CHAPTER 12

ISRAEL'S CHALLENGING TRANSFORMATION FROM START-UP NATION TO SCALE-UP NATION

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Few people in the fields of business and technology today are unaware of Israel's reputation as a world leader in innovation and entrepreneurship. The 2009 New York Times Best Seller *Start-up Nation* put Israel on the map as a force to be reckoned with for the disproportionate number of start-ups churned out by a country that is barely the size of New Jersey. Israel consistently appears at the top of international rankings and reports, such as the World Intellectual Property Organization (WIPO) Global Innovation Index (GII) and the World Economic Forum (WEF) Global Competitiveness Report.

With more start-ups per capita than any other country,[1] Israel is second only to Silicon Valley in its level of innovation, with a ratio of 1 start-up per 1,400 people. This tiny nation, whose name doesn't even fit within its borders on most world maps, is also home to the highest number of engineers per capita and boasts the world's second-highest research and development (R&D) expenditure rate.[2] Indeed, this places Israel first across several indicators in the 2019 Global Innovation Index, in terms of researchers per million population, gross R&D expenditure as a percent of gross domestic product (GDP), and research talent in business enterprises.

Israel enjoys an unusual richness of risk capital, ranking second in the world for venture capital (VC) availability.[3] Initially spurred and continuously supported by public resources, this prevalence of risk capital has received a boost from the recent establishment of hundreds of local R&D centers by multinational corporations (MNCs), such as Facebook, Google, Amazon, and others that seek to benefit from the profusion of technological innovation that Israeli entrepreneurs are generating. As one of the first countries in the world to allow the creation of university technology transfer organizations over 60 years ago,[4] Israel continues to make strides in academia-spurred products and services,[5] with two of its largest recent exits—Mobileye's acquisition by Intel and Mazor's acquisition by Medtronic—originating in university technologies.

As Warren Buffet put it, "If you're going to the Middle East to look for oil, you can skip Israel. If you're looking for brains, look no further. Israel has shown that it has a disproportionate amount of brains and energy."[6]

I and many other Israelis relish these figures and are proud of the innovative ecosystem our country has fostered, against all imaginable odds. Yet, often overlooked given this glowing data is a less fortunate fact: while we have excelled at launching game-changing start-ups and life-changing technologies, we have struggled to produce well-known multinational corporations. As far as large industry-leading global companies go, Israel has few. Those that have risen to the top of their fields, including Teva Pharmaceuticals and Check Point Software Technologies, locally employ less than 10,000 people put together. And with the recent challenges that Teva has encountered, Check Point is the only Israeli tech company to appear on Forbes' Global 2000 list, which ranks the world's 2,000 largest publicly traded companies.[7] In contrast, Israel is the third most-represented country on NASDAQ in terms of the number of companies listed.[8]

For a highly innovative country that is rich with venture capital and entrepreneurial culture, this lack of industrial maturation has become a mystery to many. Is it a result of a purposeful strategic focus on early-stage innovation? Or perhaps the inevitable and uninvited outcome of an unbalanced public policy? As it continues to be a role model for aspiring innovation economies around the world, Israel must solve this conundrum

to leverage its innovation ecosystem into a sustainable scaled economy for the benefit of its people.

The challenge

The runaway success of many local start-ups has created what is known in Israel as an "exit culture" in which entrepreneurs begin their work not with the goal of building a global, publicly traded, industry-leading company, but a company that will be purchased as soon as possible by a much larger international company. Young Israelis—and their parents—no longer seek careers as doctors, lawyers, or academics, but more than any other profession, as "start-upists".[9]

Make no mistake: acquisitions of Israeli start-ups—such as Waze, Mobileye, Click, and countless others by companies like Intel, Google, and Salesforce—have added tremendous value to Israel's economy and global prestige. The financial value of Israeli high-tech exits over the past decade amounted to over US$70 billion,[10] which is equivalent to nearly 20% of the country's annual GDP. Advocates for this exit culture argue that the money flowing into Israel from these billion-dollar transactions serves as a growth engine for launching new early-stage companies, and for attracting multinational corporations to open or expand their R&D centers in Israel.

Yet there is an often-overlooked downside to this approach. In the long run, a private sector consisting entirely of small, technologically advanced companies chasing an exit is damaging for the Israeli economy because it exports the country's most valuable know-how and hinders the development of large local companies. This, in effect, suppresses the number of jobs available to Israelis within Israel and reduces the long-term tax payments necessary to fund the country's pressing security, health, education, and infrastructure needs,[11] which are only going to increase. Even more importantly, it benefits the few—the serial entrepreneurs with strong technological backgrounds and unique know-how—while leaving behind the vast majority of the population, who are largely precluded from direct engagement, development, and social mobility opportunities which these exits generate.

Some say that Israel's small population of just nine million people is to blame, and the domestic market simply isn't large enough to accommodate the growth and sustainability of industry-leading publicly traded companies. Some might add that geopolitical challenges make it hard for Israeli start-ups to grow into mature, independent companies and operate globally.

While these are significant hurdles to industry growth, they do not fully explain the general failure of Israel's private sector to scale and expand globally while keeping a robust innovation ecosystem. Half of the top-ranked innovative economies in the GII 2019 report have population sizes similar to, or smaller than, Israel. Yet, all of them—Switzerland, Sweden, Finland, Denmark, and Singapore—have produced numerous global corporations operating in a wide range of industry verticals, including pharmaceuticals, food, financial services, and mobility. Geopolitics is not a good reason either—Israel has extensive trade and economic ties outside the Middle East, with warming ties to previously closed markets, even within the Middle East.

So what explains Israel's imbalanced industrial ecosystem? Why are other innovative economies successful at cultivating an entrepreneurial system while at the same time allowing scaled businesses to emerge? To what extent does financing play a role in the problem—and potentially its solution?

The "Catch-22" of multinational corporations

Riding the wave of technological innovation produced in this tiny country, over 500 multinational corporations have set up innovation centers in Israel to take advantage of the unparalleled local talent pool.[12] While this is to be celebrated and embraced, it is also part of the problem. While there is immense talent locally, it is immensely limited: the 2019 High-Tech Human Capital Report issued by Start-up Nation Central and the Israel Innovation Authority reported that high-tech workers represented 9.2% of the Israeli workforce in 2019.[13] The report further stated that MNCs employ a higher percentage of tech employees compared to local companies, and the average compensation per position by employers in MNCs is about 40% higher than by domestic companies. The unavoidable outcome is that these MNCs are winning the battle over this precious human resource.

When an Israeli student graduates with a degree in engineering or computer science and is given the choice of joining a growth-stage Israeli company or a brand-name MNC willing to pay a much higher starting salary, which offer do you think the graduate will take?

On the face of it, MNC R&D centers focus on generating new technologies and spurring innovation that delivers certain gains to the Israeli economy. But that's not the full story; this dominant presence and control of valuable Israeli talent and technology benefits, first and foremost, the MNCs themselves while delivering marginal benefits to Israeli innovation and industry growth. The tax payments that are derived from the local operations of these MNCs are only a fraction of the benefit that strong Israeli corporations would have generated if they were to emerge.

The role of financing

According to the GII 2019, Israel is surpassed only by Canada and the United States of America (U.S.) in terms of the availability of investment capital for new companies and start-ups. Yet this relative abundance of risk capital is misleading. Much of this funding is directed at the establishment and early phases of start-ups, and not to supporting the growth and maturation of these companies into global commercial organizations with a strong local footprint.

For such an advanced innovation ecosystem, Israel lacks multibillion-dollar funds that invest at the stage where a company can grow from selling one product overseas to becoming a large company employing thousands of Israeli workers. Even Israeli pension funds, for example, are more likely to invest in overseas real estate markets than they are to invest in a growth-stage Israeli company. This dearth of funding for growth-stage companies helps explain why entrepreneurs are so easily snatched up by MNCs, why so many promising start-ups fail to thrive, and why entrepreneurs choose to sell rather than scale their companies.

One of Israel's most well-known entrepreneurship initiatives involves the Israel Innovation Authority's Incubators Program—18 government-funded incubators with the mandate of awarding millions of dollars to promising start-ups.[14] These incubators are run by private investors who compete for the opportunity to manage the incubator over many years and access the rich flow of early-stage innovation in Israel while relying heavily on government funding. It is a promising and well-meaning effort, but the long-term impact of the program has been mixed. The initiative has fostered a few modest exits of early-stage companies, but few companies were able to take off successfully and secure additional funding beyond the short period allowed within the incubator. Many of these companies live and die in the incubator, and more than a few are closed despite showing significant technological promise.

Early-stage companies that are fortunate enough to receive funding from private resources may not benefit from those investments in the long term. For example, in 2018, nearly half of all funding going to Israeli start-ups was facilitated in part by corporate venture arms, also known as strategic investors.[15] While it is exciting and theoretically beneficial for young start-ups to evolve with that strategic support, it also limits their independence and the likelihood of growing to become strong market players before they are absorbed by the strategic investor—which often happens too soon and at a significant valuation discount. Even if the investment came from a non-corporate venture capital fund, of which Israel has many, the business model of virtually all venture funds requires near-term cash distribution to earn their investors a meaningful return on investment—which means another mad rush toward an exit.

The tendency of investors to push for acquisitions contributes to a myopic situation where a brilliant entrepreneur is less motivated to build a multibillion-dollar company in Israel. Instead, they can court Siemens or Facebook early in the company's life cycle, increase their chances of a huge exit, and call it a day.

The weakness of the Israeli stock market is another important limiting factor in this equation.[16] As long as the Tel Aviv Stock Exchange remains relatively illiquid and major domestic investors lack the tools to properly evaluate and invest in technology companies, public listings of tech companies in Israel will continue to be perceived as a last-ditch attempt to raise minimal capital—which backfires when valuation and lack of liquidity entomb the company. The valuation arbitrage of two similar companies traded on NASDAQ and TASE represents a major barrier to the growth of Israeli companies and industries. During his tenure, the former chairman of the Israel Securities Exchange said it best: "There's a certain feeling that it's not worth doing business in Israel, and we have to change it."[17]

Solutions and policy recommendations

There are some positive signs that Israel's public and private sectors are becoming more aware of this predicament and are making moves toward improving the conditions for business growth. For example, in 2018, we saw—for the first time in Israel—a decrease in exits and an increase in investments.[18] This may be a promising sign that Israeli entrepreneurs are becoming less eager to sell their companies and more eager to grow. Yet, assuming much of these investments came from corporate or private venture groups, the push towards near-term exists will continue, and the exits will come sooner rather than later. Below are some suggested approaches to tackling the growth challenge, as well as some recommendations that may be broadly applicable for policymakers involved in directing financial resources within national economies.

Numerous economies around the world are attempting to enhance the innovation activities in their respective countries through the evaluation of new models and allocation of resources to specific initiatives. Based on the observations described above, it may be important to foster an environment in which innovators are not immediately drawn to the comforts of a job at an MNC or a quick exit. Public-private partnerships can, and should, lead efforts to provide financial security and support to enable budding entrepreneurs to take big risks and stick with them. Additional measures could include models for encouraging young companies to collaborate more closely with each other and even merge to create more stable and scalable businesses.

It is important to capture the significant benefits of having MNCs within a national economy. Incentives to lure MNCs are common; Israel and other countries have awarded them hefty tax incentives while offering MNCs access to unmatched talent and technologies.[19] In exchange for those tax benefits and access to precious human capital, local governments should encourage MNCs to support innovation within and for the benefit of the local ecosystem. Rather than merely "absorbing" innovation, these programs would see MNCs investing in external, independent innovation hubs that leverage resources and expertise brought by the MNC to build strong and scalable enterprises, without a commitment to be absorbed into the MNC or to serve its exclusive proprietary needs. A rising tide lifts all boats—with a more vibrant and independent innovation platform supported by MNCs, the ecosystem as a whole stands to benefit.

Regulators should also work to create attractive opportunities for experienced domestic and foreign growth players to engage with the innovation ecosystem. In a country where there are so many innovators, the fact that there are so few growth funds has been—and continues to be—a major roadblock. We need

to think of structures that incentivize the introduction of more growth players to join the likes of aMoon, which is remarkably the only local growth fund in the health-tech space—a field in which Israel is a world leader.

For those skeptical about the importance and potential influence of public sector intervention in such matters, it may be useful to know that the robust Israeli venture capital industry we know today was actually created by a government-funded program. In 1993, the Israeli government launched the YOZMA group,[20] which used public funds to leverage financing from foreign corporations and institutions. This powerful and unprecedented initiative included equity guarantees for foreign investors, programs that linked Israeli firms with foreign business angels, and the listing of Israeli venture firms on foreign stock exchanges. YOZMA invested in Israeli start-ups and established numerous public-private funds. By the year 2000, it accomplished an amazing feat: the Israeli VC industry had reached the point where private sector investments eclipsed public sector investments—and the local VC industry has since taken off without looking back. The success of YOZMA could serve as a model for new government programs across the globe and should be entertained not only for early-stage, high-risk capital but for growth capital as well.

Finally, a robust stock exchange and its exposure to innovation is an important goal. The Tel Aviv Stock Exchange needs to become savvier, more liquid, and more robust. In some countries, if a company wants to grow, it can employ multiple mechanisms to raise public funds that aren't fully evolved in other countries, including Israel. Part of the problem is the scarcity of institutional investors playing major roles in the growth sector. Institutional investors shouldn't be the first in line to risk public capital on a field they don't fully understand, but it is up to regulators to catalyze their participation and make them more educated and comfortable with the specific challenges and value propositions of growth-stage companies. Even a small fraction of institutionally managed capital can dramatically shift the opportunity landscape.

Notes:

1 Yerman, 2019.

2 Deloitte, 2020.

3 WEF, 2018.

4 Leichman, 2018.

5 Yablonko, 2019.

6 Friedman, 2010.

7 Murphy et al., 2019.

8 Williams, 2018.

9 Shamah, 2013.

10 Solomon, 2019.

11 Halbfinger et al., 2020.

12 Mizroch, 2019.

13 Israel Innovation Authority, 2019.

14 Israel Innovation Authority, 2019.

15 Ravet, 2019.

16 Reuters, 2019.

17 Elis, 2015.

18 Solomon, 2018.

19 Solomon, 2016; EY, 2019.

20 OECD, 2003.

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