

Water Holding Policies: The Auspices of Behavioral Insights in Public Policy Design and Implementation in South Korea and other OECD Countries

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Abstract: Behavioral insights aim at improving the welfare of citizens and consumers through comprehensive public policies and relevant regulations that are designed and implemented based on empirically-tested results derived using sound experimental methodologies. They mix some traditional economic strategies with insights from psychology, cognitive sciences and social sciences to discover irrational factors that influence decision making processes. This paper sought to explore and compare the successful designing and implementation of public policies in South Korea and other member states of the Organisation for Economic Co-operation and Development (OECD) under the auspices of the behavioral insights. The paper focused on five cases which include Education Sector, Energy Sector, Environment Sector, Health Sector and Public Service Delivery Sector.

Keywords: Water holding policies, auspices, behavioral insights, public policies, design and implementation, OECD countries.

1. BEHAVIORAL INSIGHTS

Behavioural insights is the life blood of water holding public policies and it is based on some researches from psychology, human centred design and behavioural economics (World Bank, 2107). It draws on various social perspectives to better understand the ways in which policy changes can improve people's lives. In the public service domain, behavioural insights have been used to generate low cost interventions to improve service income. During the policy design and implementation behavioural insights recognises that all our choices are affected by how decisions are presented. In most cases decision making is influenced by what others are doing and people do not always follow through what they intend to do. According to Sander (2018) behavioural insights approaches complement traditional policy approaches. The behavioural insights approach is based on the idea that interventions are aimed at encouraging people to make better choices for themselves and society. These interventions will be more successful if they are based on insights from behavioural science. With very little resource people can change their behaviour in order to produce better outcomes that can benefit the whole society. Through this the demand for public services can be managed well thereby decreasing the cost.

2. UNDER THE AUSPICES OF BEHAVIORAL INSIGHTS

Many public policies across the globe are very successful under the auspices of behavioural insights as they help to create a psychological interaction between service users and the public policy makers. Nowadays behavioural insights are gaining popularity in the development discourse because they foster sustainable results (Oliver et al, 2013). They incorporate empirical evidence on how behaviour is influenced by context and it often involves direct experimentation in the specific policy context. According to Shafir (2013) there are many crucial factors to consider when institutionalising behavioural insights. These factors include context of the political environment, governance structures, capability and

culture. Behavioural insights are being used to enhance the effectiveness of government interventions and to show the feasibility and impact of policies during the policy impact analysis process. It is factoring in behaviours and embedding experimentation as part of regulating and finding the optimal form of government intervention. Many member states of the Organisation for Economic Co-operation and Development (OECD countries) including South Korea had utilised behavioural insights and their interventions were successful. This paper focused on five cases which include Education Sector, Energy Sector, Environment Sector, Health Sector and Public Service Delivery Sector.

(a) Education

According to the Organisation for Economic Co-operation and Development (2017) in South Africa In 2010, the Western Cape Government (WCG) Department of Cultural Affairs and Sport (DCAS) created the “Mass participation Opportunity and access Development and growth” (MOD) programme as an after school programme aimed at creating a socially inclusive, creative and active Western Cape. The MOD Centres act as a hub for sport, recreation, arts and culture activities for learners in the community. The centres are usually located in a school and serve the community as a whole. MOD Centres offer a complement to educational activities provided by schools, offering a safe place for learners to “hang out” and for children to engage in sport and recreational activities. There are currently 181 MOD Centres across the province, with a total of 500 coaches that provide sport and recreational activities to over 40 000 registered participants from disadvantaged communities and underserved schools. As part of a partnership established in 2012 to study the application of behavioural insights to four policy areas, the Western Cape Government (WCG) worked with ideas42 and the Research Unit in Behavioural Economics and Neuroeconomics (RUBEN), based at the University of Cape Town, to initiate a series of behavioural change pilot projects aimed at investigating whether behavioural nudges could enhance policy implementation and delivery. This helped to measure the impact of MOD centre attendance on learner academic outcomes, to understand the behavioural traits of coaches and to test the use of behavioural messaging to parents as a mechanism to increase learner involvement and attendance at the MOD programme. Through the use of Simple Discount Task, Prisoner’s Dilemma/Co-operation Game, Trust Game/Reciprocity Game, Honesty Reporting Dictator Game through questionnaires personal traits were measured. The behavioural pilot increased the daily attendance rates of learners. The results obtained from these behavioural insights were used to give more advice on how to improve the out of school programme and the education system as a whole.

In UK adults who lack literacy and numeracy skills tend to be less productive at work, earn lower wages, and are more likely to suffer from ill health and experience social exclusion. In an effort to find out how behavioural insights could be used to improve adult numeracy and literacy, the UK’s Department for Business, Innovation and Skills (BIS) established the Behavioural Insights Research Centre for Adult Skills and Knowledge (ASK) in collaboration with the Behavioural Insights Team (BIT) in 2014. ASK conducts research and runs trials with the aim of producing evidence-based policy recommendations and practical tools for employers, it conducted a large-scale field experiment testing the use of encouraging text messages, informed by principles adopted from behavioural science, which were sent to adult learners, aged 19 and over, enrolled in English and Maths courses at two further education colleges in the United Kingdom. The use of behavioural nudges in the form of simple text messages, based on principles of positive feedback, social support and planning or organisation, had a positive impact on improving attendance, attainment and retention rates of learners on adult education programmes. According to the Behavioural Insights Team (2017) behavioural insights is at the heart of the United Kingdom’s government to apply academic researches in behavioural economics and psychology to come up with comprehensive policies and interventions especially in education sector and other social services.

In Korea the National Teacher Professional Development and Evaluation System was introduced in 2010 to improve the learning environment, teachers’ effectiveness and their specialties, and it has now been implemented in all primary and secondary schools in Korea (Korea Research Institute for Vocational Education and Training, 2018). In 2016, to boost teachers’ morale, the Ministry of Education introduced a leave of absence for training for teachers who have worked for more than ten years in primary and secondary schools. It gives them a chance to take a one-time-only leave of no longer than a year to undergo training or self-improvement or to prepare for retirement. Korea has also piloted Teacher Education Emotion Centers to support and assist teachers who have been harmed in the school environment and protect teachers’ rights to a safe working environment. The Master Teacher initiative was piloted in 2008 and is currently being rolled out across the system. Particularly skilled teachers can be assessed by a screening panel and designated as Master Teachers. Master Teachers continue to teach and also take on additional research activity and input into professional development programmes. Master Teachers can also apply to be promoted to vice-principal or principal positions. Many

behavioral insights based researches and project are implemented in Korea to improve skills, capacity and to promote talent to both young people in schools and out of schools. They have positive impact to the Korean education system because it is supported by researches and empirical data based policies.

(b) Energy

In the energy sector a lot of countries used behavioural insights to promote energy efficiency and sustainability. In Italy EEGSI the regulator responsible for supervising the energy and water sector conducted a research among 300 students using a software composed of five sliders, each one simulating the use of an electric appliance with a function (not known to participants) to collect better consumption data for more efficient energy use. In USA the federal government introduced the Department of Energy to work together with the Social and Behavioural Sciences Team (SBST) a cross-agency group of applied behavioural scientists, programme officials, and policymakers—with providing policy guidance and advice to Federal agencies. They used behaviour insights to determine the consumers' adoption of renewable energy by carrying out a research on the potential behavioural barriers underlying low take-up of clean energy, as well as a suite of behavioural tools that can be used to address these barriers. In Netherland the Authority for Consumers and Markets a regulator which works to protect consumers and promote fair competition between businesses has been actively using behavioural insights in order to achieve more effective market oversight to promote transparency in energy contracts. Authority for Consumers and Markets conducted a behavioural analysis of both the non-compliant and compliant. In South Africa the Western Cape Government in partnership with The Research Unit in Behavioural Economics and Neuroeconomics (RUBEN), based at the University of Cape Town and ideas42 launched the “Too Wise to Waste” programme. As part of a partnership established in 2012 to study the application of behavioural insights to four different policy areas, the WCG worked with ideas42 and the University of Cape Town to diagnose and find solutions to promote energy efficient behaviour aimed at reducing energy use inside government buildings. In Sweden the Swedish Energy Markets Inspectorate (EMI) which supervises the electricity, natural gas and district heating markets in Sweden In conjunction with the Centre for Environmental and Resource Economics at Umeå University, carried out consumer-focused behavioural research among 900 consumers to understand energy consumption patterns amongst the Swedish population. Its aim was to explore the potential for demand-side flexibility amongst consumers of electricity to improve energy efficiency and to study the possibilities and incentives for changing current electricity consumption patterns. In UK between 2007 and 2011, the British Office of Gas and Electricity Markets (OFGEM) conducted a project among 61 000 households to illustrate the potential of behavioural insights applications to encourage energy conservation. Under the UK Government initiative to roll-out smart meters, the OFGEM-led Energy Demand Research Project (EDRP) was created to test consumers' responses to different forms of information about their energy use. All these countries are member states of the Organisation for Economic Co-operation and Development and their behavioural insight based approaches helped them to design and implement sustainable energy policies and intervention strategies (Organisation for Economic Co-operation and Development, 2017).

Through the use of behavioural insights, Italy continuously receive feedback through the smart meter app on smartphones. The feedback remarked the evolution of energy consumption in terms of cost, not energy. These results have been utilised by the Italian government in re-designing the layouts of electric and gas bills, in order to better empower the consumer, increase awareness of liberalised energy market opportunities and optimise the use of electric appliances. In Netherland the energy regulatory board achieved the desired behaviour amongst the originally noncompliant energy suppliers. It managed to involve the branch organisation in the communication strategy and to organise an information meeting for all energy suppliers (at the retail level). The intervention was successful in eliciting behaviour change within the sector resulting in compliant behaviour among all 50 energy suppliers. Although there were some implementation difficulties the “Too Wise to Waste” programme, South Africa had a 14% reduction in energy use. The researchers found that the 13.5% savings currently being achieved through the intervention would be sufficient to pay back the total costs of the project within five years (Oxford Business Group, 2018). The behaviour insights research helped the Swedish Energy Markets Inspectorate to conclude that demand response in terms of changing electricity consumption patterns through means of incentive varies across the Swedish population. Behavioural insights provided actual feedback on historic consumption and to get precise information thus enabling all these countries to find better ways to improve their energy sectors.

In Korea a Presidential Commission on Green Growth launched the Green Growth in Action Programme in 2009. As part of its national strategy behavioural insights were considered through public consultations on alternative sustainable energy. Its aim was to explore the potential to promote eco-friendly new growth engines and to enhance peoples' quality

of life. In another case the Korean Government introduced Energy Transition Committee which consisted of nine members from various industry areas and nuclear experts to ensure it would represent the public opinion. A group of 471 citizens was formed to decide whether to cancel the nuclear plants after research and in-depth discussions. During the deliberative period, the construction of the two reactors was temporarily halted. The committee later recommended that the government resume construction. In the final survey of the 471 members, 59.5% supported resuming construction, outnumbering the 40.5% who wished to stop construction. The South Korean government followed the recommendation of the committee that the nuclear plants under construction should continue and announced its energy transition road map. The behavioural insights helped the commission to conclude that the citizens were ready to adopt green growth and energy transition because it projected benefits which include increased employment in green sectors, improved income and energy security as well as significantly reducing greenhouse gas emissions. Behavioral insights also informed the Energy Committee about the possibility of expanding the railway systems and improving waste management. According to the Korea Institute of Energy Research (2016) this will lead to gradual phase out of coal and nuclear, while expanding renewable energy to 20% of power generation by 2030.

(c) Environment

According to the Organisation for Economic Co-operation and Development (2017) in the environment sector 10 EU countries and other countries around the world used behavioural insights to promote sustainable behaviour that benefits the environment. In Costa Rica the World Bank's Governance Global Practice Group, the Central America Countries Unit, and ideas42 conducted a randomised controlled trial in Belén, to test different behavioural interventions to foster water savings. The main aim was to test social norms and feedback provisions for water savings. In Denmark the Nordic Co-operation, one of the most extensive forms of regional co-operation anywhere in the world, involves Denmark in a project to find out the possibility of using nudging, changing default options to decrease electronic waste and promote sustainable consumption of electronics. In some 10 EU countries the European Commission Consumers, Health, Agriculture and Food Executive Agency (CHAFEA, EAHC) collaborated with ECORYS, Tilburg University and GfK to examine how "online information on energy efficiency performance of household appliances can be improved to promote energy efficient product choices. In another case the European Commission Directorate-General for Climate Action collaborated with the London School of Economics and partner consortium to assess the impact of different types of labels and promotional materials providing information on fuel efficiency, CO₂ emissions and running costs in 2013. This study sought to test the effects of the attitude behaviour gap, as well as inconsistent and a lack of understanding of the link between CO₂ emissions and fuel efficiency.

The Consumers, Health, Agriculture and Food Executive Agency (CHAFEA), ECORYS, GfK and CentERdata in Italy carried out a study to gain deeper insight into how exposure to sustainability information affects consumers' choices, this study surveys visitors of the Supermarket of the Future to observe to what extent they attended sustainability information in the supermarket, considered sustainability an important factor in their food choices, and whether this impacts their current and future sustainability choices. In another study they investigated consumers' decisions to use or dispose non-perishable long shelf-life food products they have stored in their kitchen cabinets over time, and how such behaviour may be influenced by the framing of dates on food labelling (best before date, production date) versus absence of a best before date on the food package. This experiment was part of a broader behavioural study testing consumer choices in relation to food sustainability. At the Milan Expo 2015 another study was carried among visitors by Centerdata, GfK and ECORYS, on behalf of the European Commission Consumers, Health, Agriculture and Food Executive Agency (CHAFEA). The aim was to understand how consumer acceptance of imperfect produce could be improved. Specifically, the researchers sought to study whether persuasive messages can be used as an alternative to diminish the need for reducing price levels of imperfect fruits and vegetables. In the UK the Department for Business, Energy and Industrial Strategy (BEIS), the Department for Business, Innovation and Skills (BIS) and the Behavioural Insights Team (BIT) collaborated with John Lewis retail chain to design a randomised controlled trial that provided robust evidence on whether providing information on the electricity lifetime running costs at the point of sale changed purchasing behaviour, by increasing the attractiveness of appliances with lower energy consumption. The sample consisted of 38 stores in the John Lewis chain, 19 in each treatment and control. Randomisation was clustered at the store level. The Department for Environment, Food and Rural Affairs (DEFRA) also partnered with specialist consultants Risk Solutions, to explore how behavioural insights could inform the reform of the water licensing regime to better manage water resilience and protect the environment. A multi-disciplinary team led by Risk Solutions delivered an extensive engagement and modelling exercise using Concepts of

Bounded Rationality to explore the impacts of the different options for reform. All these experiments and researches were very important as part of a broader behavioural study testing consumer choices in relation to environmental sustainability. These behavioural insights were successful in the formulation and implementation of comprehensive public policies that brought positive results.

In Korea In 2004, the Korean Ministry of Strategy and Finance (MOSF) and the Korea Development Institute (KDI) launched the Knowledge Sharing Program (KSP) to assist citizens by sharing information on environmental management. To provide a rigorous foundation for the knowledge exchange engagements, the KDI School has accumulated case studies through the KSP Modularisation Program since 2010. The Modularisation Program has amassed 119 case studies, carefully documenting environmental innovations in policy and implementation in a wide range of areas food waste management, recycling and gas emissions. The case studies convey practical knowhow and insights in an easily accessible format and collectively, they gave the best information to inform the environment related policies.

(d) Health

In the health and safety sector behavioural insights were used as a tool for promoting healthy lifestyles, improving access to medical treatments, and changing organizational behaviour. In Australia the NSW Health Standard Observation Chart was implemented in response to a recommendation from a major health review to reduce unintended blindness through color-coded. Through behavioural insights the Between the Flags Programme achieved its overall aim of reducing harm to patients from a failure to recognise and respond to deterioration. There was a 25% reduction in unexpected cardiac arrests (Australia Institute of Health and Welfare, 2018). In Canada behaviour insights study found that handing out a simplified organ donor form at a greeter station together with an informative brochure resulted in 2.29 times more registrations relative to using the old longer registration form. In another case, through behavioural insights the Public Health Agency of Canada found that incentives were, therefore, effective at increasing physical activity levels of using air miles to treat obesity. In Denmark after behavioural insights increasing vegetable sales project was a success. The intervention resulted in an increase of pre-cut vegetables by 61.3% per customer. The UNDP has been using behavioural insights in order to test new approaches in treating tuberculosis effectively in Moldova. Through these behavioural insights it is estimated that the patients receiving VOT will, on average, be observed taking their pills one more day a month than those in the comparison group. In South Africa behavioural experiment suggests that playing a short “HIV risk game” with repetition and instant feedback leads to substantially more accurate perceptions of the relationship between HIV risk and age among our subject pool than equivalent information being provided through a more traditional brochure approach. In another case Ideas42 sought to develop a scalable behavioural-based intervention that would reduce the incidence of violence in Cape Town’s townships in South Africa through removing status quo bias and improving youth planning for the weekends. Using these insights, the researchers created a prototype “Safety Tool,” and the results showed that the tool had a powerful effect at the end of the intervention, the treatment population was found to be half as likely to participate in unsafe activities as the control population. In Korea the municipality of Wonju funded the Healthy City project through municipal revenues from the local tobacco consumption tax. The project examined the sustainability and sufficiency of the funding by looking at the pricing policies instituted for cigarettes, smoking prevalence, cigarette consumption and revenues from local tobacco consumption as well as the budgetary allocations among programs in the city. The strong initiative of the mayor of Wonju was one of the factors that enabled the earmarking of the local tobacco consumption tax for the Healthy City Wonju project. The consultation were done among academics, counselors and persuaded the municipal government and the City Council to approve the bill based on the behavioral insights of the study.

(e) Public Service Delivery

In the public service delivery systems behavioural insights have been applied in OECD member and partner countries as a tool for improving the way government delivers services to citizens, as well as improving compliance amongst regulated entities. In Canada the Government’s Behavioural Insights Unit designed a randomised controlled trial among 626 212 vehicle owners to test whether applying principles established in behavioural science literature, such as salience and gain/loss framing, to the notice issued, and would result in an increase in the number of individuals who chose to renew their license online as opposed to in person. In Denmark, in order to reduce the workload for both Business Support and businesses, the Danish Business Authority decided to conduct an experiment to test the effect of make some Behaviourally-informed changes to the company registration form itself. It wanted to see if these modifications could nudge the companies to fill in the form more completely and accurately. The Authority conducted a diagnosis to establish

the behavioural biases that were preventing the relevant companies from completing their forms correctly the first time around. It analysed, categorized and evaluated the form to identify areas that would benefit from being changed. In another case the Danish Business Authority project team carried out an experiment with the purpose of increasing the response rate to a specific letter that the Business Authority sends out to certain businesses urging them to sign up to the public database the Nutrition Base. The team analysed the original letter to identify behavioural barriers that could lead to fewer responses. In Spain the Commission for the Reform of Public Administrations (CORA) conducted a study and produce proposals to make public administrations more accessible, useful and effective. The CORA team operated a wide consultation process where by citizens could provide their opinions through Twitter, face-to-face through the 060 Information Office, through telephone number 060 and a consultative online platform created. In UK the United Kingdom's Financial Conduct Authority sent letters to a sample of 7 984 mutual societies who were stratified by type of organisation to see if there were specific messages they could use when communicating with societies to encourage compliance. In USA the Mayor's Office of New Urban Mechanics in Boston researched on the effects of operational transparency on increasing citizens' trust in government service using the medium of a mobile application called Citizens Connect, through which residents can submit public service requests to the city government. In Korea Similar behavioural insights are fostered by the Immigration Department through the hikorea platform to promote online service provision to the foreigners. Case studies presented were very successful because they utilised a breadth of experimental methods, ranging from resource-intensive randomised controlled trials to relatively less resource intensive literature reviews. The open and transparent sharing of what works, and what does not through behavioural insights is vital to ensuring that good quality research and findings are shared widely.

3. CONCLUSION

Water holding public policies are such policies that have a strong impact of changing people's lives. Many policies are put in place but there are not relevant because they were designed and implemented without the involvement of the public or service users. Human beings are social animals with irrational behaviour. Therefore only those interventions that are based on their psychological behaviour can be successful. Behavioural insights are very important to make sure that everything is contextualised, there are no assumptions and to know the reaction and response of people towards supporting a certain initiative. Every problem is a result of a certain behaviour of people. In this regard to solve any problem there is need of behavioural insights to find out the particular behaviour that causes problems. Policies without behavioural insights cannot be successful because they are irrelevant most of the time. Behavioural insights is a bridge that connects the policy makers and the service users. It makes sure that every intervention and public policy will benefit the whole society. In short public policy and behavioural insights are inseparable. The impact of every public policy lies in the amount of behavioural insights applied in the designing and implementation process.

4. RECOMMENDATIONS

- Every public policy should be based on empirically tested results derived using sound experimental methodologies.
- During public policy designing, formation and implementation there is need to mix some traditional economic strategies with insights from psychology, cognitive sciences and social sciences to discover irrational factors that influence decision making processes.

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