Project REsource

RAND EUROPE

Security at what cost?

Quantifying trade-offs across liberty, privacy and security

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Abstract

Can governments improve security for all without infringing individual liberties? RAND Europe sought to quantify the preferences of citizens as users of security infrastructure, using stated preference techniques based on three realistic scenarios. We found that people are willing to forgo some liberty and privacy, and even pay extra for certain security benefits, but with caveats. In some cases, governments would need to subsidise people to accept intrusions on their privacy.

Fundamental rights to liberty and privacy are established in legislation such as the European Convention on Human Rights 1953 and the UK's Human Rights Act 2000. They include the right to a private life and freedom of assembly and certain rights regarding use of an individual's personal data by others. But as governments confront new security threats, policymakers are again forced to consider how far such individual rights can be reconciled with the security needs of society as a whole.

In the UK, the security versus civil liberties debate is often polarised between those who argue for more stringent measures to protect the public and those who believe that eroding civil liberties will harm society. To balance these concerns and make appropriate decisions, policymakers must consider the possible social and economic consequences of different security options, as well as their effectiveness. It is critical that they learn whether individuals are willing to surrender some liberty or privacy in return for security benefits.

While there has been extensive research in this area, including surveys for the European Commission and the UK Home Office, simple polling techniques have three major flaws: (i) unidimensional yes/no questions lead people to polarised preferences toward absolutes, instead of grading choices involving privacy, liberty and security trade-offs, (ii) researchers cannot quantify the extent to which people may be willing to give up some liberties in return for greater security, and (iii) the research cannot be easily integrated into cost-benefit assessments since it does not provide usable economic data.

RAND Europe undertook a self-funded initiative to try to understand and quantify the trade-offs that people might make when confronted with realistic choices about liberty, privacy and security.[1] We used stated-preference techniques that present participants with alternative options, each with advantages and disadvantages that they must explicitly trade off when selecting between options. Participants could also state where they would prefer the status quo. We examined three scenarios where trade-offs might arise: applying for a passport, travelling on the national rail network, and attending a major public event.

Personal data: keep it simple and private

UK citizens are asked to submit substantial personal data with their passport applications, ostensibly to help counter terrorism and illegal immigration. We found that while individuals were willing to share private data for these purposes, they were reluctant to provide advanced forms of biometric information (see figure 1). People were willing to allow DNA collection only if there was a subsidy of £19 on the cost of a passport. However, participants were willing to pay an additional £7 for the perceived security benefits of providing fingerprint data as well as a photograph.

There was also universal discomfort about the passport service sharing personal data with third parties. Large incentives would be required for people to be comfortable having their data shared with other government departments, such

[1] Robinson, N., Potoglou, D., Kim, C. W., Burge, P., and Warnes, R., *Security, At What Cost? Quantifying people's trade-offs across liberty, privacy and security*, TR-664-RE, 2010. As of May 28, 2010: http://www.rand.org/pubs/technical_reports/TR664/

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Figure 1
Participants' responses for providing or sharing personal data when applying for a passport

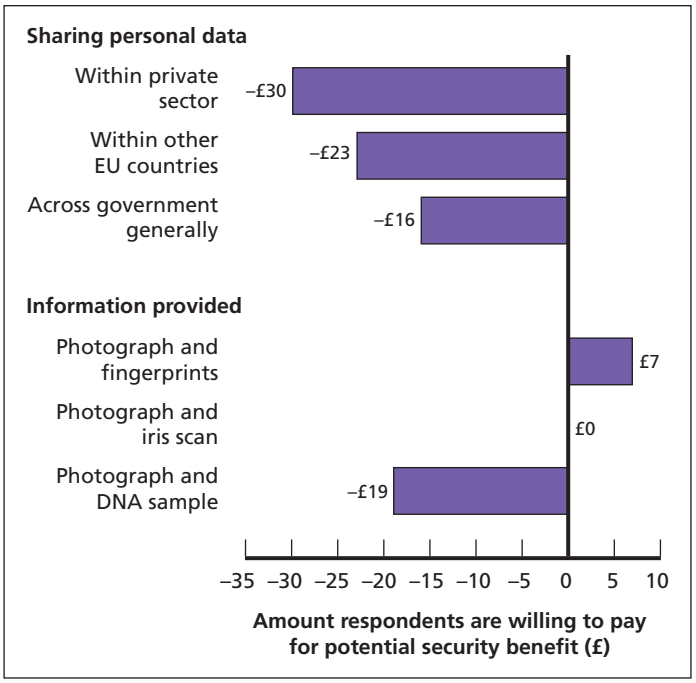
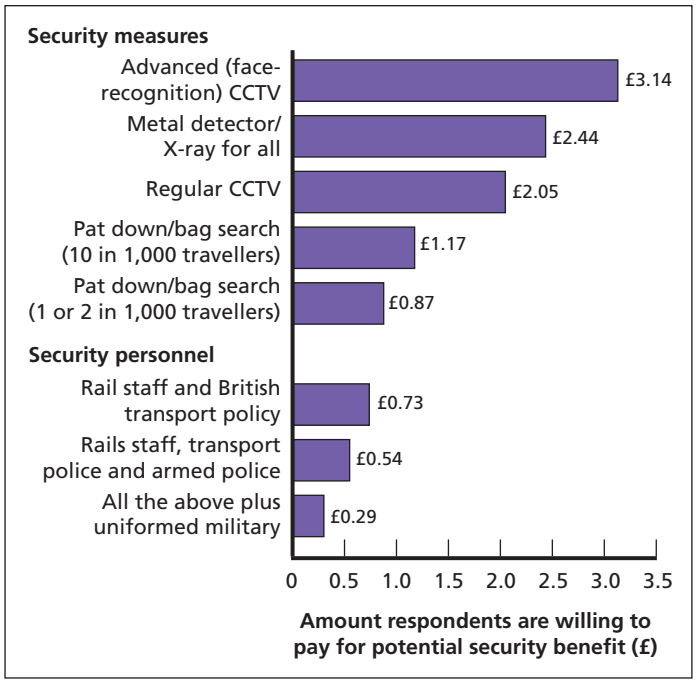


Figure 2
Participants' willingness to pay for additional security measures when using national rail network



that a subsidy of £16 would be required, or with other European nations (£23 subsidy). Participants were least willing to share information with the private sector and would do so only if the price of a passport was discounted by £30.

Security in public places: benefits outweigh privacy infringements

People are more enthusiastic about sacrificing some privacy or liberty to gain additional security in public places. This may be due to familiarity: in contrast to the somewhat abstract issues involved in submitting and sharing passport data, security mechanisms such as closed-circuit television (CCTV), X-rays and body searches are easy to envisage. In the public event case study, people were willing to pay more for identity checks, including intrusive biometric checks such as fingerprint or iris scans. In the rail travel scenario, the perceived security benefits of CCTV cameras that automatically identify faces outweighed privacy concerns. People were prepared to pay more for these than for regular CCTV (see figure 2).

Our findings on security checks were surprisingly counterintuitive. People are more comfortable passing through an X-ray arch or scanner than submitting to a pat down or bag search. While the physical nature of searches may be perceived as more invasive of privacy, the data recorded in a metal detector or X-ray scanner has the potential for broader adverse impact, since it can be recorded, stored and shared more systematically. Less surprisingly, participants were relaxed about deploying specialised security personnel, with people willing to pay for transport police, armed police and uniformed military. However, the military were least valued, suggesting some wariness about deploying them in civilian settings or doubts about their effectiveness.

Reflecting preferences in policy

The practical challenge for those shaping security policy is whether and how to accommodate the views of citizens in policy decisions. Economic appraisal of the value of civil liberties is controversial, but our research shows that it is possible to obtain and monetise the preferences of citizens and bring objectivity to a highly charged and emotional debate. Our findings highlight areas where policy and preferences differ, to help policymakers assess the broader social, economic and behavioural costs of new measures and evaluate whether the potential costs of ignoring preferences outweigh the benefits. It may also be possible to identify where measures can be adjusted to better reflect preferences without undermining the effectiveness of security efforts. ■

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RB-9535-RE (2010)