Societal Anomie in Slovakia: Evolution and Cross-National Comparison¹

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Societal Anomie in Slovakia: Evolution and Cross-National Comparison. This article presents basic findings of the societal anomie research studies (Model 1) carried out in Slovakia in 2001, 2008, and 2016. Primary attention is paid to the changes in the degree of societal anomie, as well as the challenges related to their interpretation. They are primarily caused by the fact that a critical, threshold value of societal anomie is not yet known. It also presents a model of perception of anomie (Model 2), which formed the basis of an international research carried out in 28 countries. The most significant similarities and differences between both theoretical models, which determine the potential and limitations in the comparison of their findings, are analyzed. This comparison, albeit limited, is particularly useful because it provides a reference framework for assessing the degree of overall anomie in Slovakia.

Sociológia 2018, Vol. 50 (No. 3: 311-334)

Key words: Societal anomie; evolution of societal anomie in Slovakia; cognitive estimates

In 2016, the third wave of societal anomie research was carried out in Slovakia. Simultaneously, the findings of an independent research study of the perception of anomie, carried out in 28 countries, came out as well. This rendered a uniquely interesting opportunity for a dual comparison. On the one hand, it allows us to compare the state of societal anomie in Slovakia in the years 2001, 2008, and 2016 while it also presents an opportunity for a cross-national comparison. These two approaches are the subject of this study.

The first part of the study briefly reviews the premises and principles which served as the basis for the design of a theoretical model for studying societal anomie in Slovakia (Model 1). The second part of the study examines the principal findings of the societal anomie research in Slovakia conducted in 2016. It also points out changes in the state (degree) of societal anomie in all three waves of the study, it suggests possibilities for their interpretation, and it also delves into the character of its basic parameters. The third part of the study examines the theoretical model of the perception of anomie (Model 2) which formed the basis of an international study conducted in 28 countries (cf. Teymoori et al. 2016). Slovakia was not included in this study. The final part analyzes the main similarities and differences between the two theoretical

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¹ The study was conducted as part of research assignment APVV-14-0639 Societal Stratification and Social Mobility in Slovakia and research assignment VEGA 1/10062/15 Modern Sociological Theories as the Basis for the Study of the Development of Slovakia's Society II.

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models which determine the possibilities and limitations in comparing their findings.

The Societal Anomie Model

Societal Anomie: Theoretical Model

The *societal anomie* model (Model 1) was designed in 2001 for the purposes of an empirical inquiry of societal anomie in Slovakia. Because no other models for empirical examination of anomie as a societal state were known at the time, the study relied on the approaches used in classical sociology. It drew heavily on the thorough critical analysis of three key theoretical sociological concepts (Durkheim, Merton, Berger and Luckmann). (cf. Durkheim 1960; 1969; 1998; Merton 1938; 1965; 2000; Berger & Luckmann 1999) It was also described in detail in those studies (Schenk 2004; 2006; 2010a; 2010b), which took a critical look at the approaches to measuring individual anomie, i.e., anomie as an attitude³. This served as the basis for Model 1.

In order to indicate a broader context, worth to note here that there are two general approaches to anomie measurement today. First approach deals with measuring *individual* anomie while the second one with measuring anomie as a *state of society*.

In a more detailed way, e.g., Swader recently emphasized scholars employed four approaches for measuring anomie in sociology:

- a) The first uses indirect macro-indicators.
- b) The second approach involves survey questions about the consequences of anomie or about general anti-social attitudes and behaviors.
- c) The third deals with the gap between 'is' and 'ought' in specific realms.
- d) The fourth approach looks at people's perceptions of social disorder. (Swader 2017: 498)

The construction of Model 1 was based on several assumptions. The first assumption was that due to the insufficient level of development of the theoretical and methodological questions related to societal anomie, (each) such model could only serve as one of several possible models and that, gradually, other models would be designed, thus spurring progress in this area of sociological understanding through their mutual confrontation and comparison. It was also assumed that for this phase of the study, the most optimal approach would be to choose a "static" approach in the first step; i.e., to study societal anomie solely in one particular point in time (t_0) , literally as a state, not process. Model 1 is therefore a structural model.

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This study does not examine individual anomie, i.e., particular types of attitudes. This issue is already discussed in a large body of work, e.g., Srole 1956; Form 1975; Cohen – Till 1977; Dohrenwend 1959; Eckart – Durand 1975; Martin 1980; Miller – Butler 1966; Ondrejkovič 2000; Rabušic – Mareš 1996; Robinson et al. 1991; Rushing 1971) etc.

A fundamental meritorious assumption resulted from the fact that a model of societal anomie should attempt to clarify and elaborate on the issue of deregulation and normlessness, which was merely touched upon by Durkheim and Merton. Most importantly, that anomie cannot be simply reduced to normlessness, as suggested by Merton; as normlessness represents only one part of deregulation and only one characteristic of anomie. *Deregulation*, which, according to Durkheim, is the principal characteristic of anomie, is undeniably a complex and multidimensional phenomenon. It is therefore necessary to identify its structural components. However, before one can attempt to do that, it is important that its relationship to other social phenomena and processes is defined. For example, disintegration is a unique process, which follows anomie (anomie leads to disintegration); anomie, as well as social control are based on confrontation, yet, unlike control which has an integrational purpose, anomie is obviously a negative, pathological phenomenon

In terms of self-regulating processes, deregulation can be decomposed into three structural components (dimensions), logically and factually organized, due to the fact that they are naturally inter-connected by their structural relationships:

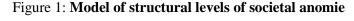
Normlessness: The absence of norms (values, rules) refers inversely to the presence of norms, their clarity and accuracy, as well as their consistency, which are all prerequisites for any society's self-regulation.

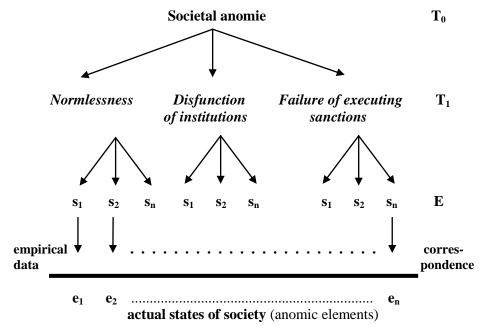
Disfunction of institutions: In society, self-regulatory processes are conducted primarily by a number of diverse institutions whose effectiveness is, to a certain degree, compromised by the occurrence anomie.

Failure of executing sanctions: The outcome (result) of self-regulatory processes is the production or reproduction, possibly distribution (of broadly understood) positive and negative sanctions in society; in case of anomie, a certain level of failure of executing sanctions can be observed.

Since societal anomie must also be measured, Model 1 has to include three analytical levels. (cf. Fig. 1)

The first analytical level shows societal anomie as a unique complete phenomenon (continuum). The second analytical level offers a differentiation of individual structural components of societal anomie (sub-continua). The third analytical level, which is directly used for the purposes of measuring, includes indicators (s_i) corresponding to concrete individual anomic elements (or anomic manifestations) in society $(e_1, e_2, \ldots e_n)$. The indicators were represented by individual statements, i.e., they were represented by items from the societal anomie scale.





Given the assumption that societal anomie represents a specific global characteristic of the state of society (of the social system), it can be concluded that it will present itself, albeit to various degrees, as "all-encompassing"; i.e., it will be present in the entire social system, or at least in its key areas or subsystems or other analytically identified levels.

Since it is presently impossible (due to theoretical and practical reasons) to select a set of anomic measures which would cover the full complex system of society, it is necessary to opt for a cross-sectional model. At minimum, it is important to select such anomic measures that would meet the sufficiency prerequisite. In order to meet this prerequisite, one can use four individual criteria that are mutually inter-connected and inter-dependent. The first one represents the relationship to anomie's basic structural components; i.e. the validity of anomic measures in relation to corresponding structural components. The second criterion is the relevance in relation to current conditions in society. The third criterion is the model's robustness; i.e., a sufficient number of anomic elements, that will be included in the model. The fourth criterion which is also related to measurement, is the collection of a qualified estimate from an expert.

Societal Anomie Measurement

Model 1 was constructed under the assumption that measuring societal anomie was based on *cognitive estimates*. The first attempt to apply this principle was carried out by W. H. Form. (Form 1975)⁴ Model 1 specifies cognitive estimates as comparison of an actual state of a specific section of society to that of a desired state: they indicate the difference (deviation) between these two states, while simultaneously presenting a different sensitivity level⁵ in registering a potential deviation and its degree. "Subjective" sensitivity of determining the "objective" difference between the actual and desired state acts as an element of social construction in societal anomie.

To measure anomie as a state of society, it is beneficial to use a uniquely constructed scale, which allows for recording possible cognitive estimates. Since individual, specific anomic manifestations are, in their character, elements of social reality itself, the scale must be – in principle – an assessment scale. The assessment of an actual state (its elements) is in this case based on the cognitive estimate of experts, in this case, citizens (respondents). This case confirmed once again that the most effective way of obtaining cognitive estimates is to collect responses of experts to statements on the state of specific anomic elements in society. Therefore, the resulting societal anomie scale is – in its final form – an individual, hybrid scale.

The societal anomie scale is comprised of twenty-four items – statements – which serve as indicators of cognitive estimates of a state (degree) of anomic elements⁶. They are listed in Table 1. The selected statements are a product of multiple testing and elimination. The wording of the statements, which are meant to testify to the actual societal state in Slovakia, takes into account both the analysis of societal discourse, as well as the generally accepted language norms and contextual particularities. The final scale therefore meets all four of the above-mentioned conditions.

Due to common methodological reasons, when collecting data, respondents were presented with both positive and negative statements (approximately in the 50 % - 50 % ratio of positive vs. negative statements). Since anomie represents a negative state of society, it was critical that every positive statement be always reformulated into a negative one (including reversed

⁴ Form claimed that previous attempts to measure (individual) anomie cannot be accepted. He believed that it is presently impossible to measure societal anomie directly and that psychological approaches, such as the one of Srole, are sociologically unsatisfactory (Form 1975: 1166), because the used indicators focused on personal feelings of pessimism or frustrated ambitions instead of societal normlessness. He therefore suggests an alternative approach in which reaction to the scale of anomie can be interpreted as "cognitive data" or as "cognitive assessment of societal normlessness," and study "the volume of societal anomie which (respondents – J.S.) observe". (Form 1975: 1166, 1187, 1167)

Cf. the sensitivity issue in the research of social control. (Hirner et al. 1973)

 $^{^{6}}$ For example, the anomic element (e_i) regarding the economy is associated with the statement (s_i) "the economy does not work at all."

scoring), as shown in Table 1. It is necessary due to the subject itself, as well as other analytical approaches (particularly, when it comes to the construction and interpretation of the societal anomie index).

Table 1: Societal Anomie Scale: Structural Components and Items

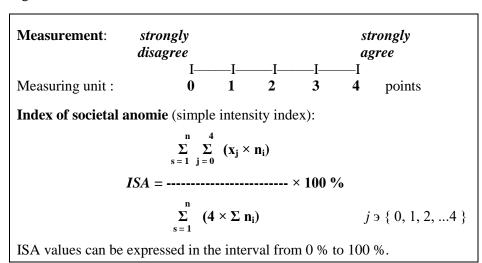
	Structural components of societal anomie	
Normlessness	Disfunction of institutions	Failure of executing sanctions
This society does not follow clear and precise rules	Our politicians' actions are leading to the disintegration of the country	People know that justice will not be served
Most people only care about more money and property	The government is incapable of solving even the most pressing issues	If a person needs help, he or she will never get it
People don't trust anything or anyone any more	When dealing with public offices, it is impossible to get anything done without bribes or connections	Children, weak and sick people are not sufficiently taken care of
Barely anyone respects basic values, such decency and honesty anymore	Our society's prospects for the future are not bright	Decent and hard-working people are not guaranteed a bright future
Success comes to those who lie and steal	Our economy is not working at all	Nobody can be certain they will get what they are entitled to: salary, social security, medicine, etc.
Most people don't act in accordance to their religious beliefs	Ethnic minorities abuse their position	Our streets are filled with crime and violence
When life gets tough, people have the right to take care of themselves and their families in any shape or form	In Slovakia, foreign interests are put before domestic ones	People are no longer appalled by all the scandals, violence, and disfunctional institutions
	There is nobody left in Slovakia who could fix this chaos	It pays off to break the law; bad deeds are not followed by punishment
	Slovaks in Slovakia are discriminated against	

For primary measuring of each statement (stimulus), a standard point-based rating scale, ranging from 0 to 4 points, was used. It enabled every expert to rate their response of agreement or disagreement with a presented statement on a scale.

The *index of societal anomie* (ISA) was designed for the purposes of measurement and analysis.

It is a simple intensity index. It can be used not only for every stimulus (statement) individually, but also as a synthetic indicator, for expressing the degree of anomie as an aggregate, e.g., for determining (estimate) the degree of overall anomie in its individual structural components, as well as in society overall.

Figure 2: Measurement and Construction of ISA



The anomie index can reach values between 0 % to 100 %. 0 % on the ISA scale indicates a non-anomic state (all respondents reject that a given state would be an anomic one), while ISA = 100 % indicates the highest anomic state (all respondents view a given state as anomic at its highest possible level). The closer the index gets to 100 %, the higher the degree of societal anomie. Therefore, the index can also be interpreted as a percentage of the maximum; e.g., a measured index of 70.6 % indicates that in that particular case, societal anomie represents approximately 71 % of the possible maximum; i.e., the particular state approaches to 71 % of anomie maximum.

Anomie index does not allow for an absolute estimate of the size (volume) of anomie; from various reasons it is rather an indication of the relative degree of anomie. The index itself does not allow to differentiate the level of anomie in social systems, which differ in their structural parameters (e.g., by historical periods and other general characteristics). It is also relative in the sense that, to the degree it is interpreted correctly, it requires a full range of comparisons (studies). Only after that could one attempt to solve the following crucial problem: i.e., to determine a critical, threshold value of ISA.

The societal anomie scale was continuously validated. Since the scale is an assessment scale in its nature, its validation criteria are based on the characteristics of the discrimination process, which forms the foundation of this type of scales (Thurstone). In this particular case, such set of criteria include: scale's discriminant capabilities, its small discriminant variance (small estimation error of the stimulus position toward the continuum), and the ability of experts to examine stimuli.

It has been determined that the scale of societal anomies adequately fulfills such criteria in all three phases of the study. It is characterized by:

- a) its high discriminant capability: the difference between items with the highest and the lowest ISA values is between 31 36%,
- b) its small discriminant variance: the scale's standard deviation yields values in the range between 9 % to 13 %,
- c) its low proportion of absences in experts' reactions; e.g., in the 2016 study, it was somewhere between 1.3 % and 4.4 % (cf. Addendum A where the basic data on scale items are introduced).

The societal anomie scale (2016) is characterized by its adequate degree of internal reliability (Cronbach's $\alpha = 0.83$)and by quite high correlations among structural components ($r_{12} = 0.603$, $r_{13} = 0.552$, $r_{23} = 0.610$).

In this case, the confirmation factor analysis is not considered to be a suitable validation tool as it is in, for example, validating scales for measuring attitudes or in typical psychometric analyses. This is derived from the fact that the state of particular anomic elements can be – and in Slovakia it really is – variable. Therefore, a confirmational factor analysis may not yield the expected solution ("pure" factors; i.e., dimensions, structural components), which would be in accordance with the theoretical model. However, that does not automatically mean that certain stimuli (items) would not prove themselves to be valid for a particular dimension; it merely suggests that their state is variable and their correlation with the factor is lower.

Societal Anomie in Slovakia in 2001, 2008, and 2016

Three repeated studies of societal anomie, based on Model 1, were successfully carried out in Slovakia in 2001, 2008, and 2016⁷. The evolution of societal anomie in Slovakia is studied here in a very simplified manner; it is a list of changes in their degree of societal anomie observed in three determined points in time. However, such a low number of points in time does not even lend itself to identifying possible tendencies.

Studies:

a) 2001: a representative research study covering all of Slovakia, quota sample (signs: sex, age, education, ethnicity, size of place of permanent residency, region), N = 1425 respondents, the sampling error $d = \pm 2.6$ %. Primary data collected between 25 June and 4 July 2001.

b) 2008: a representative research study covering all of Slovakia, quota sample (signs: sex, age, education, ethnicity, size of place of permanent residency, region), N=1084 respondents, the sampling error $d=\pm 2.9$ %. Primary data collected between 12 January and 8 February 2008.

c) 2016: a representative research study covering all of Slovakia, random walking procedure, N=3597 respondents, the error estimation $d=\pm 1.6$ %. Primary data collected between September and October 2016.

The dates for conducting the studies were not chosen on purpose; they corresponded to the availability finances for data collection.

It is therefore more suitable to list only the most basic findings regarding societal anomie at the level of society, as well as at the level of three structural components (Table 2).

Table 2: Evolution of Societal Anomie in Slovakia (ISA)

Slovakia	Normlessness	Disfunction of institutions	Failure of executing sanctions	Societal anomie
2001	69.7 %	64.8 %	70.5 %	68.3 %
2008	61.1 %	52.6 %	63.2 %	58.6 %
2016	61.4 %	57.8 %	57.6 %	58.7 %

The listed data indicate that the degree of societal anomie in Slovakia in 2001 reached the index of ISA = 68.3 %, i.e., almost 70 % of the potential maximum. Since the critical, threshold value for ISA is not available, it was only possible to conclude that it is quite a high value and that during this particular period, Slovak society was highly anomic. (Schenk 2004) The year 2008 registered a statistically and actually significant decline of ISA to 58.6 %; i.e., by 10 %. In 2016, a surprisingly similar value was recorded, 58.7 %, which could – under certain circumstances – suggest that the level of anomie in Slovakia is gradually stabilizing. Only future development will show whether or not this is the case. Nonetheless, the level of anomie can still be considered as quite high. (Schenk 2010a)

Changes in the overall societal anomie have been accompanied with changes within its structural components. Compared to 2001, the ISA index dropped significantly in 2008 and 2016 in all of its structural components: the most significant decrease was observed in the area of failure to execute sanctions. Despite the fact that the overall degree of societal anomie in 2008 and 2016 was identical, the ISA index indicates structural changes that equal each other out in the component of disfunctional institutions and failure to execute sanctions. A relatively highest degree of anomie in 2016 is reported in normlessness. There seem to indications that there will be a tendency of gradual equalization of the anomie degree among all three structural components.

This certainly presents only a description of the most basic findings. The key question is to explain why and how the recorded changes occurred. It seems prudent to stick to the description for now, as we are not yet able to provide a reliable explanation due to the fact that a set of self-regulating societal mechanisms is yet to be identified. As yet, sociology does not have at its disposal sufficiently explained and detailed theoretical knowledge of how

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 $^{^{8}}$ This parameter was measured in 2016 with the error d = ± 1.6 %. The ISA estimate therefore ranges between 57.1 and 60.3 %.

societal self-regulation should work and what its basic mechanism looks like (the processes it follows, its structure; i.e., the "chain-nature" of these processes, etc.). Therefore, it is impossible to research nor is it possible to explain the social dynamics in its full scale. Similarly, it is impossible to use successfully methods that are already available; e.g., Process Tracing (Beach – Pedersen 2016) or the construct of dynamic models of various types. The overall complexity of the issue makes it unfeasible to attempt to design a multiagent model. (cf. Schenk 2011; 2017)

Nonetheless, several different interpretations of the observed changes in societal anomic can be made, albeit the fact that interpretations are never risk-free and are often incorrect⁹. As pointed out by Boudon, there is a significant difference between an interpretation and an explanation. (Boudon 2012) Interpretations represent statements made *ex post factum*, based on a selection of certain factors or their combinations. However, such selection is generally intuitive or subjective and often is driven by one's values or historic or ideological motivations, etc. It is therefore generally feasible to articulate several alternative or competing interpretations what makes it, at times, impossible to determine the correct one¹⁰.

Thus, it is also important to address the nature of the rate of societal anomie, expressed in ISA values. The degree of societal anomie is general parameter in its nature, characterizing the unique state of a dynamic non-linear system, such as society. It is likely a result of self-regulating processes, which is also in harmony with predictions of the social entropy theory. (cf. Forsé 1989; Bailey 1990; Schenk 1992)

The theory of dynamic non-linear systems emphasizes the importance of *eigen values* for self-regulating and self-organizing processes, which occur in them. Eigen values are characteristic parameters of different states of a dynamic system (for example, sugar levels or blood pressure in physiology or medicine, etc.); i.e., a certain type of "standard" constants which are normal for the functioning of processes of a self-regulating system, their oscillations, limit cycles, external interventions, etc. A question can, therefore, be asked whether

Incorrect interpretations generally highlight just one of several possible factors (e.g., a political one) or are even based on *circulus vitiosus* scheme, such as: societal anomie is lower because the society is better at self-regulating. (sic!)

Slovakia represents a good example because during the period between 2001 and 2008, a whole range of fundamental changes occurred in the political and economic subsystems, as well as internationally (e.g., Slovakia joined the EU, NATO, etc.). Introduction of the euro in 2009 represented yet another major change. However, it is impossible to determine to which extent these changes impacted the decrease of societal anomie. (Schenk 2010a) A possible contextual determinant appears to be the period of economic prosperity; while in 2001 Slovakia' suffered from an economic crisis, during the 2008 and 2016 research studies, the world economy was undergoing a global economic boom, from which Slovakia benefitted as well. As we know, September 2008 represented the beginning of another deep economic crisis. . . It is thus more that risky to derive changes in societal anomie from a set of economic factors. Furthermore, throughout this whole period, Slovakia's GDP and per capita GDP continued to grow and unemployment kept decreasing.

the degree of societal anomie should belong to this category of general parameters.

Perhaps an analogy will help in trying to find an answer to this very complex question: the analogy with a parameter of another self-regulating process, such as the process of social control. (cf. Hirner et al. 1973; Hirner et al. 1974) These authors came to a conclusion that an important parameter can be defined for the process of social control: the potential of social control. (C_p). Furthermore, in researching different types of social systems (cf. Schenk 1996), this parameter yields surprisingly constant (close) values (Table 3) and meets the eigen value conditions.

Table 3: Social Control Potential in Social Systems

Social system		Parameters	
	C _s	C _t	C _p
Chemical Enterprise 1972	0.924	0.283	0.261
Chemical Enterprise 1987	0.850	0.345	0.293
Urban Unity 1990	0.906	0.324	0.293
Urban Unity 1992	0.595	0.451	0.268

Interestingly, the degree of societal anomie in Slovakia in 2008 and 2016 was identical. On the other hand, it is unknown how and under what circumstances it will continue to develop. That is why it is still impossible to determine whether the degree of societal anomie could be a separate eigen value of such a dynamic non-linear system, such as society. It does, however, seem to be likely a good candidate.

Anomie Perception Model

Anomie Perception: Theoretical Model

Another interesting, intriguing, and thoroughly designed model of *anomie* perception (Model 2) was presented by a sizable group of authors in 2016. The authors based their research on the broadly-accepted definition of anomie in sociology. "Sociologists coined the term 'anomie' to describe societies that are characterized by disintegration and deregulation." (Teymoori et al. 2016: 1) They also state that "despite the fact that anomie is a common experience that many people and societies in the world today share, to date there is no uniform conceptualization and operationalization of this construct." (Teymoori et al. 2016: 2) Their model is built on the assumption that "anomie encompasses two dimensions: a perceived breakdown in social fabric (i.e., disintegration as lack

of trust and erosion of moral standards) and a perceived breakdown in leadership (i.e., deregulation as lack of legitimacy and effectiveness of leadership)". (Teymoori et al. 2016: 1) Nonetheless, they emphasize that anomie must be studied and measured "consistently and solely as a perception of society, specifically a perception that the social and political conditions in society are crumbling". In that respect, they intend to operationalize and measure anomie "not as a personal belief or feeling but rather as a reflection of the societal state in individuals' minds" because anomie is not solely related to "the objective conditions of society but rather to the 'perceived conditions of society". (Teymoori et al. 20016: 3)

They define anomie "as a perception that a particular society has become disintegrated and disregulated" arguing that "disintegration involves a perception that society's social fabric is breaking down, including a perceived lack of trust and moral standards" while "disregulation, on the other hand, involves a perception that leadership of a given society is breaking down, that it is illegitimate and ineffective and that leaders no longer follow fair decisionmaking processes, including the perception that leaders do not represent and protect all society members, nor distribute resources fairly, and are ineffective in facilitating the collective good". Meanwhile, they assume that "the two dimensions of anomie, breakdown in social fabric and breakdown of leadership, are highly interrelated and can be mutually reinforcing; when one dimension breaks down, it will place additional weight on the other". (Teymoori et al. 2016: 3) In other words, "anomie involves the interaction between the breakdown of social fabric and the breakdown of leadership." (Teymoori et al. 2016: 22) Hence, anomie is defined here (as well as operationalized and measured) "as a perception of the state of society" (Teymoori et al. 2016: 4; cursive by J.S.), i.e., as a perception of societal anomie.

Measurement and Analyses

Model 2 authors pay special attention not only to the scale construction but also to its measure-ment and validation. They themselves characterize it as a psychometric analysis.

The respondents were asked to "indicate to what extent most others within their society would agree or disagree with each of the statements on a seven-point Likert-type format from 1 (strongly disagree) to 7 (strongly agree)." At the same time, "items were keyed both negatively (13 items) and positively (19 items) to minimize response bias." After a standard flipping of the scores for positive statements, it was possible "to create a total score for anomie that can also be broken down into two subscales capturing perceptions of the social fabric and leadership as separate factors. Higher mean scores indicated perceptions of higher anomie." (Teymoori et al. 2016: 5)

The first step in constructing the scale was the explorative factor data analysis of all the 32 used items in a sample of 199 freshmen students of psychology at Queensland University. It allowed for the elimination of unsuitable items and reduction of the number of final items to 12 (cf. Table 4). In the second step, these 12 items were used on a sample of 214 American citizens in the age between 18 and 80 years old and the items underwent a confirmation factor analysis. The analysis confirmed two assumed factors (anomie dimensions): breakdown of social fabric and breakdown of leadership. It also resulted in suggestion that "the internal reliability of PAS was satisfactory, with Cronbach's alphas of .81 for breakdown in social fabric, .87 for breakdown in leadership, and .88 for the whole PAS. The two dimensions were also significantly correlated, r = .55, p < .001". (Teymoori et al. 2016: 7).

Table 4: Dimensions and Items of PAS

Perception of Anomie Scale				
Breakdown of social fabric	Breakdown of leadership			
1. People think that there are no clear moral standards to follow. (+) (<i>Moral decline</i>)*	7. The government works towards the welfare of people. (-) (<i>Effectiveness</i>)*			
2. Everyone thinks of himself/herself and does not help others in need. $(+)$ $(Trust)^*$	8. The government is legitimate. (-) (Legitimacy)			
3. Most of people think that if something works, it doesn't really matter whether it is right or wrong. (+) (Moral decline)*	9. The government uses its power legitimately (-) (Legitimacy)			
4. People do not know who they can trust and rely on. (+) $(Trust)^*$	10. Politicians don't care about the problems of average person. (+) (<i>Effectiveness</i>)*			
5. Most of the people think that honesty doesn't work all the time; dishonesty is sometimes a better approach to get ahead. (+) (Moral decline)*	11. The government laws and policies are effective (-) (Effectiveness)			
6. People are cooperative. (-) $(Trust)^*$	12. Some laws are not fair. (+) (Legitimacy)*			

Instruction: Think of Australian society and indicate to what extent do you agree with the following statements? In Australia today.

*item adapted from literature Source: Teymoori et al. 2016: 6

In the following parts of the study, the authors report on the results of sophisticated analyses, namely analysis of the convergent validity, discriminant validity, and predictive validity of PAS, as well as its relationships to some parameters of social and economic stability. This issue falls outside the framework of the purpose and capacity of the study.

Possibilities for Cross-National Comparison

Model 2, which studied anomie perception in 28 countries¹¹, begs to compare it to Model 1 findings. Even though both models define anomie as the state of society, there is also quite a considerable number of fundamental differences (cf. Table 5). This makes the comparability of the findings from both models to be significantly limited and such a step would only be used for illustration purposes. Because of fundamental both theoretical and methodological differences, there is no possibility to compare Model 1 to other known models¹². Taking into account these limitations, this is – no doubts – a preliminary step but it is not completely useless.

Table 5: Comparison of Two Models of Societal Anomie

Model 1		Model 2
cognitive estimates	principle	perception
three	dimensions	two
original	stimuli	re-used (9 out of 12)
24 stimuli	model robustness	12 stimuli
particular	validity	universal
sociological	construction	psychometric
continuous	validation	ex ante
over 18 years old	basic population	over 18 years old
large, representative	sample	small, students
interval	measurement level	interval
three waves	data	one-time
index	format of parameters	score, mean number of points

¹¹ A total of 6112 undergraduate university students residing in 28 countries were recruited ... The data collection process started in January 2014 and ended in February 2015. (Teymoori et al. 2016: 14)

¹² For example, Swader defines (and operationalizes) anomie as an individual anomie, namely "as an individual-level uncertainty, lack of clarity, concerning social norms". (Swader 2017: 496) In the next steps, Swader builds a multilevel model to compare 45 countries.

In Institutional Anomie Theory, which is formulated "at a very high level of aggregation – the level of the social system of a society" (Messsner – Rosenfeld 2009: 209-210), one can find two basic types of anomie measurement models at least:

a) There are models where anomie is indirectly measured utilizing macro-indicators, such as, e.g.:

[–] percentage of families below poverty level (economic deprivation),

⁻ ratio of the yearly divorce rate per 1.000 population to the yearly marriage rate per 1.000 population (family structure),

⁻ rate of church membership per 1.000 population (participation in formal religious institutions),

⁻ percentage of voting age individuals who actually voted in congressional contests (political institutions). (Chamlin - Cochran 1995: 417-419) Similarly, macro-indicators were used also in paper (Bjerregaard - Cochran 2008). Macro-indicators approach leads very frequently to cross-national comparisons.

b) To the second type belong models based upon a mixed approach combining macro-indicators (or administrative data) referring to economic institutions and survey questions (e.g., World Values Survey, individual scale items sets etc.) indicating cultural institutions. (cf. Messsner – Rosenfeld, 2009: 216-218) Nama et al., e.g., introduced three "national culture variables" (GLOBE Study), namely performance orientation (2 scale items), in-group collectivism (4 scale items), and uncertainty avoidance (4 scale items). (Nama et al. 2014)

There are also very interesting special cases of anomic measurement in IAT. So-called "anomic syndrome" is measured as a multidimensional latent variable (cf. Messsner – Rosenfeld, 2009: 218) Regression analyses, hierarchical linear models, structural equations models etc. were used to estimate impact of anomic on crime or innovations rates.

Several of these differences, some already mentioned above, are self-explanatory and require no further explanation. Nonetheless, four observations should be noted:

Because models 1 and 2 differ not only in their items and number of items as well, any kind of comparison is plausible only at the level of general parameters (it makes no sense to compare individual dimensions and items). Furthermore, comparison of ISA and PAS is based on interchangeability of indices, belonging to the same universe (Lazarsfeld 1965): no doubt, both ISA and PAS are sufficiently reliable and robust measures.

Model 2 was designed with the intent of its universal applicability; it was used in 28 countries on five continents: Europe (14), North America (2), South America (2), Asia (8), Australia (1), and Africa (1). On the other hand, this is not the case for Model 1. It is a specific, unique model in its design, keeping in mind Slovakia's particular conditions. May be, Model 1 could be reliable (after an adequate pre-testing procedure, of course) also in neighboring Visegrad Group countries; i.e., Czech Republic, Poland, and Hungary. It is also plausible – but I am rather skeptical on the issue – this model could be applied, eventually, even in neighboring Austria (or any other country of the so-called Old Europe), yet it is quite indisputable that it could not be at all applied in Ukraine, another country neighboring Slovakia. This particular country would require its own model with items reflecting its current situation. Therefore, only researched countries in Europe and countries belonging to OECD (according to Model 2) were used for the purpose of direct comparison (Table 6a and 6b).

Although Model 2 has been thoroughly validated, the fact that it was applied to rather small samples of university students (cf. Addendum B), is not precisely in accordance with the way sociological research studies are usually carried out. The major issue resulting from this fact is the extent it allows to be projected onto the whole population and, even more importantly, to what extent one can use it to estimate the global parameter state.

Data format – Comparing models 1 and 2 is also conditional upon the format of the resulting values. While Model 1 uses ISA index to express the empirically obtained values of societal anomie, Model 2 uses mean values. Final values of both models cannot be directly compared because they are determined by the scale range: while Model 1 includes 5 variants, it is as many as 7 variants in Model 2. In order to compare the two models, it is therefore necessary to standardize them, in order to end up with two identical formats of results for both models 1 and 2. A simple, commonly-used method of transformation can be applied to both models to allow their comparability.

Model 2 assumes that:

The original PAS scale can have values $j \in \{1, ..., 7\}$,

It is a Likert-type scale

It is an interval scale (variable), because it allows to calculate arithmetic mean. It is therefore possible to make a correct transformation of the original scale with adding a constant. One of possible transformations for interval signs (variables) is to add a suitable constant to each one of the scale's variants; i.e.,

$$j^* = j + c.$$

Clearly, the suitable constant here is c = -1, which changes the value range of the PAS scale to value range of the transformed scale $j^* \in \{0, \dots 6\}$; logically, then the arithmetic mean calculated from j^* scale has to be one degree lower than mean calculated from j scale. That enables the standardization of the PAS scale into a form (simple intensity index) that is compatible with the ISA index format:

$$PAS^* = (x_i : x_{max}) \times 100 \%,$$

in which x_i is an empirically obtained value of the arithmetic mean and x_{max} is the maximum possible value of the arithmetic mean that can occur. For a scale with values $j^* \in \{0, \dots 6\}$, the highest possible arithmetic mean must equal 6. Such transformed values – as well as ISA values – also range in the < 0; 100 > interval and can be expressed in $\%^{13}$. The empirical results of the perception of anomie in 28 countries are listed in such transformed values (PAS*).

The transformed results of studying the perception of anomie in all 28 countries are listed in Addendum B. Results for studied countries in Europe and the OECD member countries are presented in Table 6a and 6b:

Despite its limitations, this comparison is useful because it provides a reference framework for evaluating the degree of overall anomie in Slovakia. Since the critical ISA value has yet to be defined, this comparison is the only way to estimate Slovakia's position in a broader, international context.

Due to the absence of necessary data, it is not possible to test the significance of differences among individual countries. However, with a dose of intuition, three categories of countries can be identified. The categorization is based on a \pm 5 % deviation from Slovakia's value, which occupies the median position. According to research practices, deviations greater than 5 % could be considered significant.

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 $\bar{x}_{i} = 4.5 \text{ and } \bar{x}_{max} = 6$, final value of PAS* = $(\bar{x}_{i} : \bar{x}_{max}) \times 100 \% = 75 \%$.

If, for example:

Table 6a: Perception of Anomie (PAS) in Studied European Countries

Europe	PAS* (%)	BSF (%)	BL (%)	N
Poland	64.2	55.3	72.8	180
Hungary	63.8	62.3	65.3	160
Italy	63.3	59.0	67.7	156
Spain	62.3	50.7	74.2	277
France	61.3	62.3	60.2	150
Latvia	60.5	57.0	64.0	149
Portugal	60.5	51.7	69.7	160
Slovakia	58.7			3597
Belgium	55.7	54.0	57.3	242
Germany – East	49.5	50.0	49.2	147
Germany - West	48.8	49.0	48.8	175
Great Britain	47.8	44.8	51.3	74
Netherlands	45.5	46.2	44.8	208
Finland	44.8	44.2	45.5	113
Denmark	43.2	41.3	44.8	164
Switzerland	42.8	44.7	41.0	448

Slovakia finds itself in the same category as Italy, Spain, France, Latvia, Portugal, Chile, Belgium, Japan, and USA. The second category is comprised of Slovakia's neighbors: Poland and Hungary, whose anomie is considerably higher. The third category consists of countries with the lowest level of anomie; i.e., Germany, Australia, Great Britain, Canada, Netherlands, Finland, Denmark, and Switzerland, where anomie measured below 50 %. This introductory comparison leads to a conclusion that the acquired picture of the situation in Slovakia is not as bad as the measured values of ISA \approx 58 % from the total maximum would suggest.

If the generally accepted statement made by Merton that "all modern societies are anomic", is valid, then it is also necessary to measure societal anomie. It is important to determine to what degree it is anomic. However, measuring of societal anomie has proven to be an extremely complex task, which is now being studied in sociology. It is necessary to underline here a complex analysis of societal anomie issue cannot be exclusively reduced to sociological approach only. Other types of analyses, such as economic, legal, institutional etc. are also inevitable. Lot of very useful inspirations one can find namely in institutional analysis. Different versions of institutional anomie theory were developed in such fields, as crime, management and so on. (Messner – Rosenfeld 2009; Messner et al. 2008; Chamlin – Cochran 1995; Bjerregaard – Cochran 2008; Nama et al. 2014)

Table 6b: Perception of Anomie (PAS) in Studied OECD Member Countries

OECD Countries	PAS* (%)	BSF (%)	BL (%)	N
Poland	64.2	55.3	72.8	180
Hungary	63.8	62.3	65.3	160
Italy	63.3	59.0	67.7	156
Spain	62.3	50.7	74.2	277
France	61.3	62.3	60.2	150
Latvia	60.5	57.0	64.0	149
Portugal	60.5	51.7	69.7	160
Chile	58.8	57.8	60.0	151
Slovakia	58.7			3597
Japan	56.8	49.3	64.3	382
USA – California	56.7	54.0	59.5	141
Belgium	55.7	54.0	57.3	242
USA-Tennessee	54.5	51.7	56.5	178
Germany – East	49.5	50.0	49.2	147
Australia	49.0	43.2	54.7	149
Germany - West	48.8	49.0	48.8	175
Great Britain	47.8	44.8	51.3	74
Canada	45.5	40.7	50.5	233
Netherlands	45.5	46.2	44.8	208
Finland	44.8	44.2	45.5	113
Denmark	43.2	41.3	44.8	164
Switzerland	42.8	44.7	41.0	448

BSF: Breakdown of Social F

abric

BL: Breakdown of Leadership

In order to reach progress in this area, it is critical to solve some fundamental theoretical and methodological issues. It is especially important to thoroughly identify self-regulating processes and their mutual relationships. This would ensure the first prerequisite for a gradual identification of a complex mechanism of self-regulation of social systems and the fulfillment of the conception of concatenation of mechanisms. (Gambetta 1998) This would also create a basic assumption, so that societal anomie would no longer be studied as a specific state of society, or the result of such states, but rather as a process in the true meaning of the word, which would allow to build dynamic models of societal anomie as well.

It can also be assumed that other (undoubtedly better) theoretical models of societal anomie will gradually appear. Mutual confrontation of such models will also be a critical prerequisite for progress in any given area. However,

progress in this area also depends on whether or not a universal model can be applied for studying societal anomie or whether it will be necessary to build models specific for certain classes of social systems (societies).

One should mention two other issues that deserve and should receive extraordinary attention. The first one requires a more through, more detailed identification of global parameter, which measures the degree of societal anomie. The second one is related to the inevitability of progress in searching for and determining a critical, threshold value of societal anomie.

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REFERENCES

- BAILEY, K. D., 1990: Social Entropy Theory. New York: SUNY, 301 p.
- BEACH, D. PEDERSEN, R. B., 2016: Selecting Appropriate Cases When Tracing Causal Mechanisms. Sociological Methods & Research, pp. 1-35. DOI: 10.1177/0049124115622510
- BERGER, P. L. LUCKMANN, T., 1999: Sociální konstrukce reality. Pojednání o sociologii vědění. Brno: CPSDK, 216 p.
- BJERREGAARD, B. COCHRAN, J. K., 2008: Want Amid Plenty: Developing and Testing a Cross-National Measure of Anomie. International Journal of Crime and Violence, 2, No. 2, pp. 182-193.
- BOUDON, R., 2012: "Analytical Sociology" and the Explanation of Beliefs. Revue européenne des sciences sociales, 50, No. 2, pp. 7-34. http://ress.revues.org/2165
- COHEN, J. TILL, A., 1977: Another Look at Modernity Scales: Reanalysis of the Convergent and Discriminant Validities of the Armer, Kahl, Smith and Inkeles, and Schnaiberg Scales. American Sociological Review, 42, No. 2, pp. 373-378.
- DOHRENWEND, B. P., 1959: Egoism, Altruism, Anomie, and Fatalism: A Conceptual Analysis of Durkheim's Types. American Sociological Review, 24, No. 4, pp. 466-473.
- DURKHEIM, É., 1960 (1897): Suicide. Paris: PUF, 462 p.
- DURKHEIM, É., 1969: The Division of Labor in Society. 7th ed. New York: Free Press, 440 p.
- DURKHEIM, É., 1998: Sociologie a filosofie. Praha: Slon, 175 p.

- ECKART, D. R. DURAND, R., 1975: The Effect of Context in Measuring Anomia. Public Opinion Quarterly, 39, No. 2, pp. 199-206.
- FORM, W. H., 1975: The Social Construction of Anomie: A Four Nation Study of Industrial Workers. American Journal of Sociology, 80, No. 5, pp. 1165-1191.
- FORSÉ, M., 1989: L'ordre improbable. Entropie et processus sociaux. Paris: PUF, 258 p.
- GAMBETTA, D., 1998: Concatenation of Mechanisms. In: Hedström, P. Swedberg, R. (eds.): Social Mechanisms. An Analytical Approach to Social Theory. New York: Cambrigde University Press, pp. 102-124.
- HIRNER, A. a kol., 1973: Sociálna kontrola a problémy jej empirického výskumu. Štúdie a materiály č. 19. Bratislava: ČSVÚP, 221 p.
- HIRNER, A. KRIVÝ, V. SCHENK, J., 1974: Možnosti optimalizácie sociálnej kontroly vo výrobnom podniku. Sociológia, 6, No. 4, pp. 336-357.
- CHAMLIN, M. COCHRAN, J., 1995: Assessing Messner and Rosenfeld's Institutional Anomie Theory: A Partial Test. Criminology, 33, No. 3, pp. 411-429. DOI: 10.1111/j.1745-9125.1995.tb01184.x
- LAZARSFELD, P. F., 1965: Des concepts aux indices empiriques. In: Boudon, R. Lazarsfeld, P. F.: Le vocabulaire des sciences sociales. Paris: Mouton, pp. 27-36.
- MARTIN, E., 1980: The Effects of Item Contiguity and Probing on Measures of Anomia. Social Psychology Quarterly, 43, No. 1, pp. 116-120.
- MERTON, R. K., 1938: Social Structure and Anomie. American Sociological Review, 3, No. 5, pp. 672-682.
- MERTON, R. K., 1965: Éléments de théorie et de méthode sociologique. Paris: Plon, 514 p.
- MERTON, R. K., 2000: Studie ze sociologické teorie. Praha: Slon, 285 p.
- MESSNER, S. F. THOME, H. ROSENFELD, R., 2008: Institutions, Anomie, and Violent Crime: Clarifying and Elaborating Institutional-Anomie Theory. International Journal of Crime and Violence, 2, No. 2, pp. 163-181.
- MESSNER, S. F. ROSENFELD, R., 2009: Institutional Anomie Theory: Sociological Explanation of Crime. In: Krohn, M. D. (ed.): Handbook of Crime end Deviance. Springer, pp. 209-223. DOI 10.1007/978-1-4419-0245-0_11
- MILLER, C. R. BUTLER, E. W., 1966: Anomia and Eunomia: A Methodological Evaluation of Srole's Anomia Scale. American Sociological Review, 31, No. 3, pp. 400-406.
- NAMA, D. PARBOTEEAH, K. P. CULLEN, J. B. JOHNSON, J. L., 2014: Cross-National Differences in Firms Undertaking Innovation Initiatives: An Application of Institutional Anomie Theory. Journal of International Management, 20, pp. 91-106.
- ONDREJKOVIČ, P., 2000: Modernizácia a anómia. Je teória anómie aktuálna i v súčasnej slovenskej spoločnosti? Sociológia, 32, No. 4, pp. 343-360.
- RABUŠIC, L. MAREŠ, P., 1996: Je česká společnost anomická? Sociologický časopis, 32, No. 2, pp. 175-187.
- ROBINSON, J. P. SHAVER, P. R. WRIGHTSMAN, L. S. (eds.), 1991: Measures of Personality and Social Psychological Attitudes. Academic Press: London, 753 p.

- RUSHING, W. A., 1971: Class, Culture, and "Social Structure and Anomie". American Journal of Sociology, 76, No. 5, pp. 857-872.
- SCHENK, J., 1992: Teória sociálnej entropie. Sociológia, 25, No. 1-2, pp. 17-32.
- SCHENK, J., 1996: Micro-Macro Relations in Self-Organizing Social Systems. Slovak Sociological Review, 1, Fall, pp. 99-113.
- SCHENK, J., 2004: Anómia na Slovensku: pokus o meranie. Sociológia, 36, No. 2, pp. 107-124.
- SCHENK, J., 2006: Anomia na Słowacji: próba pomiaru. Tyczyńskie Zeszyty Naukowe, 16, No. 1-2, pp. 13-36.
- SCHENK, J., 2010a: Anómia na Slovensku v r. 2001 a 2008: porovnanie a niektoré metodologické problémy. Sociológia, 42, No. 4, pp. 287-315.
- SCHENK, J., 2010b: K štandardizácii sociologického výskumu societálnej anómie. In: Aktuální otázky české a slovenské společnosti I. Sborník k 45. výročí založení Československé sociologické společnosti. Brno: Tribun, pp. 9-21.
- SCHENK, J., 2011: Metodologické problémy multiagentového modelovania v sociológii. Bratislava: Stimul, 163p. http://stella.uniba.sk/texty/JS_modelova nie_sociologia.pdf
- SCHENK, J., 2017: Explanačné modely v súčasnej analytickej sociológii. Bratislava: Stimul, 138p.
- SROLE, L., 1956: Social Integration and Certain Corollaries: An Exploratory Study. American Sociological Review, 21, No. 6, pp. 709-716.
- SWADER, Ch. S., 2017: Modernization, formal social control, and anomie: A 45-society multilevel analysis. International Journal of Comparative Sociology, Vol. 58, No. 6) pp. 494-514. DOI: 10.1177/0020715217736556
- TEYMOORI, A. JETTEN, J. BASTIAN, B. ARIYANTO, A. AUTIN, F. AYUB, N. et al., 2016: Revisiting the Measurement of Anomie. PLoS ONE, 11, No. 7, 27 p. doi:10.1371/journal.pone.0158370

Addenda A Index of Societal Anomie (ISA) 2016

Indicators of Societal Anomie (Statements)	ISA (%)	Standard Deviation (%)	Variability Coefficient (%)	? (%)	Ranking
People don't trust anything or anyone any more	68.88	25.55	37.1	1.5	1
Our streets are filled with crime and violence	68.75	28.35	41.2	1.3	2
Most people only care about more money and property	67.47	28.20	41.8	2,6	3
Barely anyone respects basic values, such as decency and honesty anymore	64.97	29.18	44.9	2,5	4
Our politicians' action are leading to the disintegration of our country	63.75	29.45	49.2	3,6	5
Ethnic minorities abuse their position	63.49	30.08	47.4	3,0	6
The government is incapable of solving even the most pressing issues	63.25	28.73	45.4	2,5	7

Indicators of Societal Anomie (Statements)	ISA (%)	Standard Deviation (%)	Variability Coefficient (%)	? (%)	Ranking
Nobody can be certain they will get what they are entitled to: salary, social security, medicine, etc.	62.53	30.73	49.2	2,8	8
People are no longer appalled by all the scandals, violence, disfunctional institutions	62.39	28.25	45.2	2.3	9
When life gets tough, people have the right to take care of themselves and their families in whatever shape or form	61.75	29.80	48.3	3.8	10
Success comes to those who lie and steal	61.25	29.43	48.0	2.9	11
Children, weak and sick people are not sufficiently taken care of	60.56	30.80	50.9	2.3	12
There is nobody left in Slovakia who could	60.48	29.55	48.8	3.3	13
fix this chaos People know that justice will not be served When dealing with public offices, it is	59.94	30.70	51.2	3.0	14
impossible to get anything done without bribes or connections	58.58	29.73	50.8	2.1	15
The economy is not working at all	56.25	29.83	53.1	3.9	16
If a person needs help, he or she will never get it	56.16	30.23	53.8	1.9	17
This society does not follow clear and precise rules	54.96	31.03	56.5	3.0	18
Decent and hard-working people are no longer guaranteed a bright future	54.70	31.47	57.5	3.1	19
Our society's prospects for the future are not bright	52.42	29.46	56.2	3.0	20
In Slovakia, foreign interests are put before domestic ones	51.73	29.93	57.9	4.1	21
Most people don't act in accordance to their religious beliefs	49.08	28.22	57.5	4.4	22
Slovaks in Slovakia are discriminated against	48.55	29.39	60.5	3.9	23
It pays off to break the law; bad deeds are not followed by punishment	38.09	29.57	77.6	1.5	24
Total	58.70	13.19	22.5	16.6	-

 $Note: ?-The\ proportion\ of\ respondents\ who\ did\ not\ know,\ could\ not,\ did\ not\ want,\ or\ refused\ to\ respond} \ (i.e.,\ the\ proportion\ of\ all\ missing\ responses\ altogether,\ resp.\ the\ proportion\ of\ total\ absences).$

B
PAS in 28 Countries (Teymoori et al. 2016: 15)

	PAS* (%)	BSF (%)	BL (%)	N
Pakistan	69.2	67.2	71.3	150
South Africa	64.5	61.5	67.3	451
Poland	64.2	55.3	72.8	180
Hungary	63.8	62.3	65.3	160
Italy	63.3	59.0	67.7	156
Brazil	63.0	57.8	68.2	146
Spain	62.3	50.7	74.2	277
France	61.3	62.3	60.2	150
Iran	60.7	62.8	58.5	170
Latvia	60.5	57.0	64.0	149
Portugal	60.5	51.7	69.7	160
India	59.8	63.2	56.8	145
Chile	58.8	57.8	60.0	151
Japan	56.8	49.3	64.3	382
USA – California	56.7	54.0	59.5	141
Indonesia	56.2	52.0	60.2	557
Malaysia	55.8	57.2	54.8	112
Belgium	55.7	54.0	57.3	242
USA-Tennessee	54.5	51.7	56.5	178
China	52.3	53.5	51.0	151
Germany- East	49.5	50.0	49.2	147
Australia	49.0	43.2	54.7	149
Germany- West	48.8	49.0	48.8	175
Great Britain	47.8	44.8	51.3	74
Singapore	46.7	52.7	40.7	193
Canada	45.5	40.7	50.5	233
Netherlands	45.5	46.2	44.8	208
Finland	44.8	44.2	45.5	113
Denmark	43.2	41.3	44.8	164
Switzerland	42.8	44.7	41.0	448