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The Role of Policy Targets

Title of the paper

Getting the full picture: an empirical framework

for understanding gaps in policy compliance

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CONTENT

Introduction

Public policies aim to guide citizens towards socially desirable behaviours (Datta & Mullainathan, 2012; Shafir, 2013a). Policy designers expect a certain degree of compliance from the policy targets (e.g. citizens, private or public organisations). However, during policy implementation real behaviours of policy targets often substantially differ from those expected by policy makers, and as a result, implemented policies do not bring desired outcomes. As Pawson sharply puts it "*interventions do not work in and of themselves; rather it is their subjects' choice that makes for success or failure*" (2013, p. 133). Therefore, in order to design effective interventions we need to map and understand the behavioural mechanism that determines subjects' choice to comply.

The issue of (non-)compliance has been so far explored from few different perspectives. Etienne (2010) points out at three broad strands of literature: neo-institutionalism, social norm perspective, and realistic models of behaviours.

Firstly, he notes that the neo-institutionalist approach is a valuable in studying compliance, as it allows to integrate « different dimensions of a choice: cognition (to perceive, to know), affect (feelings, moral engagement), and evaluation (calculation) » and – although not having a coherent framework for theoretical study of actors behaviors – could possibly help to understand how institutions impact behaviors (Etienne 2010).

Secondly, in relation to social norms – « understood in the classic sense of unwritten rules shared by a group, the respect of which is sanctioned both positively and negatively by the group's members » he underlines that most of the study in this field is theoretical and explores the matters of compliance indirectly (Etienne 2010).

The realistic models of behaviours feed into public policy and service design (Weaver, 2015; Hill & Hupe, 2014, Stanford University, 2016). They focus on barriers and gaps that hinder

targets' compliance. The noncompliance is attributed either to gaps in motivation or targets' capacities.

We argue that those three strands of research can be complemented with a more practice-oriented perspective offered by a field of public program evaluation. The so-called realist evaluators portrait public interventions as a causal chain where input (intervention) is supposed to trigger in a certain socio-economic context a change mechanism that will lead to the desired outcome. The subject will comply if the policy designer is able to address the right configuration of socio-psychological nuts and bolds of the mechanism in a particular context (Chen, 2005; Donaldson, 2007; Pawson, 2013).

Despite this rich and diverse literature there are three shortcomings in current thinking on policy compliance. First, there is a high degree of incoherence between different strands of literature in terms of conceptual framing of the basic analytical vocabulary used to describe key compliance determinants.

Second, certain practical applications (OECD, 2017; Behavioural Insights Team, 2015) tend to focus more on individual behavior (behavioral nudges) at the expense of social and institutional aspects, causing a risk of cognitive tunneling of policy designers.

Third, majority of approaches offer points of advice but rarely provide a coherent framework that could translate into practical procedure applied in policy design, implementation and/or evaluation.

Thus, there is a need for more comprehensive approach that would allow to explore and address the issue of targets compliance in a more systematic way. We are motivated to ask: **How gaps in target behaviors can be identified in a systematic way, in order to design effective policy responses?**

Building on interdisciplinary developments, this paper offers an analytical framework for holistic mapping of gaps and barriers to compliance in policy targets' behaviors. We argue that compliance of policy targets is embedded in a certain situation, and it is a result of complex behavioral mechanism driven by characteristics of individuals, contextual constrains and target's motivations (Michie, van Stralen, & West, 2011; Ostrom, 2010; Astbury & Leeuw, 2010; Pawson, 2013; World Bank, 2015). There is a need for a holistic view on those mechanisms. The fragmented view of target's gaps at the stage of policy design may result in policy failures at the stage of implementation.

Our paper is divided into three parts. First part provides a conceptual framework for mapping barriers and gaps in targets' behaviors. It adapts COM-B model that defines behavior of policy targets as a combination of capacities, opportunities and motivations (Michie et al., 2011; Michie, Atkins, & West, 2014). This frame is complemented with decision-making heuristics (Shafir, 2013b), arenas or actions (Ostrom, 2010), and barriers to behaviors (Stanford University, 2016; Weaver, 2015).

In the second part, we use this conceptual framework to explain discrepancy between policy design (objectives) and policy implementation results. We study case of a policy introduced by the government of Poland in 2015 to address the obesity problem of school children. The empirical sources used in our analysis of this policy include desk research of legal documents, systematic literature review on interventions targeting obesity of pupils, and ethnographic multi-stakeholder research in selected Polish schools.

In conclusions we discuss strengths and weaknesses of the proposed framework as well as implication for policy practice.

Paper contributes to the conceptualization of determinants of policy compliance by proposing a coherent framework and a set of definitions. It also helps practitioners to think systematically about gaps in targets' compliance when designing policy solution. That could prevent policy

designers from overlooking real drivers of targets' behaviors, and it could increase the chances of policy implementations.

1   Analytical framework

Our understanding of "analytical framework" follows, to large extent, Elinor Ostrom description grounded in neo-institutionalism theory of social sciences. "Framework" is a conceptual canvas that identifies key variables and relations, and allows integrating different theories with a purpose of explaining system relations (Ostrom, 2005, p.7-11). Our modification, however, introduces a processual aspect. It means that framework provides a basic analytical stages and concepts on each stage, while theories from psychology, economics and sociology can be used to analyze dynamic relations of the elements.

The analytical framework is presented as a four-stage analytical procedure, consisted of: (1) articulating theory of change, (2) defining action arenas and action situations, (3) mapping participants/stakeholders, and (4) investigating gaps in compliance. Each stage is accompanied with a set of conceptual frames. It should allow policy designers and/or evaluators exploring and assessing different aspects that affect compliance.

In the following paragraphs we describe rationale of each stage, definitions of concepts used, as well as their theoretical underpinnings.

1.1   Articulating Theory of Change

Public policies aim at positive change. Policy designers assume that with a use of certain policy tools (sticks, carrots, sermons or nudges) they will be able to obtain compliance of policy targets (citizens, companies, etc.) (Bemelmans-Videc, 2007). This should eventually lead to positive, long-term, and structural change. It is important to articulate this causal chain of assumptions in order to avoid overlooking important variables that could determine success of the policy.

Tracing causal assumption of the public policies is a cornerstone of the program evaluation practice (Chen, 2004; Coryn et al., 2011; Donaldson, 2007; Leeuw, 2003; Leeuw and Vaessen, 2009). Evaluation literature argues that public interventions (project, programs, policies and

regulations) should be viewed as levers that are designed to activate certain change mechanisms, that in turn should lead to desired effects (Astbury & Leeuw, 2010; Cartright, 2013). Evaluators use term "Theory of Change" to describe the set of assumptions about certain policy input that trigger a mechanism in targets and bring an expected output. Implementation of a public program or policy involves testing this "theory" in a certain context and time.

In our framework we propose Theory of Change to visualize basic relation between elements of the policy logic:

> INPUT - the intervention undertaken (IF...)

> BEHAVIOR - the expected behavioral response of the policy target group (THEN...)

> OUTCOME - the final, expected effect - socio-economic change (AND THEN...)

This simple logic will help us articulating: (1) what type of instrument policy designers use, (2) who is the target of the policy, (3) what compliance of behavior is expected from that target in order to (4) reach an ultimate, desired structural change.

It has to be noted that at this stage we keep all elements simple. We do not dwell into mechanism underlying target's behavior. The unpacking of that box will come at the last stage of our analytical framework.

1.2 *Defining Action Situations*

We agree with Gofen (2015) that policy non-compliance understood as the lack of change in targets' behavior in reaction to government action is not the simple, homogenous phenomenon. We argue that one of the fundaments to understand this heterogeneity is the ability to correctly define and understand the action situations within which policy targets behave (as opposition to one, universal, simplified, shared setting frequently presumed by policy makers).

The Action Arena and Action Situation concepts are the part of IAD Framework and were conceptualized by Ostrom (2005). At first, Ostrom used the "action arena" concept to describe setting, within which participants interact with action situation (at the same time being impacted by external variables). In that view action arena was a core unit of analysis based on IAD framework (Ostrom 2005, p. 15). Subsequently, reflecting on her intellectual journey, Ostrom proposed a simplified view: action arena was removed from the framework, and action situation was placed at the core of analysis (Ostrom 2010, p. 646).

Action situation is a concept denoting social space, a black-box within which choices are made (McGinnis, 2011). Action situation consists of 7 working parts: actors, actions, positions, information, control, outcomes as well as net costs and benefits. Taking into account all of these working parts and interactions among them, at the same time being aware of the external impacts, allows to analyze, predict and explain behavior within given institutional arrangement (Poteete, M.A. et al. 2010, p. 58).

We chose this particular concept because it allows us to capture, break down and investigate the social complexity, within which policy targets either comply or do not comply with policy. This is not only related to the number of working parts and possible interactions within one action situation, but also to the possibility of identification and description of different action situations, within which policy targets behave, interact with other participants or external variables (eg. rules, resources, structures). This, in turn, could help in more accurate diagnosis and description of multiple barriers to compliance (Weaver 2014, 2015). Action situation, therefore, helps to organize thinking about real-world policy implementation in more complex and profound way, by creating analytical setting, within which we can observe and analyze policy targets and their behaviors (with their heterogeneity) without losing sight of other key elements that could either hinder or foster the achievement of policy goals.

1.3   Mapping Stakeholders

The concept of stakeholders lies in the heart of the policy design. Stakeholders are defined as "any person, group, or organization who possess a stake (e.g. interest, legal obligation, moral right) in the decision" (Navarrete & Modvar, 2007). In case of public policies these are policy actors that are likely to affect or be affected by the designed intervention (Bryson, 2011).

The assumption is that inclusive policies are more advantageous in tackling complex issues and their implementation is more efficient, when different perspectives and actors are taken into account already at the design stage (Navarrete & Modvar, 2007).

Originally term was used in mid-1960-ties in private sector to describe firms' most closely related actors, to track down critical relations and drivers for organization's behaviors. Its meaning was broaden by the seminal work of Freeman in 1984 (Freeman, 1984), and later on transferred to public policy practice mainly of education, health and environmental interventions (Buse, Mays, & Walt, 2012; Gooch & Stalnacke, 2010). The notion of "stakeholders" of public policy has strong links to institutional theory and open systems (Aligica, 2006; Gomes, 2004). Recently it has been also extensively applied in the industrial, architectural and service design (Stickdorn & Schneider, 2012; Binnekamp, van Gunsteren, & van Loon, 2006).

Martin and Hanington (2012, pp. 166-167) provide simple typology of stakeholders: the main beneficiaries (policy targets, also called end users), those who hold power, those who may be adversely affected, and those who may thwart designed outcome or service.

Stakeholders mapping has been applied as part of the design of the policy intervention, reforms or evaluation of projects and programmes (Patton, 2008; Bardach, 2004). It helps understanding the prospects for policy intervention, and the ways in which implementing authority might

influence the outcome of the policy process. Stakeholder analysis is always context specific, focused on particular policy or reforms, and involved actors.

For the purpose of our analysis we define stakeholders as person, group, or organizations who are likely to affect or be affected by the designed intervention. For stakeholders mapping we apply simple visual tool - three circles. In a central circle we place the target of the policy interventions, the group which behaviors we want to influence. In the middle circle we place participants that are physically present on the action arena and in action situation with the analyzed target group. They could be further distinguished into participants that influence compliance or noncompliance. In the outer circle we place stakeholders not physically, directly present on the action arena, but having a potential impact on the key target's behaviors on that action arena. Again, they can be further distinguished into actors that influence compliance or noncompliance.

Our proposed approach allow us identifying actors responsible for negative social barriers to behavioral compliance, and identifying allies - actors who could minimize barriers and work towards compliance.

1.4   *Investigating gaps in compliance (COM-B)*

The desired outcome of many governmental policies is a change in the behavior of targeted individuals. Therefore, a profound understanding of mechanisms responsible for a given behavior should be the focal point when planning intervention, just next to analysis of stakeholders and their action arenas and situations.

A behavior is always a reaction to something. Sometimes it is a direct effect of one factor, like in case of escaping from fast approaching car, but very often it is a derivative of amalgam of factors, like in case of smoking cigarettes or eating unhealthy food. In the former the trigger of

the behavior is fear, in the latter it can be social influence, will of trying something new, or lack of knowledge to name just few. Without in-depth knowledge about the components influencing behavior a proposed policy might lead to widespread noncompliance and sometimes event to the strengthening of unwanted behavior, like in case of increase in late parental arrivals after introduction of fines for parents who arrive late to pick up their children from a child care center (Gneezy and Rustichini, 2000; Weaver, 2015).

As different mechanisms leading to behavior can interact with each other – some cancel themselves out, some others amplify their effect - e.g., in some context strong social influence might inhibit motivation to learn and acquire new skills in others it may strengthen it, we propose to use COM-B system – a systems approach - as a framework for understanding a behavior.

The COM-B system was developed by Michie, van Stralen and West (2011) who have noticed that both a US consensus meeting of behavioral theorists in 1991 and a principal of US criminal law refer to three factors necessary for preforming a behavior. These are (1) skills to perform a behavior, (2) intention to perform a behavior, and (3) lack of environmental obstacles precluding from performing a behavior. Based on this knowledge they proposed a behavioral system composed of capability, motivation and opportunity – three components that interact and influence the behavior (Figure 1). Specifically, capability and opportunity influence motivation and behavior directly, while motivation influences the capability and opportunity only through behavior. Behavior interacts back with all three components.

At the lower level, each of the components is divided into two types. Capability contains both psychological, e.g. skills, knowledge, capacity of understanding and physical capacity, e.g., strength. Motivation energizes the behavior and it is composed of both automatic (e.g. emotional reactions) and reflective processes (i.e., conscious decision-making). Opportunity is

somehow external to an individual. It is a physical and social environment that may enable or cease a behavior.

The goal that Michie and West pursued was "… to identify the simplest overarching model needed to account for change in a behavior." (2013, p. 6). In general, we agree with this logic but in case of COM-B system which was designed to help policy makers to understand the behavior and plan effective interventions we propose to unpack some of the concepts used in the model.

Especially, two components: psychological capacity as well as physical environment are very broad concepts, integrating elements that require different measures and way of thinking when to be targeted, therefore some of their elements should be separated.

In case of capability which can be understood as personal, nonmaterial endowment of any individual, we suggest to extract three subtypes of this component: physical capability, knowledge and skills, and psychological capacity. The first type, physical capability, refers to physical ability of targeted individuals to perform behavior, and it is the same as in the original COM-B system. All physical disabilities and difficulties, if there are any, should be named here.

The second type are knowledge and skills that are required to perform a behavior. The structure of knowledge and skills is a dynamical structure and it is evolving in time. It can be relatively easy changed when compared to other elements of psychological capacity, like cognitive biases, locus of control, emotions, therefore we propose to extract it from psychological capacity. Moreover, knowledge and skills are one of the most common subject of interventions because it is relatively easy to measure and to identify shortcomings within them. However, interventions addressing only knowledge not always are the most successful ones because many psychological factors, like defense mechanism, may counteract the assimilation of new information.

In case of the third component – opportunities - we propose to distinguish three types of it. In original COM-B system Michie, van Stralen, and West divides opportunities only into physical and social environment. We propose to decompose physical environment into two types: resources and organizational arrangements because such division automatically show that different aspects of physical environment have different owners: individuals and organizations. Resources describe anything material that an individual have or can have, including money, access to goods, equipment. Resources of an individual are to grate extend dependent on individual's past choices and performance. Organizational arrangement, on the other hand, dependent on third parties who may interfere with the choices that individual can take. For example, if government tries to reduce air pollution by restricting car traffic to the cars with even numbers on their plates (organizational arrangement) it does not matter if an individual have a car or not, they still will not be allowed to enter city if their car happens to have even number on its plates (resources). This distinction between resources and organizational arrangement show how interventions may affect resources of targets. The third type of opportunities is social environment, the same as in original COM-B system, which refer to norms, values, and culture.

Figure 1. COM-B model for analysis of behavioral drivers
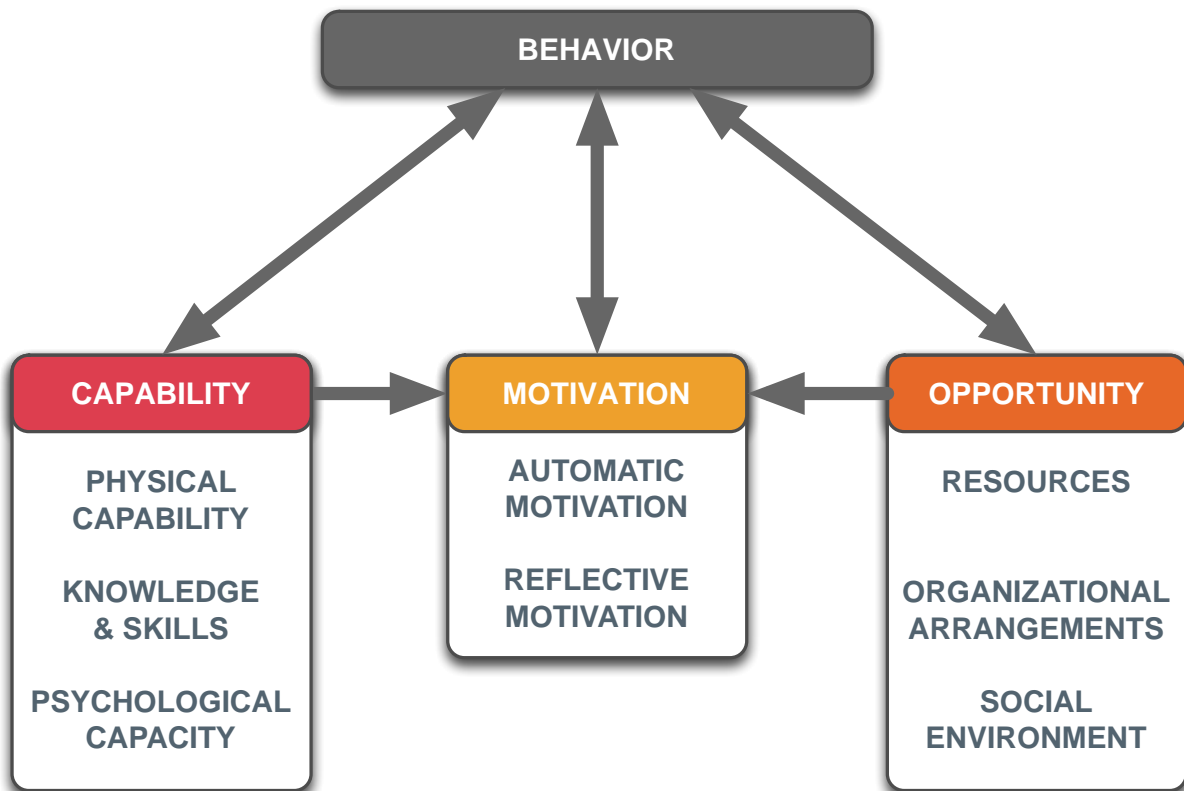
Source: Adapted from (Michie, van Stralen, & West, 2011).

2   Case study application: junk food ban in schools

2.1   *Background information*

World Health Organization underlines that childhood obesity is one of the most serious public health challenges of the 21st century. Globally, in 2015 the number of overweight children under the age of five, is estimated to be over 42 million (WHO 2017). Poland is not an exception. According to the Polish National Food and Nutrition Institute, 1/5 school-aged kids are overweight.

To stop the negative trend and "save children health by promoting healthy eating habits' (as explicitly mentioned during parliamentary debate), Polish Government decided to introduce new regulations concerning the functioning of school canteens and tuck shops. In 2014 Polish Parliament made amendments to the Food and Nutrition Safety Act.

Starting from 2015 foods and drinks high in fat, salt and sugars were prohibited. Ministry of Health issued a detailed list of forbidden products and introduced the limit of sugar, salt and fat that can be used during meal preparation for school canteens. During public consultation of the food list the ministerial proposition has been widely criticized by participating stakeholders from various communities: teachers and school principals, canteens operators, food industry, academia, etc.

In addition, vending machines were removed from schools and all kind of 'junk food' promotion within school premises was prohibited. To enforce the compliance Local Sanitary Inspectorates started school inspections and all violations could be punished either with financial penalty (up to 1000 EUR) or the termination of the contract with canteen or shop operator. Clearly, Polish Government choose the solution from "the upper end of the intrusiveness scale" (Weaver 2014) – to prohibit specific behaviors and to punish noncompliant behavior.

Soon after introduction new regulation has been widely criticized and the "prohibited bun" became a buzzword in polish media, both in traditional and social channels. Gags with young people "smuggling" illegal sweets and chips to schools, involving in 'junk food" organized crime networks or searching for fake ID cards to be able to buy "adult only food", started to appear in TV series or stand-up comedies. School principals reported that canteens operators are withdrawing contracts as a result of limited possibility to sell most profitable snacks. Public opinion reactions were overwhelmingly negative, and – as a result – Polish government allowed one year derogation for schools and canteens to better prepare for changes. Subsequently, following another wave of criticism, one year after commencement of the regulation, Ministry of Health has liberalized some of the regulations (e.g. reintroduction of buns to tuck-shops).

The studied regulation become a clear example of policy failure not only because of public opinion reaction and conflicts with stakeholders. The key goal of regulation, explicitly

mentioned by policy makers, which was to change children eating behaviors is far from accomplishment. Of course, it is too early to assess long-term impact, but our study aimed at describing short-term results and reactions of target groups provided evidence on behaviors different from expected. In the younger group of targets (primary school kids – age 6 to 12) bigger amount of new meals were either left on plates or throw to garbage cans in comparison to pre-regulation measurement. In the older group (junior high school – age 12 to 15) interviewed kids admitted to buy sweet or salty snacks outside school or bring such food from home (this was confirmed by ethnographic observations of what was eaten during lesson breaks), as well as consume unhealthy meals at home or in local fast-food bars.

In the next sections we apply this theoretical framework to explain the failure of policy regulation implemented in Poland. That case will illustrate potential strength and weaknesses of the framework in providing fuller picture of gaps in compliance.

2.2 Articulating Theory of Change

The simplified logic of the Polish regulation has been presented on Figure 2. The analysis brings following points into our attention.

Designers of policy used simple instrument - ban, combined with execution of penalties from owners of stores and schools cafeterias, and school principals who would not follow regulation.

However those actors are not the target group of the regulation. They are just a means to reach compliance of the actual target group - children attending educational facilities.

Thus, the regulation is targeted at the behavioral change of school children that start choosing healthy food. This assumption seems far fetching but in order to verify its rationality we will have to unpack the black box of the behavior.

Figure also shows challenge with second causal link - between changed behavior and ultimate policy impact. Childhood obesity is a result of "living style" that includes dietary choices as well as patterns of physical activities. Regulators targeted only the former in a very narrow context, i.e., school, not taking into account the world outside school. However to increase the probability of achieving its goals, regulation should be more comprehensive, i.e., take into account other situations in which children consume food as well as target physical activity – the second component which if lacks , contribute to obesity.

Figure 2. Intervention logic of case study regulation
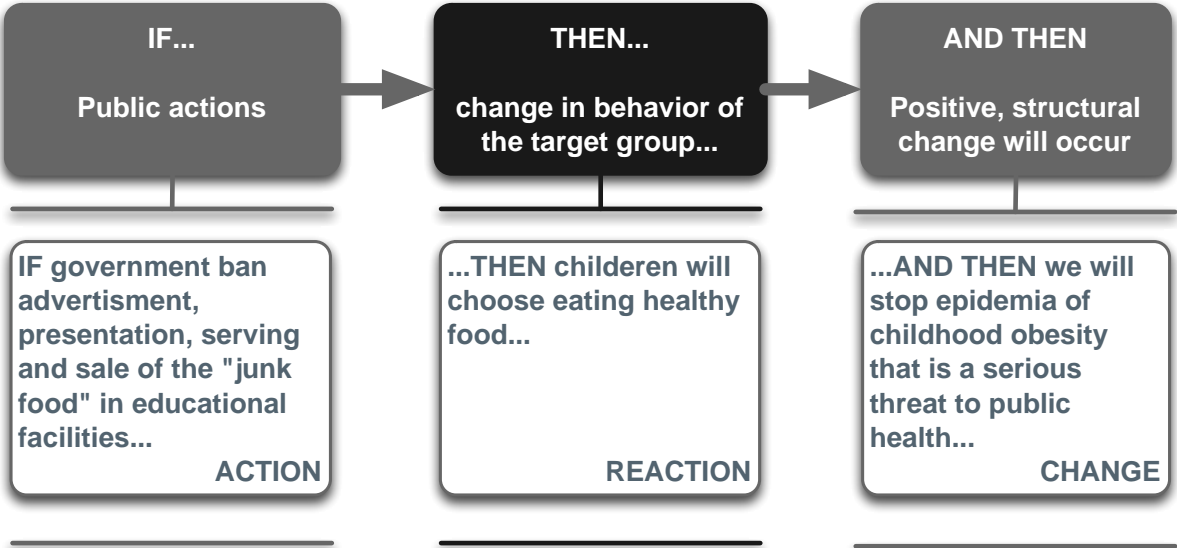
Source: Food and Nutrition Safety Act changes 2014

2.3   Defining action situations

To track the causes of targets non-compliance policy failure, we start with identifying key action situations, in which policy target engage in interactions that could possibly result in compliant (eating healthy foods) or non-compliant behavior (consuming junk food).

The case study policy aimed to impact behaviors of children (6-12) and youth (12-15). But the only action situation within which the regulation changed operational rules for targets was

school (what can be bought in tuck-shop or consumed in canteens). During our exploratory research we have identified other important action situations, which were completely ignored by the policy makers.

Firstly, policy makers did not include any kind of actions to alter policy targets (children) behaviors within the **primary action situation they live in and make decisions, which is family.** Review of evidence that accompanied our ethnographic research showed that: inclusion of families increases success chances (Kipping R. et al., 2014; Schäfer Elinder L. et al., 2012; Jordan K. C. et al., 2008), kids change their eating habits easier in families with higher socio-economic status (Plachta-Danielzik S. et al., 2011) and with better educated parents (Llargues E. et al., 2011). Our interviews were in line with those findings. Family action situation should be the focal point of analysis preceding the selection of policy tools aiming at changing eating habits of children.

One could argue that there is nothing wrong in focusing efforts on the one action situation. Yet, in the given case neither regulation (prohibition), nor accompanying implementation measures (junk and healthy food checklists) or compliance enforcement tools (inspections and punishment for canteens operators) have acknowledged the impact on the family action situation for kids eating habits.

During our research we identified possible ways, in which the family action situation could interact with school action situation, in a way that have impact on whether targets comply or not with policy. Family action situation determines especially two working elements, i.e.:

- target preferences and the level of information kids could use in school action situation (what kind of food is desirable, what is actually healthy/unhealthy food);
- target degree of control over action in school situation (i.e., by either providing home-made snacks or giving children pocket money to be spent on food);

Moreover, policymakers have omitted the other important action situation, in which policy targets eating habits could form or change, i.e. social life action situation (that could be split to two interacting and mutually enforcing dimensions, which are: real-world social life and virtual-reality social life, which is extremely important in case of youth policy targets). As described by our interviewees eating is essential part of various social interactions they undertake (either in real world, i.e. meeting at local McDonalds or in virtual-reality, i.e. consuming snacks during browser gaming with peers).

Additionally, during the desk research (i.e. investigating legal procedures preceding the introduction of regulation) we identified another action situation which was vital for the policy design. It was the action situation from the policy/collective choice level, and could be referred to as an "policy formulation action situation", in which leading actor (government and the supporting parliamentary majority) decide not to take into account the information provided by other participants/stakeholders during consultation phase and to execute its control over the policymaking process in a way it totally excluded stakeholders views and interests, scientific evidence, health practitioners' recommendations, etc. The subsequent events and public opinion critique proved it was a costly mistake.

Summing up - as far as action situations are concerned the policy makers took a simplistic approach and narrow world-view. Not only have they entirely omitted two important action situations (family life and social life), in which policy targets behave and make decisions, but they have not included any of the policy tools that could enforce compliance by changes in the microcontext of the three main action situations (e.g. availability of the prohibited foods in the commercial shops located near to schools) and the broader socio-ecological macrocontext, which affect target population (e.g. economic aspects of food industry such as pricing policies, advertising and PR activities of food brands). It also raises questions, why the government decided to use highly intrusive tool in relation to only one action situation (schools), at the same

time abstaining from taking any actions in other action situations (e.g in relation to food industry regulatory arrangements).

Identification of the above mentioned action situations in which children behave in desired or not desired way clearly shows the substantial gaps in the intervention logic of the studied policy and provides information on possible sources of non-compliance (multifaceted impacts of other action situations - family and social life on children eating behaviors in schools and in general terms). Moreover, this is a first step to design accurate policy responses to non-compliance. The systematic review of evidence on the effectiveness of healthy eating programs conducted during our research clearly showed that the most effective programs are those addressing various elements from different action situations (Laurence S., Peterken R. and Burns C., 2007).

2.4 Mapping Stakeholders

As previously stated, policy-making process aimed at increasing targets compliance not only should build on understanding the primary targets (with their heterogeneity), but also map other stakeholders that could impact the targets behaviors.

The following figure shows the stakeholder map for the case study regulation:

Figure 3. Stakeholder map for case study regulation
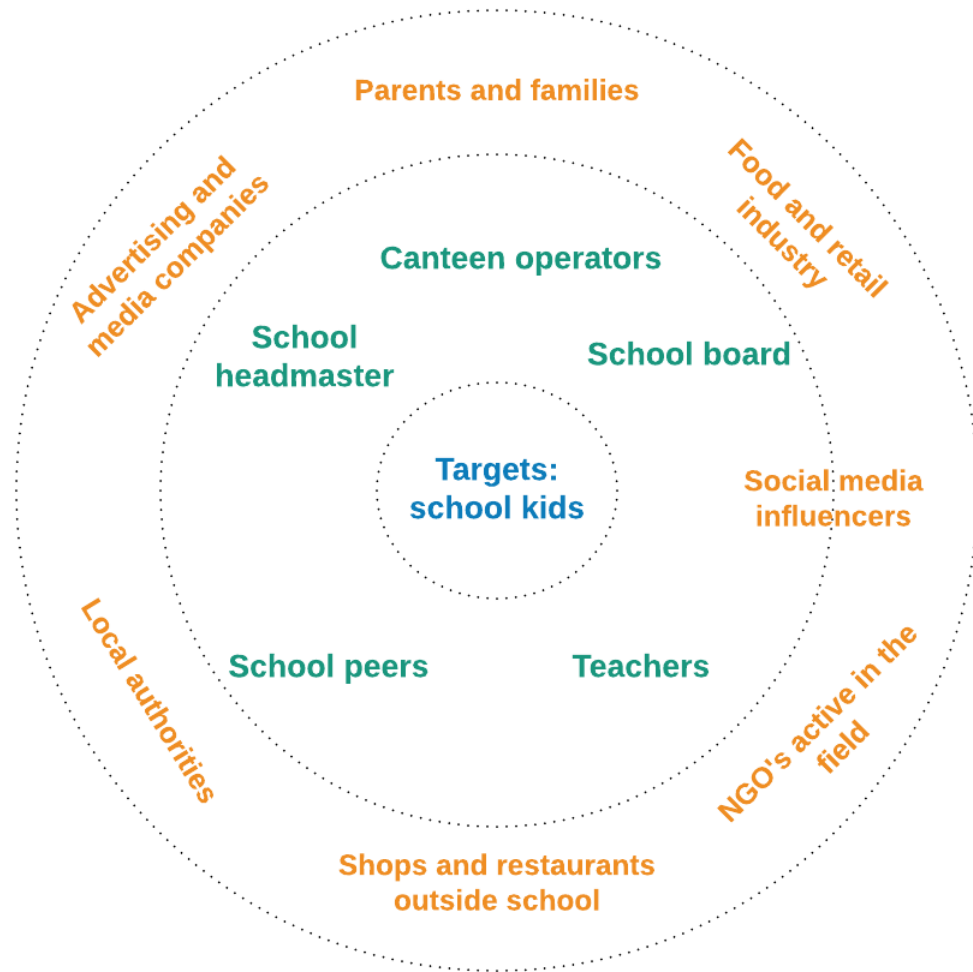
Source: own elaboration

In the center of the policy we put the key policy target: school kids. But when we recall what kind of measures have been used in the given regulation, we immediately understand, that there were no direct actions to alter kids behaviors. Policy makers have only used tools addressing canteen operators actions and additional measures involving school headmasters and school boards to enforce the new regulations. Hypothetically, kids behaviors were intended to change as a reaction to change in their school environments (we elaborate more on that in the COM-B analysis in the next section).

Additionally, the regulation did not address any possible social influences that could either help or hinder the implementation, i.e. not involved neither school peers effects, nor teachers.

Moreover, the policy makers did not take into account the complex reality of external world with various stakeholders that could influence the results of the policy. We have already referred to the significant impact that families have on kids eating behaviors, but the regulation did not consider any potential influences from media and advertising companies, NGOs (often involving in healthy lifestyle promotion), social media influencers (role models – either supportive or disruptive), local shops (providing resources that have been prohibited inside schools), etc.

The stakeholder mapping allowed to show that the Polish government decided to influence only those stakeholders that were within the educational administrative system (canteen operators tied by legal agreements, school directors and boards operating on the basis of the legal acts). The government did nothing to involve other stakeholders (like families or media) or to regulate strong interest groups (food and retail industry).

This has led to two kinds of problems with policy effectiveness: firstly, the diagnosis of situation was oversimplified, and – as such – resulted in selection of suboptimal policy tools. Secondly, many of the stakeholders not involved in government actions were further involved in critical public debate around the regulation, which had additional diminishing effect on the regulation legitimacy and acceptance within society.

2.5   *Investigating gaps in compliance*

In the following section we demonstrate, how an analysis of targets' behavior in context deepens understanding of the mechanisms leading to overconsumption of unhealthy food in schools and identification of potential gaps that may cause non-compliance of the primary policy targets. We focus here on one action situation, i.e., school, which was the only one covered by the policy tools used by Polish Government.

We start from the analysis of first component of COM-S system – **capabilities**, i.e., knowledge and skills, psychological capacity and physical capacity. The investigation of knowledge and skills of pupils revealed that pupils had difficulties in assessing the healthiness of food they consume every day. A common assumption of pupils was that junk food is only fast-food while healthy food are vegetables and fruits, leaving the rest of products in a gray zone. Moreover, pupils hold a believe that preparation of healthy food is very time-consuming and they were convinced that the end result might not be exactly tasty. They did not know what the healthy snack might be and they did not have any skills of preparing them.

Meanwhile, the introduced regulation has made a clear distinction between "healthy" and "unhealthy" foods. The ministerial list of prohibited foods and practices did not offer any explanation of the choices and its release was not accompanied by any kind of information campaign that would help to understand the rationale behind the decision of experts. There was a clear lack of divergence between pupils' and governmental understanding of healthy food which was not addressed at all.

This discrepancy resulted in two barriers to compliance: firstly, students, their parents and canteens personnel did not understand why certain foods has been prohibited.

Secondly, students had no knowledge how the prohibited food can be replaced by healthier alternative. The lack of knowledge how to prepare a tasty meal without ingredients from the list was also declared by canteens' personnel. During interviews they told us that suddenly they had to stop doing things in a way they have been doing for years and start to learn new recipes. They were given no help nor time to acquire new knowledge and skills.

In the area of psychological capacity, we found that pupils have very strong positive association with unhealthy food which is often given to children as a prize for good behavior, accomplishments or hard work. Pupils has also indicated that they did not eat a lot of vegies nor fruits at home so there is no positive habit to which policy makers could reach while

designing intervention. We have also found that pupils like to have a choice when they choose something to eat. The rapid restriction imposed on that possibility of choice has caused an effect of psychological reactance. Pupils interpreted this restriction as the limitation of their freedom and even those who in general were in favor of healthy food initiatives started to express negative opinions about regulation.

The non-compliance of pupils was strengthened by canteen workers who were afraid of being fined for non-complying activities. This resulted in some cases of overcompliance, i.e. some canteens resigned from using salt and sugar at all (although the regulation allowed small level of condiments), which in turn had negative impact on kids compliance - they did not accept the "flavorless" soups, sauces, etc. It was visible during canteens observations – younger kids were simply leaving large part of those meals that were newly introduced and their less salty, less sweet flavors were new to kids palate. As a result, their attitude towards changes in canteens were increasingly negative. The collected material did not point out to any physical capabilities, lack of which would somehow restrict the ability of average pupil to eat healthy. The disabilities and food allergies were not included in the analysis.

The second component we examined were opportunities, i.e., resources, organizational arrangements and social environment.

Firstly, the regulation addressed the **level of resources** by limiting the availability of junk food in school canteens and tuck-shops. At the same time, the regulation did not address the availability of the same product categories in the shops located in schools immediate vicinity. Our observations and interviewed showed that children still buy sweet sodas, salty snack, but they do this either in the morning (on their way to school) or in the afternoon (coming back home). Sometimes they do not buy food by themselves, especially those who are younger – their parents buy them what they want and give them to school.

The same duality was observed in the **organizational arrangements**. The studied regulation prohibited promotion of sweet/fat/salty foods in school, at the same time doing nothing with the broader regulations regarding food advertising in Poland. As a result, immediately after leaving the school, within which promotion and selling of salty chips and sweet sodas was prohibited, kids encountered billboards and other outdoor commercials with the most famous football player with the pack of chips in one hand and bottle of coke in other.

Moreover, the policy did not include any tools to support canteens operators and their staff in following the new food checklists and rules of meal preparation. As a result, media reported cases of canteens operators closing their business because of the presupposition that the introduced changes will decrease the revenue (higher prices of healthy snacks and lower marketing attraction), make the business difficult to manage (maintaining fresh products, establishing new supply chains, etc.) and more risky (possible fines for not following new rules).

It has already been signaled several times, that the studied policy was implemented as if the school children had not lived in the social world, but populate deserted island. None of the potential **social environment** impacts on eating habits have been addressed. Firstly, the family action situation was excluded from the policy scope. Secondly, the peer effects, the way young people socialize and how that relates to food consumption was also ignored. Thirdly, the policy did not address the issues related to traditional and new media discourses and communication practices around unhealthy/healthy eating. Nothing has been done to minimize the impact of social barriers (broad, attractive promotional campaigns of junk food, with role models (sport, pop stars) shown with products forbidden in polish schools) or to use the leverage points (Weaver 2015), e.g. the evolving trends in the healthy lifestyle blogs or Instagram activity of pop-stars showing how visually attractive and tasty healthy eating could be. We can clearly

see, how many gaps in compliance were not addressed or even recognized. That substantially decreased probability of the effectiveness of the intervention.

3 Conclusions

In the paper we proposed the framework to investigate and map the complexity of factors that could impact the targets' behaviors and result in policy non-compliance. We have argued that there are four key elements of such exploratory (when used at the policy design stage) or explanatory (when applied to evaluation) framework: (1) articulating theory of change, (2) identifying key action situations, in which policy targets engage in behaviors that are to be altered, (3) mapping all stakeholders whose interactions with policy targets either reinforce or reduce compliance, and finally – (4) applying the COM-B model to integrate all of this elements into manageable conceptual map of potential sources of policy non-compliance.

This procedure brings together individual with environmental determinants of behavior, which could prevent policy practitioners from cognitive "tunneling" on only selected behavioral gaps during the policy design phase (Weaver, 2015, p. 807).

3.1 Key findings from applying framework to case study

We tested the application of our framework to the analysis of the Polish regulation aiming at changing school children eating behaviors through the prohibition of certain foods in school cafeterias.

The use of the propose framework allowed to show how oversimplified and unrealistic assumptions were made about the causal inference between public regulation, target response and ultimate societal impact.

It gave the overview of three key action situations, in which desired behavior could take place and informed, that only one (school action situation) has been addressed by policymakers, which minimized the possible effectiveness of the regulation.

Moreover, framework allowed to show key capabilities (individual attributes) of policy targets, their motivations and opportunities (resources, institutional arrangements and social environment) that could be used either as leverage points to increase compliance or as a sources of problems (barriers to compliance).

When policy makers or evaluators use such 'map to behavior' they increase chances of the policy, regulation, program or project effectiveness by considering a spectrum of accompanying measures. As such, this framework helps to think out of the box and create policies that are more realistic.

3.2 Challenges and further steps in framework elaboration

The proposed framework is a work in progress. The application of the framework to the case study analysis allowed us to identify future challenges related to framework elaboration. Except

from further work on refinement key definitions to secure more conceptual clarity and order, we identified 3 broader challenges.

Firstly, more conceptual work is needed to organize thinking about those elements, which can manifest themselves differently in different action situations on different levels. Thus – multidimensionality of action situation and its impact on targets behaviors need to be addressed in more comprehensive way.

Secondly, more work need to be done to understand and manage all the dynamic elements of the action situations (when one element influence another). Different elements interact within action situations and those interactions are vital to understand the whole mechanism leading to outcome (behavior). At the current state the framework focuses more on static elements, the dynamics is still to be addressed.

Thirdly, the initial analysis showed that the framework to be fully operational and easily applicable to policy analysis, especially for practitioners, need to be enriched which sets of concrete questions tied to each element of the framework. Building of the questions catalogue could be then followed by indication, which research designs could be used to investigate each of the described phenomena.

Those further steps should be possibly done not only with the ex-post analysis of already introduced policy but also with ex-ante work – aiming at designing policies that increases chances of compliance among targets.

References

Aligica, P. D. (2006). Institutional and Stakeholder Mapping: Frameworks for Policy Analysis and Institutional Change. *Public Organization Review*, *6*, 79-90.

Astbury, B., & Leeuw, F. L. (2010). Unpacking Black Boxes: Mechanisms and Theory Building in Evaluation. *American Journal of Evaluation*, *31*(3), 363-381.

Bardach, E. (2004). *Practical Guide for Policy Analysis. The Eighfold Path to More Effective Problem Solving*. Washington, D.C.: CQ PRESS.

Behavioural Insights Team. (2015). Update report 2013-2015. *London*.

Bemelmans-Videc, M.-L. (2007). Introduction. Policy Instruments Choice and Evaluation. In M.-L. Bemelmans-Videc, R. Rist, & E. Vedung (Eds.), *Carrots, Sticks & Sermons. Policy Instruments and Their Evaluation* (pp. viii-xxvi). New Brunswick: Transaction Publishers.

Binnekamp, R., van Gunsteren, L., & van Loon, P.-P. (2006). *Open Design, a Stakeholder-oriented Approach in Architecture, Urban Planning, and Project Management*. Delft: IOS Press.

Bryson, J. M. (2011). *Strategic Planning for Public and Nonprofit Organizations: A Guide to Strengthening and Sustaining Organizational Achievement*. San Francisco: Jossey-Bass.

Buse, K., Mays, N., & Walt, G. (2012). *Making Health Policy*. Berkshire: Open University Press.

Chen, H. T. (2005). Theory-Driven Evaluation. In S. Mathison (Ed.), *Encyclopedia of evaluation* (pp. 415-419). Thousand Oaks, Calif.; London: SAGE Publications.

Datta, S., & Mullainathan, S. (2012). Behavioral Design. A New Approach to Development Policy. *CGD Policy Paper*, *16*(November), 1-33.

Donaldson, S. I. (2007). *Program Theory-Driven Evaluation Science: Strategies and Applications*. New York: Lawrence Erlbaum.

Étienne, J. (2010) La conformation des gouvernes. Une revue de la littérature théorique », *Revue française de science politique*, 3/2010 (Vol. 60), p. 493-517.

Freeman, E. (1984). *Strategic Management. A Stakeholder Approach*. Boston: Pitman.

Gomes, R. C. (2004). Who Are the Relevant Stakeholders to the Local Government Context? Empirical Evidences on Environmental Influences in the Decision-Making Process of English Local Authorities. *Brazilian Administration Review*, *1*(1), 34-52.

Gooch, G., & Stalnacke, P. (Eds.). (2010). *Science, Policy and Stakeholders in Water Management. An Integrated Approach to River Basin Management*. London, Washington D.C.: Earthscan.

Hill, M., & Hupe, P. (2014). Implementing Public Policy: An Introduction to the Study of Operational Governance. Thousand Oaks: SAGE Publications.

Jolls, C., Sunstein, C. R., & Thaler, R. H. (2000). A behavioral Approach to Law and Economics. In C. R. Sunstein (Ed.), *Behavioral Law and Economics* (pp. 13-58). Cambridge: Cambridge University Press.

Jones, R., Pykett, J., & Whitehead, M. (2013). *Changing Behaviours. On the Rise of the Psychological State*. Cheltenham: Edward Elgar.

Martin, B., & Hanington, B. (2012). *Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions*. Beverly, MA: Rockport Publishers.

Michie, S., & West, R. (2013). Behaviour change theory and evidence: a presentation to Government. *Health Psychology Review*, *7*(1), 1-22.

Michie, S., Atkins, L., & West, R. (2014). *The Behaviour Change Wheel. A Guide To Designing Interventions*. London: Silverback Publishing.

Michie, S., van Stralen, M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, *6*(42), 1-11.

Navarrete, D. M., & Modvar, C. (2007). Stakeholder. In M. Bevir (Ed.), *Encyclopedia of Governance* (pp. 917-921). Thousand Oaks: SAGE.

OECD. (2017). *Behavioural Insights and Public Policy. Lessons from around the world*. Paris: OECD Publishing House.

Ostrom, E. (2005). *Understanding institutional diversity*. Princeton, N.J.; Woodstock: Princeton University Press.

Ostrom, E. (2010). Beyond Markets and States: Polycentric Governance of Complex Economic Systems. *American Economic Review*, *100*(3), 1-33.

Patton, M. Q. (2008). *Utilization-focused evaluation* (3rd ed.). Los Angeles, London: Sage Publications.

Pawson, R. (2013). *The Science of Evaluation: A Realist Manifesto*. London: SAGE Publications Ltd.

Shafir, E. (2013a). Introduction. In E. Shafir (Ed.), *The Behavioral Foundations of Public Policy* (pp. 1-9). Princeton: Princeton University Press.

Shafir, E. (Ed.). (2013b). *The Behavioral Foundations of Public Policy*. Princeton: Princeton University Press.

Stanford University (2016) Behaviorally Informed Design for Energy Conservation; Energy Innovation and Emerging Technologies Program, Stanford: Stanford Change Labs

Stickdorn, M., & Schneider, J. (2012). *This is Service Design Thinking: Basics, Tools, Cases*. Hoboken, NJ: Wiley.

Weaver, K. (2015). Getting People to Behave: Research Lessons for Policy Makers. *Public Administration Review*, *75*(6), 806-816.

World Bank. (2015). *Mind, Society, and Behavior*. Washington D.C.: World Bank Group.