

# **A JOURNEY IN BEHAVIORAL ECONOMICS: FROM RESEARCH TO POLICIES**

SAMA QUARTERLY WORKSHOP (FIRST QUARTER 2018)

PRESENTATION by  
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March , 2018

# OUTLINES

1. A brief introduction to behavioral economics.
2. Moving from Behavioral Economics to Behavioral Insights .
3. International/regional context and development .
4. cases.
5. Framework /methodologies
6. Conclusion

"The views expressed in this workshop are those of researcher and do not necessarily reflect the position of the Saudi Arabian Monetary Authority or its policies."

# PERSONAL JOURNEY

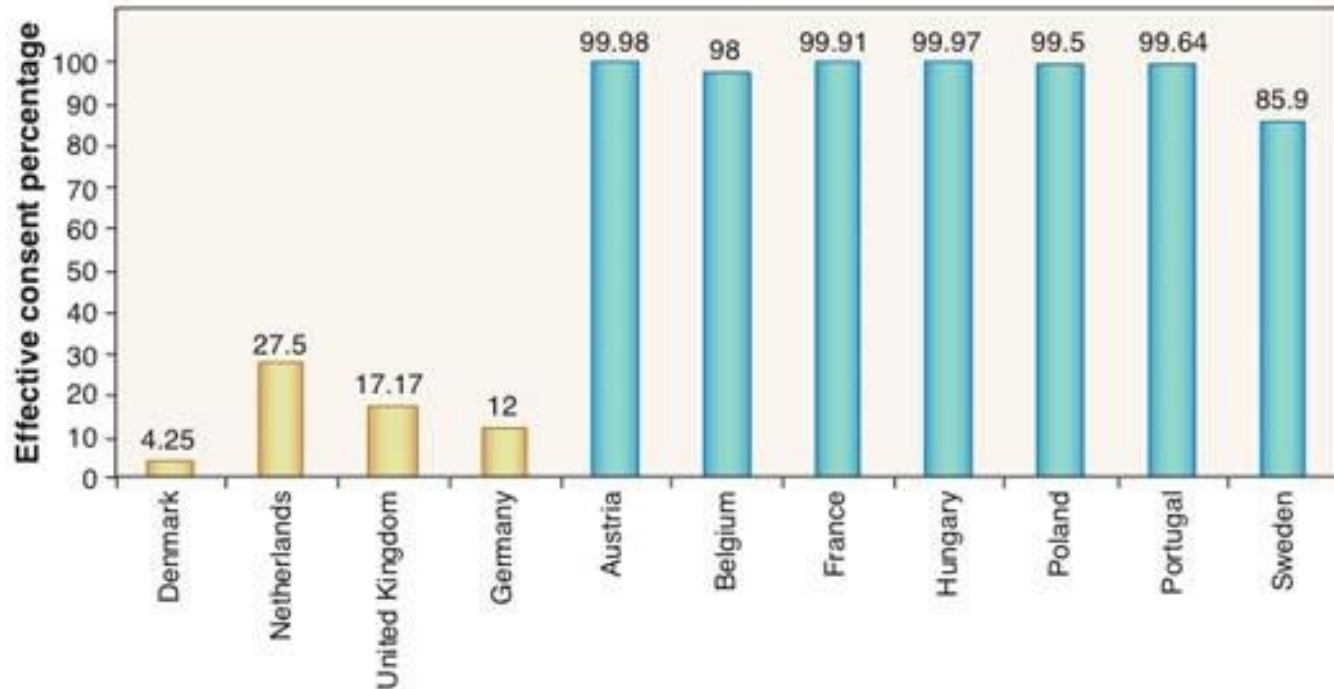
- Led the research collaboration between MOL and EPoD-Harvard (evidence based approach)
- proposal to the Ministry of Economy and Planning to establish a Behavioral Insight unit , March, 2016
- Investigating Behavioral Biases of Investors, Arab Journal of Management, September ,2017
- Behavioral Policy Review Paper (Special Issue, Arab Organization for Administrative Development, under publication)
- Can we Nudge in the stock market, experimental paper (under review)
- Many articles and lectures on behavioral economics
- A speaker at the OECD meeting on behavioral economics in economic regulatory bodies (50 economic regulators)
- Translation of the book “Inside the nudge unit” , 2016
- Local efforts with several programs and government agencies.
- behavioral insight network (available to interested parties)

- العمل مع باحثين تابعين لمركز EPoD-Harvard على مواضيع متعلقة بسوق العمل
- تقديم مقترح لوزارة الاقتصاد بإنشاء وحدة للسياسات السلوكية March, 2016
- ورقة التحيزات السلوكية لدى المستثمرين ، المجلة العربية للإدارة .سبتمبر، 2017
- ورقة السياسات السلوكية ( عدد خاص ، المنظمة العربية للتنمية الإدارية ، تحت النشر)
- Can we Nudge in the stock market : experimental paper
- العديد من المقالات والمحاضرات عن الاقتصاد السلوكي
- متحدث في اجتماع OECD عن الاقتصاد السلوكي في الهيئات التنظيمية
- ترجمة كتاب Inside the nudge unit
- جهود محلية مع عدة برامج وجهات حكومية.
- مجموعة السياسات السلوكية ( الدعوة متاحة للمهتمين )

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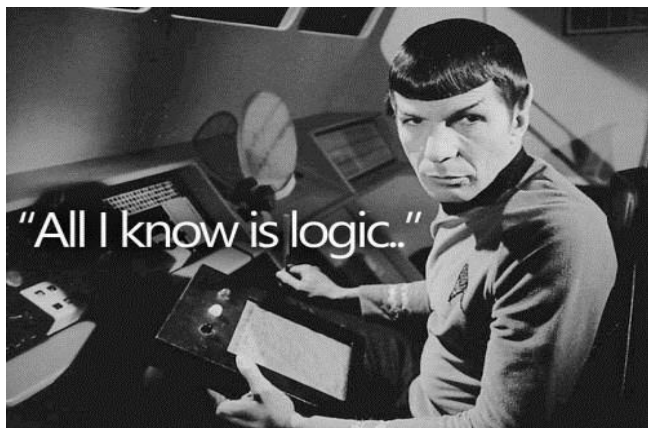
# CAN BEHAVIORAL ECONOMICS SAVE LIVES?



**Effective consent rates, by country.** Explicit consent (opt-in, gold) and presumed consent (opt-out, blue).

# HUMAN BIASES IS OPPORTUNITY

- People offered a prize next week of fruit or chocolate, 74 % fruit.
- The delivery van arrived on the day and said they 'lost' the form and again asked what the person wanted, around 70 % claimed chocolate
- What can we learn ?



# STANDARD ASSUMPTIONS OF ECONOMICS

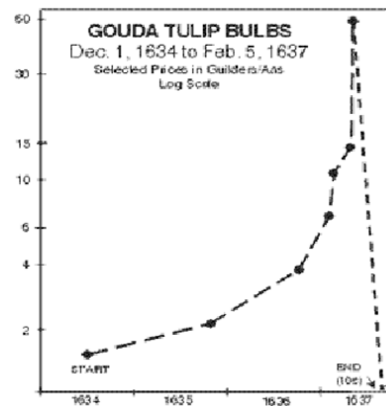
The workhouse of economic modeling is homo-economicus, an agent who:

1. Optimally maximizes his expected utility.
2. Optimally updates his beliefs according to Bayes rule.
3. Is selfish and without emotion, or, more formally, does not care about the consumption and utility of others.

But this does not hold true most times ...

# WHY BEHAVIORAL ECONOMICS?

- Do people behave like homo-economicus?
- If not, how do they behave?
- What are the implication on policy



# ALL ECONOMICS THEORIES AND MODELS ARE ABOUT ASSUMPTIONS

## Assumptions

## Approach

1

People know what's in their best interest And they act on that knowledge

influence behavior with regulation  
financial incentives, education, and disclosure.

2

People sometimes make choices that are difficult to explain with standard economic theory

Incentives and education often don't work, People need help to make better decision through behavioural interventions ( [Nudges](#) , [social Norms](#), [Choice Architecture](#))

# MOTIVATIONS AND OBJECTIVES

Behavioral economics grew out of research in psychology

The objective is to modify, supplement, and enrich economic theory by adding insights from psychology

- Suggesting that people care about things standard theory typically ignores, like fairness or status
- Allowing for the possibility of mistakes
- Offering behavioral based interventions

# WHAT BEHAVIORAL ECONOMICS DOES?

It adds to the standard model of economics some reality about how humans behave. In particular, it adds,

- bounded rationality,
- biases
- emotions,
- Learning,
- interdependent preferences

**It is not about throwing away the economics textbook to start from scratch**

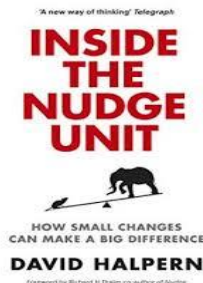
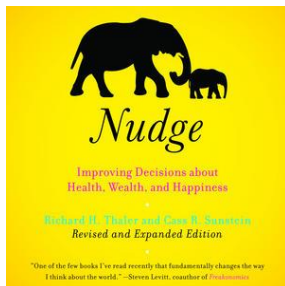
# DEVELOPMENT

- *Theory of Games and Economic Behavior* by von Neumann and Morgenstern in 1944.
- *Models of Man.* by Herbert A. Simon : 1957
- Intellectual revolution begins 1955 by series of tests/ experiment of Amos Tversky and Daniel Kahneman ( two psychologists) , prospect theory, framing effect ( 200 work)
- 1980s-1990s serious of research in financial market anomalies as a challenge to EMH ( shiller- Thaler, Shefrin, Barberis, ,,etc)
- **Nudge:** Improving Decisions about Health, Wealth, and Happiness , Richard H. Thaler & Cass R. Sunstein, 2008
- *Thinking, Fast and Slow:* Daniel Kahneman 2011
- Inside the Nudge Unit , David halpren .2016

# SO WHAT IS NUDGE?

“A nudge is any aspect of the **choice architecture** that **alters people’s behavior** in a predictable way **without forbidding any options** or significantly changing their economic incentives.”

أي محاولة لحفز التصرفات السلوكية الفردية وتسخيرها كي  
تنسجم مع المصلحة الاقتصادية العامة بدون تغيير الحوافز  
الاقتصادية أو الإجبار.



# WHAT DOES IT IMPLY?

## CONVENTIONAL MANAGEMENT

Conventional management and leadership typically involve instruction or action which directs or induces people to change in the way that the authority requires.



## NUDGE THEORY

Nudge theory is typically an **indirect approach**, which **alters situations** for people, so that **choices are designed** which produce options for **helpful voluntary changes in people**



# POLICY ASPECTS

- By its nature behavioral economics should be relevant in all areas of economic policy.
- If policy is about influencing individuals (even if they are within a corporate or other structure) then behavioral economics is crucial to get things right.
- Behavioral economics started in practical terms as a way to tackle biases at the individual level
- Then it develops into government, policies and providing scientific approach
- Rise of Evidence based policy and Behavioralists

# THREE MAIN CONCEPTS

## Nudges

influences choices but let people choose as they see fit (small changes can have big impact)

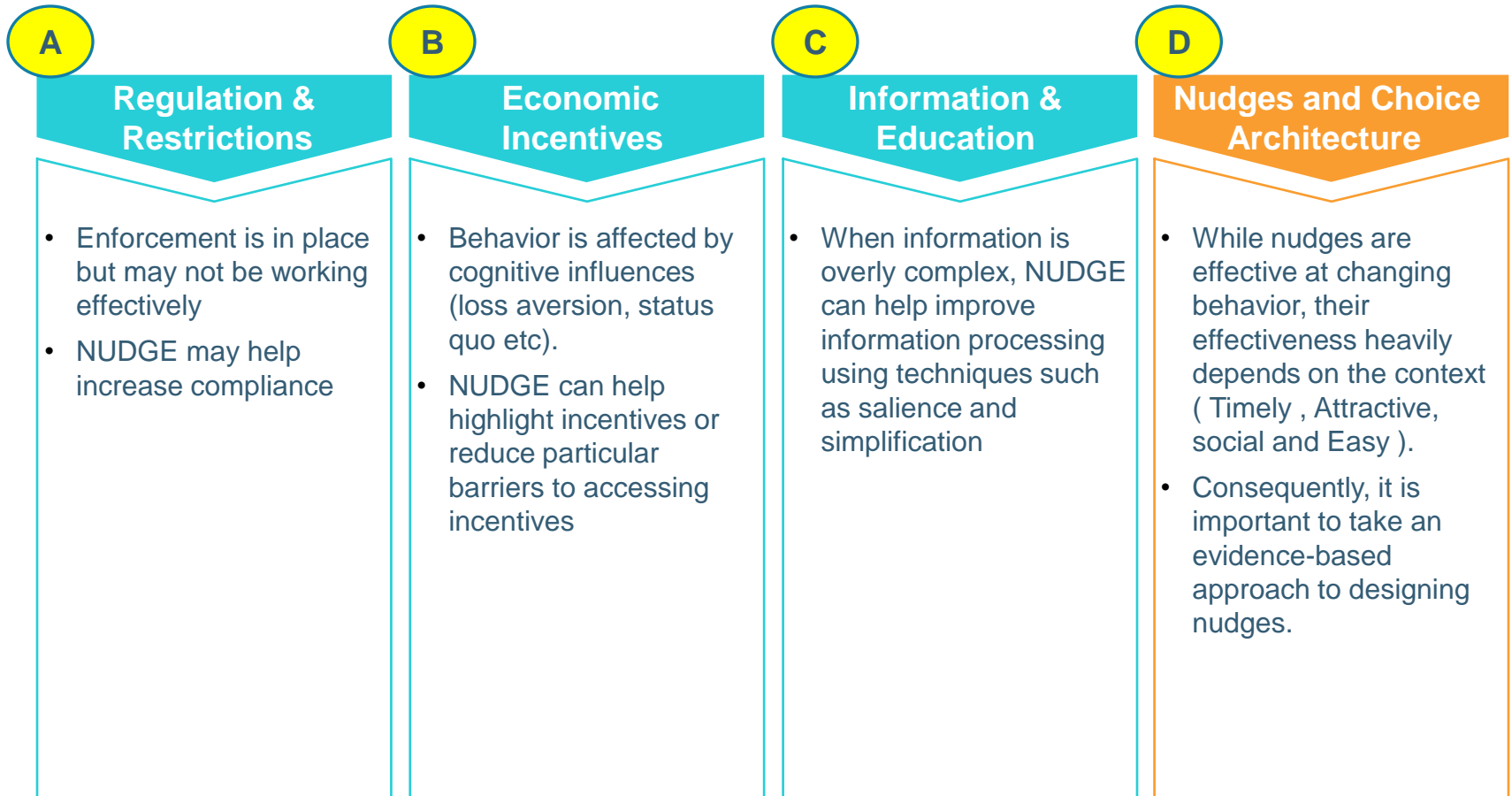
## Choice Architecture

all of our choices have architecture behind them that may impact our decision ( context and environment play important role) saving and organ donors  
the more uncertain customers are about their decision, the more likely it is that they will go with the default

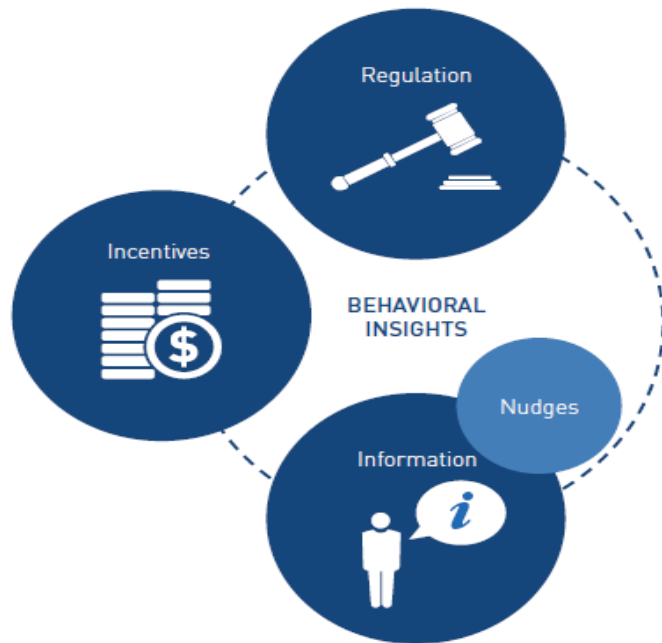
## Simplicity

complexity is surprisingly harmful (make it easy ,straight forward and intuitive),for example by pre-populating a form with information already held people to pay tax or debts

# NUDGE COMPLEMENTS OTHER METHODS



# NUDGE /BEHAVIORAL INSIGHT POLICY



- existing ways of making policy are totally wrong: people do often act in line with costs and benefits.
- Nudge is as well as a specific set of tools in
- behavioral insights should be seen as an approach to policymaking as a whole

# THE METHODS OF BEHAVIORAL ECONOMICS

## Experiments

- lab based,
- in the field,
- neuroscience

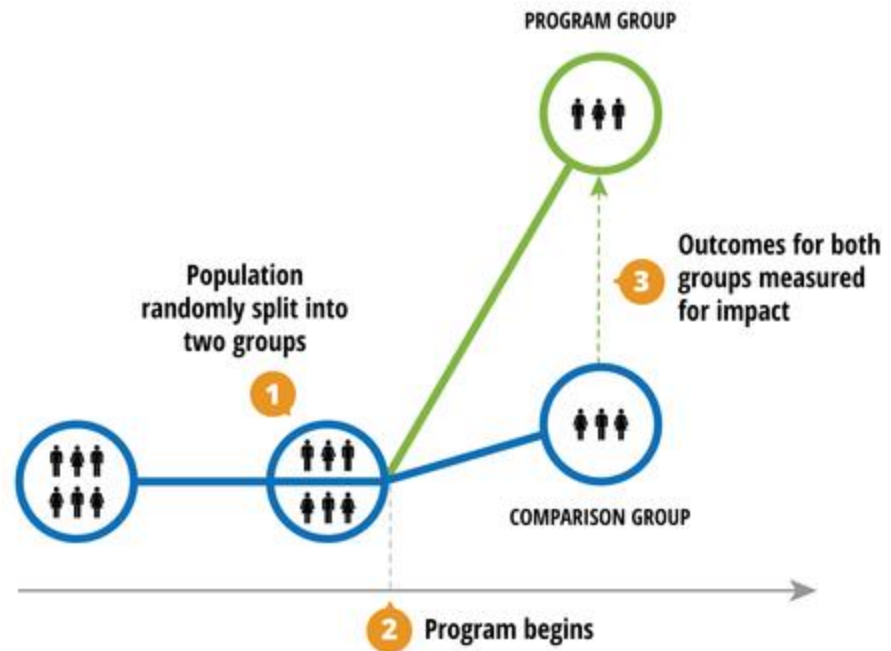
## Theoretical

- game theory
- decision theory
- evolutionary theory

## Simulation

- Agent based models

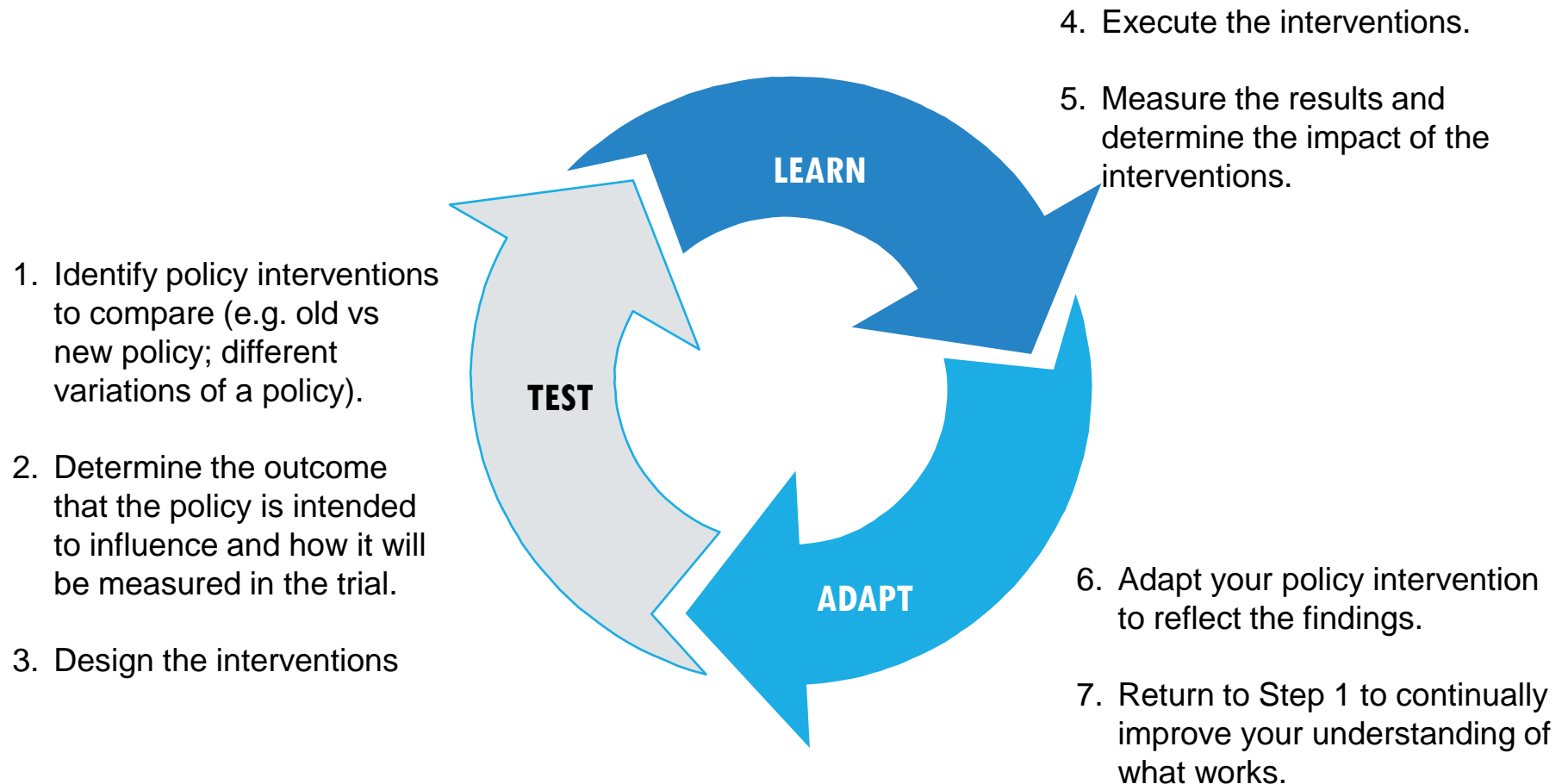
## Randomized Controlled Trials (RCTs)



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# APPROACH: TEST, LEARN, ADAPT

## Steps for nudge intervention (based on approach being adopted by BIT, UK)



# IN A NUT SHELL...

Nudge strategies are not totally new

Often not used consciously or systematically

Works well where choices are made subconsciously

routine and 'autopilot' types of everyday practices not amenable to cognitive interventions

Nudge as an explicit policy instrument is between regulation and information

more intrusive than information provision so requires more legitimation

Choice architects need to be selected carefully when used in public policy

transparency, alignment of public vs. personal goals...

# INTERNATIONAL AND REGIONAL DEVELOPMENT

## Regional Development

UAE, Qarat Nudge, Nudge Lebanon

## Local Development

- CSD (nudge unit)
- Ministry of Health
- Food and Drug authority
- Scattered experiments
- Expert & Networks

## International Organizations

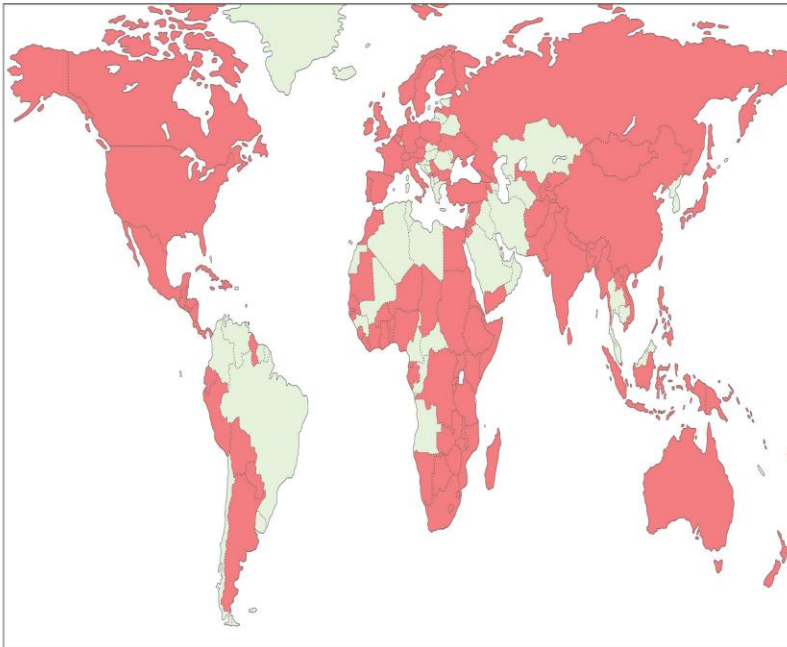
- OECD : Behavioral Insights and Public Policy Lessons from Around the World : 150 cases
- World Bank : Mind, Behavior, and Development Unit (eMBeD)
- Exploiting Behavioural Insights to foster Global Cooperation – G20 Insight
- Research Centers

# INTERNATIONAL CONTEXT 2014

**136 countries** have seen the new behavioral sciences have some affect on aspects of public policy delivery in some part of their territory

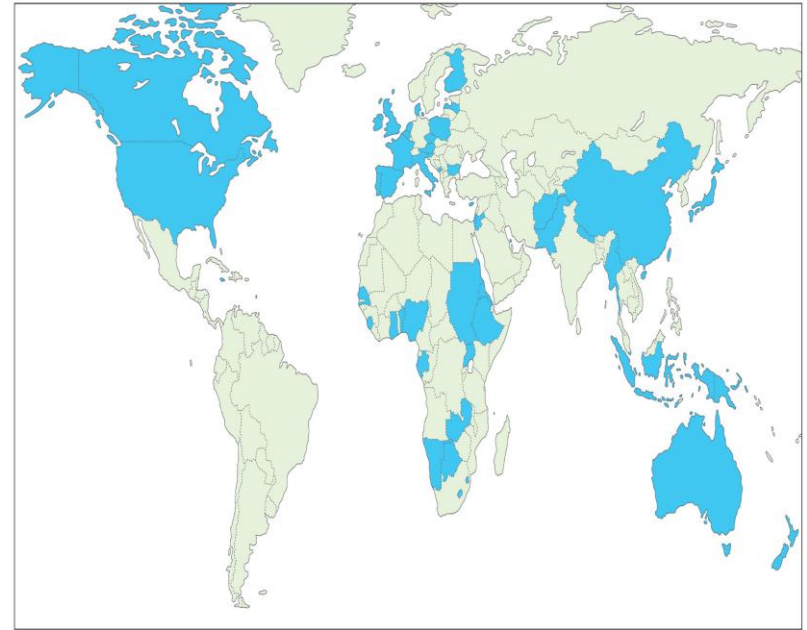
**51 countries** have developed centrally directed policy initiatives that have been influenced by the new behavioral sciences

## Policies driven by behavioral insight



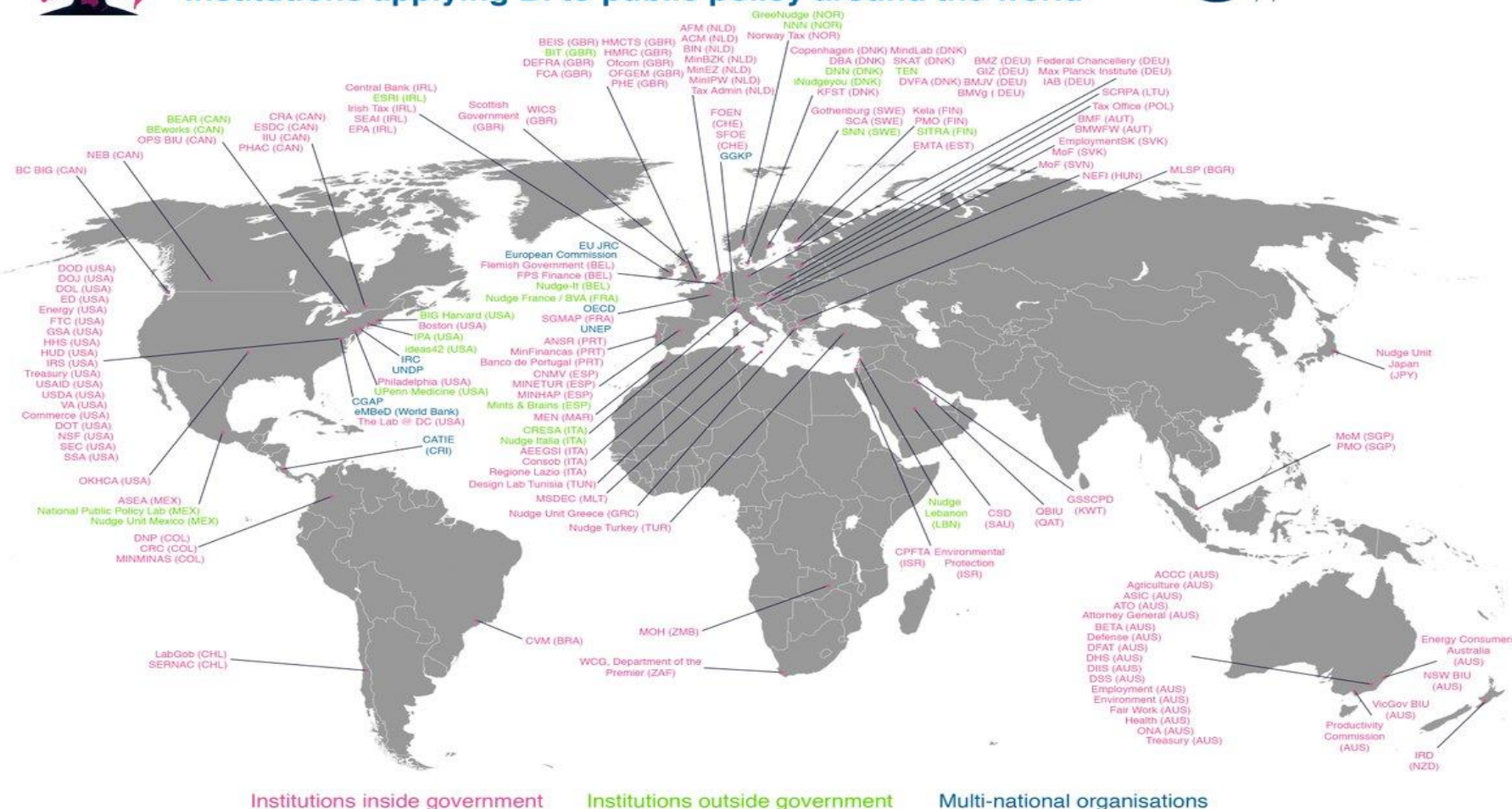
Independent states (shaded red) where evidence was found of the impact of the new behavioral sciences on the design and/or implementation of public policy

## Initiatives and units established for policy design



Economic and Social research council

The behavioral sciences are clearly having a global impact on public policy initiatives - Institutions applying BI to policies ,2018



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# WHAT ARE OTHER COUNTRIES DOING?

**According to a study more than 135 countries have seen public policy development influenced by behavioral sciences**

## UK

- Behavioral Insights Team (also called the “Nudge Unit) was commissioned by UK Government in 2010.
- Has achieved cost savings of over £300 million for UK government
- Exceeded its objective of achieving a 10-fold return on the cost of the team.

## Australia

- The New South Wales and Australian government have commissioned the BIT UK team to assist them in applying behavioral economics to their public policies

## USA

- US government has formed the Social and Behavioral Science Team who will be working with various government agencies to test and implement behavioral interventions. In sep 2015 President Obama issued Executive Order
- Currently, the team is working on initiatives in the areas of childhood education (among low-income families), health compliance, and domestic violence among many other areas

## Denmark

- Denmark government departments are part of the Danish Nudging Network and iNudgeYou, a non-profit organization that conducts research and organizes workshops and courses in behavioral economics

It should be noted that agencies in Singapore, the European Union, world bank , Canada, and other countries are also incorporating nudges and behavioral economics into their policies and welfare programs.

# MOST COMMON TYPES OF NUDGES

Given below are examples of the most common types of nudges

Default Rules	Setting people in a specific program, such as default double-sided printing in university printers or <b>default choices</b> of retirement plans in governmental policy.
Simplification	To <b>simplify information</b> in order to avoid misunderstandings and facilitate navigation, and making complex navigation more intuitive.
Uses of social norms	Emphasizing what <b>most people are doing</b> (eg: “most of your neighbors have installed energy lamp”) is an effective nudge to engage people in a certain behavior.
Increase in ease	The aim with this type of nudge is to make things easy: making healthy foods <b>more visible</b> is going to increase the possibility it gets picked.
Disclosure	To make information <b>accessible</b> , for example, by demonstrating the environmental cost associated with energy on the energy bulb packs.
Warning graphics	Nudges can also be <b>more explicit</b> in describing the risk of some behavior, like the warnings that you can find in cigarette packaging.
Pre-Commitment	To encourage people to engage in a specific course of action in order to reach their goals for example <b>commitment devises</b> .
Remainder	To avoid procrastination or forgetfulness, people can be nudged by being alerted of their upcoming obligations or commitments by <b>email or text message</b> .

# CASES

There are hundreds  
cases and  
applications around  
the world

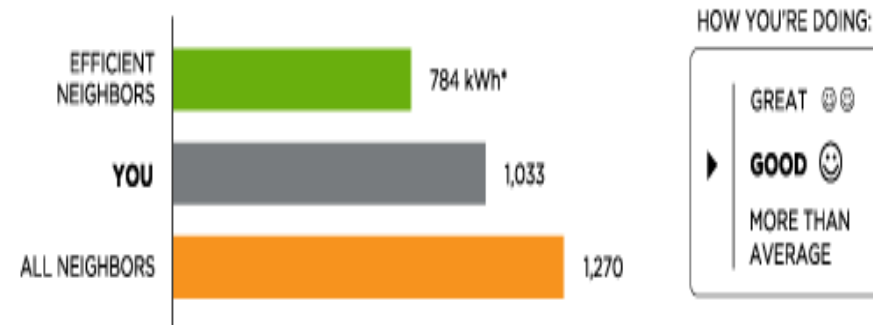
# WHICH ONE MORE EFFECTIVE??? BEHAVIORAL INSIGHT HAS TRACK RECORD AND ANSWER AND BEST OF ALL IT IS MEASURABLE AND SCIENTIFIC

الوعظ والتثقيف

حفز السلوك  
NUDGE

ندعوك عزيزي  
المستهلك إلى ترشيد استهلاك الكهرباء ، لان  
الاستهلاك المفرط في تشغيل الأجهزة  
الكهربائية لفترات طويلة دون حاجة فعلية  
يؤدي إلى استهلاك كهربائي زائد وغير  
ضروري مما يترتب عليه ارتفاع في قيمة  
فاتورة الكهرباء وتفاقم في قدرة الأحمال  
الكهربائية والتي قد تؤدي إلى الانقطاع التام  
للكهرباء . تذكر ان 30% من قيمة  
فاتورة ...

Last 3 Months Neighbor Comparison | You used **32% MORE** than your efficient neighbors.



\* kWh: A 100-Watt bulb burning for 10 hours uses 1 kilowatt-hour.

# JOB CENTRES, UK

## Increase in commitment by job seekers

*In 2012, JobCentre Plus in Essex (UK) used “commitment devices” & emphasis on building psychological resilience to help job seekers.*

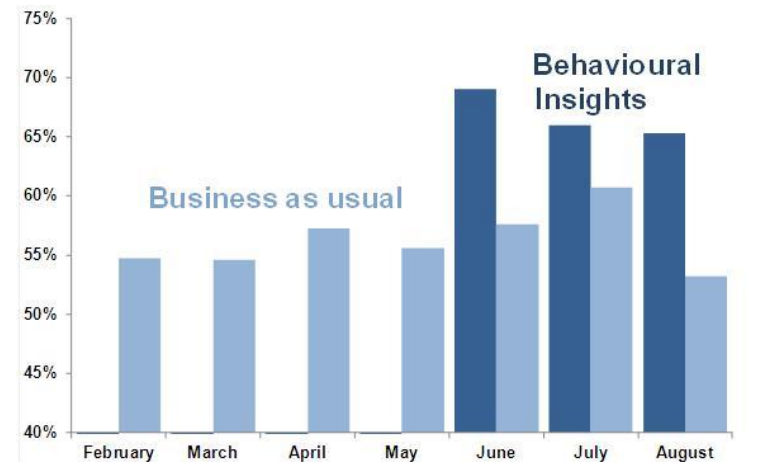
- Behavioral insights Team worked with the team of Job Advisors to **redesign the process individuals went through when they signed on to receive benefits** and began the job searching process.
- The core insight was that encouraging claimants to **focus on making specific commitments to future activities**, linked to their daily routines, helped them to follow through on their job search intentions.
- Six month randomized controlled trial was conducted to test the impact of changes

*Source: Behavioral Insights Team Website*

## Result

**“Job seekers in the treatment group are 15-20% more likely than those in the control group to be off benefits 13 weeks after signing on”.**

**More than 25,000 Job Advisors have been trained in UK so far.**



## التجربة

رفع إنتاجية الموظفين باستخدام طريقة تأطير  
المعلومات Framing

تم اجراء هذه التجربة في الصين حيث تظهر تأثير  
الأشخاص باختلاف طريقة تأطير المعلومات

- في المجموعة الأولى تم استخدام نظام إظهار  
المكافآت كأرباح واخبار الموظف في حال زادت  
انتاجيته عن المتوسط الأسبوعي سوف يحصل على  
مكافأة ( الربح )  
في المجموعة الأخرى تم التأطير بطريقة مختلفة  
حيث يعطى الموظف المكافأة مسبقا ويخبر انه سوف  
يفقدها اذا نزلت انتاجيته عن المتوسط ( الخسارة )

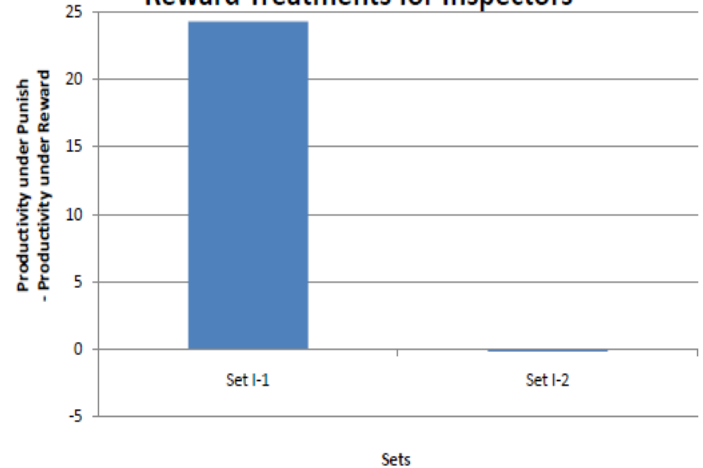
**لكن لماذا اختلفت الاستجابة ؟**

(النظرية الاقتصادية تقول المفروض النتيجة واحده)

## النتيجة

يستجيب الأشخاص بشكل افضل في حال تم  
عرض مكافأة الإنتاجية على شكل خسارة اكثر  
من حال عرضها في شكل ربح

Figure 2: Aggregate Differences in Per-Hour Productivities under Punishment and Reward Treatments for Inspectors



Source: Hossain & List (2009), *The Behavioralist Visits the Factory: Increasing Productivity Using Simple Framing Manipulations*, NBER Working Paper

### 4

### “You have been selected”: Driving uptake of Government schemes

*After the Growth Vouchers programme for small and medium enterprises had launched, the number of applications was lower than hoped.*

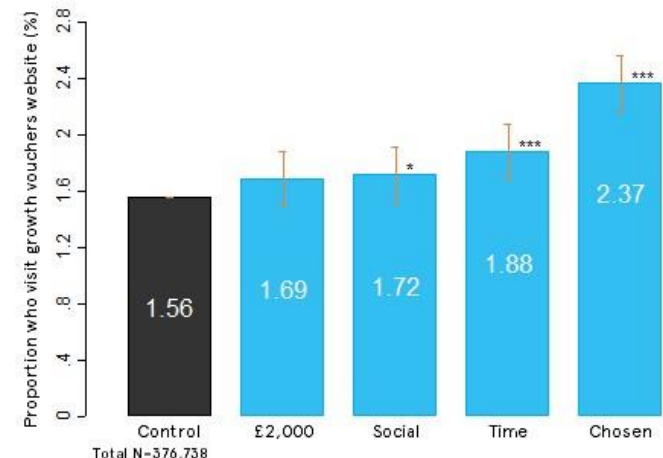
- The trial involved sending emails to over 600,000 individual small and medium enterprises (SMEs) who had registered with HMRC to find out more about tax and then measuring how many firms clicked to apply for a Growth Voucher.
- In the first stage BIT had a control group plus 4 treatment groups which tested different messages based on the behavioural literature.
- In second Stage, BIT tested three further variations, two of which were combinations of approaches that had been shown to be effective in different contexts (‘chosen+time’ and ‘direct question’).

Source: <http://www.behaviouralinsights.co.uk/trial-results/you-have-been-selected-driving-uptake-of-government-schemes/>

## Result

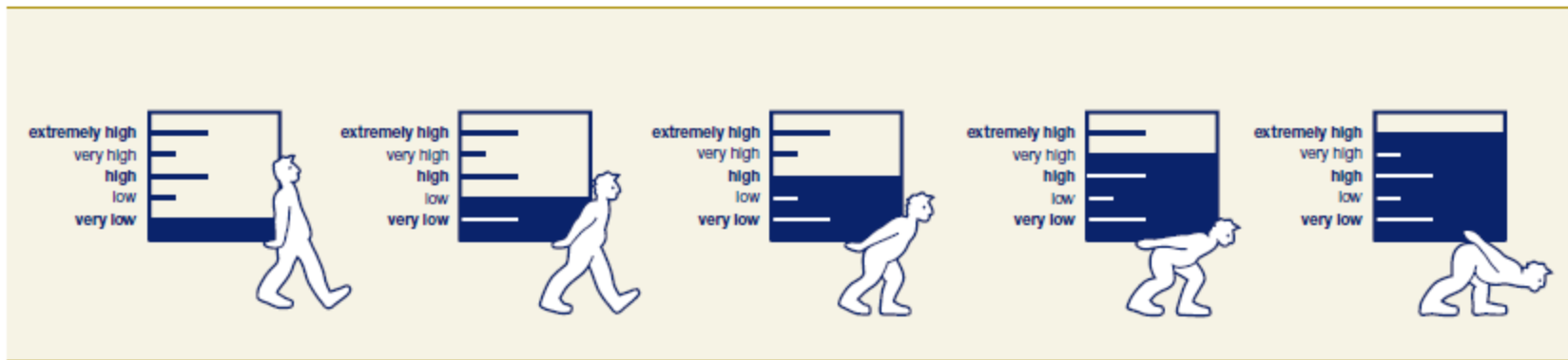
“Telling firms they had been ‘chosen’ to receive information (personalisation) was the most effective way to encourage them to apply for the Growth Vouchers scheme.

Overall the trial led to an extra 9,000 applications for the Growth Vouchers programme (more than any other single source); all generated using a communication channel that was free.”

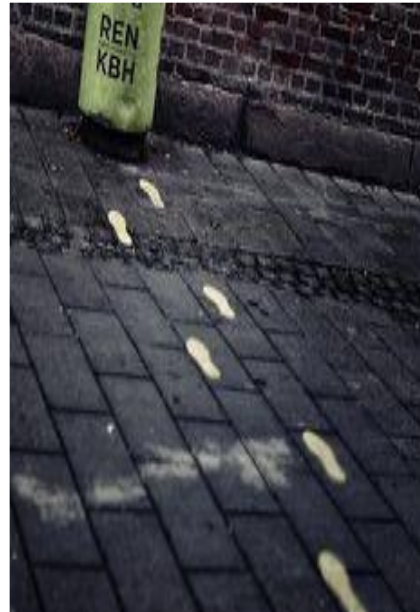


# FINANCIAL INFORMATION LEAFLET ( GRAPHIC RISK INDICATOR)

Experiment : To aid consumer in making decisions  
graphic risk indicator, as an addition to the qualitative risk indication



# RANGED STEPS CAN INFLUENCE PEOPLE UNCONSCIOUSLY TO DO THE RIGHT THINGS



**For example :  
Dropping trash in the Bins  
Using stairs instead of elevator**

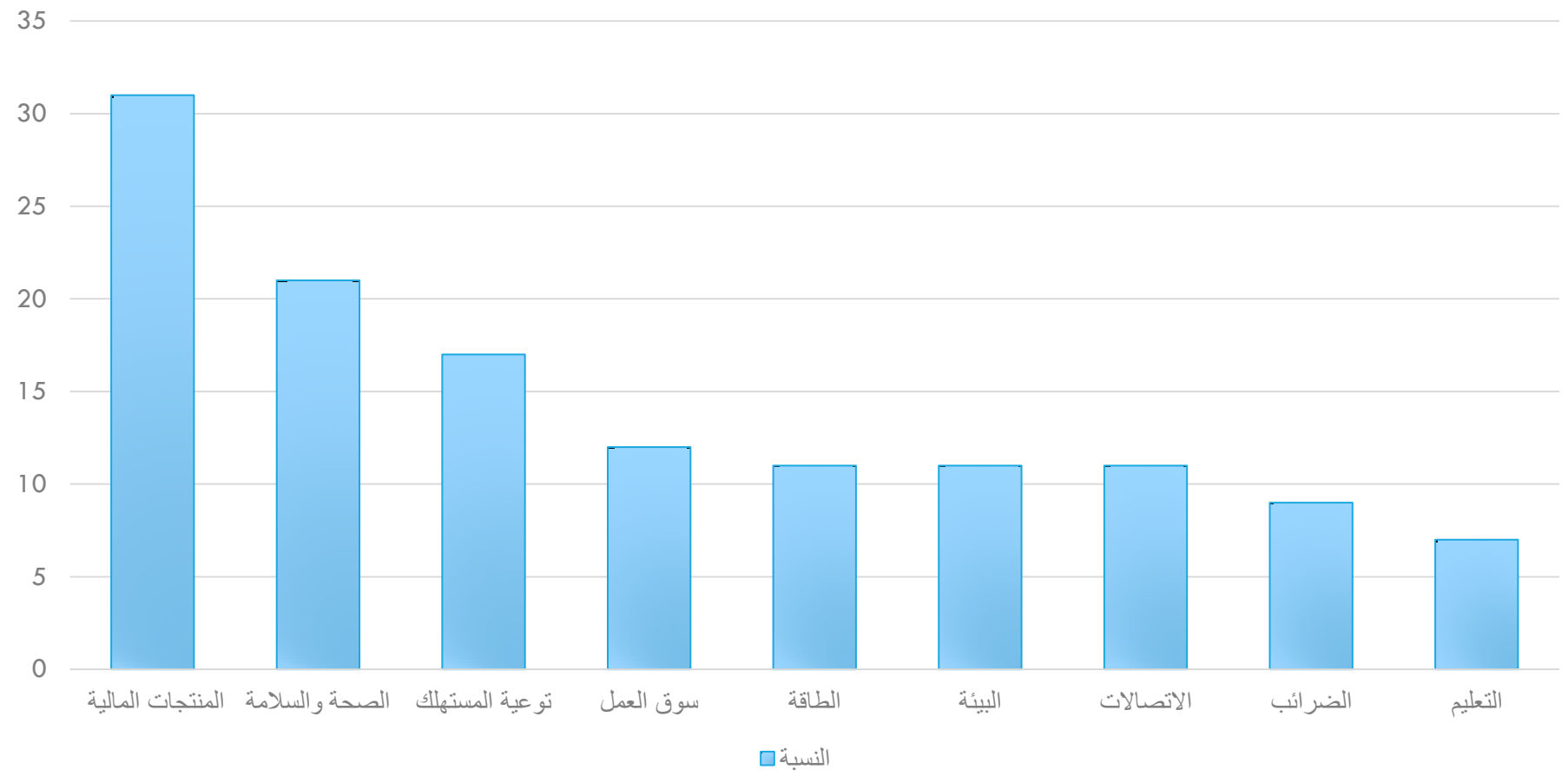
# PAINTED STAIRCASE CAN INFLUENCE PEOPLE TO USE STAIRS MORE THAN ELEVATORS



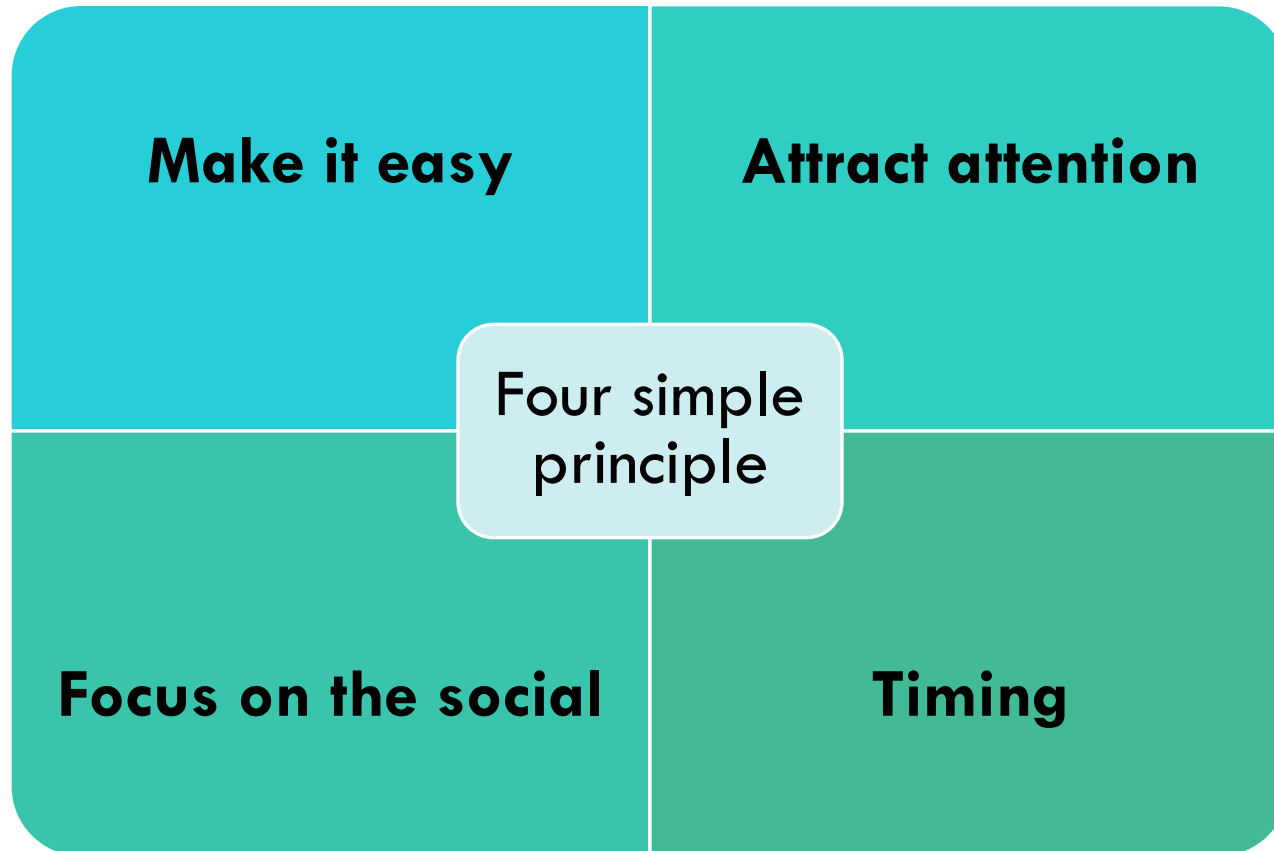
# SUGGESTED AREAS OF “NUDGES”

Area / field	expectation
Giving and Altruism	insights suggest that relatively small variations in the way in which people are asked to donate, or to increase their regular donations, can make large differences to the amounts of money donated to charity. Experiments have found using network Nudge and social networking can increase charitable giving up to 500%
Energy Consumption (electricity & water)	Literature and different experience suggest If you tell people on their electricity bill how much energy they are using compared to their neighbors (using social Norm ) you can reduce energy utilization by something between 2% and 6%.
Financial	There are tremendous potential to help people in financial decisions (saving, investment and personal finance and protection)
Health	There are various evidence and practices suggesting that health sector has strong potential (obesity , healthy food, smoking,,etc)
Traffic and Accidents	Using different tools to nudge people toward being more safe might save thousands of accidents and deaths
Littering	there are many behavioural experiments and practices that suggest it is possible to reduce large amount of littering and waste through Nudges

# MOST APPLICATIONS IN THE FINANCIAL SECTORS



# REMEMBER - FOUR BEHAVIOURAL INSIGHTS PRINCIPLES



# BENEFITS?

Gov

- could mean huge saving in government spending on health , energy , education and other areas as well.

citizens

- The benefits includes better life standards

society

- They include thousands of lives saved and countless illnesses and accidents prevented.

# CONCLUSION

- Behavioral economics/insight has become mainstream.
- The journey in behavioral insight public policy is not an easy road (scientific approach , capability building, top management support ) Ready-made intervention without rigor analysis and testing (RCT ,Big Data).
- Needs community of researchers and experts (economists, psychologists, management, public policy,,,etc)
- Not to be mixed with media and communication

# Thank you!

For any inquiry please contact:

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[Prof.alzahrani@gmail.com](mailto:Prof.alzahrani@gmail.com)

## Test1 : prospect Theory

A) A certain win of \$250, versus

B) A 25% chance to win \$1000 and a 75% chance to win nothing?

How about:

C) A certain loss of \$750, versus

D) A 75% chance to lose \$1000 and a 25% chance to lose nothing?

-----  
*Test 2: System 1 ( intuitions ) and System 2 thinking ( deliberate forceful)*

Q : A bat and ball cost \$1.10. The bat costs one dollar more than the ball.

How much does the ball cost?