

DIGITAL AGE ENTREPRENEURSHIP WIKIPEDIA DEFINES ENTREPRENEURSHIP AS “THE PROCESS OF DESIGNING, LAUNCHING AND RUNNING A NEW BUSINESS”

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An Entrepreneur:

- One whose dreams are bigger than his or her resources.
- Able to solve problems and make the world more convenient.
- Make a mark in the universe

Digital Age Entrepreneur:

- Ideas and innovation are at the core.
- Constantly adapts to new trends and innovations.
- There is no barrier, not even age.
- Digitization has redefined the possibilities of entrepreneurship.

INTRODUCTION

The emerging digital age and fourth industrial revolution is having an unprecedented impact on the way people live and work. The world of work is going through major structural changes, with technological advancement, increased fragmentation of production, growing demand for new skills and shifting employment relationships. Technology, digitalization and automation promise to improve productivity, increase economic output and create high-skilled jobs – bringing immense economic and social opportunities in all economies. Adopting digital technologies and automation techniques can not only increase labor productivity but also enable the development of new business models, new markets and job opportunities.

However, at the same time, digital technology may be disruptive with far-reaching effects on productivity, employment and well-being. These changes will likely render some occupations obsolete and expose more workers to vulnerable employment.

Advancement in technology has led to a pressing need for human resources development including research into the implications for the labor market, education, training and reskilling. This coupled with on-going labor market analyses will support targeted investment consistent with economic needs. Evidence-based policy is required to ensure that labor market participants are employable and prepared for the challenges and opportunities in the new digital age.

THE ARRIVAL OF DIGITAL AGE

The term ‘*Digital Age Entrepreneurship*’ most commonly refers to the process of creating a new internet enabled/delivered business, product or service. This definition includes both:

- Startups—bringing a new digital product or service to market
- The digital transformation of an existing business activity inside a firm or the public sector.

In advanced countries, the emergence of utility-based cloud computing is shifting focus from technical barriers to the business environment challenges facing digital age entrepreneurs. This shift reinforces the

growing importance of implementing effective policies that foster the best climate for digital service incubation, growth and successful development. However, in many rural areas and developing countries, even basic infrastructure remains a challenge, from the hardware, the network, the content, the ICT eco-system, to the skills on both consumer and business sides.

Digital age entrepreneurship may level the playing field in certain sectors, creating opportunities to work from remote areas, at different hours, from the home, or on the go. It can play an important role in promoting gender equality and social and economic inclusion, stimulate local development, and contribute to sustainable development, especially when new technologies are combined with the availability of open and public data.

However, digital age entrepreneurship also highlights the scope for the emergence of new digital divides. In many developed countries, the digital divide is increasingly moving from one of (affordable, reliable, safe and high-speed) access (to digital technologies), to the ability to use and exploit them to create new opportunities.

Perhaps surprisingly, many businesses are still not using technologies to their fullest potential, often as a result of a lack of skills and/or vision. A lack of competition can also slow down the diffusion of technology and entry barriers may prevent digital age entrepreneurs from challenging traditional firms.

THE ISSUES

The main barriers to digital age entrepreneurship appear to include: skills, infrastructure, and various aspects of the business environment. In many parts of the world, access to affordable, reliable, high-speed broadband infrastructure is still a problem, including in parts of developed countries. It is also important to create a dynamic and competitive digital business environment and address concerns around digital age entrepreneurship conditions in order to enable the creation of online services and applications. While these factors also matter for entrepreneurship more generally, they are even more important in the fast changing and fast moving digital world, and for digital age entrepreneurs in start-ups, smaller companies, and newer companies, in highly innovative—and therefore inherently riskier—sectors.

There are also some differences in the issues facing digital age entrepreneurs, and entrepreneurs more

generally. For example, many digital age entrepreneurs are *'born global'* (on the internet or in the cloud), or have the ability to grow and scale across borders very quickly. Much of a digital age entrepreneur's capital is often *intellectual capital*, which may raise Intellectual Property (IP) protection related issues (and less 'tangible assets' for creditors to fall back on in case of failure). Funding may also be difficult to obtain in cases where a successful innovation/start-up is the result of many initial failures (a learning process). Indeed, many well-known success stories are of digital age entrepreneurs who are in fact 'serial entrepreneurs' with a number of failures to their name.

MILLENNIALS

The term "millennial entrepreneur" refers to a business owner who is affiliated with the generation that was brought up using digital technology and mass media—the products of Baby Boomers, those people born during the 1980s and early 1990s. Also known as Generation Y, these business owners are well equipped with knowledge of new technology and new business models and have a strong grasp of its business applications. There have been many breakthrough businesses that have come from millennial entrepreneurs such as Mark Zuckerberg, the founder of Facebook.

Despite the expectation of millennial success, there have been recent studies that have proven this to not be the case. The comparison between millennials who are self-employed and those who are not self-employed shows that the latter is higher. The reason for this is because they have grown up in a different generation and attitude than their elders. Some of the barriers to entry for entrepreneurs are the economy, debt from schooling and the challenges of regulatory compliance.

THE MILLENNIAL FACTORS

Generally, it is accepted that those born between the early 1980s to the late 1990s are considered millennials, also known as Generation Y. So what is it about this generation that makes them more innovative and business inclined? Contrary to the stereotype that millennials are lazy individuals who were born with silver spoons in their mouths, the majority of millennials are extremely hardworking and economically conscious; wanting to make their

mark on the world while also caring about social and environmental issues such as ethics, rights, and sustainability. Commonly, millennials are also career confident, with a desire to contribute and a thirst for flexibility in their careers. These characteristics mean millennials are turning to entrepreneurship to generate a more creatively fulfilling career.

One of the most famous millennial entrepreneurs, Mark Zuckerberg, has built an online empire estimated to be worth more than \$70 billion, after launching Facebook from his dorm room at Harvard University back in 2004. In 2015, 52,000 millennials followed in Zuckerberg's footsteps and set up their own businesses before even graduating university, with a further 15% of undergraduates planning to set up their own company on graduation.

Moreover, a study, conducted in 2016, highlighted that 85% of millennials understand that entrepreneurship, while offering a chance to be your own boss and work more innovatively, is at large, a huge gamble. Not only are millennials willing to take that risk in order to embrace more creative pursuits, but they understand the risk and are prepared to fail, learning from the process.

CHANGING WORKPLACE & SOCIAL MEDIA

Technological advancements, global change, and cultural and political shifts have ultimately affected not only the types of jobs available, but also the way in which we work. In a time where we are being told to work longer hours and that being constantly exhausted and overworked is glamorized, millennials are looking for ways to work smarter, not harder. Millennial entrepreneurs are driven by their need for flexibility both creatively and through the 'way' they work.

Moreover, growing up in the digital age, many millennials, are guilty of constantly being online across a variety of platforms. While this can be the downfall, not looking up and sensing what's actually going on around, it has also enabled millennials to utilize these channels to market and promote their businesses. Constantly being attached to our phones, can be a benefit for employers too, as a study found that 89% of millennials who own a smartphone regularly check their email outside of the normal working hours.

With the rise of social media, it has never been easier to start your own business. YouTube sensation, Zoella, who has over 11 million subscribers, has used

social media to build a globally recognized brand, with products ranging from her published novel series, 'Girl Online,' to her range of lifestyle and stationery products.

THE EFFECT ON ORGANIZATIONS

The millennial generation, defined by the digital revolution, ignited a wave of cultural and organizational change, and it is this change that companies need to acknowledge. In such a progressive business environment, things are constantly evolving, and so must organizations if they want to appeal to the millennial generation and ensure their long term survival.

Millennials have their finger on the pulse of current and future business trends. Organizations should be aware of how millennial's social media expertise, combined with their strong work ethic, can help create a more diverse and innovative conversation that ultimately helps keep organizations forward-looking, enabling them to continually flourish and remain informed.

While not all millennials will launch into entrepreneurship, the majority share fundamental character traits that prove them to be a hard-working and progressive generation, looking for greater flexibility within their career. So the question for organizations today is, how can you attract and support the millennial generation who in turn can apply their digital know-how and ambition to improve your organizational culture and performance? Or will you just get left behind?

IMPACT OF ICT IN BUSINESSES

In addition to ensuring the right infrastructure is in place, it is also crucial to continue to encourage the diffusion, uptake and integration of ICT, notably in (smaller) businesses that have been shown to lag. Nowadays, it seems that consumers are often more eager and show a greater readiness to adopt new technologies, applications and devices than businesses. Thus, while the technologies and applications exist, there is often still a lack of societal or cultural readiness, which can include factors such as skills (in particular those related to digital age entrepreneurship), corporate or organizational culture not only in in businesses but also in the public sectors, as well as various types

of restrictive regulation that introduce rigidities and barriers to change. Many of these are related to the implementation and adoption of the technology, not the technology itself.

THE IMPORTANCE OF SKILLS

Skills issues are extremely important for digital age entrepreneurship. From the ability identify the talent that is required and recruiting that talent, including across borders, to having the skills to identify new technology-enabled business opportunities and bringing them to fruition, either as a new venture, or by transforming existing business models, skills issues are key to successful digital age entrepreneurship, digital transformations, and even the successful conceptualization and implementation of most IT projects (in both the private and public sectors).

Having the ability to communicate or ‘pitch’ the business case, either to the bank or other investors, or to senior management in the case of transforming activities in existing organizations, is crucial. This is also referred to as the need for ‘dual skills’, or ‘e-leadership skills’ (van Welsum and Lanvin, 2012): people who combine an entrepreneurial mind-set with business and communication skills as well as technical skills, at various levels of management and enterprise activity/organization.

Business leaders and entrepreneurs need to possess a degree of technological awareness that allows them to identify new technologies that will transform and shape their business model that will allow them to do new things, or do things differently, and to develop new products and services, ways of delivering them, and ways to communicate with their suppliers, customers and employees.

At the same time, it is important for technically trained people to have business acumen and skills to identify new opportunities, as well as communication skills to convey them to management and other less technically inclined leaders and decision makers.

As more countries transform into knowledge-based economies, and as the cloud and big data continue to gain importance, having access to these skills will become ever more important. Having access to data and being able to exploit them will increasingly be factors of competitiveness and (market) power. Many countries are putting their hopes for economic development and innovation on investments in ICT. However, the impacts of ICTs depend on the use that

is being made of them, which is in turn driven by factors such as skills, and whether or not the business environment enables people and businesses to take advantage of the opportunities offered by ICT.

THE CLOUD

The emergence of cloud computing over the past decade or so has reduced barriers to entry and increased opportunities for digital age entrepreneurs.

Cloud computing offers several benefits:

- Delivers computing resource as a utility service removing the need to invest in dedicated hardware and software infrastructures.
- Provides as much capacity as needed ‘on demand’ where only the amount of resource used is paid for.
- Makes new services globally accessible by default.
- Reduces costs by removing the need to buy equipment, software and services, the physical space to house the equipment, the day-to-day running and maintenance costs of the equipment, and less need for in-house IT and technical support resources. This benefit has greatly helped startups and small firms in particular as it has reduced the cost of IT enormously, and has made more and better IT—including IT support—affordable to those who might otherwise not have been able to afford it.

The ‘utility’ nature of the new cloud computing model means that investment capital that would previously have been needed to build out dedicated computing infrastructure can now be saved or spent on developing better products and services. The use of cloud computing as the foundation for startups has become so apparent that venture capital firms now refuse to allow investment funds to be spent on fixed computing infrastructure.

There is also a cash-flow advantage to this model as rather than having to spend money on fixed capital ahead of revenue, buying on-demand computing resources is a ‘real-time and on-demand/need’ consumption expenditure, thereby improving the cash-flow of companies and start-ups in particular. Indeed, the ‘on-demand’ aspect of cloud computing means that the computing costs of delivering a new digital service will be directly proportional to usage of the service by consumers. This enables entrepreneurs to more effectively manage costs and capital utilization.

Cloud computing is inherently 'elastic' so costs are only incurred when there is demand.

These advantages of cloud computing enable digital age entrepreneurs to more effectively utilize capital, manage costs, and scale reliably and responsively to growing user demand even when that demand comes from all over the world.

On the cost side, there are also some new developments in venture capital fundraising, notably that the cost of startup is actually increasing again, at least in the US. Indeed, the cloud lowered the cost of startup and the internet has made it much easier to start a business. As a result, there is now more competition for funding and startups are having to budget more for advertising and marketing, including in pitching their cases to VCs, driving the costs up again. In addition, startups and VCs are reporting that a growing war for talent with technical skills is also driving up costs. Whereas people were willing to accept a pay-cut in order to work for a cool or promising startup in the past (often in combination with an equity share), today they are demanding the same wages as paid in large established companies.

GOVERNMENT HELP

A good dose of regulatory humility will be needed in the fast moving digital space. Figuring out how to regulate activities and players that could be as yet unknown—created by fast moving and evolving technologies and the emergence of new applications—requires a fine balancing act. It will be important to strive for consistency and harmonization of the rules governing digital age entrepreneurship, while also limiting regulatory change and uncertainty going forward. Several areas are key, including:

- **Ensuring the Supply of Appropriate Skills:** Simplify and speed-up procedures for cross border recruitment of talent and reduce the associated costs; promote more interaction between the private sector and educational and vocational training institutions and organizations to ensure the skills supply better matches the skills needs in practice.
- **Fostering a Competitive Environment:** Reducing barriers to entry, and exit, where necessary is important in fostering a competitive environment and should help the diffusion of technology and reduce the power of incumbents.

- **Recognizing the Self-Interest of Incumbents:** Well-established businesses will often use policy influence to defend their market position against new disruptive technology based entrants. Policy makers need to be alert to the tactics and to ensure that policy intervention is not used as an unfair barrier to new competitive business models.
- **Clarifying the Rules for Use of Data:** 'Big data' regulation/rules of 'ethical' conduct around the collection, storage and use of data. Until the implications and ramifications are better known and understood it will be important not to over regulate data, which could stifle innovation and introduce unintended biases, while safeguarding privacy and security. It is also important to create trust in the online environment.
- **Promoting Open Standards and Open Data:** A new generation of evolved open standards will be required to unlock the full potential of the 'Internet-of-Things'. Policy makers should also 'prime-the-pump' for the creation of new digital services by ensuring open access to public data to allow the creation of new and relevant localized digital content, services and applications.
- **Creating the best Climate for Incubation and Success:** Promoting entrepreneurship and technology awareness and skills in schools, from early age and at all levels, including through the use of role models, promoting technology skills, and especially combinations of technical and soft skills (e.g. communication, management, and creative fields such as design), and providing information and a one-stop-shop to start a business online.

SUCCESSFUL DIGITAL AGE ENTREPRENEURS

The recent evolution of entrepreneurship and how the digital revolution have changed the entrepreneurial community. The digital age has redefined what an entrepreneur is—you no longer need money or backing to succeed. Today the market is increasingly global and competitive.

The pace of innovation has never been faster. An explosion of digital information, combined with lower barriers to enter the entrepreneurial community, has leveled the playing field.

Here are a few tips of how to succeed as an entrepreneur in the digital age:

1. Take advantage of the resources a co-working space provides

A lack of office space often prohibits people from starting a business. Co-working spaces solve this problem while giving you a place where you can easily collaborate.

2. Use free services to monetize your business

Entrepreneurs need to promote their businesses through one of the many free services that have recently cropped up. Now there are platforms for every entrepreneur to get out there and be successful without hiring a salesman and a team to build their website.

3. Use crowd-funding to keep your equity

These aspiring entrepreneurs can also benefit from crowd-funding, a platform that gives your product a global stage and lets the world be your funder.

4. Invest in the global mobile market

As mobile devices continue to become smarter and more personable they are also becoming more affordable.

5. Be a data-driven entrepreneur

Making data driven decisions is key to helping your business grow. Take advantage of the available data and use it to find out what works best. Small data-driven changes can have a huge impact on the success of a business.

CONCLUSION

Digital technologies offer tremendous growth opportunities but require entrepreneurs to fully unlock their economic potential as the basis of new businesses or an enabler of the transformation of already established firms.

Cloud computing dramatically reduces technical and investment barriers to bringing new digital products and services to market. But with these barriers being reduced much greater emphasis must be placed on creating the right environmental conditions—including skills, business cycle regulations, infrastructure and access to capital.

Ensuring affordable, reliable, safe and high-speed access to the technology—including at scale in the cloud—is in place is critical in removing barriers to digital entrepreneurial success. To enable digital age entrepreneurs in maximizing the benefits that access to

the infrastructure can offer, the role of policy makers in creating the right growth conditions for new digital business models, products and services becomes ever more critical.

Enabling digital entrepreneurs in developing countries is especially important to allow the creation of new markets, the exploitation of existing markets and integration into global value chains. Infrastructure, skills, financial inclusion and market access appear to be the enabling factors to focus on. At the same time, it is important to avoid the temptation to ‘pick winners’ or take early position on who will or will not be successful, and instead focus on creating an enabling environment that maximizes opportunities for digital age entrepreneurs.

The growth of online platforms that match demand and supply also offers increasing opportunities for people to offer services regardless of location. These tasks span the skills spectrum, (low- to-high-end skills), and can be a first step into building a broader and experienced skills base to allow subsequent new opportunities for countries to move up the value chain and increase local content in international supply chains

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