Regulation Will Make or Break Europe's Internet of Things

Europe could lead in the Internet of Things (IoT), if the EU and member states take the right actions and avoid the wrong ones. The right approach is for Brussels and national governments to craft policies that will overcome some of the inherent market failures associated with the Internet of Things. The wrong one is to assume Europe can continue to overregulate the collection and use of data, as this would do real harm to Europe's ability to make the most of the Internet of Things.

The Internet of Things is subject to at least three market failures that require smart government action. The first is a collective action problem that stems from the fact individual adopters do not receive all of the collective benefits of investing in the Internet of Things. For example,

smart meters bring only modest savings to individual households, but support a much more efficient, dynamic, and resilient power grid that benefits everyone if widely deployed. This slows investment. The second market failure is a "chicken-and-egg" problem of interdependency in some emerging technologies: connected cars work best on connected roads, but there is little use in a connected road without connected cars. Contactless bank cards are useless without contactless card readers, but the same is true vice-versa. Unless one is already there, nobody wants to buy the other. The third is the "penguin effect": just as penguins are often reluctant to be the first to dive into unknown waters for fear of predators, unknown risks deter people from becoming early adopters, limiting opportunities for those risks to be properly identified and addressed for everyone else's sake.

To tackle these problems, member states should create and implement national IoT strategies. One goal of a national strategy is to promote the Internet of Things for use in public services and encourage its adoption in key industries (like utilities, transportation, and telecoms). This will make public services better and support wider development of the Internet of Things. For example, in line with the EU's Third Energy Package, member states compel energy firms to supply smart meters to customers, which will overcome lack of individual interest in smart meters and ease the chicken-and-egg problem that holds back smart grids. Allowing people to use bank-issued contactless cards and NFC-equipped smartphones as transport tickets, or to pay for toll roads, encourages take-up of contactless payments in the wider economy. The use of IoT sensors to supply live data about public car parks puts competitive pressure on private car parks to do the same. Public investment in smart street lighting creates connection points for additional IoT devices, which reduces the marginal cost of expanding the Internet of Things.

The EU can—and does—offer some funding to kick-start public sector IoT adoption. In 2016, the Commission's Horizon 2020 program provided over €100 million for IoT pilot projects and a further €60 million to support smart city pilots. This funding helps develop viable use cases for the Internet of Things in public services. However, the EU's principal role

is not as an investor or service provider, but as a market regulator. In this capacity, it could prove Europe's greatest asset or burden, depending on how aggressively it pursues innovation-friendly policies to support the Internet of Things.

The EU is taking some positive steps. With the Free Flow of Data Initiative, the European Commission plans to ban data localization laws. These are laws whereby member-states insist data must be kept in, as Andrus Ansip puts it, "our beautiful country," even when doing so offers no benefits to user privacy or security. Ensuring cross-border data flows within the EU will reduce costs for consumers and businesses using the Internet of Things by eliminating the need for firms to invest in pointless data centers in multiple countries. Lower costs will encourage adoption and help keep European firms competitive.

While that initiative is on the right track, other EU policies work against IoT innovation. A case in point is the new General Data Protection Regulation (GDPR), which prohibits any use of data other than for the purpose for which it was first collected. This makes it extremely difficult to experiment in the Internet of Things, where businesses and governments are only scratching the surface of what can be achieved with the data that connected devices already gather. For example, after an earthquake in California, Jawbone, which produces wearable fitness devices, found it could use anonymized data from its users to detect tremors at different distances from the epicenter. This yields important insights to help communities respond to these natural disasters. If the EU means to be serious about the Internet of Things, it should revise the GDPR to allow more reuse of data.

EU policymakers should tread cautiously: a healthy enthusiasm to solve market failures in the Internet of Things should not become an unchecked zeal to regulate for every conceivable risk or problem. They should take a look at existing regulation—including new regulations, like the GDPR—and ask whether too many benefits are being thrown away for fear of poorly-defined risks. Europe's digital single market could put it ahead in the Internet of Things, but only if its policymakers take positive steps instead of negative ones.