DEPARTMENT OF JUSTICE

"Start Me Up"[1]: Start-Up Nations, Innovation, and Antitrust Policy

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Good evening.

Thank you Professor Gal, The University of Haifa, the Center for Law and Technology and the Center for Cyber Law & Policy for the opportunity to speak with you today. It's a real pleasure and honor for me to be here in Israel and at a premier institution such as the University of Haifa.

I. Antitrust and Innovation

Given the hosts of this event, I thought it would be fitting to speak about antitrust and innovation in today's digital economy.

Innovation is a topic that is near and dear to me. As a former patent lawyer, I have seen up close the dynamic power of innovation and the importance of providing the right incentives to those who create. America's longstanding appreciation for innovation led it to protect patent holders in the United States Constitution, which was ratified in 1789. The Antitrust Division of the U.S. Department of Justice also has a long history of caring deeply about promoting innovation through its competition policies and enforcement. Nothing promotes consumer welfare better than the dynamic improvements that innovation provides.

A track record of successful innovation is something that Israel and the United States share in common. In the same way that Silicon Valley serves as a cradle of creativity for start-ups, Israel also has become a hub for entrepreneurship and innovation. Israel is home to thousands of innovative start-ups and it also houses R&D centers for many of America's leading tech companies.

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[1] *See* THE ROLLING STONES, "Start Me Up" (1981).

American consumers have Israel to thank for a number of ground-breaking innovations across different industries.

Transportation is one example. Waze, a leading crowd-sourced traffic and navigation app, was founded in Israel. Thanks to Waze, drivers throughout America are able to avoid traffic jams and find the fastest routes. Via, a ride-sharing company founded in Israel, competes with Uber and Lyft to help people move around many American cities, including Washington, D.C. I will discuss ride-sharing further a little bit later. Israeli start-up Mobileye, which was recently acquired by Intel, improves vehicle safety through software that alerts drivers to pedestrians and impending collisions.

Israel has also improved the ways people communicate with each other. Israeli company VocalTech released the first Voice over Internet Protocol in 1995. Israeli company Mirabilis developed and popularized ICQ (or "I Seek You") in 1996, an instant messaging client that led the way for services like AIM, Skype, WhatsApp and others. These innovations have given Americans, as well as other consumers, faster and cheaper ways to communicate with each other and with friends and family across the globe.

Israel's successful cultivation of start-ups was chronicled in Dan Senor and Saul Singer's 2009 book, *Start-up Nation: The Story of Israel's Economic Miracle*.[2] In *Start-up Nation*, Senor and Singer explore potential reasons for Israel's economic success, which seemed improbable in light of the country's small size and lack of natural resources. Former President and Prime Minister Shimon Peres explained, however: "In Israel, a land lacking in natural resources, we learned to appreciate our greatest national advantage: our minds. Through creativity and innovation, we transformed barren deserts into flourishing

[2] Dan Senor & Saul Singer, *Start-up Nation: The Story of Israel's Economic Miracle* (2009).

fields and pioneered new frontiers in science and technology."[3] The prime goal of antitrust enforcement indeed is to protect the free markets to allow such pioneering minds to better our lives.

a. Parallels between Israel and the United States

To attract and cultivate innovators, a nation must have a supportive ecosystem with the right legal, political, and social factors. As commentators have observed, "innovators can, and will … move to those jurisdictions that provide a legal and regulatory environment more hospitable to entrepreneurial activity."[4] In reflecting on Israel and the United States' shared success in innovation, I've observed several parallels between the countries that may help explain why.

First, both Israel and the United States have pro-market economic and legal structures that support innovators. Entrepreneurs have fewer regulations and bureaucratic hoops to jump through than some other countries, making it easier and more attractive to launch new business ventures.

Through free markets, brought about by a culture of competition and innovation, Israel and the United States are also able to attract and keep the best, brightest and most motivated people. Transparent, non-discriminatory, and predictable legal structures, including an independent judiciary, make entrepreneurs comfortable investing resources. Sound antitrust policies and enforcement, such as those in the United States and Israel,

[3] Shimon Peres, *Shimon Peres says: Two states for two peoples*, L.A. TIMES (June 28, 2012), http://articles.latimes.com/2012/jun/18/opinion/la-oe-peres-middle-east-malaise-20120618.
[4] Adam Thierer, *Innovation Arbitrage, Technological Civil Disobedience, and Spontaneous Deregulation*, THE TECHNOLOGY LIBERATION FRONT (Dec. 5, 2016), https://techliberation.com/2016/12/05/innovation-arbitrage-technological-civil-disobedience-spontaneous-deregulation.

further promote innovation by ensuring the integrity of the marketplace and giving everyone the opportunity to compete on the merits.

Second, and relatedly, both Israel and the United States have laws that protect intellectual property rights. Strong protection of intellectual property is key to unlocking innovation and allowing it to flourish. Intellectual property rights provide incentives to invest in research and development. Intellectual property rights are so fundamental to Americans, as I mentioned before, they are guaranteed by our Constitution. Exclusive intellectual property rights are consistent with antitrust principles; indeed, it is precisely the ability to earn monopoly profits that drives innovation and ultimately benefits consumers.[5]

Israel and the United States have signed international agreements recognizing the value of an intellectual property regime for economic development. Both are signatories to the Agreement on Trade-Related Aspects of Intellectual Property Rights (also known as TRIPS). Article 14 of the Israel-United States Free Trade Agreement also explicitly reaffirms each parties' obligations under bilateral and multilateral agreements relating to intellectual property rights. Just this week, I discussed with Director General Michal Halperin of the Israel Antitrust Authority the prospect of starting a bilateral working group on competition and intellectual property rights to further our cooperation in this important area.

Third, in both the United States and Israel, universities play a key role in promoting innovation. In the United States, universities like Stanford, MIT, CalTech, among others,

[5] *See* Makan Delrahim, Assistant Attorney General – Antitrust Division, "Protecting Free-Market Patent Bargaining, Competition, and the Right to Exclude" (October 10, 2018), *available at* https://www.justice.gov/opa/speech/file/1100016/download.

are leaders in promoting innovation. The same is true in Israel, with universities like University of Haifa, Technion, and Hebrew University, among others. Universities not only train a workforce with technical skills but they also play an essential role in research and development themselves.[6] In both countries, universities have strong relationships with the innovative start-up community. Our hosts tonight, the Center for Law and Technology and the Center for Cyber Law and Policy, represent such beneficial collaborations.

A fourth parallel between Israel and the United States is that both countries have vibrant venture capital systems. Access to venture capital means that an inventor can fund her great idea without having deep pockets herself. The advent of venture capital systems revolutionized the ability for new businesses to take flight.[7] Start-ups can thrive in environments that have seed to late-stage venture capital financing and embrace start-up acquisitions as a legitimate exit strategy.

Finally, and perhaps most importantly, both Israel and the United States have a culture of risk-takers—individuals who are willing to push the boundaries of what is possible. In other words, a culture for innovation. In the business world, there is a popular saying that "culture eats strategy for breakfast." And it's an element of success that has been emphasized by leaders such as Andy Grove, former CEO of Intel,[8] and former venture capitalist John Doerr.[9]

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[6] Senor & Singer, *supra* note 1, at 210-211 (noting that top universities in Israel were founded even before the state).
[7] *See id*. at 172.
[8] *See* Andrew S. Grove, HIGH OUTPUT MANAGEMENT (1983).
[9] John Doerr, MEASURE WHAT MATTERS: HOW GOOGLE, BONO, AND THE GATES FOUNDATION ROCK THE WORLD WITH OKRS (2018).

In *Start-up Nation*, Dan Senor and Saul Singer describe this innovation culture in Israel as "chutzpah."[10] In Silicon Valley there is a similar mantra of failing fast and failing often. When Howard Schultz first tried raising money for Starbucks, he was turned down by 217 of the 242 investors he spoke with.[11] Henry Ford's first car company, Detroit Automobile Company, struggled and finally dissolved before he launched Ford Motor Company.[12]

Having *chutzpah* is an important ingredient of innovation. You have to be willing to take a risk, to have guts, to pursue a crazy new idea—even if it results in failure. As Albert Einstein once said, "A person who never made a mistake never tried anything new." Or as Thomas Edison, an early American inventor, said: "I have not failed. I've just found 10,000 ways that won't work." American entrepreneurs, like Israelis, are not afraid to take risks, to fail, to learn from mistakes, and to start anew.

Imagination. Determination. Courage. Chutzpah. These are the qualities of American and Israeli entrepreneurs and these are the ingredients for true innovation.

b. Antitrust Policies that Encourage Innovation

Start-ups, including those in Israel and the United States, play an important role in today's digital economy. In the cycle of dynamic competition, where free markets rule, an incumbent's monopoly can easily be upset by new challengers offering newer and better products. Unlike incumbents, start-ups can be more willing to take risks and venture into

[10] Senor & Singer, *supra* note 1, at 30.
[11] Tanza Loudenback, *The incredible rags-to-riches story of Starbucks billionaire Howard Schultz*, BUSINESS INSIDER (Oct. 21, 2015), https://www.businessinsider.com/howard-schultz-profile-2015-10.
[12] Ethan Trex, *Seven famous people who survived bankruptcy*, CNN, (Nov. 19, 2008), http://www.cnn.com/2008/LIVING/personal/11/19/mf.successful.people.survived.bankruptcy.

uncharted territories. While start-ups are more likely to fail, they are also more likely to provide the next great technological leap forward.

Some of the greatest innovations come from disruptive technologies that shook conventional wisdom. Again, consider, ride-sharing apps, like Uber, Lyft, and Via. Ten years ago, who would have thought consumers would be willing to ride in a stranger's car? These services nonetheless have revolutionized transportation in much of the world.

I should note that I was surprised that, in Israel, Uber and Lyft are still not allowed to operate. Sometimes competition advocacy is needed to show regulators that the consumer and job benefits from new competitors can be enormous even if it means incumbents may have to compete harder. We have had to overcome those challenges in our states that at first refused to allow such competition to taxi cabs, but ultimately couldn't resist the huge efficiencies and benefits it provided.

With creativity and a little chutzpah, a start-up can radically change the competitive landscape in digital markets. Google leapfrogged over several incumbent search engines, and Facebook overtook MySpace. The iPhone surpassed Blackberry, Motorola and others. Netflix vaulted over Blockbuster and brought important competition to our video landscape.

The cycle of dynamic competition and disruptive innovation undoubtedly benefits consumers. Innovation brings new goods and services to the market, reduces costs, increases efficiency, and fuels economic growth. The question, then, is how can antitrust policy best encourage and protect this beneficial innovation?

Some have argued that stronger antitrust policies and enforcement against dominant online firms are necessary to make it easier for start-ups to compete. Some have even

suggested breaking up current companies. We must remember that big platforms were once themselves start-ups, and be cautious in any enforcement decision to not undermine the very innovation incentives that competition aims to protect.

At the Antitrust Division, we continue to study this area and believe in a careful application of the antitrust laws that takes into account both the short-term and long-term effects on innovation. We should take action only with credible evidence of harm to competition and not harm to just competitors. We must balance the goals to protect the very incentives to innovate, but at the same time be prepared to intervene when anticompetitive conduct distorts the free market.

Israel's Antitrust Authority also has recognized the need to be mindful of how its actions impact incentives to innovate. This is reflected most recently in the Authority's inquiry into competition issues and the digital economy.[13] I applaud Israel's careful consideration of these complicated issues. The deep experience of the Authority's Director General as well as the Chief Economist give me great hope that you, like us, have the thoughtful personnel and approach to this important sector of our mutual economy.

II. Data and Competition

For the remainder of my time, I will concentrate on a related issue of particular relevance to start-ups and innovation: data or "big data."

Data has been called the "new raw material of business: an economic input almost on par with capital and labor."[14] Given its increasing importance, data – including what

[13] Israel Antitrust Authority, *Competition Issues in the Digital Economy Inquiry*, http://www.antitrust.gov.il/eng/subject/177/item/35246.aspx.
[14] Greg Sivinski, Alex Okuliar & Lars Kjolbye, *Is Big Data a Big Deal? A Competition Law Approach to Big Data*, 13 EURO. COMPETITION L. J. 199 (2017) (quoting Kenneth Cukier, *Data, data everywhere*, THE ECONOMIST (Feb. 25, 2010)).

some call "big data" – has become a popular topic in debates on competition policy in the digital economy.

An influential American engineer, the great W. Edwards Deming, once famously remarked: "In God we trust; all others must bring data." Of course, Deming was credited with perfecting engineering processes that helped Japan become an important powerhouse post World War II and President Reagan awarded him the National Medal of Technology in 1987.[15]

Some have raised concerns that the accumulation of large amounts of data can give companies an unfair advantage or create barriers to entry. They have advocated for more aggressive antitrust intervention, including requiring that large online platforms share data with smaller competitors.

These calls for new categorical rules for data in competition policy overlook the fact that all data is not the same. Data can refer to different types of information, from different sources, used by firms in different ways. Not all "big data" is "bad," just as not all big firms are bad. Indeed, there are many ways that accumulation of data drives innovation and benefits consumers.

I am therefore wary of claims that "big data" is *necessarily* a barrier to entry or that, *on its own*, it constitutes evidence of market power or an unfair advantage. Antitrust agencies need to appreciate differences in data and assess data issues on a case-by-case basis.

[15] *See generally* Andrea Gabor, THE MAN WHO DISCOVERED QUALITY: HOW W. EDWARDS DEMING BROUGHT THE QUALITY REVOLUTION TO AMERICA – THE STORIES OF FORD, XEROX, AND GM (1990).

a. Procompetitive Benefits of Data

In fact, the collection of data by online services, done in accordance with privacy policies, can generate significant procompetitive benefits.

The accumulation of data can benefit consumers by improving the quality of existing goods and services and by creating new ones. Platforms and apps pair large amounts of data with technology to create some of the economy's most important innovations, including in medical diagnoses, weather forecasts, transportation safety, and language translations. These innovations are having a significant impact on almost every aspect of our daily lives, making possible many of the conveniences we have begun to take for granted.

Consider, for example, crowd-sourcing apps like Waze. The more data that Waze accumulates through its users, the better its services are to drivers. Consumers may be willing to exchange voluntarily their own location data in return for avoiding traffic jams and road hazards. Accumulation of traffic data enabled Waze to launch in the first place and continues to help Waze improve the quality of its offering.

Data also can enhance competition. Comparison services, such as those for flights, hotels, shopping, and real estate, collect data from different sellers and provide consumers an easy way to compare products and services. This increased transparency puts competitive pressure on sellers in both digital and traditional industries.

Online platforms also use data to help monetize their services, frequently through targeted advertising. As a result, platforms can offer their services to users at a low, often zero, price.[16] By giving over their data, consumers can avoid having to pay for a variety

[16] *See* D. Daniel Sokol & Roisin Comerford, *Antitrust and Regulating Big Data*, 23 GEO. MASON L. REV. 1129, 1147-51 (2016) ("Perhaps the most obvious and pervasive benefit to be realized in the Big Data era

of useful services, like search, maps, social media, and music. Of course, users' preferences may change over time as they may attach different values to their privacy, and we may see markets to be revealed based on such new preferences.[17]

One recent paper attempted to quantify what prices people would have to be paid, on average, to give up certain digital, online services that sometimes appear to be free. The study reported that people would have to be paid more than $3,000 a year, on average, to give up digital mapping services, and a whopping $17,000 a year to give up using online search engines.[18] When viewed with that lens, it become clear that consumers aren't giving up data for free; they are exchanging it for valuable services.

This value exchange, however, should not be confused with price. Because many online services are free for users, there has been a temptation to use "data" as a proxy for price when determining the anticompetitive effects of a merger or conduct. Consumers, however, have different preferences with respect to sharing their data. As a result, there is no uniform value yet assigned to "data." It's not necessarily the case that the more data a platform extracts, the higher the "price" on consumers. In some cases, more data can be *better* for consumers.

b. Data is Not Necessarily a Barrier to Entry

Although most people agree that data generates significant benefits, some argue that these benefits are *so* substantial that data creates an insurmountable advantage for large

has been the ability of firms to offer heavily subsidized, often free, services to consumers as consumers give those firms permission to monetize consumer data on the other side of the business.")

[17] *See* Makan Delrahim, Assistant Attorney General – Antitrust Division, "Don't Stop Believin': Antitrust Enforcement in the Digital Era" (April 19, 2018), *available at* https://www.justice.gov/opa/speech/file/1054766/download.

[18] *See* Erik Brynjolfsson, et al., *Using Massive Online Choice Experiments to Measure Changes in Well-Being*, NBER WORKING PAPER No. 24514, (April 2018), http://www.nber.org/papers/w24514.

online platforms. There are, however, several reasons why data—even large amounts of it—may not act as an entry barrier in every digital market.

First, data is often "non-rivalrous," which is a fancy term meaning that a consumer can share the same data with multiple firms. One firm's use of the data does not diminish its availability to others. For example, there is no limit to how many times you can share your name and email address. The fact that you've given your name and email address to Google does not preclude you from also giving it to the Wall Street Journal, to Facebook, or to a brand new competitor.

This is different from currency. If you pay $10 for a product, you can't use that same $10 to pay another competitor. Consumers can furnish basic information about themselves, however, as many times as they want to without diminishing their income.

Second, data is often widely available and inexpensive to collect. These days, even small businesses can easily and cheaply collect data themselves or acquire data from third-party providers. Technological advancements also make it easier to collect, manipulate, analyze, and store large amounts of data.

Third, most data has a short shelf-life. While advertisers are very interested in what a consumer is searching for at the moment, that particular data is much less valuable a week, a month, or a year from now. Just as yesterday's weather data will not help you decide whether you need an umbrella today, the fact of a traffic accident last week will not necessarily help a commuter tomorrow. Where data becomes stale quickly, new entrants can be on the same general footing as incumbents with large stores of historical data.

Fourth, for many online platforms and tech businesses, data is an input and not the product itself. As with other inputs like labor and capital, a new entrant may not need the same type of data or quantity of data to compete effectively against an incumbent.

The amount of data alone does not make a product or service better. It depends on what a company does with the data. The history of Israeli and American start-ups has demonstrated that data is not necessarily an insurmountable barrier for new challengers. When Facebook and Uber started, for example, they did not have troves of user data. Only by providing innovative and attractive services were these platforms able to accumulate the amounts of data they have today. Innovation came first, the data followed.

All this does not mean that firms with market power can never use data in anticompetitive ways. Antitrust authorities, on the other hand, remain vigilant to detect where firms use data to collude with each other or otherwise interfere with the competitive process.

c. Forced Data Sharing Can Undermine Innovation

Recognizing the benefits of data, some commentators have argued in favor of requiring dominant firms to share data with smaller competitors. They argue that a refusal to share data by a dominant platform is anticompetitive. In the United States, however, we do not generally require firms, even dominant ones, to deal with competitors. I am not yet convinced that we should have different rules for data.

As antitrust enforcers, we do not object if a firm comes to dominate a market purely by competition, including through superior quality or lower prices. As Judge Learned

Hand wrote in his seminal *Alcoa* opinion in 1945: "The successful competitor, having been urged to compete, must not be turned upon when he wins."[19]

A firm that amassed data because it created a more innovative or efficient product should not be punished for its success by having to share the fruits of its labor and investment with competitors. Forced sharing of critical assets reduces the incentive to invest in innovation. As our Supreme Court has observed: "Compelling such firms to share the source of their advantage is in some tension with the underlying purpose of antitrust law, since it may lessen the incentive for the monopolist, the rival, or both to invest in those economically beneficial facilities."[20]

Our Supreme Court has further warned: "Enforced sharing … requires antitrust courts to act as central planners, identifying the proper price, quantity, and other terms of dealing–a role for which they are ill-suited."[21] Neither antitrust agencies nor courts are equipped to make determinations on how much data should be shared, with whom, and at what price. But free and competitive markets can do this.

Finally, mandated sharing of data between competitors leads to what Justice Scalia called "the supreme evil of antitrust: collusion."[22] Antitrust authorities should instead encourage firms to compete aggressively against each other.

Enabling free-riding also reduces the incentives for new entrants to develop their own sources of data or invent disruptive technologies. Granting forced access undermines future incentives to invest in innovation aimed at competing *for* the market rather than

[19] United States v. Aluminum Co. of America, 148 F.2d 416, 430 (2d Cir. 1945) (L. Hand, J.)
[20] Verizon Commc'ns, Inc. v. Law Offices of Curtis V. Trinko, LLP, 540 U.S. 398, 407-408 (2004).
[21] *Id*. at 408.
[22] *Id*.

competing *within* the market. The same is true in the compulsory licensing of intellectual property rights, which reduces incentives for competitors to "invent around" patents.

It is, however, the process of "inventing around" and creating disruptive technologies – what economist Joseph Schumpeter called the "perennial gale of creative destruction"[23] – that results in the greatest innovations and benefits for consumers and society.

d. Implications for Antitrust Policy

A 2017 Report on "Big Data" from the Organisation for Economic Co-operation and Development (the OECD) concluded that "[b]ecause Big Data does not systematically cause harm and can actually result in significant gains for consumers, any actions by competition agencies should be supported with evidence of harm to the competitive process."[24] I agree.

The competitive effects of data should be looked at carefully within the context of fact-specific circumstances and in light of the overall competitive dynamics. The price of false positives are borne not only by the companies, but also by the consumer who suffers if innovation is diminished. If antitrust agencies began blocking companies from acquiring large amounts of data, this could prevent or delay important technological advancements.

Innovators, however, are not exempt from the antitrust laws. Even innovators can engage in anticompetitive behavior. When they do, antitrust authorities must step in to protect the free market.

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[23] Joseph A. Schumpeter, CAPITALISM, SOCIALISM, AND DEMOCRACY 84 (1942).
[24] *Big Data: Bringing Competition Policy to the Digital Era*, OECD (April 26, 2017), https://one.oecd.org/document/DAF/COMP/M(2016)2/ANN4/FINAL/en/pdf.

The challenge for antitrust authorities is to separate cases requiring closer scrutiny from the bulk of cases where the collection and use of data is procompetitive or, at least, competitively benign.

V. Conclusion

Competition and the digital economy is not a unique challenge for Israel. With the globalization of commerce (and an internet without borders), it is helpful to have international dialogue on these important topics. I came today from the International Competition Network (ICN) cartel meeting in Tel Aviv, another example where international collaboration on antitrust enforcement is highly valuable and has been quite effective.

I applaud Israel and the Israel Antitrust Authority for considering international perspectives in confronting these challenges, and thank the University of Haifa for inviting me to share our perspectives today.

As I mentioned in my opening, Israel and the United States have many parallels that may explain their success in fostering some of the most innovative companies in the world. That success is due to both countries' ecosystem of policies, people, and culture that fosters and rewards innovators, risk-takers, pioneers, and chutzpah.

Thank you.