2009	%	2010	%
CL	0	0	2	0,38	0	0
Laws	113	23.89	112	21.33	66	14.73
PRD	113	31.04	114	29.92	66	20.18
GA	57	12.05	79	15.05	62	13.84
PO	194	41.01	188	35.81	199	44.42
SEC	251	68.96	267	70.08	261	79.82
NIA	88	18.60	124	23.62	91	20.31
FCC	21	4.44	20	3.81	30	6.70
Total	473		525		448	
Total without NIA	385		401		357	
Total without NIA and FCC	364		381		327	

Table No. 5 provides summary information about legislation types compared for the last three years (2008, 2009 and 2010). The percentage proportions are for basic types related to the total of all documents, i.e. including NIA and FCC. In case of aggregate variables PRD and SEC these are derived from the whole of only these variables, i.e. without NIA and FCC.

3.3. The above mentioned **coefficient of** change - amendment in 2010 changed as follows:

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[8]) In this table No. 4 we provide proportional data with respect to the total of all documents, including FCC category, which we classified as *sui generis,* but also excluding this category.

Tab. No. 6 - Active amendment of legislation in 2010

Type	CL	Laws	PRD	GA	PO	SEC	FV	Total
Number of amendments/all	0	59/66	59/66	36/62	119/199	155/261	(9/11)	214/338 (223/349)
Ratio amendments/all	0	0.894	0.894	0.581	0.598	0.594	0.820	0.633 (0.639)
Ratio % amendments/all	0	89.39	89.39	58.06	59.80	59.39	8.18	63.31 (63.90)

The share of active amendments in 2010, when compared to the previous year, increased again (more than 63 % compared to 61 % in 2009), however, it has not reached the level from 2008 (c. 65 %). The same message comes from the indicator with respect to acts (89 % compared to 79 % in 2009 and 90 % in 2008).

3.4. International agreements

Tab. No. 7 - Quantitative characteristics of the position and relevance of international agreements within the Czech legislation in 2010 (total number of IA without editorial messages).

IA-overview	Share of IA in all legislation documents	Share of IA in laws	Share of IA in legally relevant documents
91	91/544	91/66	91/448
Share	0.167	1.379	0.203
Share in %	16.73	137.88	20.31

Comparison with 2009 reveals certain decline in the international factor in absolute and relative sense (91 compared to 124, less than 17 % compared to 20 % in 2009). Similar results are observed when comparing international agreements and legally relevant legislation documents, with relative decline more than 3 %, which means, in comparison with such ratio - international agreements within the legislation system, decline to 86 % from the previous year, i.e. by 14 %! However, we must emphasize that the values from 2010 are very near those from 2008 (91 to 88 in absolute numbers, 16.7 % to 15 % in relative numbers).

Conclusion

This article brings an overview of the basic descriptive and analytical categories proposed for regular quantitative monitoring of the state and development of the Czech legislation, carried out since 2007, as well as an example of the results of such monitoring using some of them for 2010. The system of

categories is, in our opinion, capable of reflecting the basic structural frame-work of legislation in general and it can also be used as a methodological base for international comparative research of legislation in European countries, in particular countries implementing continental European legal culture and orga-nization of their laws. In this sense we created a methodological basis for common research and cooperation within Visegrad Group focused on the area of comparative research.

The article presents, as we already mentioned, also the basic description of the Czech legislation in 2010 (including authentic, numerical results presented in the form of tables), which is a part of the regular monitoring of the Czech legislation, as an example of research conducted in this area. Such monitoring has been carried out on regular basis in the Institute of State and Law since 2007.

This basic description of the legislative activity in the Czech state is built on the analyses of the main Statute Books containing legally normative documents - Statute Book of the CR and the Collection of International Agreements of the CR. The initial structure is based on the formal typology defined in these registers, which is from constitutional law point of view and from the point of view of the general theory of law determinant also for the differentiation of legally relevant legislation documents, i.e. formal sources of law.

Other structural cuts in the Czech legislation system are, for the sake of standardization of the framework for time-based comparisons, kept in the sphere of amendments, branches and international. The amendment activity reflects the development dynamics of the legislation, branch structure reflects the basic horizontal organization of the normative system and the international factor reflects the dynamics of external relations and level of integration of the Czech Republic within the EU.

Because regular annual monitoring of the legislation in the CR was carried out four times in a row, it is natural to include comparative references, not just with respect to the previous year, but with respect to the last three years. Further analyses, including longer time periods, as well as analysis of deeper structural levels, will be, considering the capacity of the initial database, subject of future studies.