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Entrepreneurship 4.0: Setting the Stage

The role of policy in driving entrepreneurialism

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Government policy can play a large role in supporting or undermining entrepreneurship. We highlight how governments can cultivate a startup ecosystem that is digitally-driven and in service of human-centered goals. Innovative entrepreneurs are essential to mastering the global challenges humankind faces.

Executive summary

Motivated people willing to take risks to realize their visions – the driving force behind entrepreneurialism – are essential to the sustainability of economies and their capacity to adapt to new challenges. An environment that attracts innovators and brings them together with investors and experienced incumbents as role models and mentors would seem to be the place to go. Clearly, that place is Silicon Valley. Or is it?

While a thriving startup culture requires a cohort of enterprising individuals and a technological infrastructure to accompany it, government support plays a decisive role in creating a successful entrepreneurial ecosystem. Several elements of Western, free-market capitalism fail to meet the needs of an innovation-friendly environment. Ecosystems that favor large corporations and fail to attract and actively cultivate innovation that benefits society are unlikely to produce sustainable technological solutions. As AI, big data and IoT become key elements of more and more industries, tech talent and innovation will become even more important.

The (digital) entrepreneurship and cooperation between stakeholders required to master the global challenges we face demand decidedly inclusive institutions and systems. We put forward some policy recommendations, and look at Estonia, France and Germany

as examples of governments that support successful startup ecosystems. Although Estonia is small and has had a very specific set of challenges to overcome, we maintain that there are many broadly applicable learnings to be drawn from it. And yet, we also see that this model does not necessarily cover the big picture. That's why we also look at France as a policy model for innovation in the digital sphere as well as Germany – the current worldwide innovation leader according to Bloomberg's 2020 Innovation Index.

The power of inclusive economies

Real and meaningful innovation is always a convergence of technologies and stakeholders, creating the right conditions for advances and mass adoption. As detailed in "Why Nations Fail – The Origins of Power, Prosperity, and Poverty" (Daron Accmoglu and James A. Robinson 2012), the first industrial revolution was born in Britain, not because the technology (e.g. the steam engine) was unavailable elsewhere, but because the country's sociopolitical environment in the early 19th century was initially more favorable toward fair competition and cooperation than that of countries in continental Europe. As a later example, mass adoption and production of the internal combustion-driven automobile would not have been possible without the advent of the pneumatic tire and paved roads, as well as governments able and willing to regulate traffic. In other words, then as now, progress involves a complex interplay of stakeholders.

As detailed in the recent book "Reimagining Capitalism in a World on Fire" (Rebecca Henderson 2020), Denmark, postwar Germany and the ethnically divided island nation of Mauritius all built robust economic growth and social stability on cooperation between the public sector, business and labor organizations. Here, it is important to emphasize that in these countries, as elsewhere, cooperating factions were – and remain – at odds on many points. What's needed is a core set of parameters to enable the frequently and radically disagreeing parties to find common ground.

In "Why Nations Fail," the authors explore how rule of law and political participation have set the stage for nations to flourish. Further, they differentiate between extractive and inclusive economic systems. "… growth under extractive institutions differs in nature from growth brought forth by inclusive institutions," the authors state. "Most important, it will not sustain growth that requires technological change, but rather growth based on existing technologies." They cite the former Soviet Union as an example of an extractive system that can drive growth for a limited period before ultimately (and catastrophically) collapsing. The massive industrialization that Joseph Stalin engineered in the Soviet Union brought on progress at a dizzying pace, but was doomed to hit a

wall once it reached global standards. At the same time, the fatally flawed policy of agrarian collectivization forced huge swathes of the population into poverty and – particularly in Ukraine – famine.

The key takeaway is that the top-down rule aimed at extracting maximum value while suppressing initiative, ingenuity and cooperation between stakeholders is dangerous for economic sustainability. The more pressure a system places on individual agents to survive, the less incentive there is for cooperation on addressing shared challenges. The elephant in the room here is climate change.

Beyond shareholder value

Looking at how most of today's listed corporations operate, it's easy to forget that devotion to shareholder value above all else is a relatively new phenomenon. One of many Cold-War responses to the – then seemingly thriving – Soviet planned economy was the Friedman Doctrine, also known as Shareholder Theory or Stockholder Theory. In a 1970 essay that appeared in the New York Times, Milton Friedman quotes from his book "Capitalism and Freedom" (Milton Friedman 1962), "… there is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception or fraud."

The Friedman Doctrine clearly espoused a laissez faire economic approach as opposed to the planned economy of the USSR. Paradoxically, the current fixation on shareholder value in the vast majority of companies has evolved to support an extractive approach. It stifles both breakthrough innovation as well as the adoption of sustainable processes. This is because (1) innovation is extremely costly and risky and (2) the costs of unsustainable business practices like allowing high carbon and other greenhouse gas emissions, inequitable hiring and exploitation of the environment – known as externalities – generally don't appear on the balance sheet. Instead, these costs are borne by society in the form of taxation and lower quality of life. The potential consequences for future generations, particularly regarding the above-mentioned greenhouse gas emissions and the resulting accelerated climate change, are dire.

A further aspect worth consideration is the "capital-labor split," which French economist Thomas Piketty discusses in his controversial work "Capital in the 21st Century" (Thomas Piketty 2014). He argues that economies in which returns on capital exceed income from productivity (e.g. in manufacturing or the service sector) by orders of magnitude are inherently prone to crisis. In a world where vast returns on capital can be generated in trading within milliseconds, investment in the long slog of entrepreneurialism and innovation becomes understandably less attractive.

Returning to "Reimagining Capitalism," what is required to set the stage for entrepreneurship in pursuit of meaningful goals for the future of humankind and the planet is a form of free enterprise that goes beyond shareholder value to include value added for society and the environment. In addition, companies must be required to pay for the upstream and downstream costs they incur for other stakeholders.

The upside

Fortunately, we live in an era of well informed and highly motivated young people who want to improve the world and move toward a brighter future. Today's potential entrepreneurs are global-minded, geographically mobile and technologically savvy. As the generation that will be directly impacted by the cascading impacts of a rapidly changing climate, mass migration and the challenge of feeding a global population of around 10 billion, millennials have priorities that go far beyond shareholder value. Tapping into their imagination and innovative drive is the most promising path toward long-term economic growth. It is also essential to the wellbeing of humankind and the planet Earth.

Attracting and cultivating the next generation of entrepreneurial talent is high on the economic agenda of many countries, but approaches vary. The question is: which are most effective? Here we look at some success stories.

Estonia: Embracing a multicultural digital future

As a small country emerging from a legacy of Nazi-era German occupation and subsequent Soviet rule, it presents a “clean slate” on which to examine economic policy. Also – sorry, Estonia – it’s probably not the most attractive geographical location for young people wishing to start a company.

The small Baltic nation with a population of 1.3 million regained its independence in 1991 and entered the European Union in 2004. It ranks among the fastest-growing economies in the EU and scores high in the UN Human Development Index. Estonian citizens are covered by universal healthcare insurance. University education is free, and the country has the longest paid maternity leave in the OECD. Residents enjoy civil liberties and freedom of speech. In 2005, Estonia became the first state to hold elections via the Internet.

With its small population, it’s not surprising that Estonia has introduced measures to attract foreign entrepreneurs. These include E-Residency, which helps facilitate incorporation of companies for people who are not physical residents of the country, as

well as setup of banking, payment processing and taxation. In addition, Estonia offers a Nomad Visa that allows tech talent to freely work from anywhere in the country.

Under the heading Startup Estonia, the country stages events, helps create marketing and branding strategies and offers training for startups. It provides information events for local investors, attracts foreign investors and initiates accelerator programs. Estonia also offers a Startup Visa to further encourage foreign entrepreneurs to set up shop in Estonia.

Thanks to this startup-friendly environment, several globally well-known tech players have begun as startups in Estonia. Pipedrive, an Estonian customer relationship management (CRM) company founded in 2010, is ranked on the Forbes Cloud 100 In 2019 Financial Times recognized Pipedrive among Europe's 1000 fastest-growing companies.The pioneering Web conferencing service Skype was founded in 2003 by six people from Estonia, Sweden and Denmark, with three Estonian developers writing the code. Microsoft acquired Skype for US$ 8.5 billion in 2011. TransferWise, the Estonian-founded online money transfer company, is now valued at US$ 5 billion. Co-founderTaavet Hindrikus received the 2020 Pathfounder of the Year award.

According to the startup advisory platform startupblink.com, 66% of the country's entrepreneurs are happy with the government's initiatives. And Estonia is often cited as one of the world's most digitally advanced societies. Administrative and fiscal processes are streamlined using digital tech, and international companies find it easy to navigate.

Golbriak Space offers a current example of how Estonia's policies appeal to entrepreneurs. The aerospace company is developing a satellite-to-satellite communication device that fits into a shoebox. Founded in 2017, it is run by an Italian e-resident, Simone Briatore. "The reason we picked Estonia is for bureaucracy and the friendly space for startups. We considered starting a startup so we wanted a friendly startup ecosystem. We were amazed by Estonia. Business administration is simple here because everybody speaks English," says Briatore. "The main advantages are the ability to found and run a company online, sign legally binding documents electronically and file taxes online in just a few minutes."

France: An old economy encouraging new investment

A further fiscal policy that can have a very positive effect on startup and tech culture is to offer tax concessions for research. France introduced such a tax incentive in 2008. Its research tax credit (Crédit d'Impôt Recherche) is considered to be one of the most generous in the world according to a KPMG report.

The research tax credit is a corporate tax relief measure based on R&D expenses incurred by companies subject to corporate income tax. It covers 30% of all R&D expenses up to €100m, and 5% above this threshold. And the rate can go up to 60% if the companies hire recently graduated PhDs or if they collaborate with academia.

For startups and SMEs, the tax credit covers a proportion of the costs of bringing an innovative product to market in addition to pure research, such as design and prototyping. Here, the rate is 20% up to €400k per year. If the company was founded less than eight years ago and its R&D expenditure accounts for at least 15% of its total spending, the "Jeune Entreprise Innovante" (Innovative New Company) status exempts it from social contributions on research personnel salaries and provides significant income tax cuts (100% for the first year of positive income and 50% the second year).

Companies with innovative project concepts can also apply for grants from either the European Union or the French government. The French public investment bank (Bpifrance) supports specific innovation projects through grants, zero-interest loans and even direct investment.

The FinTech Kard, founded in 2018, is a good example of what is happening in France's startup scene. Catering specifically to young people, it offers the opportunity "take control over their money by offering them a bank that is cool, social and free." The telehealth company Qare, launched in 2017, offers a care and diagnostics app, while FinTech Epsor (founded 2017) helps employees manage their savings and investments with a robo-adviser.

Germany: Transitioning from traditional industry to high-tech

During the postwar "Economic Miracle," Germany built a strong economy based on high-quality manufacturing and export. The birthplace of the automobile, Germany was the world's No. 1 export nation for many years, until being overtaken by China in 2009. It currently ranks third, behind China and the USA (although the European Union as a whole is No. 1).

Although the country remains the undisputed economic powerhouse of the EU, the German government is well aware of the need to cultivate the new economy and sustainable technologies. In recent years, it has successfully developed a thriving high-tech innovation scene, one of several factors that has earned it the No. 1 position

in Bloomberg's 2020 Innovation Index. The ranking is based on scores in seven areas: R&D Intensity, Patent Activity, Tertiary Efficiency, Manufacturing Value-added, Productivity, High-tech Density, Research Concentration.

Germany owes its top position, for which it nudged out South Korea, mainly to its scores on High-tech Density ("The volume of domestic, high-tech public companies as a share of the world's total companies. Examples of high-tech companies include: aerospace and defense, biotech, internet services, and renewable energy.") and Patent Activity ("The number of annual patent and grant filings, and the 3-year average growth of filings abroad and filings growth, as a share of the world's total patent growth.").

Berlin has built this success on many years of policies to provide information, guidance and financial support to innovative entrepreneurs. For example, it launched its first High-Tech Strategy in 2006 and currently pursues the High-Tech Strategy 2025. The High-Tech Strategy 2025 divides its agenda into three main categories: Societal Challenges, Open Innovation and Venture Culture, Germany's Future Competencies. It is worth mentioning specifically that Germany maintains a National Agency for Women Start-ups Activities and Services to provide female entrepreneurs with extensive support, financial and otherwise. In addition, Berlin has introduced the German Accelerator program, which advises and guides promising startups at no charge. Qualification for the German Accelerator serves as a seal of approval and includes opportunities to pitch to major investors.

The country's most successful recent startups include Aipark, whose app uses artificial intelligence (AI) to help drivers find parking places. Founded in 2015, it currently operates in 200 cities in 14 countries around the world. Further examples include Superseven, founded in 2017 to produce recyclable and biodegradable packaging, LiveEO, which efficiently monitors critical infrastructure via satellite. LiveEO was established in 2018 and currently supports railways, power lines and pipelines.

Learning from leading startup magnets

Estonia, France and Germany are just a few examples. Many policy considerations will be different for other countries depending on size, geographical location and legacy, among other factors. But the underlying logic remains the same: entrepreneurialism needs favorable policies to succeed and entrepreneurial global citizens will go wherever the best conditions are in place.

These policies include:

- Supportive immigration systems and an international culture – as exemplified by Estonia
- A fair and just society with reliable rule of law – prerequisites that set the stage for the industrial revolution in Britain and are present in all the countries we use as examples here
- Manageable fiscal and administrative requirements – again, a setup that Estonia has established with success
- Programs and grants fostering cross-pollination between academia, industry and business – which both France and Germany demonstrate
- Policies to encourage creatives and freelancers – one of Germany's strengths
- Extensive information, financial support and programs to connect investors and startups – a further area in which Germany excels
- A clear government strategy to steer the economy toward inclusivity, sustainability and social equitability – as demonstrated by all three national economies looked at here

This is not trivial. As AI, big data and IoT become key elements of more and more industries, tech talent and innovation will mean the difference between winning and losing in the global marketplace. In addition, the global challenges humankind faces demand radical and exponential development on multiple fronts. And young, motivated and enabled entrepreneurs are our best bet for the kind of sustainable economy we need.

This next generation of business leaders needs – and deserves – our full support in pursuit of its goals. Governments, businesses, labor organizations and the old and new economies need to collaborate to create a form of capitalism that works toward human-centered outcomes. As Rebecca Henderson writes in "Reimagining Capitalism," "We have the brains, the technology, and the resources to build a just and sustainable world – and in doing so create enormous economic growth." Let's do it.

About

The Digital Economist is a global impact organization with the mission to drive technological convergence towards a human-centered digital economy by bringing investable opportunities, in line with the Sustainable Development Goals, to the fore. For press inquiries, please reach out to press@thedigitaleconomist.com. For partnerships please contact directly : navroop@thedigitaleconomist.com.