Harbiye Convention Center, Istanbul
A quarterly journal published by MIT Press

innovations

TECHNOLOGY | GOVERNANCE | GLOBALIZATION

Special Edition for the Global Entrepreneurship Summit
Istanbul, Turkey, December 3-6, 2011

Entrepreneurship, Values, and Development

ENTREPRENEURIAL SOLUTIONS TO GLOBAL CHALLENGES

Innovations: Technology | Governance | Globalization is co-hosted by the School of Public Policy, George Mason University (Fairfax VA, USA); the Belfer Center for Science and International Affairs, Kennedy School of Government, Harvard University (Cambridge MA, USA); and the Legatum Center for Development and Entrepreneurship, Massachusetts Institute of Technology (Cambridge MA, USA). Support for the journal is provided in part by the Lemelson Foundation and the Ewing Marion Kauffman Foundation.

This special edition for the Global Entrepreneurship Summit, 2011, was produced in partnership with the El-Khazindar Business Research and Case Center (KCC), American University of Cairo.

Innovations (ISSN 1558-2477, E-ISSN 1558-2485) is published 4 times per year by the MIT Press, 55 Hayward Street, Cambridge, MA 02142-1315.

Subscription Information. An electronic, full-text version of *Innovations* is available from the MIT Press. Subscription rates are on a volume-year basis: Electronic only—Students $24.00, Individuals $46.00, Institutions $164.00. Canadians add 5% GST. Print and Electronic—Students $27.00, Individuals $51.00, Institutions $190.00. Canadians add 5% GST. Outside the U.S. and Canada add $23.00 for postage and handling.

Single Issues: Individuals $15.00, Institutions $50.00. Canadians add 5% GST. Outside the U.S. and Canada add $6.00 per issue for postage and handling.

For subscription information, to purchase single copies, or for address changes, contact MIT Press Journals, 55 Hayward Street, Cambridge, MA 02142-1315; phone: (617) 253-2889; U.S./Canada: (800) 207-8354; fax: (617) 577-1545. Claims for missing issues will be honored if made within three months after the publication date of the issue. Claims may be submitted to: journals-claims@mit.edu. Prices subject to change without notice.

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Innovations: Technology | Governance | Globalization is indexed and/or abstracted by AgBiotech News & Information, CAB Abstracts, Forestry Abstracts, Global Health Abstracts, RePec, PAIS International, and World Agricultural Economics & Rural Sociology Abstracts.

website: http://www.mitpressjournals.org/innovations/

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About *Innovations*

Innovations is about entrepreneurial soultions to global challenges.

The journal features cases authored by exceptional innovators; commentary and research from leading academics; and essays from globally recognized executives and political leaders. The journal is jointly hosted at George Mason University's School of Public Policy, Harvard's Kennedy School of Government, and MIT's Legatum Center for Development and Entrepreneurship.

Sherif Kamel

Foreword to the Global Entrepreneurship Summit Special Edition

It gives me great pleasure to see the publication of this Middle East special issue of *Innovations*. It is important to note that this special issue will be distributed at the Second Presidential Summit on Entrepreneurship to be held in Istanbul, Turkey, on December 3-6, 2011; more importantly, it will be disseminated for use in business schools around the Middle East-North Africa (MENA) region and beyond.

This special edition includes a number of business cases that focus on for-profit entrepreneurship in the MENA region. They emphasize how innovation and creativity can lead to significant growth in business and industry and, hence, create opportunities for society. The cases address the development taking place in the emerging economies such as those of Egypt and Jordan, and in Turkey, one of the leading global economies, at a time when the MENA region is in the midst of a historic transformation in the wake of the recent uprisings in a number of nations, including Egypt.

Teaching cases are invaluable in linking industry, business, and academia, as well as in blending educational content and in-class discussions with real-life market practices and emerging concepts and trends. The case methodology provides a comprehensive ecosystem within the educational framework, where many constituencies contribute to the development process and the readers and beneficiaries of the cases get exposed to current market experiences and a wealth of lessons learned from the previous ventures of entrepreneurs and investors. Since January 2011, the uprisings taking place across the MENA region have introduced new challenges and presented new opportunities for a number of institutions. They also offer rich content for the cases that will be developed in the years to come and inspiration for the region's young, energetic, and passionate graduates and entrepreneurs who are hoping to create a start-up culture and a solid private sector that will transform their society and contribute to socioeconomic development and growth.

In that sense, perhaps the most important obstacle and opportunity the MENA region's management education programs are facing in this new era is relevance. The recent developments across the MENA region, including its most recent iteration in the United States in the form of the Occupy Wall Street movement, underscore the fact that management programs that promote graduate employability in the immediate future are paramount. Youth unem-

Sherif H. Kamel has been founding dean of the School of Business at The American University in Cairo since September 2009. In that position, he is leading a major restructuring by adopting a thematic approach that includes entrepreneurship, innovation, and leadership. He also has been a professor of management information systems at the university since 2000. Kamel has varied experience as an academic leader investing in human capital, building and managing executive development institutions, and addressing management, entrepreneurial, and leadership issues. He is the editor of E-Strategies for Technological Diffusion and Adoption: National ICT Approaches for Socioeconomic Development (2010), and the associate editor of the Journal of Cases on Information Technology and the Journal of IT for Development.

ployment, insurmountable barriers for small businesses entering the market, a stifled startup culture, and widespread corruption are just some of the factors that inspired and ignited the Arab Spring. According to the World Bank-International Finance Corporation “Doing Business 2011: Making a Difference for Entrepreneurs” report, the average ranking for “ease of doing business” in the MENA region is 96th place, a position that needs to be changed quickly if a startup culture is to be given the chance to contribute to the economic development aspect of the Arab Spring. The challenges and opportunities faced by MENA region entrepreneurs and investors represent a wealth of knowledge that should be shared and disseminated for the benefit of current and future entrepreneurs and business leaders. They include cases on successes and failures and portray how to benefit from a growing startup culture that has been transforming itself continuously since the first quarter of 2011.

In the coming years, the MENA region institutions will need to play an active role in educating and consulting with new government and business leaders. As such, management schools must become better at integrating facets of public- and private-sector leadership into educational and research practices. However, using models and cases from different regions outside the scope of MENA will not adequately address the specific short- and long-term challenges the region faces. MENA’s future leaders should embrace diversity and the sharing of knowledge, which should start with the development of case studies that disseminate knowledge among entrepreneurs, startups, investors, mentors, and other constituencies involved in the entrepreneurship ecosystem. This must be a community effort that is developed collaboratively and then is used and benefited from through dissemination and sharing.

With this in mind, the School of Business at the American University in Cairo established the El-Khazindar Business Research and Case Center in 2010 to develop case studies relevant to the region. Locally sourced knowledge is the future of regional management education and is fundamental for asserting leadership on the competitive global stage. It is important to note that emerging economies are going through rapid developments, and with a world constantly affected by innovative and cutting-edge information and communication technology tools and applications, information sharing and knowledge dissemination is an invaluable mechanism for sharing expertise and lessons learned. Case studies (including mini-cases) represent the ideal platform for reporting and documenting the successes and failures for different projects, initiatives, and companies operating in various sectors and disciplines. Cases that address flourishing emerging economies and various other developments represent a key element in the advancement of both academia and business. The need for local (homegrown and developed) cases is becoming invaluable because the desire for local knowledge—for example, that pertaining to Egyptian businesses—has become increasingly necessary to improved comprehension of organizational performance, development, and growth in the Egyptian context. These cases reflect the implications of the global market, economic, and development trends, while also catering to local conditions, cultural implications, and societal values and norms. They could be considered cases that demonstrate “glocalization.”

This special issue of *Innovations,* in collaboration with the School of Business of the American University in Cairo, is a step forward in documenting the developments taking place in the region and showcasing examples of the entrepreneurial spirit spreading in this part of the world. This special issue combines a variety of cases in a number of diversified disciplines. There are 11 mini-cases on entrepreneurial ventures in the MENA region: seven from Egypt, two from Turkey, and two from Jordan. One of the most notable aspects of the special issue is its broad coverage of challenges and opportunities from both a local and regional point of view.

The issue divides the cases into six areas of business and industry, including technology, food, oil and gas, pharmaceuticals, housing, and jewelry, with food taking the biggest share of the cases. The cases provide comprehensive content on different startups and well-established companies, which covers a depth of experience in different markets, including strategic and operational issues faced while running the day-to-day business, but also in meeting challenges and planning for the future.

This special issue focuses on entrepreneurship and innovation, which in today's world are the driving forces behind transforming individuals, organizations, and societies. I am confident that the content of this publication will make a solid and effective contribution to these influential social trends. I would like to seize the opportunity to thank all those who got involved in the development and production of this special issue, as well as all the authors, reviewers, and editors whose expertise helped to deliver such an important contribution. It is my hope that this publication will provide emerging economies and evolving organizations with good practice principles for development, growth, policy, regulatory, and market frameworks in an evolving, dynamic, complex, and constantly changing marketplace. Eventually, sharing the lessons learned and exchanging capacities and knowledge will allow newly emerging and growing economies and their startup companies to leverage their entrepreneurial skills to create and sustain companies, and to benefit from the opportunities constantly emerging in this globally interconnected and dynamic marketplace that is empowered by emerging information and communication technologies.

On that note, the American University in Cairo's School of Business has introduced its Entrepreneurship and Innovation Program (EIP), whose philosophy shifts the emphasis from "entrepreneurship the *discipline*" to "entrepreneurial *thought and action,*" focusing on elements that provide students with a well-rounded marketplace advantage, regardless of their career choice. EIP supports the creation of an entrepreneurial educational ecosystem that can help accelerate the growth of startups in Egypt, where there is no shortage of innovative ideas. It also educates students to be employees of choice or self-employable; connects students with venture capitalists, angel investors, mentors, and others; and is accelerating the growth of hundreds of entrepreneurial companies. EIP is an ideal platform for generating a flow of case studies that relate to different sectors and disciplines and will demonstrate the way to do business in this part of the world. Case studies are the perfect communication vehicle, as they connect these experiences to a huge market of stakeholders in the local, regional, and global marketplaces. I hope *Innovations* readers will enjoy this important read about how to do business in the MENA region and the associated cultural challenges and opportunities.

Fadi Ghandour

The Age of Timidity Is Gone

Address delivered at the Skoll World Forum
Oxford, U.K.
April 1, 2011

For decades, bad news has crowned us in the Arab world, much like an epitaph on a tombstone. And it is the very sad story of squandered youth that stands at the heart of our region's epic tale of failure:

- 40 percent of youth hugging the walls in Algeria,
- 24 percent in Egypt,
- 30 percent in Tunisia,
- 27 percent in Jordan,
- 39 percent in Saudi Arabia,
- 30 percent in Syria,
- 46 percent in Gaza…

And *when* they do finally find work, the pay is lousy, job security is nonexistent, and the working conditions are dismal.

All this, and I haven't even begun to pick at the other problems that plague us:

- Rich and poor living galaxies apart
- Endemic corruption
- Withering environments
- Deeply entrenched discrimination against women
- Pervasive abuse of civil rights

A people on the cusp of disaster, you might say, or revolution

Well, barely two months ago, I thought I would be standing here today to talk to you about Arab civil societies in quiet action for change—a story I've been telling for a while now to anyone who cared enough to listen.

As you can imagine, it was a hard sell. In the sight of a region that seemed at a standstill, paralyzed by too many traumas and brought low by heartbreak, the verdict everywhere against our civil societies seemed as fair as it was cruel.

Worn out!

Feeble!

Stuck!

And then, Tunisians and Egyptians spoke in passionate unison.

So, I actually do get to say it in my lifetime: Vindication at last!

Fadi Ghandour is the Founder and CEO of Aramex, a global logistics and transportation solutions provider. Ghandour is also the Founder of Ruwwad for Development, a private sector-led initiative that is engaging youth to empower disadvantaged communities. He is a founding partner of Maktoob, the world's largest Arab online community, and serves on the boards of Business for Social Responsibility, National Microfinance Bank Jordan, Abraaj Capital, Endeavor Jordan and S.S. Olayan School of Business at the American University of Beirut.

Vindication because what we are witnessing this very minute, here and now, did not actually happen on a whim. It happened because our civil societies finally turned out to be more alive, more vibrant, more confident, and—yes—more furious than many of us thought they were.

Vindication because, of all the calls for change, the most powerful has been the one for citizenship.

Vindication because behind the rage of it all—the collective cry for freedom, for jobs, for better pay, for security, for dignity, really—behind this collective cry for change stands the hard toil of Arab activists.

The age of timidity is gone. The Arab world is at a crossroads and the choices we make are of profound consequence.

Activists of all colors, rich and poor, men and women, from within the labor movements and without, professionals and vegetable vendors, bloggers and field organizers . . .

A mass of activists who have shown us that the flipside of the famous Arab deficits cited in the UNDP's Arab Human Development Report is none other than empowerment.

And if the youth in the Arab World have shown us anything in these past two months, it is that pain and dispossession can beget change of the most dignified kind, that when time bombs explode, the results sometimes can be unusually inspiring.

They have shown us that they are actually avid readers and tuned in:

- 86 percent of them are connected to the Internet
- 65 percent are connected to social media
- 18 percent read blogs

They have shown us that women may have been left behind and out by the Arab system, but that they are at the forefront of change.

They have shown us that they have an enduring desire for democracy.

They are also telling us now, as many surveys confirm, that they prefer to work in the private sector, and that in fact half of those aged 18 to 24 intend to start their own business in the next five years.

They are telling us that they have a growing sense of global citizenship . . .

We, in the private sector, are indeed very lucky, because we, especially the entrepreneurs amongst us, know how to turn uncertainty into opportunity and transform enthusiasm into tangible achievement.

We know that this fervor in the Middle East is just as much about societies wanting a better life as they do better governance.

And we know that our companies' healthy bottom line is a sham if it is divorced from our communities' well-being.

But, truthfully, for far too long, we have been conservative, reactive, even fearful, playing second fiddle to governments and walking in the distant shadow of civil society. Almost always, we have been the most vocal apologists for the status quo.

The age of timidity is gone.

The Arab world is at a crossroads and the choices we make are of profound consequence.

Ladies and gentlemen, on May 6, 1954, 3,000 spectators gathered at the Iffley Road Track here, in Oxford, for the annual match between the Amateur Athletic Association and Oxford University.

A dreary, cold, windy day, a very lucky crowd . . . for they were about to witness Roger Bannister break the impossible four-minute mile, a feat once deemed by the American scientist G. P. Meade as beyond "the realm of reason."

Bannister's time: 3 minutes 59.4 seconds.

Only six weeks later, his own record would be beaten by the Australian John Landy, at 3 minutes 57.9 seconds. Since then, 18 new records have been reached.

Roger Bannister always comes to my mind when I think of the magnificent power of role models and of activists and social entrepreneurs in our part of the world.

Social entrepreneurs, like Maher Kaddoura, a businessman who, after the tragic loss of his son in a car accident, worked relentlessly for safer roads in Jordan rather than wait for the government to do so. In three years, the results are astounding: a 32 percent drop in fatalities from traffic accidents and a massive 46 percent drop in serious injuries.

We have Yasmina Abu Youssef, who established Khatawat, a vocational and academic school for truants in Izzbeit Khairrallah, one of Cairo's countless haphazard slum areas where close to half of the capital's 17 million population live.

We have role models like Samih Toukan and Hussam Khoury, who created Maktoob, the leading Arab online portal, and paved the way for the Arab web industry, inspiring a whole generation of web entrepreneurs.

We have people who have created networks for mentorship, like Habib Haddad, who launched YallaStartup in Lebanon, a boot camp, which brings together highly motivated developers, graphic designers, product experts, start-up enthusiasts, marketing gurus, and artists for a 54-hour event that builds communities, companies, and projects.

We have none other than Soraya Salti, who empowers through education. Injaz al Arab, her organization, instills entrepreneurial skills and a deep sense of business ethics in youth at schools and universities across the Middle East and North Africa.

And then we have us at Ruwwad, a group of business entrepreneurs who decided to venture into social entrepreneurship and bring our skills, resources, and networks to the Arab world's downtrodden and forgotten. Ruwwad al Tanmiah, Entrepreneurs for Development, is a private sector-led model that puts entrepreneurship at the service of community development and empowerment. A youth-centric model at heart that offers education to economically and socially marginalized youth in exchange for community service. A model that taps into the resources of the community itself, thereby unleashing its creativity and generosity in finding solutions for its problems. A model that believes in people power and nurtures grassroots leadership.

Ladies and Gentlemen, I have shared with you tiny, wonderful vignettes of Arab civil society hard at work in the service of the people.

I don't know what life has in store for us around the corner. But I am certain that we, the entrepreneurs of the region, must do our part in shaping it into something infinitely better than it was in the years that, thankfully, are now behind us.

Ovais Naqvi

Entrepreneurship MENA: Opening the Floodgates

Stimulating entrepreneurship is intrinsic to creating both sustained economic value and jobs. It is also clear that no more critical a goal exists in the Middle East-North Africa (MENA) region than creating stability and common prosperity through the long-term employment—and positive deployment—of youth.

Studies make extensive connections between entrepreneurial activity and economic development, and a 2010 report by the Kauffman Foundation makes explicit the role of startups in job creation. The study specifically states, "Startups are not everything when it comes to job creation. They are the only thing."

In related Kauffman studies from the U.S. (see Kane 2010), conclusive evidence exists that startups account for a substantial proportion of all net job creation. Mapped onto domestic and/or regional recession, further evidence suggests that job creation in the startup segment remains consistent in economic downturns, whereas larger businesses are more adversely affected by the cyclical economic factors typical to the boom/bust cycle. Finally, in a 2009 study by Litan, Kauffman concludes that two-thirds of new jobs come from firms that are between one and five years old.

It is clear that emerging and developing economies are impacted by similar dynamics, based on evidence from Brazil, Jordan, and other entrepreneur-centric economies (Ali 2010; Castanhar, 2008), in that entrepreneurship stimulus and growth metrics in such places supersedes even the pace of startup activity in the U.S.

Mapped onto the above dynamics, it is also possible to gain insight from studies such as the Startup Genome Report (Marmer, Herrmann, & Berman, 2011) as to how and why startups succeed, thereby creating an effective framework to facilitate such success. Projects such as Oasis 500 in Jordan have (with some early success) begun to create the structured pipeline of incubated businesses that may well ensure quality. Thus the flow of venture capital may accelerate in the region over time and in a sustained fashion.

Of course, success through entrepreneurship does not depend solely on the rate of growth in the volume of startups. A core factor in the success of such businesses is access to an open channel of active "angel" and early-stage investors, who operate individually or through dedicated vehicles or seed funds and plug the gap of early-stage capital requirements below the $1-$2 million threshold of conventional venture capital firms. Such an approach may well give entrepreneurs the access to quality strategic insight, possibly to mentoring, and to the reasonable performance reporting requirements of a sophisticated early-stage investor. A joint Harvard-MIT study estimated that angel-funded firms have a greater chance of survival and typically outperform their non-angel-funded counterparts (Kerr, 2010).

Ovais Naqvi serves as a Senior Advisor to Abraaj Capital, responsible for strategic marketing and brand creation challenges, currently as CMO/Brand owner at the wholly-owned Riyada Enterprise Development (RED), a US$1 billion investment fund focused on SME investment across 14 markets in Middle East North Africa (MENA).

THE ECOSYSTEM

Startups cannot exist in a vacuum, nor are they isolated from cultural, political, and structural factors. It is clear that an entrepreneurship ecosystem, typically at the national level to start with, is the defining factor in creating a sustainable entrepreneurship culture and in repeated success. In the words of pioneering jazz musician Dizzy Gillespie, "The professional is the guy who can do it twice." A large part of that ethos is embedded learning, culture, and the impact of repeated success that benefits the whole ecosystem, fraternity, or community.

The broad factors that are required to make the ecosystem work in a region like MENA are:

- **Entrepreneurship education and relevant academia:** One lynchpin is the "anchor" role of an innovation-driven academic institution like MIT. Its role is in entrepreneurship education, incubation, and acting as a long-term bridge for academic insight allied to closely affiliated or even in-house business expertise. Regional universities such as The American University in Cairo and the American University of Beirut seek also to create the content, bridge, and pipeline of future success stories. However, as Bill Aulet, head of the MIT Entrepreneurship Center, points out from his travels to far-flung Romania and other emerging or growth markets, it is perfectly possible to create entrepreneurial vibrancy without a single top-500 university in the vicinity, primarily because the innate characteristics and hardiness of the population lend themselves to business endeavors and entrepreneurial behavior.
- **Capital and markets equity, markets and debt:** Much is said about the need to unlock capital from venture capital, angel investors, and private equity firms to make entrepreneurship happen. This can go as far as the evolution and maturity of capital markets and exchanges for flotation, and the IPOs of midsized enterprises, such as the Alternative Investment Market in the UK. While a vibrant pool of equity capital is key, so, in parallel, is the role of banks and debt. The first thing to suffer in an economic downturn is the ready availability of "cheap" bank financing, from bridge loans to positive debt financing that accelerates growth without equity dilution. One area where stakeholders need to step up to the plate far more is regional and domestic banks that dedicate both capital and specialists to supporting the growth goals of national small and midsize (SME) enterprises. Parallel to this is the role of cash-rich family enterprises and holding companies in creating entrepreneurship-focused vehicles within their corporate structures to seed and participate in businesses, which may eventually act as a growth hormone to their core businesses. Regional businesses, such as logistic provider Aramex, have already begun to do this through the venture funding of e-commerce-led businesses, for which Aramex can be both a physical incubator and a service provider in logistics, distribution, and customer fulfillment of the early-stage business.
- **Shift in culture:** As per the example of Romania and closer to home in Jordan, Egypt, Lebanon, and similar markets, the cultural "X" factor is key in defining the backdrop against which entrepreneurs prosper. The key factors there include the family and society structures; the role of and deference toward age; the existence and encouragement of innovation, creativity, arts, music, and literature communities; freedom of speech and expression; respect for the radical, maverick, and even seemingly crazy view and for nonconformity; cultural openness and the breadth and depth of that embrace; and the "continuous beta" versus product perfection culture. That is, a new culture of "get the product out, let it live, and get the user franchises' active support to improve it"—the Google way. Two other factors also appear to be key:
  - The willingness to let go and exit the business at an optimal moment of value creation, versus holding onto it as an heirloom or cash cow
  - The acceptance, tolerance, and positive embrace of failure; the most gifted entrepreneurs

and most visionary investors would argue that failure is merely a normal, necessary, and valuable step on the path to success. To quote Steve Jobs (and why not"), "Sometimes when you innovate, you make mistakes. It is best to admit them quickly and get on with improving your other innovations."

- **Knowledge and best practice:** Most entrepreneurs are smart but not geniuses. The basics of knowledge sharing, best practices, continuous learning, and exploring the behaviors of the best are the way to learn to integrate these into a unique personal work style. Online platforms, open-source content, and community portals play a key role in that.
- **Community creation, partnership/alliance and connection:** Find like-minded people and network for positive economic advantage versus mindlessly adding numbers to the personal network. This is especially critical in countries that are relatively and largely "disconnected," sometimes from their own regions let alone globally (Syria, Libya, Yemen, and Iran are examples). The models of the future, especially in the service sector, are more than likely to be virtual, where partners and stakeholders in the organization could be so disconnected geographically and so connected digitally that they have never and don't even feel the need to meet each other.
- **Mentoring framework:** Commonly neglected and easy to identify is the role of the mentor, typically someone outside the business and family circle who can offer their wisdom, experience, and wider insight, or just give time and an ear to the entrepreneur and even the seasoned business leader at key business or personal inflection points. In *The Critical Phases of Mentoring* (Bury, 2011), Tony Bury, founder of mentoring organization Mowgli, identifies the startup, growth, and—quoting post-meltdown Jim Collins's *How The Mighty Fall* (2009)—even the "success/hubris" stages of the business' history and the role for tailored and precise mentoring interventions at those key moments.
- **Role modeling and success stories:** For every Steve Jobs, Mark Zuckerberg, Reid Hoffman, and, in the regional context, Naguib Sawiris of Orascom, Fadi Ghandour of Aramex, there are multiple aspirants, and the role of such entrepreneurs is key in knowledge sharing and in shifting the paradigms. Leading entrepreneurs are often maverick who are capable of thinking and staying outside the box. It is critical to recognize the real drivers of their successes, as opposed to the shallow factors: typically their innovative and disruptive thinking (often at early age), tenacity, determination and drive, taking others with them versus force-fitting their perspectives, an anti-establishment ethos and lack of deference, and a constant thirst for what one might call "new-frontiering" and the ability to "remake/remodel/remaster" their businesses and their thinking. Equally critical is the role of knowledge platforms to create new success models and identify newer role models as the old ones potentially start defining or epitomizing a past generation.
- **Government, thought leadership-bridging platforms and universal stakeholders in general:** Government has a central role to play, both as the defining authority in society and the primary stakeholder in the legal, jurisdictional, and regulatory context in which businesses operate. "Ease of doing business" measures (World Bank) provide a quantified and relative measure of whether entrepreneurs are unleashed or tied up. Regional think tanks that bridge the public and private sectors and encourage the active participation of development finance institutions all contribute to the opportunity to access capital, best practice, governance structures, sustainability insights, and globalizing the strategic depth, planning skill, and customer reach of a business.

WHAT ABOUT US?

Abraaj Capital's entry point into this whole debate and the action it has created lies at the very heart of the fabric of the firm. Established in 2002 by Arif Naqvi, Abraaj pioneered regional private equity through a combination of having a clearly enshrined founder-led vision, embracing and then redefining best practices within global private equity, successfully creating and reinforcing market leadership through a continuous learning, adopting best practices and global operation standards and hiring practice culture, and two critical differentiators: delivering superior returns to investors over a sustained period, having an active stakeholder engagement program that is focused on deeply embedding itself in the region, and being regional rather than global in focus, depth, insight, and expertise. Over time, the firm has grown to have assets under management of $6 billion and a team of more than 90 investment professionals.

Central to the above has been an approach to taking responsibility, recognizing the community versus customer footprint of the Firm and its partner companies, an inclusive and innovative approach to wider strategic partnership and social/strategic platforming, an early embrace of community and (later) wider ESG practices, and treating the entrepreneur and business leader within the invested business as a principal, aligned strategic partner in the common growth and value creation plan of the business.

As a result of the economic impact and value created by the firm's private equity business, Abraaj has been able to leverage significant resources to fund and accelerate a series of initiatives and outcomes, all of which reinforce the firm's pedigree as an entrepreneur-centric business. The firm has recognized the components of both creating an effective entrepreneurship ecosystem and creating a layer of investment and capability to execute deals, derived from private equity and then remixed for the small and midsize segment, and even into angel stage investments. The core components of this strategy are:

- **Abraaj Sustainable and Stakeholder Engagement Track (ASSET):** ASSET has a wide-ranging, five-pronged mandate at Abraaj, central to which is maximizing impact, value, and return on investment from all the non-investment activities of the firm, which in this context embrace and include strategic and social platform partnerships such as Endeavor, Global Compact, Injaz al-Arab, and Ruwwad, among others in the fields of business and social entrepreneurship, sustainability and ESG, classic strategic philanthropy and capacity-building in children and youth
- **Riyada Enterprise Development (RED) Growth Capital Fund:** A $650 million fund focused on investing in a diverse deal flow covering eight core economic sectors, with around $100 million of capital either deployed or committed to nearly 20 investments by November 2011. Central to the RED ethos is the reinterpretation of private equity best practices by framing them in a faster-moving venture capital-style context, actively identifying entrepreneurs who have a track record, growth potential, and the ability to exist successfully within a well-governed corporate framework and, finally, going yet deeper into the region but setting up relatively small office infrastructures across multiple geographies. Finally, embracing the development finance institutions co-investment model and fast-tracking ESG and sustainable practices within a new and emerging layer of regional growth businesses
- **Wamda:** Conceived, initially operated, and seed-funded by Abraaj, Wamda.com is the centerpiece of a content and community vision that creates a common digital frequency of knowledge, content-sharing, and community engagement in MENA that is targeted at all segments of the entrepreneurial community. Wamda already plays a defining role in the regional SME knowledge and community space by:
  - helping professionalize SME business practices and operational capacity
  - ensuring a level playing field in access to knowledge and best practices
  - driving critical regional themes, such as corporate governance, transparency, female -

empowerment, and social entrepreneurship
- supporting government to ensure that ecosystem support is core to SME development
- connecting regional with global behavior through the commonality of best practices.

In a final act of entrepreneurialism, Abraaj decided in 2011 to spin out Wamda into an entity within which it remains a shareholder, but which operates autonomously across Dubai and Beirut hubs under CEO Habib Haddad, builds its own offline and online integrated content, community, event, and partnership strategies, and works toward a revenue-generation goal by 2013

- **Wamda Angel Fund:** In 2011, Abraaj seeded the Wamda Angels fund with an initial draw-down of up to $5 million. The fund is effectively a Silicon Valley-style "micro-VC" or seed fund with a mandate focused on early-stage investment opportunities. The business feasibility around such a platform recognized both U.S. and global best practices within the angel investment/platforming space, and the need (and opportunity) within the region for a single angel platform that, over time, attracted co-investors and served as the region's leading seed investment community, largely driven through online submission of business plans, smart screening, and fast-tracked deal execution and closure
- **Celebration of Entrepreneurship:** Abraaj conceived, funded, and executed "Celebration of Entrepreneurship" (CoE) in Dubai in 2010 has been generally regarded as a landmark content and networking event in MENA regional entrepreneurship, and it has perhaps even set the standard globally for multi-platform, multi-format, parallel-speaker and multi-content event programming in the entrepreneurship space. It attracted 2,500 attendees over two days across over 230 individual speaker events. It further centralizes Abraaj and RED in regional entrepreneurship and reinforces the firm's stated credentials as an entrepreneur-centric investment organization and culture. CoE has played its part in unleashing entrepreneurial energy, reinforcing the firm's capacity-building and community engagement intent, and its regional authenticity, even as a positive change- maker. This in itself is a globally unique positioning for a private equity firm: to be seen as a double bottom line value creator, a force for positive change, an agent for sustainable and community impact, and as a thought leader in harnessing and celebrating regional and youth capacity. As of now, the firm is also identifying the growth and development path for CoE, which may well involve, like Wamda, spinning out the platform into a separate for-profit entity.

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Maha El Shinnawy

Women's Entrepreneurship in the Middle East

It is widely recognized that entrepreneurship is one of the most critical sources of economic growth around the world, particularly in developing regions. According to Adam Smith, entrepreneurs are the economic agents who transform demand into supply for profits, or those who transform unfulfilled market demand into an innovation. Renowned economist John Stuart Mill described entrepreneurship as the founding of a private enterprise that encompasses risk-takers, decisionmakers, and individuals who create wealth by managing resources to create business ideas. This can be in the form of a new good or new quality standard, the introduction of a new method of production, or the development of a new service or new market. According to Greg Watson, entrepreneurship is "a process through which individuals identify opportunities, allocate resources, and create value. This creation of value is often through the identification of unmet needs or through the identification of opportunities for change." Watson, Smith, and Mill all agree that entrepreneurs transform problems into opportunities with definable solutions that customers will find valuable enough to pay for. Successful entrepreneurial activity is the product of identifying these opportunities and capitalizing on them to create value.

The Middle East is currently at a crossroads. Without sustained economic growth and steady job creation, the region will face ever increasing hardships. Over the next 20 years, the countries of the Middle East must create 100 million new jobs. This challenge is especially acute because the region's labor force is increasing at 3 percent each year, while at the same time economic growth is slowing. Many scholars have begun to point to the economic potential of women as a critical part of the solution to this impending crisis. The primary challenge in promoting women as catalysts of economic growth is the lack of access to education and training for women in the region, where they are underrepresented and underserved. Many of these women are already entrepreneurs, despite their lack of the formal skills and experience associated with graduate level students. Others are recent college graduates who are interested in earning an MBA. Regardless of their background, they are all women who do not have the financial capacity or opportunity to receive the support, guidance, and mentoring that will allow them to become successful business leaders and social entrepreneurs.

Women's entrepreneurship is recognized as an underutilized source of economic growth, in that women entrepreneurs have been found to create not only new jobs for themselves and others but also to provide diverse products and services that help to address complex managerial, organizational, and business problems and to exploit unique entrepreneurial opportunities. Women start their own business and their careers with the same level of intelligence, education, and commitment as men, yet comparatively few reach the top. All men and women who have the intelligence, desire, and perseverance to lead should be encouraged to fulfill their potential and leave their mark.

Clearly, the potential for women to develop and grow successful entrepreneurial businesses is a topic of great interest in regions where economic growth through entrepreneurial activity

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is necessary for survival. While women's entrepreneurship has a substantial economic impact, researchers recognize that policy development, education, access to finance and mentor networks, and focused research is necessary to help make this a reality.

Women's entrepreneurship has been largely neglected in society and in the social sciences. Women not only have lower rates of participation in entrepreneurship than men, they also generally choose to start and manage firms in different industries than men. The service, retail, and education industries, which are those usually chosen by women, are perceived as being less critical to economic development and growth than those geared toward manufacturing and technology. It is apparent that the specific needs of women entrepreneurs are often not taken into account, which leads to a lack of equal opportunity for women and thus a less than equitable entrepreneurship environment.

Women's entrepreneurship is not only about the position of women in society but about the role of entrepreneurship in society in general.

It is important to incorporate a gender perspective into all entrepreneurial dimensions when considering growth policies for small and midsize enterprises. The components critical for the development of women's entrepreneurial growth and development include access to finance at all stages of the business continuum; adequate business development and support services; access to corporate, government, and international markets; and access to technology, research and development, and innovation. Periodic evaluation of the impact of any policies designed to enhance the success of women-owned businesses is equally important. Moreover, profiling and celebrating the success stories of women entrepreneurs also helps promote awareness of the role women entrepreneurs play in the economy and inspires other potential women entrepreneurs.

Entrepreneurial networks are a valuable tool for the development of entrepreneurship among women and have been found to be critical in the sustained growth of women-owned businesses. However, these networks are far less developed among women than men. Policymakers therefore must foster networking between associations, encourage cooperation and partnerships among national and international networks, and facilitate women's entrepreneurial endeavors.

Women's entrepreneurship is not only about the position of women in society but about the role of entrepreneurship in society in general. Women are faced with cultural obstacles that must be circumvented to enable them to have the same opportunities as men. Women represent 30 percent of Egypt's labor force, therefore their increased participation in the labor force is a prerequisite for improving the position of women. It is clear that much work remains to be done to enable women to become a force for economic development and entrepreneurial participation.

Arab countries rank low on the scale in the Global Gender Gap report of 2010, with Egypt ranking 125th out of 134 countries. Reasons for the gender gap include economic opportunity and participation, and political empowerment—or lack thereof. Cultural factors also seem to play a prominent role, such as the compatibility of productive and reproductive roles, with the burden falling on the shoulders of women. Women also tend toward different options in schooling and subjects studied, both by being so directed and by choice.

Although 40 percent of Egypt's female population is illiterate, female literacy in the 15-24 age group is now above 80 percent, labor force participation increased from 22 percent to 26 percent, and women's annual earned income has increased from $1,635 to $1,963. Moreover, women own 20 percent of the companies in Egypt, including some that are more technologically sophisticated and more likely to export than those owned by men.

There is a strong relationship between economic participation and the empowerment of women. At the macro level, there is a positive correlation between female labor force participation and economic growth. At the micro level, the participation of women is beneficial to the welfare of the family. Raising the level of education and training will increase women's rate of labor force participation. As women receive more education and more policies are passed to empower women to be active participants in the economy, income potential, job creation, and the benefit to families and society will rise.

Globally, over 500 courses on entrepreneurship are available. Harvard Business School 's three most popular courses are in entrepreneurship, and colleges across North America are receiving millions of dollars in endowments to expand their entrepreneurial programs. The success of entrepreneurial programs is attributed to ever more people living the entrepreneurial experience, something that cannot be learned in a classroom and must be mastered by experience. However, to become the next Colonel Sanders or Bill Gates or Steve Jobs, being qualified is certainly not the only criteria. The difference between managers and entrepreneurs is that managers are a resource while entrepreneurs are driven by opportunity. Young minds need to understand the concept of wealth creation and be trained to look for opportunities.

Women entrepreneurs play an important role in the entrepreneurial economy in part due to their ability to create jobs, both for themselves and for others. Furthermore, entrepreneurship represents an important job option in any economy, and self-employment is one of the most important job opportunities for women. This is perhaps more critical for women in developing economies.

Entrepreneurship is clearly a path to the social and economic empowerment of the Middle East. There are challenges in the post-revolution era due to a high level of uncertainty and risk aversion. This is particularly pronounced with respect to women. However, the opportunities are immense and far reaching. Education can give an entrepreneurial person the tools and skills to become successful. Improved policy development combined with education can create a new generation of entrepreneurial leaders that will make a difference in their own lives, in the lives of their families, their communities, and their countries.

Elizabeth Littlefield

Impact Investing: Roots & Branches

Foreign aid has grown to become a $200 billion global enterprise,[1] and aid funding from traditional donor nations alone has increased more than 63 percent in the past decade.[2] In many sectors, the investment has paid off. At a time when the world population is climbing inexorably beyond 7 billion, we are now on track to actually reduce the number of people living in extreme poverty by more than half, from 1.3 billion to fewer than 600 million, in the decade from 2005 to 2015.[3] Meanwhile, long-sought progress is being made on basic needs such as access to safe water, sanitation, and nutrition, as well as on issues such as maternal mortality reduction, primary school completion, and gender parity in education.[4] The magnitude of this generation's advances against some of humanity's most pervasive and debilitating problems is unprecedented.

That said, new and stubbornly persistent social and environmental problems continue to require investments that far exceed the coffers of governments and other donors. Just one of the challenges facing the developing world—adapting to climate change—is estimated to require an additional $70 billion to $100 billion per year.[5] Fortunately, however, such problems are not beyond the scale of global financial market resources. Commercial businesses and investors have the capacity to help address the needs of developing nations, and ever more private investors and entrepreneurs are seeing opportunities in doing so.

ENTER IMPACT INVESTING

There is growing optimism about business as a force for good in the developing world. A new momentum is building along with this around a breed of private investor that aims to solve social and environmental problems while making a financial return—impact investors. These investors have abandoned the long-held belief that their philanthropy draws from one of their pockets while their financial revenue lines another. These objectives can be blended rather than separated, and both values and commercial discipline can apply across the whole of their investments. To their minds, this is where the borderless world of capital meets the borderless world of conscience.

For decades, both public and private investors have sought in different ways to harness the power of private enterprise for the greater good, or at least to steer it away from making matters

Elizabeth Littlefield was appointed by President Obama as OPIC's tenth President and CEO. From 2000 until 2010, Ms. Littlefield was Director of Private and Finance Sector at the World Bank and Chief Executive Officer of the Consultative Group to Assist the Poor (CGAP), a multi-donor organization housed at the World Bank. Prior to joining CGAP, Ms. Littlefield was JP Morgan's Managing Director in charge of capital markets and financing in emerging Europe, Middle East, and Africa. Ms. Littlefield has served on the Board and Executive Committee of Women's World Banking, the Mastercard Foundation, and Calvert Foundation, and was the founder of the Emerging Markets Charity in the UK.

worse. Take the socially responsible investor movement. The market capitalization of corporations targeted each year by socially minded investors who engage with those companies as shareholder activists and advocates measures in the trillions. Other socially responsible investors, who only invest in funds that screen out undesirable industries such as tobacco, gambling, or liquor, are now estimated to account for as much as $3 trillion.[6] Best-in-class investors set an even higher bar for social performance, but command fewer assets.

Instead of a policy of excluding undesirable investments or an engagement as shareholders to improve investee companies, impact investors seek those rare investments whose very business model is geared toward having a positive impact on a social or environmental need.

Today's impact investors are fundamentally different. Instead of a policy of excluding undesirable investments or an engagement as shareholders to improve investee companies, impact investors seek those rare investments whose very business model is geared toward having a positive impact on a social or environmental need. They aim from the outset—frequently before an enterprise is created—to hardwire positive social and environmental returns along with sufficient financial returns into their investments. They hope to draw on the efficiency, versatility, market discipline, and powerful incentives of the private sector in order to address public needs.

PUBLIC AND PRIVATE PIONEERS OF IMPACT INVESTING

Impact investors have development goals in their DNA, just like mission-driven public-sector organizations. So, loosely defined, this "impact first" model is not a new phenomenon. Community development finance institutions were created in the United States early in the 1900s. Credit unions and housing investment trusts soon followed. And public-sector institutions that finance the private sector have been an established tool of the foreign aid community for decades. These development finance institutions such as the CDC Group of the United Kingdom, International Finance Corporation of the World Bank, DEG of Germany, FMO of the Dutch government, and the Overseas Private Investment Corporation of the U.S. were created, in effect, to serve as impact investors for underdeveloped nations.

In their early years, DFIs were regarded as peripheral players, smaller in staff and lending capacity than their kin who financed governments. As emerging markets have grown and attracted more private capital, however, DFIs have grown with them. Using a combination of loans, equity, and risk-management instruments, DFIs have played an outsized role in helping create private-sector jobs and mobilizing finance for high-risk, low-income markets.[7] OPIC, for instance, has supported nearly $200 billion worth of investments in developing countries, generating an estimated 830,000 jobs in those countries. The IFC's outstanding portfolio has grown to roughly $50 billion.

The DFI model is largely what impact investors now seek to emulate: co-financing and risk management for profitable emerging market investments; sophisticated management of corporate, country, and currency risks; job creation and tax revenue for less-developed host nations; spillovers such as technology transfer, improved corporate governance, and market diversification; and measurable contributions to vital sectors such as energy, water, health care, agriculture, and housing. Moreover, DFIs have been financially self-reliant. Over its 40-year history, OPIC has generated enough income to return profits to the U.S. Treasury every year.

The ways in which impact investments contribute to development are virtually limitless. Consider the diversity of just a handful of OPIC investment projects in recent years:

- Buchanan Renewables Fuel Inc. is a Liberian company that converts old rubber trees into biomass that will help replace coal as a fuel source in European energy plants.
- Habitat for Humanity's subsidiary, MicroBuild I, provides microfinance loans to help thousands of low-income families throughout the developing nations build or improve their homes.
- Afghan Growth Finance makes loans and equipment leases to SMEs focusing on agribusiness, light manufacturing, energy, information technology, construction, and consumer goods and services.
- Husk Power Systems of India builds facilities to convert rice husk waste into electricity.

> In a complex global economy, private firms have innumerable valid ways to make positive economic, environmental, or social contributions.

The other development finance institutions, like the IFC and those in European countries, have similar stories to tell.

PUBLIC AND PRIVATE CAPITAL INVESTING TOGETHER FOR IMPACT

Today, these DFIs are engaging with the new breed of private capital-based impact investors who have the potential to extend the reach of financing far beyond what governments alone could hope to supply.

Among these funders are foundations such as the Calvert Foundation, Rockefeller Foundation, and The Omidyar Network; retirement funds such as TIAA-CREF; "layered" entities that blend philanthropic funds and investment financing, such as Acumen Fund; sector-specific funds such as the clean energy investor E+Co. There are also angel investors, ultra-high net worth individuals, and families.

The thousands of social enterprises that have already benefited from other investment and returned profits to their investors include microfinance providers like Equity Bank, Water Health International, and Grameen Phone, which cover virtually every market sector and developmental issue.

There are business school programs and affinity networks dedicated to building infrastructure for the asset class, such as the Aspen Network of Development Entrepreneurs and the Global Impact Investing Network.

The result has been an outpouring of innovation and groundbreaking initiatives ranging from mobile phone banking to advance market commitments for vaccines to projects that monetize the benefits of biodiversity.

But impact investing is still small in comparison to other forms of social activist investing and foreign aid. Figures are notoriously difficult to obtain, but some researchers such as the Monitor Institute place impact investing assets in the range of $50 billion.[8] J. P. Morgan recently argued that impact investing already qualifies as a distinct asset class and estimated that the scale of impact investing capital among poor populations in five sectors—housing, rural water delivery, maternal health, primary education, and financial services—will range from $400 billion to $1 trillion over the next 10 years. Of equal importance: the profits generated by these sectors could range from $183 billion to $667 billion.[9]

One aspect of this activity has been lacking, however: scale. With a handful of exceptions, enterprises in the impact investing sector have often been too small and location dependent to draw capital from large investors and provide suitable exits for investors. One recent study estimated that there were only about 200 impact investments that were viable vehicles for the developing world as a whole.[10] "Scaling-up" has become the mantra of the day.

WHO'S IN? WHO'S OUT? MEASURING PERFORMANCE

As the new wave of impact investors attempts to create a distinctive asset class, one question continues to crop up: who qualifies? One finds a number of competing definitions of an impact investment. Financial performance benchmarks vary. Some definitions call for positive environmental or social impact accompanied by a very small financial rate of return or simply a return of capital. Others call for environmental or social impact plus a competitive rate of return.

Developmental standards also vary and are far more complex—as complex as poverty itself. While there seems to be unanimity that a firm's intent must be "impact first" rather than profit maximization, guidelines for operations and methods of measuring impact still vary considerably. With numerous segments of the investment and development communities engaged in the debate, there is unlikely to be consensus soon.

One can fairly ask whether consensus is necessary. To date, there is little evidence that a lack of universal guidelines has been a deal-killer for impact investors. Witness the microfinance sector, where a consensus on best practices and measurement of both financial and developmental performance has emerged over time and is still evolving. Inclusivity, rather than exclusivity, served the movement well in its early phases.

In a complex global economy, private firms have innumerable valid ways to make positive economic, environmental, or social contributions. A firm can do so through its production factors (organic farming, off-grid renewable energy), products (e.g., antimalarial bed nets, low-income housing), or its target market (e.g., post conflict populations, disenfranchised women).

The signal question is whether impact investors can craft consistent, quantifiable, and comparable measures of developmental outcomes per dollar invested across projects—a "price-to-impact" ratio, similar to a price-to-earnings ratio—and ensure that those outcomes are transparent and subject to verification. Should this prove possible, mainstream investors now on the sidelines will have a critical missing element in their decision-making equation: the means to analyze the trade-offs between development outcomes and financial rates of return that CEOs and boards of social enterprises inevitably make. Big capital will trust hard evidence more than pre-approval punch lists and post disbursement anecdotal reports.

For example, suppose an investment's intent, standards, products, target population, and financial sustainability match all checklists but still fall short of hoped-for returns? The Abdul Latif Jameel Poverty Action Lab of MIT recently conducted a randomized trial (increasingly regarded as the gold standard in impact analysis) to examine the effect of charging small fees for preventive health care products—for example, insecticidal bed nets, water disinfectants—across ten projects in four developing countries. The researchers found that even very small prices for such products led to huge drops in consumer uptake and that charging a fee for the products had no bearing on whether consumers actually used them.[11] This type of price-to-impact finding need not doom every private enterprise that seeks to deliver health-care products. Still, such findings should inform the decisions of future investors and investees alike.

The impact investing community has a plethora of new entrants and experiments. Its next phase requires rigorous evaluation, transparency, and platforms for sharing comparable information. As the managerial capacity and adroitness of impact investors and their investee companies improves, brighter lines to determine "who's in and who's out" will emerge.

INGREDIENTS OF GROWTH

Impact investing holds enormous promise for addressing the problems of the developing world. However, a sturdy, large asset class of such investments will need more than a steady tide of creative entrants, a few hundred small, break-even incumbents, and a handful of larger "lighthouse" ventures that best market performance. It will need a generation of managers with enough sophistication to negotiate both local development issues and investment climate risks, such as political instability, corruption, and red tape. It will need margins to cover management fees, overhead for impact monitoring, reinvestment for growth, and then some. It will need enterprises with enough scaleability to warrant attention from institutional investors. It will need liquidity beyond mere industry sales and management buyouts. It will need broad-based indices that enable market analysts to make reliable estimates of long-term rates of returns, assess volatility, and find correlations with market and economic variables.

The history of the global financial markets has proven that none of these hurdles is insurmountable. In the decades since their founding, DFIs in the emerging markets learned their lessons the hard way and devised solutions for investors when none were at hand. Through trial and error they succeeded, and helped others succeed, sometimes spectacularly so. From a vast desert of equity opportunities a generation ago, the stock market capitalization of emerging markets has grown to $14 trillion, and it may be as much as $80 trillion by 2030.[12] Impact investment in the developing world, where both needs and market opportunities will be greatest, can and should be a vital part of that trend. It is no longer a hypothetical asset class; it is well on its way. Ultimately, that will mean millions of lives bettered and potentially millions of lives saved.

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2. See "Net ODA Disbursements, Total DAC Countries," at http://webnet.oecd.org/dcdgraphs/ODAhistory/.
3. Laurence Chandy and Geoffrey Gertz, *Poverty in Numbers: The Changing State of Global Poverty from 2005 to 2015*, Policy Brief 2011-01. Washington, D.C.: Global Economy and Development at Brookings, January 2011.
4. *Global Monitoring Report 2010: The MDGs after the Crisis*. Washington, D.C.: The International Bank for Reconstruction and Development/The World Bank, 2010.
5. *The Cost to Developing Countries of Adapting to Climate Change: New Methods and Estimates*. Washington, D.C.: The World Bank Group, 2010.
6. *Report on Socially Responsible Investing Trends in the United States, 2010*. Washington, D.C.: Social Investment Forum Foundation, 2010.
7. An IFC investment officer, Antoine van Agtmael—not a private-sector investor—actually coined the term "emerging markets" in the late 1970s to encourage equity investors to consider opportunities in poor nations in a better light. His parlance replaced the pejorative term "Third World," and within a few years he led a successful effort to create the first global fund for securities from the developing world.
8. The Monitor Institute at http://www.fa-mag.com/component/content/article/14-features/5617.html?Itemid=133.
9. *Impact Investments: An Emerging Asset Class*. New York: J. P. Morgan Chase & Co, the Rockefeller Foundation, and Global Impact Investing Network, Inc., November 29, 2010.
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11. *The Price Is Wrong*. Cambridge, Massachusetts: J-Pal Bulletin, April 2011.
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Ahmed Tolba

Introduction to the Case Studies

It is my great pleasure to introduce the 11 case studies published in this special edition of *Innovations*. Case studies are excellent teaching and learning tools, and El-Khazindar Business Research and Case Center (KCC) is honored to partner with MIT Press in producing these high-quality studies on for-profit entrepreneurs in the Middle East and North Africa (MENA) region. Entrepreneurship is considered a major economic driver, not just in the region but globally, and I therefore believe that such a publication is of great value to both academia and industry.

Case studies are the best teaching and training tools for use in the classroom, as they can clarify academic concepts in a practical and effective manner. This is also the best methodology for promoting participant-centered learning techniques. While various prominent institutions across the globe publish quality cases, few focus on businesses in the MENA region. KCC was established to bridge this gap and produce quality cases that reflect both success stories and learning situations in the region.

Entrepreneurship is critical to the development of the economies of the countries in the MENA region, particularly during this time of extraordinary transformation. Thus it is crucial to promote the entrepreneurial spirit among young individuals in the region and to showcase both success stories and the significant challenges facing entrepreneurs. While several lessons could be learned from such cases, it is equally imperative to build a culture of initiative-taking among young individuals with high potential.

The 11 cases published in this special edition represent businesses from three countries: Egypt, Turkey, and Jordan. They also cover various types of industries, including capital-intensive industries (oil and gas, biomedical, pharmaceutical); large-scale products (publishing, real estate, jewelry); large-scale services (telecommunication and entertainment); and, finally, food services (online and face-to-face).

While developing an entrepreneurship ecosystem in the region is critical, it is also important to consider what type of support each entrepreneur needs in order to power a significant leap forward in entrepreneurial activity. Accordingly, these cases cover the three phases of entrepreneurship development: startup, growth, and sustainability. *Startup* refers to entrepreneurs just starting their ventures and facing issues related to financing, organizational development, and business planning. *Growth* refers to entrepreneurial ventures that have succeeded for years but aim to continue to grow, whether through introducing new products, partnering with other companies, and/or initiating a regional/international business. Finally, *sustainability* refers to well-established ventures that face issues related to governance and the ability to manage a large, successful organization effectively.

Table 1 lists the 11 cases, along with the country, the industry, and the stage of entrepreneurial development. The first two cases (Tarwi'a and Harran Kebab) are relatively new. They both aim to generate profits, increase market share, and/or promote a new distribution medium (online). The following three cases (Timeline Interactive, Pharmacy1, and TA Telecom) are

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Company	Country	Industry	Entrepreneurial Stage (Starting Year)
Tarwi'a Outlet	Egypt	Food	Startup (2009)
Harran Kebab	Turkey	Food	Startup (2009)
Timeline Interactive	Egypt	Entertainment	Growth (2007)
Pharmacy1	Jordan	Pharmaceutical	Growth (2001)
TA Telecom	Egypt	Telecom	Growth (2000)
Madinet Nasr Housing and Development	Egypt	Real Estate	Growth/Sustain ability (1959)
Azza Fahmy Jewellrey	Egypt	Jewelry	Sustainability (1997)
Hindawi Publishing	Egypt	Publishing	Sustainability (1997)
Yemeksepeti.com	Turkey	Food	Sustainability (2001)
IrisGuard Inc.	Jordan	Biomedical	Sustainability (2001)
Overseas Energy	Egypt	Oil and Gas	Sustainability (2001)

Table 1. Case studies featured in the Global Entrepreneurship Summit special edition of *Innovations*

successful ventures that target regional and/or international expansion following their significant local success. Their key challenges include securing effective partnerships, targeting international venues, and establishing a strong regional presence. Madinet Nasr Housing and Development represents a special private equity case, whereby Beltone aims to develop the business following years of struggle and establish effective management in preparation for selling the company. The final five cases (Azza Fahmy, Hindawi, Yemeksepeti.com, IrisGuard Inc., and Overseas Energy) are successful ventures with a good/strong international presence. They primarily face sustainability challenges, such as finding ways to strengthen their international presence to establish strong organizational and management systems.

I hope you enjoy reading the 11 cases and find them beneficial, both for teaching purposes and as learning tools for your entrepreneurial associates. I also hope that showcasing the challenges different kinds of entrepreneurs in the region are facing will provide policymakers with valuable input as to how to support the entrepreneurship ecosystem most effectively.

Lobna Mohamed Youssef

Students, Yet Entrepreneurs
Tarwi'a Outlet at the American University in Cairo

On the 6th of September, 2009, after a full day of classes, Osama Abdel Fattah, a senior student at the American University in Cairo (AUC), Egypt, decided to take his coffee and watch the sunset while sitting in the library garden on campus. That day, AUC had completed one year at its new campus located in New Cairo. Osama was admiring the new state-of-the-art campus, which extended over 260 acres and offered various facilities to all members of the AUC community. Osama compared all this to the old, small, crowded campus downtown. Meanwhile, he remembered the year spent at the new campus and how troublesome it was, full of strikes by students who were disappointed with the limited variety of food offered on campus and its prices.

Surrounded by desert, students have no option but to buy food on campus, and even though a year had passed since the move to the new campus, that situation had not changed a lot; the number of restaurants on campus was still very limited and the prices were still high. At that moment, an idea came to Osama's mind: to open a small outlet on campus to fill in the market gap. He knew he would face many challenges, but he was willing to take the risk. In March 2010, Osama opened his food outlet in partnership with two friends, which they named Tarwi'a. After seven months in operation, Tarwi'a started facing problems related to cost management. Unstable demand and high costs, in addition to competition with other outlets at the food court, all contributed to the problem. The young entrepreneurs are now facing a dilemma, as they need to make decisions about how best to manage their costs in order to improve profitability. They have many dreams for expansion, but can they really achieve their goals in the near future?

MACROECONOMIC OVERVIEW OF EGYPT

In 2008, like most countries of the world, Egypt's financial position was impaired by the global financial crisis. People started to feel the effects in their daily lives, as inflation doubled between 2008 and 2009. The condition of students at AUC was not much better, especially after their move to the new campus. AUC students, though considered the crème de la crème of Egyptian society, were not ready to pay an average of 50 Egyptian pounds daily for the food available on the new campus, especially during the time when the economic crisis was affecting everyone, rich and poor alike.

FOOD INDUSTRY AT AUC'S NEW CAMPUS

The food industry at AUC's new campus is monopolized by a company named Delicious Inc., which owns all outlets and rents them to various restaurants. In 2008, when students moved to the new campus, not many food outlets had yet opened and students had to choose from a limited variety of foods. The only outlets operating were Cilantro, Cinnabon, and Jared's Bagels. For a student body of about 5,000 students, these outlets weren't enough. Not only were they too few, the choices too limited, and the prices relatively high, they also were scattered across the wide campus and far from many students' classes.

The serious shortage in food varieties was causing problems for many students, and it was the main trigger for the student strikes and protests in 2008. Students staying at the dormitory were facing an even more serious situation, as they had buy all their basic food necessities on campus, where everything was expensive and available only in small quantities. On some nights, the outlets would simply run out of food.

In response to students' anger, Delicious Inc. decided to give each student coupons with a specific amount of money, nearly 250 Egyptian pounds, which allowed students to get food free on campus. However, this was a temporary solution that lasted for less than a semester. Fortunately, by the second semester of academic year 2008-2009, two new outlets opened on campus: McDonald's, and El Omda, which serves popular Egyptian food. Being a fast-food restaurant, McDonald's could not be considered the perfect solution for many students, especially with their increasing health awareness. As for El Omda, it solved the problem of high prices, as it sells low-cost food. However, popular dishes such as beans and *koshary* (a dish of rice, lentils, chickpeas, and macaroni) are not the type of food that meets most AUC students' demands. Therefore, the market was still hungry for more outlets and varieties of food.

THE YOUNG ENTREPRENEUR

With all these thoughts in mind, Osama revived his dream of starting his own business—he had merely been waiting for a good opportunity to make his dream come true. Osama was able to see the gap in the food market at AUC from a business point of view. He transformed his negative feelings of anger and disappointment into a positive and practical solution: he would open a small outlet on campus that served different types of food and at relatively cheap prices.

Osama could not think of a better opportunity; the market at AUC was in great need of new outlets, students would welcome the idea, and, most importantly, he could work at the same place he was studying, which would help him organize his time. His idea formed, he started looking for partners who would be as enthusiastic about the idea as he was. Within two weeks, he was able to convince his friends Mina, who is also a student at AUC, and Hammam to start preparing to open such a business. Each of the three partners, being of different backgrounds, met a different need of the business. Osama was studying communication and media arts and Mina was studying economics, both at AUC, and Hammam had finished his accounting studies at Cairo University and had worked at several companies. Together they started the journey and were determined to make it work, no matter what challenges they would face.

TARWI'A, THE OUTLET

By November 2009, the three partners had finished writing the business plan for their food outlet, which they called Tarwi'a, an Arabic word that means refreshment. They decided to specialize in selling Lebanese food, such as *shawerma* (thinly sliced cuts of meat) sandwiches, spring rolls, and *kobeba* (a fried meatball made with ground lamb, bulgur, and onion). The main characteristic of their products is that they can be prepared and served quickly so that any student passing by can grab a small plate containing the assortment he or she chooses. They were also keen to offer their products at reasonable prices, and they agreed that all food items would be prepared daily to ensure freshness and high quality. This strategy would enable Tarwi'a to distinguish itself from other outlets in terms of both cost and product. The young entrepreneurs also decided to run their outlet from a portable cart so they would be able to serve the wide area of the campus and go to students wherever they were. To finance the business, they decided to depend on their own resources instead of getting loans; having three partners made each partner's share relatively affordable.

They started negotiating with Delicious Inc., first to learn the procedures for renting an outlet on campus and then to discuss the possibility of having their outlet in the form of a cart.

Moreover, it was important for them to get kitchen rights to prepare the food on campus so they could ensure the freshness of their products. However, it wasn't easy for them to reach an agreement with Delicious Inc. They were told that no slots were available, and they had to negotiate for some time to convince the company that they could operate from a portable cart instead of a fixed slot. After a long series of discussions, in January 2010 they got the license from Delicious Inc. to start their outlet on a portable cart and were able to execute their business plan. Preparations to open the business took them nearly one month, during which time they had to sign contracts with suppliers, get the required appliances, and find reliable workers for the kitchen and salespeople for the cart.

The business started its operations in March 2010. The outlet was first placed near the dorms, where no other food outlets were available; however, they soon learned that demand at the dorms was mainly at night, after students finished their classes and returned to the dorms. They decided to move the cart to the middle of the university campus during the day, and at night they moved it near the dorms. They hired six employees, three in the kitchen and another three at the cart. They also were allowed to use university club cars to deliver food from the kitchen to their cart, and at the outlet itself they had their own equipment, including a refrigerator for drinks and water, a microwave, and a large steel hot box where the food was kept warm.

CURRENT SITUATION AT TARWI'A

No business is problem free, but even small problems have to be dealt with as quickly as possible to prevent further repercussions. Tarwi'a has started to gain popularity on campus: students like the idea and find it very practical, and they especially appreciate the good service at the cart, the high-quality food, and the fact that students can get anything they want very quickly when they're running between classes. However, they still face the significant problem that demand on campus is not stable. This has made it difficult to balance costs and revenues, thus costs have been 30 percent higher than revenues.

Tarwi'a is not able to guarantee stable revenue or demand for its products because of the many breaks students take off campus; because most sales occur during the day and demand at night is low; and because of the long summer vacations. Meanwhile, rent has to be paid to Delicious Inc. every month, even during vacations and breaks. Primary costs are the fixed items such as rent, and variable expenses include wages, utilities, and transportation for the workers (they have to pay for a car to transport workers from and to the university, since public transportation is not yet available at New Cairo).

The high costs have been an issue since June 2010, when the summer break started and demand decreased tremendously. Since then, the three partners have been thinking of ways to overcome the problem. They know they should have expected and planned for it from the beginning, but it has happened, so what are they to do? Quitting is not an option, since they are very passionate about what they're doing and they have dreams of making their business grow and flourish. They also would lose their initial investment, which would be a severe loss. Therefore, they have to think of ways to reduce costs and increase revenues. Moreover, they have to do so as quickly as possible because competition is starting to get fierce on the new campus as new outlets are opening that serve more types of food. If Tarwi'a is unable to improve its situation and get on firm ground soon, they won't be able to compete with the newcomers to the campus market.

CONCLUSION

After a five-hour meeting, Osama, Mina, and Hammam came up with three possible solutions to the problem of cost-revenue balance. The first option was to decrease their costs by reducing the number of workers and shifts. They thought they might limit operations to the morning hours until they are able to reduce their costs, which they estimate would decrease costs by 15 percent.

Another option would be to keep shifts as they are but reduce workers' wages or stop paying transportation fees, which is one of their main costs. However, that might affect workers' satisfaction and reduce the quality of their work, or even lead them to leave their jobs. Risky as it is, this approach could reduce costs as much as 25 percent, and with so many people looking for jobs, if their workers leave they will be able to replace them easily.

The third option was to increase revenues. They thought of expanding their activities on campus by catering events and adding new items to their menu. This would mean incurring more costs and increasing their investment, but only in the short run. They estimated that these actions would increase revenues within eight months by more than 50 percent, which would cover their costs and create reasonable profits.

Osama and his partners face a difficult dilemma and haven't made a decision yet. They are not sure whether to focus on cost reductions in the short run, or to live with higher costs for the short run until they're able to increase revenues. They have big dreams for growing their business and expanding beyond the university. Will they be able to achieve their dreams?

Meanwhile, there is Osama, sitting in the library garden, sipping his coffee and thinking deeply . . . what should they do?

Ali Acılar and Çağlar Karamaşa

Kebab on the Web: A Case Study of Harran Kebap

This case study highlights the e-commerce experience of Harran Kebap, a small family owned and operated restaurant in Bilecik, Turkey. Harran Kebap offers Turkish cuisine, mainly various kinds of kebab. The owner of the restaurant, Aziz Karaatlı, wanted to keep pace with the Internet revolution and made a strategic decision to create a Web presence and start accepting online orders, in addition to his brick and mortar restaurant business. His goals were to increase his sales and profits, and improve service. In 2009, Harran Kebap launched its website and started accepting online orders.

Aziz Karaatlı is 50 years old. He graduated from primary school, is married and has four children, three daughters and a son. He has been working in the restaurant industry for more than 30 years. He was born in Urfa in the southeast of Turkey, which was one of the less developed regions at that time. Like many others in that region, he immigrated to Istanbul, the biggest city in Turkey, in order to earn more money and seek a better life.

After working for more than 25 years in Istanbul, Aziz decided to escape from the chaos of the big city and live a quieter life. In 2006, he closed his restaurant and his wife closed her beauty salon in Istanbul, and they moved to Bilecik to start a new life. Located in the northwest of Turkey, Bilecik is a small but historic city not far from Istanbul. Compared to Istanbul, the city is relatively quiet; its population is only about 45,000.

Once they were settled in Bilecik, Aziz worked as a chef in a restaurant in order to observe market conditions in the city's restaurant industry before setting up his own restaurant. When his boss decided to close the restaurant in 2007, Aziz took over the business and changed its name to Harran Kebap. Harran Kebap serves traditional Turkish cuisine, primarily from the southeast region of Turkey, including a wide variety of kebabs, *lahmacun*—a dish consisting of a round, thin piece of dough topped with minced meat and onions that is known as Turkish pizza—and other Turkish specialties. Aziz works full time as both manager and chef; his wife works as a cashier. The restaurant currently employs five other people.

The restaurant is located on one of Bilecik's major streets. It is about 140 square meters, has 25 tables indoors with a capacity of 100 patrons, and tables outside with 80 seats. The restaurant has also a small garden. Aziz opens the restaurant at 8 a.m. and closes it at 11 p.m.

SETTING THE STAGE

In recent years, computers and the Internet have become an indispensable part of modern society. The Internet has created a new medium for communication and commerce, and many enterprises depend on it and their computers to run their daily operations. These technological advances have created both opportunities and challenges for small and midsize enterprises (SMEs). While large companies have been adopting information and communication technologies quickly, SMEs have been slow to adopt them, including e-commerce, for a number of reasons, especially in developing countries. Practicing e-commerce is a particular challenge (Bui, Le, & Jones, 2006; Hawk, 2004) for very small businesses with limited resources.

Figure 1. The Main Page of Harran Kebap's Website

Figure 2. Online Order Page: Food Selections

According to the Turkish Statistical Institute survey results of 2009, among enterprises surveyed in Turkey, the Internet access rate is 90.7 percent and the website ownership rate is 58.7 percent. Only 15.2 percent of the enterprises accept online orders via their websites. The institute reported that the main barrier to online sales is that customers are not ready to buy via the

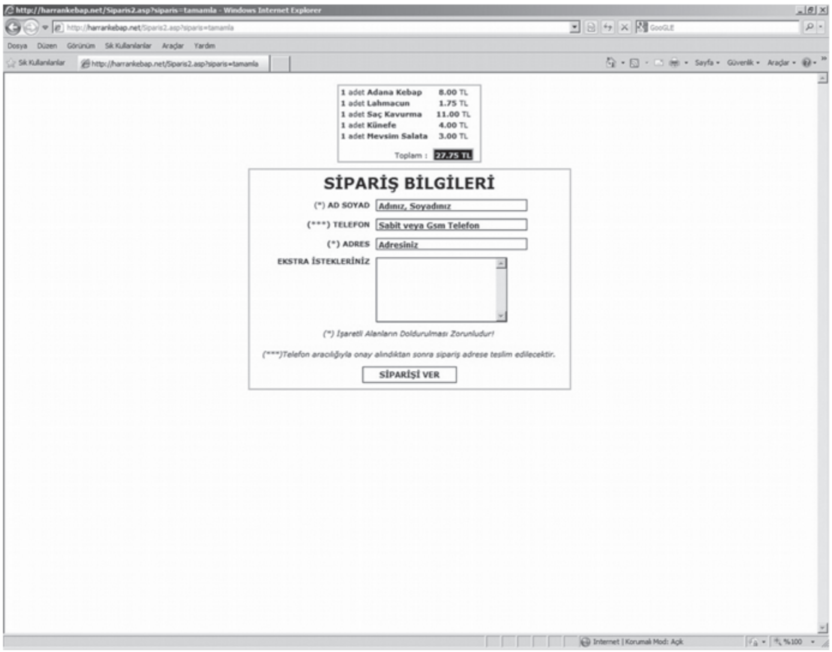

Figure 3. Customers Give the Delivery Address

Internet. The survey revealed that 87.5 percent of enterprises with 10-49 employees have Internet access, with this rate increasing as the size of the enterprise increased: businesses with 50-249 employees had a rate of 96.9 percent; those with more than 249 employees, 99 percent. A similar trend is evident in the adoption of websites.

According to a recent report by TTNET, the leading Internet provider in Turkey, the broadband Internet connection penetration rate in Bilecik is 28.4 percent. Although the number of Internet users is relatively small in Bilecik, Aziz saw the potential of the Internet for his restaurant business. He realized that the number of users increases every day and that the future is in the Internet. He saw an additional opportunity in the fact that no restaurants were accepting online orders in the city—at least until Harran Kebap started doing so.

Even though his computer skills and experience are limited, Aziz appreciates the value of the Internet and is very enthusiastic about doing business online. A business owner's knowledge about information technologies is a key factor among small businesses in practicing e-commerce (Al-Qirim, 2007; Cloete, Courtney, & Fintz 2002). Aziz is enthusiastic about e-commerce, but his lack of knowledge about e-commerce and his limited computer skills are a barrier to making full use of Web technologies. Moreover, his staff's computer skills are not so good.

Like other small businesses, the restaurant's information technology resources are limited, which is one of the most significant barriers to adopting information technologies and e-commerce (MacGregor & Vrazalic, 2005). It can be difficult for most small businesses to garner the resources necessary to succeed in e-commerce. Therefore, it is an ongoing challenge for Harran Kebap to keep up with current technologies. Harran Kebap's computer is outdated, and Aziz could not afford to buy a mobile point-of-sale machine. There is only one desktop computer, which is connected to the Internet via broadband. The restaurant used the Internet for about two years for non-business purposes before accepting online orders.

UNDERSTANDING THE REALITIES OF E-COMMERCE

Before deciding to move into e-commerce, Aziz asked some of his friends what they thought about having a website for his restaurant. They encouraged him to do it, and one of his friends referred him to a website designer from Istanbul. The restaurant's website was ready in a day, and Harran Kebap became the first restaurant in Bilecik to accept online orders in August 2009. The website's designer is responsible for maintaining it; the server is in another Turkish city.

Aziz considers his restaurant's online presence important, as it is expected that Internet use will become more and more common. Having the website also gave him an additional channel for interacting with customers and increasing sales. However, it is still very challenging for small businesses like Harran Kebap to conduct online business successfully.

It is important for small businesses to understand the realities of e-commerce—in particular what opportunities Web technologies offer and how they can help improve business. Harran Kebap has not yet been taking full advantage of these opportunities. Its website is relatively basic, if also easy to use, and the content is only in Turkish. Figure 1 presents the main page of Harran Kebap's website. It contains general information about the restaurant, online ordering, online reservations, the menu, and contact information. Harran Kebap does not use a membership system or offer online payment; furthermore, the website is not updated regularly and it has changed little since it was first built. Finally, the restaurant does not use a database to store customer and order information, thus missing an important business opportunity. In fact, the owner is very busy and does not deal with the website at all.

Before placing an order, customers choose the food they want from the menu in the online order page. After selecting food from the menu (see Figure 2), customers push the order completion button. In order to complete the order, customers have to fill in the required fields: name, phone number, delivery address (see Figure 3).

When a customer places an online order, the server transmits it to the restaurants' computer, which sounds a siren to notify the restaurant staff that an order has arrived. A staff member confirms the order by phone, and it is delivered right to the customer's door. Since Bilecik is a small city, most deliveries do not take more than 30 minutes. The restaurant does not accept credit cards for online orders, so all payments are made in cash when the order is delivered. Customer and order information is not recorded in any way; in fact, the order information is deleted.

A story about Harran Kebap accepting online orders appeared in a local newspaper. To increase website traffic and promote his online business, Aziz offered a 15 percent discount on online orders, which he announced on billboards throughout the city. He also ran a banner advertisement on the local Internet news website several times, and put the restaurant's website address on cloth banners, flyers, and business cards. Aziz believes that the discount campaign for online orders has attracted new customers and increased sales. He said the website is expanding his customer base from traditional customers to include the more educated Internet users. Currently, about 15 percent of Harran Kebap's sales come from online orders.

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Dale Murphy

Timeline Interactive: "All Your Game-Engine Are Belong to Us"

The story of Timeline Interactive gives fascinating insight into just how much digital technology has enhanced worldwide production, even for an Egyptian high school student working on a computer at home, and it illustrates the beginnings of a successful Cairo-based videogame company. The earliest roots may be unimportant to current investors, but they provide insights for those interested in entrepreneurship education, incubators, cultivating an innovative work environment, and encouraging a new generation of tech-savvy entrepreneurs in the Middle East-North Africa (MENA) region.

The videogame industry earns more than either the global music or movie industries, with global sales reaching $40 billion in 2007 and a forecasted $68 billion by 2012. A single title can outsell a summer blockbuster movie. Grand Theft Auto IV, for example, earned $216 million on its first *day,* and $500 million the first week. Advances to fund commercial developers typically run about $1 million, with additional royalties coming once the advance is paid off. It is a truly globalized industry, with national borders mattering little to developers, publishers, or consumers.[1] The stereotypical game-player is a testosterone-fueled youth eager to wreak destruction upon virtual foes from the comfort of his parents' home. But, in fact, the average U.S. player is 36 years old, with women accounting for 40 percent of players.[2]

CLOUDY INCUBATION

The path to Timeline Interactive emerged in the cloud space of Internet chat systems, in-house global email forums, and the collaboration between Mostafa Hafez and various individuals and nascent companies from around the world (many not formally registered) that he met and got to know online. They produced their first product for sale six years before they had salaries, an office, or were incorporated.

A game engine is the software that allows a person to create videogames, and Mostafa wrote his first engine in 1998, at age 14.[3] His parents worried about his homework and tried to restrict his computer time during the school year. Nonetheless, he created a website and posted his engine online, where it attracted the interest of gaming enthusiasts in the U.S. and Europe who, together with Mostafa, formed an informal team under the unregistered name of Bright Light Productions. They worked for two years to create a game and finally released Journey's End in 2000, when Mostafa was a high school senior. They were able to license the first-person shooter (FPS) game to a small publisher named Crystal Interactive. Ten thousand copies of the game were sold for $10 each, with royalties from 10-20 percent, which gave Bright Light roughly $15,000—a significant sum for a high school student and enough, as Mostafa explains, to "convince my parents that what I do is serious"—and also a lesson in profitability.

Mostafa entered Ain Shams University in 2001, where he concentrated on computer science courses. For the first time he met face-to-face with other programmers who were equally passionate about game development. He joined in work on a new game-engine called Reality Engine in collaboration with an Egyptian classmate, Mohammed Samer, and online friends from a nascent company called Artificial Studios, which was cofounded that year by Tim

Johnson, Jeremy Stieglitz, and Jesse Rapczak and based in their Florida house. "There was no real headquarters of the company," Mostafa recalls. "We were all working together through the Internet." The group's transaction costs were nil.

Reality Engine was finished when Mostafa graduated from college in 2005. Forty copies were licensed to developers before it was bought by Epic Games, which is headquartered in North Carolina, with studios in Poland, China, Korea, Japan, and elsewhere in the U.S. Fearing that it would cut into sales of its own Unreal Engine, Epic Games obtained all rights to Reality Engine, including IP, trademarks, and copyrights, and also hired Tim Johnson. But, it did not intend to continue sales, development, or support of the Reality Engine. It licensed Artificial Studios to use Unreal Engine—perhaps not the best deal Mostafa could have obtained, but a step forward in his development.

A more cheery lesson learned was about the importance of following one's passion. Mostafa cites the popular quote: "Above all be true to yourself, and if you cannot put your heart in it, take yourself out of it." His partner Mohammed quotes Hegel: "Nothing great in the world has been accomplished without passion." Mostafa concludes, "Passion for gaming is what drove both of us in our careers as developers."[4]

Mostafa rejoined the Artificial Studios team in 2006 to work on a game demo to demonstrate a new gaming card called PhysX from Ageia; it was later bought by NVIDA. This was the first gaming card designed to process physics equations about the behavior of rigid and soft objects, fluids, particles, and collision detections, and was intended to ease the processing load on graphics cards and CPUs. As is common among nascent developers, Artificial Studios farmed out parts of the work to collaborators and their infant companies elsewhere, including to Mostafa and Mohammed in Egypt, Julian Castillo and José Miguel Posada, cofounders of Immersion Games, in Colombia; Romain Lapoux, a.k.a. Manus Freedom of Galahan Games, in France; Tiemen Bakker in Holland (FutureFarm), John Sonedecker in Ohio (Blackfoot Studios), Prabodh Reddy and Srikanth Kondaloyala in India (Zen Technologies), a Canadian sound studio, and others. The demo game this global collaboration produced was called CellFactor: Combat Training (CF:CT). They also used the Reality Engine to produce Monster Madness.[5]

CF:CT proved so popular that Ageia asked for a more elaborate, full-function version, which became CellFactor: Revolution. It was released for download in June 2007. Funded by the deal with Ageia, which had backing from UbiSoft, Epic Games, and Microsoft, Artificial Studios's "Egyptian division" rented a simple office for the first time, with just enough room for desks, and for beds to sleep on during the development process. Working with their collaborators at Immersion Games in Colombia, Mostafa and Mohammed gradually decided to split off and form Timeline Interactive sometime in the winter of 2006-2007.

FUNDING SEEDS A COMPANY

Timeline's big break as a company came in June 2007 when, at age 23, Mostafa met with Egypt's Technology Development Fund (TDF), which welcomes "over-the-transom" applications for funding—that is, without any prior discussion or arrangements. TDF's venture fund is a unique public-private partnership managed by EFG-Hermes. It was started in 2004 with roughly $10 million in capital; a second round (TDF-II) in 2008 provided an additional $40 million. Through an advisory arm, Ideavelopers, TDF holds business-plan competitions and has provided pre-seed and seed capital to a dozen ICT startups to date.[6] TDF and Ideavelopers help fill a critical financing gap that is found in many MENA countries: the early stage "angel investing" that is often unavailable to those from poor or middle-class families.[7]

Ideavelopers liked what it saw in Mostafa and Timeline's products. In September 2007, TDF signed a deal with Timeline Interactive, investing $500,000 in exchange for a 50 percent share and two board seats. For the first time, Timeline Interactive became a legally registered company and was suddenly on the map of Egypt's investors and entrepreneurship community.

Ideavelopers's CEO, Ahmad Gomaa, also convinced Mostafa that he needed to bring in senior personnel with startup business experience to manage the company. Mostafa agreed, and a year later, Ahmed Metwally, then 36, was made CEO, with Gomaa acting as CFO.[8]

Ahmed Metwally was born in Cairo and graduated from American University Cairo in computer science in 1997. He moved to Canada, where he worked for ITWorx for six years. In 2003 he joined Microsoft as a senior enterprise strategy consultant, where he stayed until 2008. During that decade, he was involved in various startup projects, including ConnectMeTV with Yousef Adnam, which had ties to the TDF and Intel Corporation. Through his discussions with TDF about ConnectMeTV, Metwally was also put in touch with Timeline Interactive by mid-2007. He worked part-time with them remotely for four months. By late 2008, Metwally left Microsoft and became CEO of both ConnectMeTV and Timeline Interactive.

In the meantime, Mostafa and the Timeline and Immersion Games developers were working on the third iteration of CellFactor, which was called CF:Psychokinetic Wars (CF:PW). They had partners in Canada, India, and Eastern Europe, which made use of Cairo's central timezone. They sought a publisher for the title (much like a book publisher) and an advance based on a demo. In March 2007, they exhibited the game at the largest industry event, the Game Developer Conference held in San Francisco, which is attended by 15,000 professionals. By December that year they had signed a contract with UbiSoft, a French publisher with 6,400 employees. They underbid prevailing prices by half, but still received far more funding than they had previously. They were now competing with the best game developers worldwide.

CF:PW broke new ground in the gaming world. Drawing on the designers' experience with Ageia, the title boasted advanced 3-D visualizations and game-play physics, yet was priced at only $10 and was downloadable—an industry first for an advanced 3-D game. Development and testing took 15 months, and it gained approval from UbiSoft by November 2008.

To get technical approval from Microsoft and Sony for publication on the XBox 360 and PlayStation-3 (PS3) platforms, CF:PW had to go through what one developer described as "seven loops of hell," with multiple-player performance testing and certification steps. Sony's evaluation is front heavy; Microsoft's is back heavy. Teams in France, Canada, and India assisted in the testing. Localized language versions were developed in English, French, German, Italian, and Spanish. By March 2009 it received approval from Microsoft and Sony, and was launched in June on the XBox Arcade and PlayStation Store. It was the first and only videogame studio in the Middle East certified by Microsoft and Sony to develop games for Xbox 360 and PS3.

Initial reviews of CF:PW were mixed. Some users complained that UbiSoft did not give it enough promotion to quickly build the base needed for a multi-user game.[9] PS3 and XBox hardware were challenged to handle multi-user versions of the demo's advanced physics programming. The harshest critic blasted that "the design in the game is butt ugly and downright boring with a touch of generic." However, a top critic concluded, "All-in-all, CellFactor is an incredible game . . . So why have you not bought this game yet? Go do it now; you will thank me." It scored a "great" 8/10 on the IGN rating scale, in the nearly ten-year period when no 10s were awarded. Downloads were brisk enough that it became a top ten bestseller on XBox Live Arcade and sold well on PlayStation-3. UbiSoft recuperated its advance within a year, with additional royalties to come for Timeline and Immersion. Mostafa learned from this experience, as he had with his sale of Journey's End, the sale of Reality Engine, and the first two CellFactor titles. He concluded that greater control over testing and advertising would be fruitful. Timeline had preserved the right to self-publish a PC version, which it did in late November 2010.

In 2009, TDF's Ideavelopers exercised an option to invest an additional $500,000 in Timeline Interactive, with equity coming from existing investors' shares, which gave it a majority ownership and two additional board seats. Proceeds were used to fund new titles and additional staff, which increased from 8 to 25, and expanded its art team capabilities. Building on Egypt's dominant regional position in the TV, movie, music, and print industries, its rich cultural traditions, and worldwide interest in the region, Timeline is exploring MENA-based themes for some of its new projects. This not only will differentiate Timeline but may also contribute to building the human capital it seeks. The company is also expanding its client base. To help retain talent and ensure motivation, employees are offered equity, based on seniority, with industry-standard four-year vesting procedures.

REGULATORY ENVIRONMENT

Drawing on his experience and observations with Microsoft and other North American tech firms, Ahmed Metwally commented to *Daily News Egypt* in October 2010 about some of the government policies that affect entrepreneurship:

> The education system in Egypt is not conducive to entrepreneurship. For us to be able to someday attain this environment, we have to learn to celebrate failures. The whole idea about being an entrepreneur is not being afraid to take a risk and fail. You take a risk, you don't make it, you learn from it and move on.

Much of the Egyptian education system, he suggested, "kills innovation from the start" by teaching students that going against the norm is doing something wrong. He also encouraged tax credits for seed-money investments, as has been practiced successfully in the UK, and for generating intellectual property and patents.[10]

As with other cases in the MENA region (Pharmacy1, Azza Fahmy Jewellery, Diwan Bookstore), Timeline Interactive is taking on some of the burden of developing local talent and human capital. Finding innovative videogame developers and artists is extremely difficult, despite the 5,000 computer science graduates Egypt produces yearly. Timeline has collaborated with the Egyptian government and universities—at Ain Sham, Al Azhar, and the Ministry of Communications and Information Technology's Regional IT Institute—to develop educational materials and sponsor projects to promote the new generation of videogame developers. It is interested in helping grow the "ecosystem for gaming" in MENA. Timeline chooses new employees based on its estimate of their ability to learn, rather than on their existing skills, and then mentors them for half a year.

CONCLUSION

With strong financial backing, an advanced technical team, extensive experience managing partners worldwide, and a growing collection of successful titles and contracts, Timeline Interactive is poised to continue its path-breaking role as the Middle East's top game developer. The entertainment software industry is ruthlessly competitive, however, and victory is not certain in this $50 billion industry. But the regional picture is bright: the global collaboration these young developers take for granted may help spur innovation in other MENA countries. Timeline Interactive's nascence in the swirling online forums of teenage game-players shines light on the future possibilities of international entrepreneurial activity—for educators, incubators, and the region's entrepreneurs themselves.[11]

The same technological fluidity that reduces transaction costs in global collaboration also makes it difficult to retain talent, as experienced by Artificial Studios when its Egyptian and Colombian teams parted ways. This technologically driven change has broad social implications, because transaction costs are one reason that firms are created in the first place: to lessen the burden of coordination among individual contractors.[12] As digital technology reduces transaction costs, it may weaken some incentives for keeping production within a given firm and challenge traditional practices of business organization.[13] Employee vesting plans, as deployed by Timeline, are one response.

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1. For example, the inaugural issue of a new trade journal, Interactive Age ("Serious Discourse for the Video Game Industry"), boasts articles about the gaming industry in Egypt, Japan, Korea, China, Vietnam, Singapore, Turkey, Iran, Russia, Finland, Holland, France, Germany, Croatia, UK, Canada, and Latin America, and has roundtables on global investment, global production, international business development, and global currencies.
2. "Industry Facts." Entertainment Software Association, December 30, 2010.
3. A game engine allows game designers to focus on the storyline, design, and strategy of the game they are creating, rather than on the basic computer programming. The engine allows multiple games to be created using libraries of backgrounds, characters, sounds, and images.
4. Mohammed Hafez. Welcome. Blog posting at http://blogs.ign.com/Ubi_CellFactor, December 29, 2010.
5. Their routine online dialogue consisted of comments like:

> Yes, please tell me how to use continuous collision. In GameCore.cs, I tried editing MNxPhysics. SetTiming (1.0f/60.0f, 8, MNxTimeStepMethod. NX_TIMESTEP_FIXED); If I decrease maxTimeStep(1.0f/60.0f) it's improve collision detection, Is that what you call the physics update frequency? but I can't see any different from changing maxIter(8) from 1 to 800.

or

> Noooo, physics visualization is a feature to draw oriented bounding boxes and velocity arrows around physics objects, nothing more.

6 About the TDF, see http://www.techdevfund.com and http://www.ideavelopers.com. TDF is managed by EFG-Hermes Private Equity, with managerial advice from Ideavelopers, an EFG-Hermes/Telecom Egypt joint venture. Investors in the TDF include public and private institutional investors, such as the National Investment Bank, Export Development Bank of Egypt, Egypt Post, Telecom Egypt, and Misr Insurance. Private investors include Banque Misr, Commercial International Investment Company (CIIC), Misr Iran Development Bank, and Faisal Islamic Bank of Egypt. To date, TDF has invested in OpenCraft, OstazOnline, Diagnosoft, Advanced Smart Cards, Allied Soft, Coltec, ConnectMeTV, Ensphere, Fawry, IdealRatings, IdentityMind, RDI, Si-Ware, and Smart Card Applications.

7. Angel investing simply means the earliest stage of financing a startup company by individuals other than the entrepreneurs, their family, and friends. Angel investors typically invest their own money in exchange for an equity share of the company. It is a risky investment, as 70 percent of new startups do not succeed, so they hope to break even on a couple and make their money on the 10 percent that are very successful.
8. Gomaa is an active investor who has held 30+ board seats in 10 years, managing $120 million in venture investments, with 15 successful exits.
9. One user wrote on UbiSoft's online forum, using the informal slang of gamers, "I cant seem to find anyone online or servers. Does anyone have an ideas as to why? [sic]" Another user replied, "Ur not alone! oh yeah u are' lol i found 1 dude from mexico and i kicked his butt then he quit and i couldnt find no one? why is there no servers from ubisoft or cellfactor like ut3? [sic]"
10. "Timeline CEO Sees Potential in Gaming Development in Egypt." Daily News Egypt, October 17, 2010.
11. Hassan, Kamal. "Can Borderless Innovation Solve the Innovation and Entrepreneurship Challenges in the Middle East?" i360 Institute. Innovation 360, February 28, 2010.
12. Oliver E. Williamson and Sidney G. Winter. The Nature of the Firm: Origins, Evolution, and Development. Oxford University, 1993; Jean Tirole. "The Theory of the Firm," in *The Theory of Industrial Organization*. MIT Press, 1993; Jean-Jacques Laffont and Jean Tirole. *A Theory of Incentives in Procurement and Regulation*. MIT Press, 1993.
13. Examples of this include open-source software development (including operating systems such as various "flavors" of Linux, and the myriad applications developed for platforms ranging from personal computers to mobile phones to Facebook), the growth of "free agent" consultants, outsourced telecommuting for various stages in the value chain, etc. There is still a final organization that does quality checks and may provide retail support for a given product. Thanks to an anonymous reviewer for this observation.

Dale Murphy

Pharmacy1: Reverse Brain-Drain in MENA's Retail Pharmacy Sector

As markets and governance evolve in the Middle East-North Africa (MENA) region, new business opportunities are creating a phenomenon of "reverse brain-drain," whereby regional entrepreneurs educated elsewhere or who have business-acumen learned in another country are returning and adapting innovations to their home environment. A prime example is Dr. Amjad Aryan, a Jordanian pharmacist educated in Boston, who is the founder of Pharmacy1, the fastest-growing pharmacy chain in Jordan. Powered by Aryan's tenacious leadership, Pharmacy1 demonstrates the creative destruction of disruptive technologies, through which old ways of doing business are transformed. Less competitive firms may lose out, but new value and jobs are created as the economic pie is expanded in an interlinked web of growth. The case of Pharmacy1 demonstrates innovation through adaptation, the interaction of technology and business organizations, and the impact of many small innovations throughout a company's operations.

As a child, Aryan observed his father's pharmacy business in East Jerusalem. The family moved to Boston in 1984, when Aryan was 18. At age 20, he started his first company, Balsam Janitorial Services, which cleaned carpets for businesses. He built up the company for three years and then sold it, after which he sold cars for another three years to help finance his own education and that of his brother and sister. He entered the Massachusetts College of Pharmacy and Health Sciences, which was located within a thriving cluster of medical service providers. He obtained a pharmacy degree, with a specialty in retail pharmacy management. He simultaneously interned at a local CVS store, starting as a cashier and working up to become manager of CVS in the Boston area. He left CVS in 1997 to buy a 1922-era drug store in Miami, together with his father, who moved to America to help, and brother. They modernized the store and started a small chain of pharmacies in Miami that is still in business today. But Aryan wanted to raise his young children in the Middle East, and he had a vision for adapting what he had learned in the U.S. to create a business in Jordan.

RETAIL PHARMACY IN JORDAN

Until then, the pharmacy business in Jordan and much of the MENA region was characterized by small mom-and-pop shops or one-off lifestyle businesses. These shops typically had a defined geographic turf and little competition, offered limited selections, little employee training and thus poor customer service (by world standards), made little use of technology, were heavily regulated, and had seen little innovation in decades.

With an entrepreneur's eye for spotting opportunity where others see problems, Aryan opened his first pharmacy in Amman, Jordan, in 2001. It was the first Jordanian pharmacy registered as a limited liability company. At the time, he says, "I thought Jordan could handle only ten branches and no more. If I had listened to what people told me, I would never have started up here at all." But he was determined to forge ahead and apply the lessons he learned in Boston and Miami to building a pharmacy chain in Amman.

The obstacles were manifold, including traditions and laws that explicitly prohibited chains and a regulatory authority and pharmacy community that were cozy with existing methods of doing business. But the Jordanian economy was undergoing a revitalization, with new ideas injected by King Abdullah II, who had ascended to the throne in February 1999. The U.S. and Jordan signed a free-trade agreement on October 24, 2000. In 2001, Provisional Law 80 (PL80), which limited pharmacy chains, came under review. These regulatory changes helped fuel business change, thereby creating new business opportunities. First movers are not always advantaged, and Pharmacy1 took time to expand. While encouraging the repeal of restrictions against chains, Aryan learned methodically, taking two years to open his second store, in 2003. PL80 continued to be reviewed, and by 2005, Pharmacy1 had grown to five branches.

TRANSFORMATIVE TECHNOLOGY

In the meantime, Pharmacy1 made the risky but ultimately path-breaking decision in 2004 to purchase Advanced Soft, the Jordanian software company it had hired to develop its pharmacy management system, called PH1. Pharmacy1 invested management time and R&D resources in PH1, bucking a trend to outsource IT functions. This decision to work in house ultimately gave Pharmacy1 a big competitive advantage, and it also helped to transform the pharmacy business in Jordan and perhaps beyond.

Fueled by dozens of other innovations that improved service and efficiency, Pharmacy1 had phenomenal growth: its number of branches skyrocketed from 5 to 28 by 2007, and to 48 by 2010. All the branches have a similar modern look and feel, with a broad range of drugstore products available and the same operating procedures across all branches. Driven by improved customer service, scale economies, and cost efficiency, Pharmacy1 gained a 15 percent share of the $212 million Jordanian market, despite having only 2.4 percent of the nearly 2,000 pharmacies in Jordan.

The PH1 management system provides an insight into how technology can transform business relationships beyond a company itself. It provided the backbone for Pharmacy1's processes, systems, and people, which boosted service and growth. Its core is a proprietary, state-of-the-art, back-end data-infrastructure system, the first for pharmacies in Jordan. It manages all company data on customers, patients, insurance companies, operations, purchasing, point-of-sale, inventory, supply chain (with 350 suppliers), statistical analysis, accounting, product mix, etc., building on best practices worldwide.

The basic functions include electronic records of patient histories, which gives all branches quick access to pharmaceutical information and provides safety checks on prescriptions, allergies, side-effects, drug warnings and over use. The system also permits greater economies of scale, such as buying stocks in bulk or negotiating volume discounts with suppliers and insurance companies. It enables more efficient inventory control, identification of urgent orders (deliverable within one hour, whether from the warehouse or nearest branch), preemption of stock shortages, and estimates of future consumption for each branch. This allows Pharmacy1 to serve customers better by ensuring that the right products reach the right customers in the shortest time. Billing goes directly from PH1 to the customer's insurance company and reduces transaction costs. It also facilitates a host of smaller improvements, some going beyond what CVS offers in the U.S. For example, printed prescription labels are Arabic-English bilingual and include dosage, usage compliance, warnings, expiration date, storage information, etc.

Pharmacy1 adopted a novel business strategy: making the most of PH1 and recognizing that the company's success depends almost as much on its information technology-enabled operations as its knowledge of pharmaceuticals, it added an IT strategy department.

INNOVATIONS THROUGHOUT THE COMPANY

Pharmacy1's innovations go beyond bringing the first chain pharmacy to Jordan and its in-house creation of a robust software management system. In fact, the company is marked by dozens of minor innovative practices that reflect the founders' insights and drive. A simple list of these gives a deeper sense of why Pharmacy1 has been so successful:

- It created and runs the first training and drug information center in the Middle East, which is located next to the Ibn Al Haitham Hospital and works in coordination with the Jordanian Food and Drug Administration and Jordan University. This provides free, unbiased information by phone, email, or fax. Its public interest service was demonstrated during the 2009 swine flu pandemic, when it was able to assist the government in reassuring and informing the public.
- It partnered up to establish the first pharmacy benefit management system, called PharmaNet.
- Tied in to its innovative software is an equally state-of-the-art, 32,000-square-foot brick-and-mortar warehouse. The warehouse alone provides 40 jobs. It uses modern equipment, innovative logistical software, and extensive feedback and quality-control procedures.
- Obsessed with customer satisfaction, Pharmacy1 has gone beyond what its founders learned in the U.S. and offers a host of customer services. These include not only a 24-hour hotline and many 24-hour stores, but valet service where parking is limited, a fleet of delivery vans equipped with credit card machines (which smaller firms cannot afford), SMS reminders to renew or pick up prescriptions (a service not provided by U.S. pharmacies), and free 24/7 home delivery—the first (and somewhat controversial) such service. The home delivery teams can also sort, label, and evaluate the stray drugs in customers' medicine cabinets, looking for expired medicines, incompatibilities, etc.
- It provides a three-month training program for pharmacists, three times as long as its competitors. This has a cost as well as benefits, however; at one point the company experienced a 33 percent employee turnover rate, when competitors lured away its highly trained staff.
- It offers the most attractive pharmacy salaries in Jordan, which indirectly helped improve perceptions of the profession.
- Rigorous cost controls—in logistics, in-house training, retail space, and operations—have improved productivity.
- It invested time and money to research and proactively anticipate evolving consumer needs, behavior, and expectations.
- Unlike most pharmacists, Dr. Aryan lectures at three local universities, and he recruits fresh graduates from the programs he teaches. He emphasizes professional responsibility and pride, noting that students need not work as marketing reps for pharmaceutical corporations in order to have a good career. Pharmacy1 has donated a simulation pharmacy, software, computers, and other equipment to the Zeytoonah University and the University of Jordan for students to train in a retail pharmacy environment.
- Advertising medicine is banned in Jordan, so to brand their stores, Pharmacy1's marketing department uses innovative methods, sometimes questioned by critics, such as sponsorship, medical awareness education, and scholarships.
- In its expansion methods, Pharmacy1 uses small tricks to become operational within a remarkable one to three weeks (e.g., renovating existing pharmacies or similar spaces and hiring the same carpenters, electricians, and interior designers so that each branch has the same look and feel).
- In November 2010, Pharmacy1 signed an agreement with the Strategic Center for Organizational Performance Improvement, becoming the first pharmacy chain in the

region to use QPR Software Solutions to help continually improve the efficiency of Pharmacy1's operations with the automation of strategy, quality, process, and risk-management performance.

The accumulation of these innovations, both big and small, helped earn Pharmacy1 its ISO 9001 quality certification in September 2010, making it the first pharmacy chain in the Middle East to receive this certification.

CREATIVE DESTRUCTION

All these disruptive innovations and successes have not earned everyone's approval, and there have been some bumps along the way. Existing single-shop pharmacies in Jordan were in an uproar about the effect of Pharmacy1 on their traditional way of doing business. Some of them felt their profit margins were squeezed, others felt they were forced to merge. Some felt that it was unfair to bring in innovations from America because it stacked the deck in the chain's favor. "You've been in a market where the only ways to grow were [previously] made illegal," Raghda Kurdi, managing director of Hayat Pharmaceutical Industries, was quoted as saying by *JO* journal in September 2010. "Then, all of a sudden, you copy and paste a new market where you can only be successful if you come from the States. You were told for so long: 'No, you can't grow [chains].' Then the rules are changed. That's why people think this is unfair." Many of the small store owners lobbied against repeal of PL80, which limited chains. They complained that Pharmacy1 has a growing oligopoly. They opposed home deliveries, arguing that they are not safe and that drugs might fall into the wrong hands. This became an ongoing dispute, with a bill passed in 2010 that might limit home deliveries.

But Pharmacy1 and its supporters counter that customer service and satisfaction are the overriding metric, and that its operations (and those of other emerging chains it has inspired) continue to improve the delivery of pharmaceutical services in Jordan. In fact, the overall improvement in pharmacy service might have helped boost Jordan's regional medical tourism trade. This case illustrates that firms' regulatory preferences vary and that innovative technologies and business models disrupt the status quo of regulatory capture. Regulators in Jordan were struggling to balance these competing demands and claims.

One of the more telling effects of Pharmacy1's appeal to customers is that many independent pharmacy owners were provoked into banding together and creating their own cooperative, PharmaServe. Through PharmaServe, they now offer improved inventory control and have raised their standards and customer care. Other small chains began to emerge in the past several years, including Orange, Drug Center, Pharmacy-A, and PharmaCare. By raising the bar in terms of customer service, Pharmacy1 has indirectly contributed to transforming the sector and improving standards in Jordan, and arguably has contributed to the public interest.

EXPANSION INTO SAUDI ARABIA

But Dr. Aryan was not content simply to transform Jordan's retail pharmacy business and expand to 48 stores. By 2007, his eyes were already looking beyond the relatively small Jordanian market into the biggest and most lucrative market in MENA: the Kingdom of Saudi Arabia. Following the method he used in Miami and then in Jordan, in 2007 Aryan bought first one and then another pilot pharmacy store in Saudi Arabia. His plans are to expand to 20 stores there by the end of 2011, followed by another 30 stores in 2012. He would like to move into other MENA markets as well. Pharmacy1 will be the first regional pharmacy to expand outside its borders. The small chain in Miami continues to feed innovations from the U.S. market into Pharmacy1's Middle East operations, but now it also benefits from the experience of more than 50 branches overseas.

FUTURE CHALLENGES

There are a number of challenges to Pharmacy1's expansion plans. For one, Saudi Arabia already has five existing pharmacy chains. International competitors that use modern management systems, such as Boots, may follow.

If the Kingdom of Saudi Arabia changes its law to allow pharmaceutical sales by large stores such as Walmart or Carrefour, it may pose a threat to (or another opportunity for) Pharmacy1 and other independent chains. Carrefour has already opened an in-house pharmacy in Dubai in conjunction with BinSina Pharmacy, the United Arab Emirates's largest chain. Pharmacy1 might also consider such an arrangement, but its margins might be squeezed.

Regulatory challenges also continue to be a concern, and staying abreast of them occupies a considerable amount of management time. Changes in regulations can create opportunities for entrepreneurs, but established businesses generally prefer regulatory stability.

Human resources are another ongoing challenge. Most young MENA employees have not had internship opportunities at CVS or elsewhere, so they have a lot to learn about corporate culture and the opportunities available in retail pharmacies. The cost of training is a significant obstacle to Pharmacy1 and other small and midsize firms.

Despite these challenges, Dr. Aryan is buoyant about the future of business in MENA. "The MENA region is the new land of opportunity for new, innovative ideas," he observes.

CONCLUSIONS

The case of Pharmacy1 illustrates not only the drive and determination of one man and his family in their entrepreneurial success, but also the broader phenomenon of reverse brain drain, as people educated or trained elsewhere return to their homelands and practice what they learned while away. It also splendidly illustrates how innovations (whether copied from elsewhere or improved upon or developed sui generis) not only can lead to the significant growth of a business but can spread and transform an industry. The lessons that Dr. Aryan and Pharmacy1 learned in the U.S. have been adapted, improved upon, scaled up, and are now being emulated by other retail pharmacies in Jordan, Saudi Arabia, and beyond, with implications for regulatory regimes and firms alike.

Part of the fascination of entrepreneurship research is identifying the importance of idiosyncratic decisions and their path-dependent impact on broader social relations, as well as the broader patterns identified elsewhere in this journal. Changes in regulation (such as PL80) and technology (such as PH1) lead to disequilibria in markets, creating opportunities for some and challenges for others. Innovative firms such as Pharmacy1 are able to create and take advantage of these changes, which powers their growth.

Ahmed El-Banhawy

T.A. Telecom: An Idea, Big Growth, Challenges for More

It's February 2011 in Cairo, Egypt, and Twitter is all the rage. Having been delivering timely information via mobile devices since 2000, Amr Shady, age 35, understands now more than ever the importance of his company's services. Since the onset of Egypt's revolution, subscriptions to his company's "Buzz!" Platform has been surging and his servers have been buzzing with activity as Egyptians eagerly await the latest breaking news. A true pioneer in the mobile value-added services (VAS) industry, Amr founded T.A. Telecom in 2000, when Egypt still had single-digit mobile penetration and the VAS industry had received little attention. The company's first service was demographically targeted, permission-based SMS advertising, which was pitched to consumers as a way "to be the first to know." T.A. Telecom introduced "Buzz!" in 2006, a content subscription platform that now boasts millions of subscribers and accounts for the majority of company revenues. The pathway for growth is substantial: mobile penetration in the Middle East-North Africa (MENA) region is 50 percent and is increasing 45 percent annually, with an African VAS market size of US$5.5 billion. Having grown company revenues by over 40 percent annually since its inception, Amr now envisions T.A. Telecom becoming MENA's premier mobile content platform. Moreover, he has the industry experience, the network, and the technical team to realize his vision.

Amr Shady has always had a knack for arriving early. A talented mathematics and physics student, he enrolled in Dalhousie University at the age of 15 to study electrical engineering. Upon graduating, he took a managerial post at the company his father founded in the 1970s, an electrical contracting firm with the bulk of its operations in Saudi Arabia. By the age of 21, Amr was managing the company's Egypt operations. The experience supplemented Amr's technical skills with business and managerial acumen. After three years of working at the family business, however, he found that electrical contracting work simply failed to light his fire. He decided to follow in his father's footsteps—not by taking over the family business but by starting his own company.

Having received his education in Canada and witnessed the widespread adoption of mobile phones in the 1990s, Amr knew there would be tremendous opportunity in Egypt's mobile space. In 2000, together with a friend and with financing from his father, he built a platform integrated with mobile network carriers that enabled permission-based SMS advertising. Amr has been dreaming up different ways to deliver timely information ever since. After experimenting with a hits-based model for six years, in 2006 T.A. Telecom introduced the idea of content subscription via "Buzz!". Revenues from this service surged eightfold in one year.

The success of "Buzz!" has hinged on two factors: (1) rather than having users chase information, "Buzz!" "pushed" relevant information to users; and (2) pricing and charging was tailored to the MENA region's demographics and spending habits, such that they accommodated the prepaid customer reality. The combination of relevant news and affordable increments quickly gained traction in the VAS industry, and T.A. Telecom spearheaded the rebirth of SMS subscription services across the region, positioning it as the top content VAS services in the countries where it operates. This came at a time when mobile operators were looking for growth in VAS in other areas, such as smart phones and apps.

Product/Service	Year Launched	Notes
"Buzz!" Platform	2006	• White-label product • Subscription platform for content channels • T.A. Telecom manages process from platform development to content aggregation
Ringback Tones Management (RBT)	2007	• White-label product • Ringback tones management • T.A. Telecom manages content aggregation
mobise	2000	• Proprietary brand • Demographically targeted, permission-based SMS advertising
Mobinil 8000	2004	• White-label product • Directory assistance for Mobinil users • Supports cinema listings and restaurant reservations
	2010	• Proprietary brand • "Megakheir" translates as "MegaGood" • Open platform for NGOs and community organizations to engage users
DABOOOS	2011	• Proprietary brand • "Dabooos" translates as "Pin" • Open platform for location content and alerts

Figure 1. T.A. Telecom products

Having proven the sustainability of SMS subscriptions, T.A. Telecom is set to stay ahead of the industry curve by introducing new products that will drive up revenues. With the exception of its permission-based advertising service, T.A. Telecom largely provides white-label services. The company provides back-end technical support and interfaces between content providers and three of MENA's largest mobile network carriers. Forced to sign exclusive contracts with carriers, T.A. Telecom's margins are squeezed on the one hand by carriers, who take a 50-60 percent cut of revenue generated, and on the other hand by content providers, who take a 35-40 percent cut. Amr plans to confront this industry dynamic and increase margins via a two-pronged strategy: (1) the company will build a consumer-facing brand to free itself from exclusive contracts with carriers; and (2) it will streamline its internal content-sourcing capabilities.

In the last year, T.A. Telecom has launched two new brands that build off the subscription-based model proven by "Buzz!": Megakheir and Dabooos. Megakheir is a platform that connects NGOs and community organizations with users. During Ramadan in 2010 and 2011, Megakheir partnered with the Egyptian Food Bank and raised enough money through its platform for 250,000 meals. Dabooos—a smart phone, location-enabled improvement over "Buzz!"—provides time- and location-specific content. The service allows content subscriptions as well as peer-to-peer communication via "location notes." While T.A. Telecom's white-label services continue to generate revenue with healthy margins, future growth will be driven by these new consumer-facing brands. If network effects kick in, Amr could realize his vision of building the MENA region's leading mobile platform for time- and location-specific content.

T.A. Telecom has consistently been at the forefront of Egypt's mobile VAS industry. If it continues this trend with its new consumer-facing brands, the company could transform the industry landscape, especially as smart phone adoption accelerates. Communications technology plays a special role in this moment of Egypt's history, and T.A. Telecom's services are meeting growing demand.

As an industry expert who succeeded in turning T.A. Telecom from a two-person startup into a multi-million-dollar business, Amr is ambitious and eager to learn. On the other hand, like all entrepreneurs, he is always brimming with new ideas. He recently has been working with third parties through the Endeavor network to help him focus his thoughts and structure a comprehensive strategy. As part of Endeavor, with its industry veterans from across the globe, Amr finds all the mentoring and help he needs to navigate this competitive and rapidly changing industry.

PRODUCTS AND GROWTH

T.A. Telecom has always been in the business of providing information to users via mobile devices. The company has developed versatile technical platforms and built relationships with content providers in order to provide the following products and services:
Over the years, products and services have followed the logic of three different models:

- Hits-based model—2000-2006: The company sought to package information in novel ways with successive hits. SMS trivia games are examples of popular hits during this time.
- Subscription-based model—2006-2010: In 2006, T.A. Telecom launched “Buzz!”, which allows users to subscribe to specific content channels, such as CNN, BBC, or Al Jazeera. The launch of “Buzz!” corresponds with the jump in revenue growth from 2006 to 2007, and “Buzz!” now represents 53 percent of total company revenues. By having ever more relevant streams of information chase users (rather than users chasing information), T.A. Telecom has proven the viability of SMS subscriptions and given itself predictable cash flows.
- Platform and network model—2010-present: Building on the success of the subscription model and incorporating the logic of location-based services, T.A. Telecom is creating a dynamic framework for users, content providers, local businesses, and community organizations to exchange information that is relevant in terms of both time and space. For example, users can receive location alerts when they pass by a sales event at one of their favorite stores; they can “pin” rave reviews at their favorite restaurant; or they can rally friends to a social cause in coordination with a local NGO. As open platforms, T.A. Telecom’s latest line of products will benefit from network effects and user dynamism.

MARKET

Mobile penetration in the MENA region has come a very long way in a few short years. Mobile penetration in the region reached 70 percent in 2009, up from 11.3 percent in 2003. As of February 2010, Egypt’s National Telecommunication Regulatory Authority reported 56.6 million mobile phone connections, or a penetration rate of 72 percent.

Mobile value-added services: The growing popularity of mobile phones and increased competition among mobile network carriers have driven down average revenue per user (ARPU) for voice services. The VAS market expects a sharp uptick in investments as network carriers scramble to counteract the drop in ARPU. Whereas network carriers have historically been very possessive of their users and were able to reap an outsized portion of ARPU, new smart phone ecosystems have eroded the power of network carriers and given more economic weight to VAS providers. Informa Telecoms & Media estimates that the VAS market in Africa was worth over US$5.5 billion in 2010. The market is expected to grow at a strong compound annual growth rate of around 22 percent, and to reach total revenues of over US$11.5 billion by 2014. Egypt’s VAS market had 2010 revenues of roughly US$625 million and is projected to reach US$1.76 billion by 2014.

Smart phone adoption: As of 2010, smart phone adoption in Egypt represents roughly 6 percent of the country's mobile market. The industry expects smart phone adoption to accelerate in coming years with an annualized growth rate of 35 percent.

Location-based services: According to IE Market Research Corp., location-based services in the MENA region are projected to grow 67.5 percent per annum to US$250 million by 2014. Globally, location-based services are expected to grow 51.3 percent year after year, reaching $13.4 billion in 2014.

COMPETITIVE ADVANTAGES AND CHALLENGES

T.A. Telecom has a set of competitive advantages that genuinely differentiates it from other competitors and gives it a head start that enables it to grow faster than any player in the market:

Track record of innovation: With regard to nearly all of its products and services and to its pricing model, T.A. Telecom has been a first mover. Rather than be approached with ideas, T.A. Telecom has proposed its services to network carriers and executed successfully. Competitors have typically followed in T.A. Telecom's path.

Industry network and market knowledge: As an early entrant into the VAS space, T.A. Telecom enjoys longstanding relationships with the MENA region's largest network carriers. Unlike many of its competitors, T.A. Telecom is an independently owned firm and can thus exercise independent judgment on business decisions. The company has also gained valuable Egypt- and MENA-specific information with regard to demographics, spending habits, and the mobile industry.

Technical expertise: T.A. Telecom is stronger and more focused technically than its competitors. Licensing and reselling agreements with a number of its competitors for its white-label platforms speak to that edge. Consumer-facing brands that are not restricted by exclusive contracts should allow T.A. Telecom to exploit this competitive advantage more fully.

Nevertheless, there are some challenges that T.A. Telecom has to face and work hard to overcome with innovative solutions:

Competition: Like all entrepreneurial activities, competition has increased over time and clients are getting price sensitive. Accordingly, profit margins are getting thinner. Moreover, some of the operators now own companies with activities similar to T.A. Telecom's, which narrows the company's chances with some of its existing clients.

Branding matters: As a white-label service provider for network carriers, T.A. Telecom has no leverage with end users. New direct-to-consumers initiatives are helping to change the dynamic.

Lack of strong board and management team: Amr is addressing the need for a strong management team by grooming senior employees for management positions. He is also currently trying to build a network of mentors and an official advisory board to tackle this challenge.

Dependence on network carriers: Historically, each carrier has guarded its client base by enforcing exclusive contracts with VAS providers and branding services with the carrier's name. Future success and the ability to scale will depend on T.A. Telecom's ability to diversify away from carrier dependence.

Lowered barriers for market entrants: With smart phone app stores, almost anybody who knows how to write code can launch a "mobile" business. T.A. Telecom is attempting to embrace this disruption by leveraging its existing platforms and industry relationships to build unique mobile apps. T.A. Telecom will also invest in patenting some of its processes and ideas to create a more defensible position.

While reviewing its revenue growth chart, it was obvious that T.A. Telecom has had a sustainable pattern of growth, with more than a tenfold increase every five years. Nevertheless, Amr Shady disclosed his main concern: "What keeps me up at night is how to speed up our growth in order to achieve a tenfold increase in just two years, not five."

Hend Mostafa

Privatization of Madinat Nasr Housing and Development

On a cold winter day in Cairo, Egypt, the board of directors of Madinat Nasr Housing and Development (MNHD), the real estate company listed on the Egyptian Stock Exchange, was sitting in the meeting room discussing the company's future. It was December 2008, and the global financial crisis has just hit Egypt. "The share price of the company has fallen dramatically," explained board member Hazem Mahmoud. "The financial crisis had a huge impact on the company, [even] though the government claimed that it would not affect Egypt." Ahmed Mohsen, another board member and a member of the executive committee of Beltone Financial, an Egyptian investment bank, was very concerned: "Our investments are now at risk, the land prices have fallen dramatically, and this will negatively affects our profits." He also mentioned that "selling the company's land bank now will incur a lot of losses." Moreover, the managers of MNHD were not skilled or trained, and minimal effort had been directed toward the company since its privatization in 1996. The major goal of the investors who bought the company was to unlock hidden potential by solving land issues. Faced with the company's situation and the financial crisis that hit the world, the board of directors needed to decide within one month what to do to overcome these problems. Should they sell the land bank and get some cash, instead of losing all their investments? Should they wait for a few years till prices again increase? Should they invest more in the company and start developing its land bank?

MADINET NASR HOUSING AND DEVELOPMENT

MNHD was founded by the Egyptian government in 1959. The company targeted middle-income housing and generated revenues from selling land, as well as residential and commercial units. The company developed the majority of the Nasr City district in Cairo, which covered more than 40 million square meters. Today the company has 19 buildings under construction, with future plans for buildings in other areas, like the outskirts of Cairo and 6th of October City. The company was partially privatized in 1996 without any changes in operations or management.

Beltone Private Equity, through its funds Beltone Capital and Beltone Investment Group, bought a large stake in MNHD. The main thing that encouraged Beltone Private Equity to buy the shares was MNHD's large land bank. Although the company had a large land bank in competitive areas in Egypt, some of its lands had ongoing disputes. For example, Teegan had problems with the civil aviation authorities over height restrictions, and KM 45 had disputes with the military; these disputes are now resolved. Back then, however, there was no interference from the government, and a large community was created in this area. MNHD didn't make any effort to get back the lands that had disputes, which represented a great opportunity for Beltone Private Equity, which decided to buy shares in MNHD and solve the land disputes in order to have a positive impact on the company's future share price.

Later in 2007, the company was fully privatized and controlled by a public tender offer. Beltone Private Equity, through Beltone Capital and Beltone Investment Group, currently holds 31 percent of the company's shares; foreign institutions hold 10 percent.

THE MACRO-ECONOMIC AND POLITICAL ENVIRONMENT OF EGYPT

Egypt has been a republic since the 1953 revolution, which was led by a group of nationalist reformist free officers. Since then, Egypt has had four presidents, starting with Mohamed Naguib and ending with Hosni Mubarak. Throughout this time, Egypt has witnessed many political and economic changes that had different effects on the country. During the term of the second president, Gamal Abdel Nasser, Egypt was a closed economy; the government controlled everything and there was a huge middle class. Anwar Sadat later adopted a different political and economic direction, including the open-door policy that allowed Egypt to export and import a variety of products from other countries. It also allowed many international companies to start businesses in Egypt. In 1991, Hosni Mubarak, the fourth president, undertook many reforms to improve Egypt's position, which were supported by the International Monetary Fund. The structural reforms included privatization and new business legislation. Therefore, during this period, many national companies were sold to the private sector. The privatization and new business legislation allowed Egypt to control inflation, build up foreign reserves, and reduce its budget deficit. Accordingly, Egypt became more market oriented, which increased foreign investment.[1]

HISTORY OF THE REAL ESTATE INDUSTRY IN EGYPT

Egypt's real estate market has been growing in the past few years. An increase in demand helped the construction industry to flourish, and in 2004, the construction and building sector constituted 3.8 percent of the country's GDP. Most of the housing supply in Egypt (around 90 percent) was built informally where more than 11 million Egyptian live, while the remaining 10 percent was built by professional companies. Around 44.4 percent of the real estate units were occupied by owners, 35.7 percent by renters, 14 percent were offered as gifts and in-kind privileges, and 5.5 percent represented public housing. The government introduced programs to subsidize low-income families through the Guarantee and Subsidy Fund, which provided up to 15 percent of the value of a residence.[2]

The increase in the real estate market was most noticeable in residential housing. Different factors justified this increase in demand. First was Egypt's growing population, especially the younger generations. The second reason was the housing shortage for lower-end housing. In the previous few years, the demand for high-end real estate had been stable; however, the demand for middle- and lower-income consumers increased rapidly and was expected to continue to grow. It was estimated that the Egyptian housing market had a shortage of around 40,000 units per year in the low-income segment. The low mortgage penetration and the rise in income also caused demand to increase. Moreover, income levels have increased by an estimated average of $6,000 per year.[3]

Prices in the real estate market varied across the years. In 2005, the price of property in Egypt increased by 13.7 percent. In 2006 and 2007, however, there was a decrease in prices by 0.4 percent and 0.6 percent, respectively. Due to the financial crisis in 2008, an Egypt Housing Survey conducted by Bearing Point Inc. indicated that housing prices had decreased further.[4]

THE PUBLIC SECTOR IN EGYPT[5]

After Egypt's 1952 revolution, the Egyptian government became very active in the country's economy. It started various projects that affected development of the economy, such as the construction of iron and steel and cement factories. The concept of building public projects was introduced by a 1957 law that enabled the creation of public organizations designed to achieve monopoly power in diverse markets. The public sector subsequently rose to economic dominance in the country. Whereas in 1952 the private sector constituted about 76 percent of total investments in the economy, during the next three decades, the public sector's investments grew to be between 80 percent and 90 percent of overall investments in the economy, which constituted around 37 percent of the country's GDP.

The public enterprises created through these initiatives performed very poorly over time. In 1990 they were divided into 260 profit-making entities and 56 losing entities. The losses were financed from the government's budget. These public enterprises had profits of 1.2 billion Egyptian pounds (£E) and losses of 2.37 billion £E. Moreover, the public enterprises had debts that reached 47 billion £E, which represented a huge burden on the government's finances. The public enterprises were overstaffed with low-productivity employees, which caused a lot of problems. These problems led to a decrease in the return on capital to 5.9 percent in 1989. Furthermore, the government protection programs for the public sector reduced the economic growth in the mid 1980s.

In 1974, after the open-door policy was established, Egypt suffered from a budget deficit of 17 percent of GDP and inflation increased by 15 percent. Accordingly, in 1991, the government took several initiatives to stabilize the economy by becoming market oriented and allowing the private sector to take the lead. The government also decided to privatize the public sector. Until 1993, the rate of privatization was slow because several legislative and regulatory arrangements were required. Moreover, Egyptian culture was not ready to accept the concept of privatization. The rate of privatization started to increase in 1995; by June 2002, the number of public enterprises that were privatized included 190 out of 314 public companies.

BELTONE FINANCIAL

Beltone Financial is a full-fledged investment bank that has different companies working under its name that are located in Egypt, Libya, Qatar, the U.S., and Dubai. Beltone Private Equity, a subsidiary of Beltone Financial, manages Beltone Capital and Beltone Investment Group. Beltone Capital was established in the second half of 2006 to invest in Egyptian companies with strong, capable management. It also invested in privatization and turnaround opportunities. Beltone Investment Group was established as a buy-out fund in December 2006 to co-invest with Beltone Capital in controlling shares of MNHD.[6]

PRIVATIZATION OF MNHD

Beltone Investment Group, together with Beltone Capital, worked to acquire a controlling stake in MNHD, which previously had a problematic land bank of 10 million square meters. In December 2006, Beltone Private Equity made a tender offer for the acquisition of 100 percent of MNHD shares and was able to acquire 31.3 percent. Beltone Private Equity is now the major shareholder in MNHD, and accordingly has four of nine seats on the board of directors.[7]

Since the company's privatization in 1996, no changes have taken place in the company's operations or management. On the contrary, all operations have been done the same way and employees have not received any training. However, to achieve its objective, Beltone Private Equity decided to work on solving the company's land bank disputes and develop the major plot that had no disputes. Therefore, it decided to identify the land bank that MNHD had and divide it into four categories: reclaimed lands, simple disputes close to being reclaimed, difficult disputes, and disputes not expected to be solved. Beltone Private Equity was able to solve one of the major disputes, and the share price of MNHD increased dramatically in a short period of time.

In 2008, the financial crisis hit the world and its effects reached Egypt. The financial crisis had a great impact on the price of the land, and demand for real estate declined. MNHD's share price decreased dramatically, reaching its lowest levels since Beltone Private Equity's acquisition. Accordingly, Beltone Private Equity faced huge challenges, as its investment was at great risk. The market was declining and the demand for land real estate was at its lowest level.

FUTURE

Although Beltone Private Equity was able to solve the disputes of MNHD's land bank, to date no new developments or projects have been introduced. On the other hand, between 1996 and 2008, many changes occurred in the market. Before the financial crisis, demand for housing increased rapidly in Egypt, and many international real estate companies entered the country and made huge investments.

Faced with all these challenges, by the end of 2008 Beltone Private Equity's board of directors was discussing the options they could choose. As the meeting moved on, the board determined that investing in MNHD without interfering in the management and processes was not the right decision.

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Dale Murphy

Azza Fahmy Jewellery: The Pursuit of a Passion

Pursuing one's passion is a common trait among many successful entrepreneurs, and it is abundantly clear in the case of Azza Fahmy Jewellery (AFJ). As a 24-year-old Egyptian woman, Azza Fahmy was browsing the first Cairo International Book Fair in 1969 when her eyes were drawn to an illustrated German-language art book about medieval European jewelry.[1] She could not read German, but the illustrations compelled her to spend nearly one month's salary to buy the book, which set in motion what became first a regional and now a global luxury design company and brand name that has several million Egyptian pounds in annual revenues, 25 percent annual growth, and a staff of nearly 200.[2]

Making jewelry is not new—in fact, the world's oldest goldsmith artisans were from Egypt, dating back 5,000 years. But turning a passion for artistry into a modern commercial success requires continual innovation and a shrewd business sense. AFJ has managed to grow from a one-woman apprenticeship to a global design powerhouse, meanwhile retaining the aesthetic integrity and Egyptian cultural heritage of the company's handcrafted designs. Azza's mother initially opposed her daughter's decision to give up a good government job (designing covers for political tracts from the State Information Authority), and Azza faced many other challenges in her precedent-setting path as a modern female entrepreneur. The startup phase of AFJ marked her transition from an artist to an entrepreneur, and the growth phase included AFJ's transition to a global brand, led in part by Azza's daughters, Fatma and Amina.

PHASE I: FROM AN AVOCATION TO A COMPANY

Azza was born in Upper Egypt's Sohag Governate and graduated with a BA in interior design from Helwan University in 1965. Her father was a cotton trader; his death in 1959 forced Azza's mother to sell some wedding jewelry to make ends meet—a poignant beginning to a story in which Azza has become a world leader in high-end jewelry. In 1969, after Azza was inspired by the jewelry illustrations she saw at the Cairo book fair, she decided to do an apprenticeship with craftsmen in the Khan El-Khalili *souk* (marketplace). She was the only woman there. Her mother worried that doing manual labor was beneath their social status, and she cried when Azza told her that she was giving up on a graduate degree at the Faculty of Fine Arts (now part of Helwan University) to become an apprentice. Azza initially could not afford to quit her day job, so she apprenticed after work. She often walked to the souq, where a mentor, Hagg Sayyid, was calmed by a daily opium tea, and she stayed until after 11 p.m. She made use of her upbringing, education, and other advantages: an economics minister was a family acquaintance, and after some years of work he recommended her for a bank loan of 15,000 Egyptian pounds (£E; roughly $65,000 in today's terms). But she also encountered obstacles that fewer women face today, thanks in part to the success of path-breakers like Azza and her daughters.[3]

Azza married in 1971, had one daughter in 1980 and another in 1983. She confronted the challenges of finding a work-life balance that are familiar to many working women today. "Being a mother and a woman with a business were my biggest problems," she told *Arab News* in 2008. "As a businesswoman, I carried the load of the family, because if I didn't succeed . . .

my children would say I was a failure. My family was not very supportive at the beginning because they could not quite understand what I was doing, but I was very confident about my work."

The importance of an internship or mentorship is seen in the cases of many entrepreneurs, including Azza. She initially mentored under master craftsman Osta Ramadan, then workshop owner Hagg Sayyid, then merchants Hagg Muhammad Makkawi and Hagg Awad Gasser. She developed her creativity through research, reading, and visits to Egypt's culturally rich museums, where she explored the artistic, cultural, and intellectual history of Islamic designs. She transformed her passion for Egyptian calligraphy, poetry, and architecture into jewelry designs. After just one week as an apprentice, Azza made her first sale—three silver rings—which earned her nine Egyptian pounds, about $100 in 2010 terms, nearly half her meager monthly salary. She apprenticed for a year or two and held small weekly showings of her work. In early 1970, she rented a small workshop in the back garden of her apartment building for 3 £E per month. She participated in an exhibition of girls' handicrafts facilitated by the Association for Schools and Social Development, and to her amazement she grossed 750 £E in two days—three years' salary. At her first solo exhibition she made double that. Late in 1974, Azza quit her government job and struck out on her own.

Throughout the 1970s, Azza produced pieces that she later called "primitive hippie jewelry."[4] She learned quickly that designing the pieces was the easy part. She felt stymied in her quest to translate her more imaginative designs into actual products. She got a break in 1975 when the British Council awarded her a six-month fellowship to study more advanced techniques of jewelry design at the City of London Polytechnic.

Azza returned to Cairo in 1976 and set up a workshop, hiring two craftsmen from the souq (including Mamduh, who still works with her). In 1981 she took out a loan to open her first store, the Al-Ain Gallery in Cairo's affluent Mohandeseen district, in collaboration with her younger sister Randa, an Islamic metal smith, and her (now former) husband Nabil Ghaly, an architect.

With hard work, Azza's sales continued to rise. She was able to hire more workers and gradually focus more on the upscale end of the market, which supported more gold and precious stones and commanded higher prices. Buoyed by good sales, she expanded. By the late 1980s she had gone from being primarily a designer and artisan to a businesswoman—one who was in need of a company, a production plan, strategy, quality controls, and marketing. For the next decade, Azza concentrated on sales within Egypt and to foreign visitors. She retained the exquisite quality of her designs and craftsmanship, innovatively reviving and adapting traditional motifs while continuing to increase sales and production.

In 1997, Azza opened her first flagship store, the Azza Fahmy Boutique in Maadi, a suburb of Cairo favored by the middle class and expatriots. She developed a concept for the store that combined classic and contemporary interior design, and offered a private selling area to allow for client privacy, which was especially favored by high-end clients. Word spread among the high-end jewelry *cognoscenti,* and over time her clients included Egypt's former first lady Jihan Sadat, Queen Noor of Jordan, members of the royal families of Saudi Arabia, Kuwait, and Bahrain, and actresses such as Catherine Deneuve. As Cairo's suburbs grew, Azza followed with another store in Heliopolis.

To support increased demand, Azza opened a larger factory and design studio in 2003 in Sixth of October City, 20 kilometers southwest of downtown Cairo, which for the first time gave her relief from cramped office space. The company was reestablished as a limited liability company under the name Jewellery of Egypt. By this time, AFJ had made the transition from being a one-woman show to an established company that employed specialists in finance, human resources, marketing, sales, design, planning, and production.

PHASE II: AFJ'S INTERNATIONAL COLLABORATIONS AND BRANDING

By 2000, Azza had recognized the need to reorganize AFJ to manage its rapid growth. This coincided with her older daughter, Fatma, joining the family business. Fatma was business oriented and rose to become AFJ's deputy general manager from 2003 to 2005, and in 2006 she became general manager. Younger daughter Amina joined AFJ as a designer in 2005. The mother-daughters team and private ownership help AFJ maintain its feel as a family firm. This is reflected in the unique artisanship of its products, which carefully avoid a mass-production aesthetic.

Fatma Ghaly is now in charge of building the AFJ name into a diversified and globally recognized luxury brand. With a high school friend's help, she restructured the company, organizing reporting into four functional lines: operations, marketing, finance, and organizational development—a big change from the 18 managers who initially reported to her. She also oversaw implementation of an inventory supply system that monitors and can replace precious materials as they are sold, which provides some stability in the fickle gold and silver markets.

As one strategic milestone, AFJ signed a franchise agreement in 2003 with the large Dubai-based Al Tayer Group, which has operations in the United Arab Emirates (UAE), Kuwait, Oman, Qatar, and Lebanon. At the time, AFJ was well known in Egypt and certain elite circles, but was not widely known in the Gulf region. Positioning the brand in the cosmopolitan shopping mecca of Dubai, whose population is comprised of 90 percent expatriots, gave the company broader exposure among wealthy customers who were highly attuned to international brand names. Al Tayer's Dubai *Azal,* which is a multi-brand retail outlet for luxury watches, fine jewelry, and accessories located in the fashionable Boulevard shopping area of Emirates Towers, holds the UAE franchise rights for such designers as Bulgari, Armani, and Boucheron. It has added AFJ to its exclusive line. AFJ jewelry is also sold through Bloomingdale's and Harvey Nichols Dubai.

A second strategic decision was to make inroads into London's and New York's notoriously chic, high-end fashion markets. At first, AFJ intended to saturate the Middle East and North Africa (MENA) region before expanding elsewhere. However, although there is still lucrative untapped demand in Saudi Arabia, Kuwait, Qatar, and Lebanon, the company chose first to push ahead in Europe. Fatma explains:

> Cities like Paris, London and New York are the fashion capitals of the world. We decided if we want to grow our brand the right way and truly become an international brand, we need to leave our mark in these markets. This is particularly true of the Gulf markets. They imitate the spending patterns of the rich and famous in the West. You have to make it big in Paris or London if you want people to look at you as "designer jewelry." Up till now, there has been no such thing as an Egyptian designer brand. We aim to be the first.[5]

Establishing a brand name in London, Paris, and New York helped change MENA perceptions of its products, which drove up the prices the MENA market would bear.

To broaden AFJ's appeal and to challenge itself in the world's toughest market, Fatma applied the same determination that had led her mother to Cairo's souq. She researched the British market for two years, and in 2006 she approached Julien Macdonald Ltd., a highly regarded British fashion designer, and worked with a London-based public relations agency. AFJ collaborated with Julien Macdonald for shows during London's fashion week, designing a range of jewelry especially for his clothing line for two years, which then retailed in his stores to wide acclaim. AFJ also sold through London's Kabiri Jewellery. In February 2010, AFJ teamed up with Preen's Justin Thornton and Thea Bregazzi for an avant garde collection that was unveiled during New York's fashion week.

Global awareness of the AFJ brand is growing. Five years ago, exports accounted for perhaps a quarter of the company's total sales; they now amount to nearly half, as sales overseas expand. The company continues to experiment with new designs and products consistent with its image. Amina Fahmy has launched several new collections, along with a men's and Valentine's Day line. She is also leading a fashion line for AFJ.

As of early 2011 there were five Azza Fahmy boutiques in Cairo, one in Alexandria, one on Egypt's North Coast, and one opening in Luxor. There is also one store in Amman, Jordan, with another planned. There are also AFJ corners or displays at high-end stores in Dubai and London; in Doha, Qatar; Manama, Bahrain; and Florence, Italy. Each piece is still unique and handmade, taking months to create. The flair of ethnic originality is difficult to imitate, which creates some barrier to entry, and AFJ is willing to sue to protect its intellectual property if others infringe on its designs or brand.

EGYPT'S ENTREPRENEURSHIP POLICIES

One might not think that a designer jewelry company would care much about national policy or governance issues, but Azza Fahmy Jewellery found it helpful to encourage certain government policies. As the company grew more successful, the government was increasingly responsive, concomitant with other pro-business regulatory reforms in Egypt. The World Bank's Doing Business report placed Egypt among the top ten global reformers in four of the seven years from 2003 to 2010, even before the seminal uprisings in early 2011 that toppled the Mubarak regime.[6]

Entrepreneurs usually lack the time, resources, and individual clout to work on policy reforms, but many Egyptian entrepreneurs were involved in the country's 2011 revolution, and a budding entrepreneurial ecosystem has been taking root in Egypt to help improve the business climate for startups. It remains to be seen how this ecosystem is affected by the regime change, but early indicators are promising.

One ongoing policy challenge is the endemic shortage of skilled labor in MENA, including Egypt. Fatma Ghaly raised this issue with the Ministry of Industry several years ago and worked with them to help build a center to train workers, using trainers from abroad. As Fatma told Egypt's *Daily News* in 2006, "They are actually helping us. We see things that are happening instantly, which was not the case before."[7]

Previously, AFJ had faced challenges regarding regulations from the marketing authority, with stamp taxes (*damgha*), with importing semi-manufactured goods, and with exporting red tape. "All these issues were raised with the Ministry of Industry. And they are going ahead with solving a lot of it," Fatma added in the 2006 interview, noting that the government was asking about problems facing Egyptian businesses and beginning to remove some of the obstacles. Fatma explains: "We had an export shipment going to Dubai that was stopped because of some regulation. Instantly, over the phone, the Ministry made it go through. This could never have happened before."

Azza serves on Egypt's Building, Refractory & Metallurgy Export Council and the Jewellery Sector Steering Committee. Some of AFJ's plans for helping to build up human capital in Egypt include the Tasmeem design education and development program, a project for poor high school graduates; a jewelry school; and a design R&D center in Aswan. The latter will make use of the unique archive of antique jewelry, fragments, and designs collected by AFJ over the past 40 years. "The idea is to create a hub of creativity for designers . . . who have already put their foot in the design world and want to take it further," Fatma explained in 2010.[8]

Although Egypt made significant strides in improving its entrepreneurship policies in the past decade, there is still progress to be made in creating a regulatory environment that will attract investors. Much uncertainty hovers over the unfolding political events of 2011. There is great potential for Egypt to forge a new, entrepreneurship-based economy, building on its millennia of rich cultural history, Mediterranean port, proximity to European markets, agricultural and fresh water resources, media industries, and cultural leadership in the Arab world. There is also the risk of rent-seeking behavior from military controlled industries, unions, and partisan groups, and broader political and security concerns. Externally, there is competition from countries with easier rules and regulations for entrepreneurs. Azza is optimistic: "The revolution has inspired a lot of Egyptians in all fields . . . There is a real air of freedom and optimism that I am sure will be reflected in the work of artists across the country."[9] Not every entrepreneur has the credibility and ability to get the government to listen, which is why achieving legal reforms to benefit all entrepreneurs is so important.[10]

CONCLUSION

With its success in London's high-end fashion market, AFJ's innovations came full circle. AFJ designs now set trends in markets that Azza had once learned from as a passionate student. In 2007, the Financial Times chose her one of the 25 most influential businesswomen in the Middle East. Her path has had both personal and professional hardships, but she managed to turn her artistic visions into a modern commercial success, one that demands continual innovation in the highly competitive world of high fashion and design. Her company's strategy springs from promoting Egypt's cultural heritage, such that what is good for one is good for the other—arguably a deeper aspect of social responsibility than the minor charity practiced by some firms.[11]

Azza Fahmy Jewellery is challenging centuries-old views in which high-end design was conducted in Paris, London, and New York, and low-cost assembly was farmed out to less wealthy countries. Indeed, AFJ began with the highest quality and unique designs, and only turned toward more production once it had established a reputation within Egypt. From there, its brand reputation has expanded into Dubai, other MENA countries, and the world's most famous design centers. AFJ is drawing on the deepest wells of jewelry design, restoring and advancing Arab-inspired traditions in a profitable, hence self-sustainable, way.

In 2011, as AFJ continued to build on its strong Egyptian image and create a niche in the competitive space of luxury brands, it faced decisions without simple answers: should the company bring outside investors into the family business to help penetrate new markets, scale up, and further build the brand? Or would this weaken the aesthetic integrity and quality of its products, which have provided the company's identity, earned its customer loyalty, and fueled elite word-of-mouth marketing? If it did accept investors, what would be the best way to structure the deal and corporate governance to achieve its goals? Would joint ventures where AFJ maintains managerial control be better than franchising? Is now the time to enter the Saudi and Kuwait markets? How will the political upheavals and regime change in Egypt affect AFJ's strategic thinking and opportunities? AFJ's second phase of growth is still unfolding, and the answers to these questions, among others, will shape the direction it takes.

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Noha Ismail

Publishing Progress: Hindawi Case Study

Dr. Ahmed Hindawi, chairman of Hindawi Publishing Corporation, was sipping his morning coffee in his office in Cairo, Egypt, talking with his wife and with deputy chairperson Dr. Nagwa Abdel Mottaleb about how much progress the company they founded in 1997 had made in the past few months. They were waiting for Hindawi's senior management team to arrive for their weekly management meeting. Having become one of the three leading open-access publishers worldwide, Dr. Hindawi remarked, "We have achieved great success that needs to be sustained, especially as competitors are developing. We need to study alternatives that would fulfill our vision and ensure a continuous increase in the number of articles published."

Hindawi is a commercial publisher of peer-reviewed English-language journals that focus on science, technology, and medicine (STM). He was first introduced to academic publishing during his days at the University of Pennsylvania. While completing a PhD in high-energy physics, he learned about the industry's supply side, including the fact that publishing articles is integral to academic success, but only if published in the most selective and well-regarded journals, which often have the longest application and peer-review editing processes. These journals introduce research to a wider audience of academics, who then cite the articles in later publications, which is how a researcher measures their impact in academics. Though this had initially appealed to Hindawi, he began to think that he could have a bigger impact as an entrepreneur than as a physicist. He saw that the Internet was beginning to shake up the publishing industry, and he returned to Cairo in 1997 with a PhD in hand and a risky entrepreneurial idea in mind. Hindawi was convinced that he could create a viable publishing business in Egypt that would rely on low-cost digital publishing to compete in the global market, and he founded Hindawi Publishing in 1997. By building on his idea and testing various commercialization techniques along the way, he has subsequently developed a portfolio of 277 English-language scholarly journals.

INDUSTRY BACKGROUND

Industry Context

The academic publishing market is in the process of a major shake-up that began in the mid-1980s with the so-called "serials crisis" and has recently culminated in a move toward open access publishing. During the 1980s, the academic publishing market was governed by a few renowned publishers that charged high prices and employed restrictive copyright policies. According to a 2007 industry snapshot, the top 100 publishers published 67 percent of all journals, while the top 10 published approximately 35 percent. The four largest publishers (Elsevier, Springer, Taylor & Francis, and Wiley-Blackwell) each published well over one thousand journals.

Between 1986 and 2003, there was a shift in the amount libraries were spending on journal subscriptions; spending increased by 260 percent, while the number of journals they had access to increased by only 14 percent. The introduction of the Internet created an opportunity to address this "serials crisis," as it created a platform for publishing research that was widely available. Because only a few academic publishers monopolized the market, they were able to increase their prices by 10 percent each year. In response, members of the academic and publishing communities initiated the open access movement, which formally began in 2001 with the signing of the Budapest Open Access Initiative. The academic publishing sector is currently in a transition phase and remains unstable. Open access is growing, but it is still unclear whether it will stabilize at some point or continue to expand. The open access movement has developed according to two separate models, which are generally referred to as Gold OA and Green OA:

- Gold OA: Under this model, all publishing costs are covered by the authors, and journals are freely available and accessible online in their final published format. In addition to journals that are published entirely using a Gold OA model, many subscription-based journals allow authors to make their individual articles available on an open access basis by paying an optional fee. This model is referred to as hybrid open access publishing.
- Green OA: In this model, authors publish their work in a subscription-based journal and can then publish a free version on their university website or in an open access repository. In the vast majority of cases, however, authors are not allowed to make the official published version of their article available for free; instead, they are allowed to post their article as it appeared before it underwent any copyediting, typesetting, or reference validation by a publisher.

Over the last five years, the momentum behind open access publishing has grown significantly. Many of the largest subscription-based publishers have recently begun to publish a number of open access journals, or at least have announced their intention to do so. The creation of open access publishing has not had a distinct impact on the demographics of the market: about 55 percent of global STM revenues (including non-journal STM products) come from the U.S., 30 percent from Europe, 10 percent from Asia/Pacific, and 5 percent from the rest of the world. The most lucrative fields in publishing are those that account for the largest share of research grant budgets; the biomedical field, for example, represents nearly 30 percent of journals.

Concerns about Open Access

The OA model can still be considered nascent, and thus it sparks a great deal of speculation. Several concerns are arising, for example, about the sustainability of the OA model. In the OA model, the article processing charge (APC) is considered an extra cost that the authors must bear, in addition to the costs they already incurred while conducting their research. In fields like biotech and chemistry, the APC is a small percentage of the overall cost of research, which can easily reach $700,000. However, in other fields, such as the social sciences and mathematics, the initial cost of research is not significant; therefore, the APC sometimes represents a large percentage of the research budget. Furthermore, the APC can be a burden for researchers in developing countries, who might not have the means to pay costs, which can be thousands of dollars. As a result, high-quality work by an author who lacks adequate financial means might not be published. Another concern regarding the OA model is that some publishers are using it as an opportunity to make quick money while disregarding the quality of the work published. Such publishers have created the impression that open access can be unreliable.[1]

Market Size

According to a 2009 report from the International Association of Scientific, Technical, and Medical Publishers, the total size of the English-language scholarly journal publishing market is approximately US$8 billion, and it is growing at roughly 6-7 percent per year. As of mid-2009, there were 25,400 active peer-reviewed scholarly journals collectively publishing some 1.5 million articles each year. According to the Directory of Open Access Journals, there are currently 4,300 open access peer-reviewed journals worldwide. The Directory estimates that about 2 percent of all published articles appear in fully open access journals, 5 percent in journals offering open access within 12 months, and fewer than 1 percent are published under a different hybrid model. Given this breakdown, it's not surprising that the academic publishing industry as a whole is still primarily supported by subscriptions.

COMPANY BACKGROUND

Influenced by the Internet's impact on the flow and availability of information, Ahmed Hindawi established Hindawi Publishing in 1997. Hindawi currently publishes 277 journals; their content is licensed through creative commons agreements, and the majority of the company's articles are included in one or more of the leading international abstracting and indexing databases. Hindawi's mission is to make scientific research accessible and affordable worldwide, to reach 20,000 published articles annually by 2015, and to occupy 10 percent of the global market share by 2020 in terms of number of articles published.

As it has expanded, Hindawi Publishing has added more than ten thousand senior researchers to the editorial boards of its journals, which in turn has led to the company's increasing prestige and reputation—the two most important factors in the scholarly publishing world. Moreover, as an early mover, Hindawi has been able to create more than 200 new journals in a wide variety of fields.

As the academic publishing industry continues to adapt to open access, Hindawi's breadth will enable it to publish an increasing variety of highly prestigious titles. Some 15 percent of its articles are currently authored by academics from the top 100 universities worldwide, and Hindawi authors' H-index (a calculation that measures an author's citation levels and productivity) is 8.11, which is higher than the industry average. Furthermore, the rejection rate at Hindawi could reach up to 65 percent, which is an indication of the company's strict peer-review process, and of the quality of the work they publish.

From an operational standpoint, Hindawi benefits from low overhead and labor costs, due to its location in Egypt. The production and editing facilities are also located in the Cairo Free Zone, which is tax free. Hindawi estimates that its average operating costs are 80 percent less than its competitors, as reflected in its lower APC fees. Although Hindawi's location helps keep overhead costs down, it also creates challenges for the company because it is very difficult to recruit staff that has experience in the scholarly publishing industry. As a result, the company must focus on building an internal pipeline of talent that will be able to lead the company into the future.

Hindawi's operations are organized around three main units:

- Business Development (51 employees) oversees the creation of new journals (one journal per person per month)
- Customer Relations (65 employees) oversees all aspects of the editorial process (around 40 submissions per employee per month)
- Production (121 employees) publishes all articles once they are selected (eight articles per person per month)

To guarantee the quality of the articles published and the efficiency of the publishing process, the above units are further supported by a business and quality management unit (60 employees) and an information systems unit (38 employees). As a result, the production stages are all processed in house, except the final printing stage, when applicable. Hindawi's team is able to turn around 25 articles per person per year, compared to an industry average of about 17. Each new member of the production team receives three months of on-the-job training.

Hindawi's primary revenue streams come from the following publishing business models:[2]

- Open Access—Author pays for digital publishing: 92 percent of 2009 revenues, 40 percent average profit margin
  Hindawi is an early adopter of this business model, which inverses the traditional publishing scheme. In open access, articles are published online and are free to readers; instead of subscriptions, publishers collect fees from authors to cover costs. Hindawi's average open access APC is US$730 across all of its journals.
- Print Edition Sales—Subscriber pays for printed editions: 7 percent of 2009 revenues
  Hindawi expects this revenue stream to continue to decline over the next few years, as most libraries see little value in subscribing to the print edition of journals that are freely available online.
- Hindawi's Gold Open Access Model: Gold OA generates revenues from authors—and sometimes directly from the institutions that fund these authors—and publishes content in journals that are freely available online without a subscription. Because of this, even its newest journals have positive cash flows; articles are paid for after they are selected (a task that is mostly outsourced to voluntary peer reviewers) but before production (which is the main cost). Hindawi's 277 journals are updated in real time—for example, when a new article is published it is immediately made available online. Newer journals will appear on Hindawi's site even if they have just a few articles.
- Partnership with SAGE Publications: In late 2007, SAGE Publications and Hindawi entered into an informal partnership that has since led to the creation of 35 new Hindawi journals. SAGE is the fifth largest commercial publisher of scholarly journals worldwide, and it faces many of the same challenges as Hindawi in building prestige and an authorship/reader base as the industry transitions to open access. By partnering and launching cobranded and co-owned journals, Hindawi and SAGE hope to leverage their respective strengths more effectively. Thus far, revenues have been split 50-50. In 2009, the co-owned journals accounted for 4 percent of Hindawi's revenues.

Clients

Hindawi's clients are scholarly authors and researchers from around the world who submit their work for publication in any of Hindawi's journals. With 277 journals, Hindawi's clients span a wide variety of scientific, technological, and medical fields. In some sectors—and thus in some journals—the funding institutions behind the researchers (universities, public foundations, etc.) pay to publish the work. Hindawi also offers a university membership program, through which it collects 1-2 percent of its revenues directly in fees from universities, such as the University of Calgary, the University of British Columbia, and Lund University. These institutions pay an annual fee up front that is based on the output of their researchers; annual membership fees range from US$3,000 to US$10,000. If an institution is a member of Hindawi's programs, its researchers do not have to pay APC. Hindawi's target readers include the approximately four million people who actively work in research each year, as well as interested professionals from related fields. The number of articles published annually at Hindawi primarily originate in the U.S. (852), followed by China (582), Italy (233), and Japan (200).

The Next Step

Commenting on his company's success, Ahmed Hindawi remarked that "growing at such a high rate for several years is challenging, both on the operational level and on the market share expansion level. There is so much work to be done to secure future expansion and to fulfill our vision." He noted that many alternatives are available to authors, given the fierce competition from other renowned journals and the presence of less expensive publishing venues, such as hybrid models or personal websites. He explained further: "We need to expand the exposure of our brand name and capitalize on our prestige. The company now faces several critical questions: should we start an aggressive marketing campaign within the academic publishing industry; should we acquire other established journals published by competitors although it will be difficult to raise the capital needed for such action; or should we expand our area of focus to include more demanded specializations such as social sciences?"

This case study is based on information provided in the entrepreneur profile developed by the search and selection teams at Endeavor Egypt (www.endeavoreg.org) and Endeavor Global (www.endeavor.org)

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1. N. D. Kho, "Hindawi Publishing: A Working OA Model," *Information Today*, Inc. 27, no. 11 (2010, December). Retrieved from http://www.infotoday.com/IT/dec10/Kho.shtml.
2. A small portion of revenues comes from one-off projects and recurring revenues from a book unit Hindawi cancelled several years ago.

Ronan de Kervenoael

Championing the Co-Production and Co-Creation of Value: The Turkish Case of Yemeksepeti.com

Turkey, with a population of over 72 million whose median age is 28, is a rapidly growing emerging economy. As such, consumption of information and communications technology (ICT) is strong, with over 35 million Internet users, roughly 45 percent of the population in 2010. As in many emerging markets, income level, age, skills, experience, trust in the e-channel, and multidevice access to the Internet are reported to be key factors in the likelihood of consumers adopting e-commerce. Table 1 (next page) presents an overview of ICT use in Turkey to demonstrate technological leapfrogging and the large potential for e-commerce. As new communication technologies (such as 3G, smart phones, tablets, and fiber broadband) are becoming widespread across the country, online retailers that can provide their customers with efficient and secure service are burgeoning. Turkish consumers are now more comfortable ordering online, due to perceived ease, usefulness, and value. For example, online retailers generally offer cheaper options, wider ranges, and more convenient delivery than regular stores. As most of the population becomes urbanized, more time-poor, cash-rich individuals are emerging. In addition, more than just buying, participating has become the key in developing the e-experience. Turkey is, for example, the largest user of SMS in Europe, and social networks are adopted at a very high rate.

Yemeksepeti.com (which means "meal basket"), founded in 2001 by Nevzat Aydin, is the first online food delivery portal in Turkey that is based on a business model similar to that of waitersonwheels.com in the U.S. The company works with local restaurants and big food chains throughout Turkey to offer consumers different cuisine options. Through the online portal, customers are able to access member restaurants' menus and current deals, as well as feedback from previous customers. A ranking on service, food quality, and speed allows customers to differentiate between the large number of offers.

Customers place their orders securely and efficiently without paying any extra fees. The order is delivered to the customer within 20 minutes. Beyond saving time, hassle, and, in many cases, money by bringing together the available alternatives and listing discount and special offers, Yemeksepeti provides a lifestyle solution to busy urban individuals in search of diverse food choices prepared by expert chefs.

Since its founding in 2001, Yemeksepeti strives to meet customers' ever-changing needs by working closely with consumers and supply-chain members, and encouraging their participation at each stage of value creation. In an emerging market, where face-to-face transactions still dominate the food category and the e-channel is still in its infancy, creating a system to order food online from over 4,000 small, often independent restaurants (now in 21 cities in Turkey) may sound like a strange idea. Yet ten years after its launch, with over 120 employees, 800,000+ active subscribers, and over 900,000 visits per month, Yemeksepeti is the leader in its category. It takes over 30,000 orders per day (one order consists of meals for 2.5 persons, or an average of up to 75,000 per day), with a growth rate of 40 percent in 2010 and business volume of more

Internet usage per age group	31-40 34% 23-30 51% 40>15%	Preferred payment method	Credit card 80% EFT 16% Cash at the door 4%
Internet usage per gender group	Men 63%, women 37%	Average spending when purchasing online 1TL = 1.5$	▪25TL 5% ▪25-50 12% ▪50-99 27% ▪100-249 32% ▪250-500 16% ▪500> 8%
Internet usage by employment status	Salaried 56.8% Employers 66% Unpaid family worker 15.7% Unemployed 41.6% Students 88.2% Retired 15.9%	Online purchase per product types	•Jewellery 3.45% •Food 5.33% •Toys 6.72 •Tickets 8.95% •CD/DVD 9.11% •Magazine subscription 10.45% •Clothing 12.76% •Book 13.08% •Electronics 26%
E-shopping frequency per year	•1-3 times=44% •3-5 times=22% •5-10 times=15% •10>=19%	Online activities	•Research 54% •Email 35% •Newspapers 36.2% •Games 33.6% •Download music 21.6% •Download films 10.6% •E-banking 9% •Blogging 6.6%
E-channel choice	Low price 25% Convenience 21% Searching capabilities 17% Product range 20%	Key dates	3G license 2008, over 85 million mobile phones E-government platform 2008
Turkey key statistics	•Population 72 million •70% of population lives in Urban areas •Median age 28 years •50% of households use Internet at home in Urban areas •61% use computer everyday •Broadband access 35% •90% of enterprises use the Internet	Turkey main Concerns with e-channel	•Privacy security 30% •Not feeling the need to buy online 72% •Distrust complain 4% •Lack of information 7% •Spam mail 58% •Virus 64%

Table 1. ICT and Turkey, 2010

than $110 million. It is also developing a presence in Russia and the United Arab Emirates (see Table 1).

Co-production to create value is defined as leveraging acts within the supply chain that defy conventionally accepted behavior in the managerial process and breach the mutual expectations between Yemeksepeti and its partner restaurants (Prahalad & Venkat, 2003, 2004a, 2004b). Similarly, co-creation is about joint creation of value where consumers are seen as active players in defining and solving problems and, more importantly, in constructing the brand experience (Prahalad & Ramaswamy, 2004a and 2004b). These views of value creation (i.e., co-production and co-creation) challenge the perspective that firms are the sole designers of products and that they control the production, marketing, and sales processes. Active participation requires consumers and suppliers to provide and share information, make suggestions, and become involved in decisionmaking during the product/service co-creation and delivery process (Chan, Yi, & Lam 2010). As such, the notion of value creation in Yemeksepeti can be described as eroding the distinction between the roles of the producers (restaurants), the website provider (Yemeksepeti), and the consumers.

The Yemeksepeti success story begins with a timely assessment of the dramatic changes in the culture of dining out observed in Turkey over the last ten years, such as Westernized tastes and the spread of fast food (Palmer, Owen, & De Kervenoael, 2010; Ramirez, 1999). It is the shifting consumption practices at the neighborhood level, not the technology, that motivated the Yemeksepeti business model.

One early decision identified by CEO Aydin was to ascertain if neighborhood restaurants were viewed as socially constructed entities. Would consumers in local communities be willing to use their customary restaurant choices for food delivery at home? Could local restaurant brand equity—including authenticity, trust, traceability, history, and habits—be leveraged and transferred online? Ms. Sahin, a member of the Yemeksepeti marketing department, emphasizes that these co-created meanings create immaterial assets that make up the brand value: "Creating consumer experience through co-production and co-creation is not an innovation for Yemeksepeti; it is the very core of the idea behind the system."

Moreover, IT head Melih Odemis notes that technical aspects alone do not create a sustainable competitive advantage. State-of-the-art tools, he adds, yield success only if they are embedded in a culture that fosters value creation:

> Using the right tools to keep the business at the edge of the competition is very important if you are trying to beat conventional methods and change user behavior both at restaurant and consumer levels. Leveraging the features of top notch software like Strongmail, Omniture, and Qlikview helps us a lot to add more value to our business partners, a.k.a. restaurants. Strongmail as an in-house operated emailing platform developed by a Silicon Valley company gives us a very powerful e-marketing platform, enabling us to co-produce and publish excellent campaigns with our member restaurants serving our consumers. Omniture Sitecatalyst enables us to measure every move of visitors on [our] site and understand user behavior trends so that we can shape our site, as well as our campaigns co-creating these trends and changes. Qlikview is an excellent tool which helps our sales and marketing teams to make deep-down analysis in taking macro snapshots of the business, consumer trends and geographic brand penetration.

Service quality and standardization also have created an issue in a market where many restaurants (1) do not have many ICT skills, (2) are independently managed without external control or influence, (3) are not used to cooperating with what is essentially perceived as the competition, and (4) are governed by the norm of face-to-face relations. Akin to the problem of governance in inter-firm relationships, the issue of how to govern relationships with suppliers became a focal point in the co-production innovation. Do mutual expectations exist between the partners (i.e., are goals compatible)? What constitutes proper behavior in the process of co-production (i.e., opportunistic behavior)? Is self-interest too strong, thereby encouraging active bypassing of the system when the customer base is established (i.e., relational exchange)? And are partners going to maintain the quality standards they agreed to once they have been accepted into the network (i.e., information asymmetry)?

Specific examples of value creation Yemeksepeti is working on include the following:

E-marketing

1. A "feedback points" system is an interactive platform where parties can discuss issues. This encourages consumers to write comments about the quality of the food for other consumers' enjoyment. Consumers are also encouraged to leave feedback directly with partners to help improve service.

2. Driven by consumer feedback, the "Yemeksepeti campus" was introduced as a separate service that allows students to order meals with unique offers and shorter delivery times. Similarly, in response to partner recommendations, the "Yemeksepeti elite club" was created to offer exclusive access to premium restaurants and a reservation system.

3. Following the iPhone mania, an application was designed to support mobile access, as consumers wanted to synchronize orders and delivery while on the move to cut down waiting time. Odemis states:

> Mobile will be the core of social media, since every single person is a publisher and listener at the same time, so the communication is not bi-directional anymore, it is omnidirectional for everyone.

E-market research

By actively participating in social networks such as Facebook and Twitter, Yemeksepeti identifies (1) food consumption trends, (2) the evolution of drink and beverage choices, (3) the e-lifestyle, and (4) growth potential in new areas. Odemis elaborates:

> Since we are running a huge platform where almost 4,000 restaurants interact with close to one million users every day, creating around 30,000 orders, we are able to watch all the consumption habits broken down by ages, locations, seasons, cuisines, food types, etc. That is the only single platform that has 100 percent correct data about this market, which gives e-market researchers a unique chance to work on it.

E-invoicing (a standard invoice with structured data)

Value creation yields advantages in (1) lower handling costs, (2) digitization, (3) production costs, (4) preventing fraud, (5) employee productivity, and (6) customer/partner history management. Odemis observes:

> E-invoicing is legal in Turkey for two years . . . at the moment for a very limited number of telecom and governmental companies. It will be possible for us in the very near future. Our infrastructure is ready to create the needed platform for that. We only lack the legal environment to let us make the final touch for e-invoicing, which will speed up our invoicing and collection processes while cutting our costs on man-hours, printing, and logistics items.

While these areas of co-production and co-creation are ongoing activities, Yemeksepeti is conscious that too many changes and calls for integration may not be understood by all of its partners, and that these ideas will need to be refined and reshaped before they can be adopted. The idea of core competencies and who owns them are crucial factors affecting the co-creation/co-production process. In sum, this case illustrates the complexity of the value creation process, the richness of suppliers' co-creative roles, and the potential of "glocal" strategies that use a global media in a local situation.

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Mireille Barsoum

Success in the Making: The Story of IrisGuard Inc.

Jordanian Imad Malhas, founder and CEO of IrisGuard Inc., is a pioneer in the field of biometrics, in particular iris recognition identity security systems. In an interview with Mireille Barsoum, the author of this case, he discussed an article published recently in The National, *Abu Dhabi's English-language daily newspaper, about IrisGuard's success story, as well as his personal entrepreneurship and experience.*

The Institute for Security and Open Methodologies defines security as "a form of protection where a separation is created between the assets and the threat." The history of security systems ranges from small bells attached to a door that ring when it is opened, town hall bells that alert the population of danger, and security systems connected to local police stations.

As technology has advanced, so has the ingenuity of rogue thieves and hackers. All they have to do is discover the weakest link in a security system's chain and exploit it, for as everybody knows, the weakest link in the chain is the most critical and can cause disastrous consequences if unprotected.

In the corporate world, various aspects of security were historically addressed separately, most notably by distinct and often non-communicating departments: IT security, physical security, fraud prevention, political security, and financial security. Today there is a greater recognition of the interconnected nature of security requirements, an approach known as holistic security and all hazards management.

BIOMETRIC TECHNOLOGY

Biometrics is the science and technology of measuring and analyzing biological data. In information technology, biometrics refers to technologies that measure and analyze human body characteristics for authentication purposes, such as DNA, fingerprints, eye retinas and irises, voice patterns, facial patterns, and hand measurements.

Biometrics has been the single greatest area of growth in homeland security. Although biometric identification isn't new, the September 11, 2001, attacks changed people's attitudes toward its use. The event dramatically lowered the public's resistance to technology previously viewed as invasive and rendered individuals more welcoming to the idea of a more effective security technology.

Security personnel look for biometric data that does not change over the course of a person's life; that is, physical characteristics that stay constant and are difficult to fake or change. Though the field is still in its infancy, many people believe that biometrics will play a critical role in the future, especially in electronic commerce. Future personal computers will perhaps include a fingerprint scanner, where index fingerprints are analyzed to determine who the user is and, based on their identity, authorize different levels of access. Access levels could include the ability to use credit card information to make electronic purchases.

IRIS RECOGNITION IN BRIEF

Iris recognition is a biometric identification technology that uses high-resolution images of the irises of the eye, which are well suited to authentication purposes and considered a good subject for biometric identification. The iris is an internal organ protected from most damage and wear, is practically flat and uniform under most conditions, and has a texture that is unique even to genetically identical twins.

Iris scans create high-resolution images of the irises, and can be done even when the subject is wearing contact lenses or glasses. However, it is necessary for the system to take eyelids and eyelashes into account, as both can obscure the necessary parts of the eye and cause false information to be added into automated systems.

Iris pattern recognition is used to determine the identity of a subject. It is accomplished by applying proprietary algorithms for image acquisition and subsequent one-to-many matching that were developed initially by John G. Daugman, whose algorithms have produced accuracy rates in authentication that are better than those of any other biometric method. Iris scans are extremely accurate. The technology has been implemented in the United Arab Emirates (UAE) by IrisGuard as a part of the country's immigration process; after more than 200 billion comparisons, there has never been a false match (Technovelgy.com, Article no. 65).

IRISGUARD: THE DREAM

Imad Malhas has a strong technical background in the field of information technology. Over the last two decades, he has been regarded as a prominent pioneer in software development in the Middle East. Malhas graduated from the University of Wisconsin in Milwaukee, Wisconsin, in 1984 with a degree in computer science. He founded IrisGuard in 2001 and has occupied the CEO position since that time.

Malhas began his professional career in 1984, when he held IT managerial positions for several Jordanian establishments. His fascination with security systems began at the age of 25, when he became the technical advisor to Jordan's director of public security, a position he held from 1988 to 1992, and to the national security project known as Command and Control. He later founded a software company called IdealSoft and led a team of professionals to produce large-scale software solutions for hospital management and health insurance administration throughout the region. He was one of the founders of the National Health Insurance Administration Company in 1999, the first company in the region to use smart cards for health claims adjudication.

Malhas founded IrisGuard Inc. in 2001 and serves as its CEO. He has guided the company to become a world leader in the field of iris recognition technology. IrisGuard is credited with taking iris recognition from the uncertainties of the lab into the real world. IrisGuard has offices in Washington, London, Geneva, Dubai, Amman, and Singapore, and its customers can be found in North America, South America, Europe, the Middle East, Africa, Asia, and Australia. They include government and commercial operations, such as law enforcement, homeland security, health care, banking and finance, to name just a few.

Malhas pioneered the concept of employing iris recognition to secure national borders in the United Arab Emirates prior to September 11, 2001. More recently, he led IrisGuard's successful deployment of the world's first iris implementation at banks and ATM machines using the EyeTrust Technology, with which customers use only their iris to withdraw money from their accounts (Cairo Amman Bank-Jordan).

Malhas is the principle designer of the Iris Farm Architecture (IFA) that revolutionized the process of national iris recognition solutions. His close collaboration with Professor John Daugman of Cambridge University—the inventor of iris recognition technology—in the early years of the company, and with other world-renowned professors and scientists in the field of optical and pattern recognition, resulted in an accurate and scalable iris architecture. IrisGuards' IFA is designed to provide real-time response to iris enrollments and iris matching in holistic projects that involve millions of records at national borders or hundreds of ATM machines and Internet home banking users. The IFA architecture's continued development included the release of the world's first iris-enabled Web interface in 2005. The UAE Iris Expellee Tracking System, deployed in 2001, is the largest real-time iris deployment in the world (IrisGuard.com)

IRISGUARD: THE INNOVATION

IrisGuard has pioneered the use of iris recognition in unique ways. Having begun with homeland security-illegal immigration border control systems, IrisGuard then moved into commercial applications that enable people to walk up to an ATM and withdraw cash from their accounts using their eyes, thus eliminating the need for the cumbersome PIN/card combination. Subsequently, customers visiting the bank teller positions became able to sign for a withdrawal with the blink of an eye—intuitively, easily, and, more importantly, securely.

Part of the IrisGuard strategy has been and will continue to be focused on IRT research and development. When IrisGuard started, the company used the existing entry access control iris camera device called the LG2200, which was designed for door access by LG. IrisGuard innovated the concept of a sovereign state as a "building," the "doors" being the border control points. This happened in 2001, well before 9/11, an event that significantly increased acceptance and deployment of biometric security systems worldwide.

IrisGuard's software development division built all the necessary components, and used the aforementioned device as the camera front end in a totally different way than what it was designed for—that is, to open doors. The company's innovation allowed the EAC system to be used in airports to check for individuals trying to re-enter the UAE illegally after having been deported. This innovation was very successful and continues to operate in the UAE; it has prevented more than 600,000 people from entering the country with fraudulent travel documents.

In 2001, IrisGuard could no longer purchase the LG2200 camera as a standalone unit without acquiring the complete LG door access system, which included additional hardware that was of no practical use to the company. Consequently, they had no alternative but to purchase the entire door access system, using only the camera and discarding the rest, which imposed a huge and unnecessary, financial burden on the company's resources. IrisGuard approached LG in the hope of resolving this issue, but without success.

It was then that IrisGuard took the decision to manufacture its own iris camera imagers, a difficult task that required an extensive commitment to research and development. Malhas and the IrisGuard research and development team in the company's UK laboratories soon had designed and manufactured a high-quality iris camera. They produced three award-winning iris camera systems that were distinguished for their quality, innovation, and speed. The cameras are now extensively deployed worldwide.

The IG-H100 iris camera system was immediately deployed in the aforementioned UAE border control project. It acquired pristine iris images of more than 25 million people of 200 nationalities. The system has been independently evaluated by the International Biometric Group in New York and was found to be the most accurate and fastest iris camera on the market today. Recent additions include the IG-AD100 dual-eye camera system, which produces pristine images of both irises simultaneously, and the world's first 0.00 percent Equal Error Rate device. IrisGuard has five different cameras currently under development. The company's innovations have attracted international media coverage by the likes of CNN, BBC World, Fox News, National Geographic, Al Jazeera, *BusinessWeek,* and Bloomberg, among others.

IRISGUARD: ENTREPRENEURSHIP AND PERSISTENCE

Banking and finance is the second area where IrisGuard plays a predominant role in providing secure, accurate, and easy-to-use identification systems that protect customers against identity theft, card spoofing, and forgery. Cairo Amman Bank in Jordan was the first bank to deploy IrisGuard iBank Software Suite with all its tellers, its ATM network, and customer service departments in all of its branches in Jordan and Palestine. Several banks in the MENA region currently use IrisGuard technology, services, and products.

In 2008, when IrisGuard owned the only national security system in UAE, and as global awareness and acceptance of biometric security increased, competitors were trying to replicate IrisGuard's innovations and to make inroads into the company's position in the market. IrisGuard's persistence and determination was put to the test, and the company put up a strong but quiet fight. IrisGuard's innovation not only served its production and design roles, but was put to use in marketing and strategic decisions as well. By focusing the company's full efforts on providing unique solutions to bank customers, IrisGuard managed to create a competitive advantage that put it well ahead of its nearest competitor. In 2009, the company rolled out the world's first iris banking solution that allowed customers to identify themselves at bank tellers and ATMs without a card and pin. Since then, over 1,200 units have been deployed in various countries with as yet no direct competition.

Research was conducted with a random sample of 700 Cairo Amman Bank customers to evaluate the usefulness, relevance, and security of the iris identification service. Among the most interesting results was that 89.8 percent of respondents used the technology and more than 90 percent of them found the service appealing, relevant, and secure, and reported being satisfied with the service. Most of those surveyed anticipated using the service more often and intended to recommend the service to others.

IRISGUARD: THE COMPANY AND CULTURE

IrisGuard was founded with a team of only six employees working out of one office, which was managed by Malhas. The team focused exclusively on iris recognition, conducting extensive research and development on both hardware and software, which helped the company to grow rapidly and to establish six international offices with over 40 staff members. In 2011, IrisGuard has six wholly owned subsidiaries worldwide. The company's corporate culture is family oriented and customer focused, and it fosters a culture of acceptance and diversity. Employees at all levels receiving ongoing training in state-of-the-art technical innovations.

IRISGUARD: THE FUTURE

IrisGuard's success is the result of hard work by people dedicated to achieving Malhas's dream and to delivering superior quality products and services, as well as adherence to a strategy of learning from mistakes and overcoming challenges in a constructive manner. This has led to the company's leadership in an industry where many players have failed.

According to Malhas, "the most important thing for any company is to avoid complacency . . . to excel in what one does best . . . to seek new novel objectives outside one's comfort zone in order to augment the innovative spirit . . . and never to relax or take leadership for granted." As such, his company is growing quickly and benefiting from its success in iris recognition, focusing increasing on applications in health care, retail payment systems, social networking, and, finally, government-to-citizen applications.

IrisGuard technology is expected to be deployed in homes next year, as well as restaurants, supermarkets, and shopping malls, where it will enable people to securely pay-by-eye or log on to their bank accounts or social media sites through the EyePay Technology.

Another IrisGuard project is the EyeSign Technology (Figure 13), which resembles an iPhone and allows users to access banks and other encrypted websites securely from a home PC or laptop, and to execute all sorts of offline and online shopping "with one's eyes," as Malhas describes it.[1]

As Malhas reflects on the IrisGuard journey, he is filled with a feeling of pride and satisfaction about his team's accomplishments and the prospects of what they may yet accomplish. He is, however, anxious about the company's future. Although he is confident of its ability to innovate in product design and manufacturing and to face business hurdles in a dynamic and motivated fashion, he does recognize that global technology is advancing at a rate that imposes a constant challenge for any technology-based business. Malhas wonders what steps IrisGuard should be taking today to ensure its sustainability in a very competitive environment. As a true believer in learning from previous mistakes and transforming problems into opportunities, Malhas welcomes any challenge as a test of the company's high levels of innovation and excellence. He smiles to himself as he acknowledges that there is no time to waste: he knows that where IrisGuard leads, others follow.

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Engy El Maghraby

Renewable Energy: A Question of Business Sustainability

It was late afternoon in Cairo on November 6, 2010, when Mohamed Mahran, the business development manager at Over Seas Energy Company, was sitting in his office in Heliopolis and thinking about how challenging his business was turning out to be, day after day. He had just been called to an intense meeting with the CEO and CFO, who both had serious questions about the renewable energy division's profitability. His division had been engaging in very promising clean energy projects, none of which was yet delivering a return on investment of more than 11 percent, due to the challenging nature of the sector in Egypt at the time. The company officers informed Mahran that he needed to come up with a proposal to improve the profitability of his division in two weeks; otherwise he would face budget cuts as a way to manage the profitability issue.

EGYPT'S MACROECONOMIC PROFILE

Over Seas Energy operates in Egypt, which is strategically located for trade and transport. Egypt's GDP is estimated to be growing at approximately 5 percent annually, with an inflation rate of 11.8 percent. Egypt's economy is heavily dependent on the services sector, primarily tourism, which represents 48.7 percent of GDP, followed by industry at 37.6 percent and agriculture at 13.7 percent. The official unemployment rate is 9 percent, although experts believe it could be as high as 20 percent. The central bank discount rate was estimated to be around 8.5 percent in 2009, down from 11.5 percent in 2008. The government started a set of economic and financial reforms in 2004, which have helped to increase the volume and value of trading and attracted more direct foreign investment. These reforms include:

- Adding a set of rules for cash flows and fixing issues related to market credibility and settlement of loans
- Establishing investor compensation funds
- Introducing new financial tools, such as margin trading
- Recapitalizing insurance companies
- Privatizing major public companies

RENEWABLE ENERGY INDUSTRY

The main source of energy in the world today is oil, which is the most reliable and cheapest source. Humanity has been dependent on oil for so long that it has developed a kind of addiction to it, with very high resistance to shifting to other energy sources. Economists have come to realize, however, that oil is not a permanent source of energy and that its supplies are going to run out one day. This has gradually led to what is known as peak oil, which refers to the situation where the addition of new oil discoveries to the confirmed global oil reserves is equal to the total decline in productivity of the existing oil fields. It is a point after which there is a net decline in global oil reserves, which should lead naturally to an increase in oil prices. It was this concept that highlighted to economists the need to have a more sustainable source of energy in order to decrease dependence on oil. In other words, there is a need to have an energy mix or a diversified portfolio of energy sources to decrease the risk of depending on oil as the only source of energy.

Fossil fuels are still perceived by many developing countries to be more economic to use than renewable energy; however, policymakers in developed countries have learned that the value of an energy source does not only lie in its price competitiveness. The inherent value in any energy source is a combination of its price, its sustainability, and its effect on the environment. Looking at it from this perspective, it is easy to see that although the extraction cost per unit is still lower for fossil fuels, this does not mean that it is the most valuable source of energy. For example, the cost of pollution in any society should be taken into account when measuring the cost of using fossil fuels. On that front, renewable energy would definitely score much better than fossil fuels.

The importance of renewable energy is currently being reflected in the policies of many countries. For example, the EU energy strategy involves consuming 20 percent of its energy needs from renewable energy sources by the year 2020. In addition, the U.S. dedicated a great part of its economic stimulus package (to counter the effects of the economic crisis) to the green energy business. Moreover, the UN has developed certain mechanisms that provide financial assistance for renewable energy projects, such as the Clean Development Mechanism (CDM), which financially rewards projects that reduce CO_2 emissions. Various multilateral organizations provide grants for renewable energy projects like the Clean Technology Fund, which is currently managed by the International Finance Corporation.

RENEWABLE ENERGY IN EGYPT

Egypt is among the countries with the highest potential for renewable energy resources. The Gulf of Suez is one of the best wind corridors in the world, comparable only to northern Europe. Egypt also lies on the solar belt that extends across most of North Africa and is characterized by the highest concentrations of solar energy per square meter. Egypt also contains huge amounts of organic waste that could be used as a main source of bio-energy. This abundance of renewable resources increases the productivity and yield per unit of investment, and makes it quite attractive compared to other locations in terms of investment. For example, the DESERTEC research indicated that, with current solar technologies, a piece of land in the Sahara that extends across North Africa with an area of around 90,000 square kilometers is enough to produce 100 percent of the global demand for electricity. This of course will come at a cost that is currently higher than that of fossil fuels, due to the expensive technologies.

The story is not all that beautiful, however. The macroeconomic situation in Egypt makes it very difficult to invest in renewable energy. The huge subsidies on fossil fuels represent a major barrier for renewable energy investments. This year, the government paid around 68 billion Egyptian pounds in subsidies for petroleum products. This makes fossil fuels the most attractive source of energy in the country, even though they are not the most sustainable. The surge in energy prices in 2008 proved how exposed the Egyptian economy is and showed how vulnerable the subsidy strategy is in the case of a price hike. It thus becomes important for the Egyptian government and society to start looking at renewable energy as a reliable source of sustainable energy. The reality, however, is that even at market prices and in the absence of subsidies, renewable energy would still be a more expensive source of energy than fossil fuels. However, governments in many countries provide subsidies for renewable energy production to bridge the gap between its cost and the price of fossil fuels to make it more competitive. The purpose of those green subsidies is to encourage the private sector to invest in renewable energy, and thus enhance the pace of R&D to make sure businesses create an affordable renewable energy technology that can compete with fossil fuels.

The advantage in Egypt is that because renewable energy productivity is much higher there than anywhere else in the world, reducing the reliance on fossil fuels can be achieved faster than in other economies. Thus, the Egyptian government needs to transfer money from the subsidies dedicated to fossil fuels to finance renewable energy production.

There currently is not even one very large-scale private-sector renewable energy farm in Egypt. All the existing solar and wind farms are government owned and are operated by the New and Renewable Energy Agency. The private sector is still uncertain about that sector in Egypt, and the government is not providing enough incentives to attract foreign and local investors.

OVER SEAS COMPANY BACKGROUND

Over Seas Energy is a privately owned energy company based in Egypt. It has active operations in oil and gas exploration and production, and in Clean Development Mechanism and renewable energy. The company was established in 2001 with the goal of becoming one of the first vertically integrated energy companies.

Over Seas Energy's CDM and Renewable Energy division is a new concept. Competition in this area is almost nonexistent, which gives the company the edge of being first movers. Looking at the CDM sector, Egypt has only four such projects that are registered at the United Nations Framework Convention on Climate Change. Each of those projects is a one-off done by foreign companies. Once Over Seas registers its project in Mahla, it will mark the first CDM project done by an Egyptian company.

The project is based on switching factories from heavy fuel oil to natural gas, thus reducing its carbon emissions. Once the project is registered, Over Seas will receive its first certified emission reduction units. Over Seas is working on developing partnerships with local and international players in the renewable energy sector to classify and develop potential projects across Egypt and the region. The company is also investing in research in this area to support the development of renewable energy industry in the region.

CURRENT SITUATION

The company's strategy is to use the CDM business as a source of financing; its revenues will be used to cover the costs of establishing a viable renewable energy business. This was based on the premise that the CDM is highly profitable compared to renewable energy, which requires lots of time and investment before a return can be realized. However, the company faced the problem that the CDM cycle involves a tedious bureaucratic process, which meant that more money and time were spent on CDM business than anticipated. CDM is still profitable, but because of the difficult bureaucratic aspect, it cannot provide all the sustainability the company requires if it wants to venture into renewable energy.

The company's aim is to create an economically sustainable model for renewable energy investment. The initial plan was to have CDM as the supporting factor, which was supposed to compensate for the negative effect of the subsidies on fossil fuels. The company management then realized that this was not entirely possible. Although CDM will indeed be a supportive business, the renewable energy projects will need to be profitable on their own. The main challenge that faces the company now is how to make renewable energy projects competitive in a cheap energy environment, like Egypt. The strategy is to present the renewable energy solutions not only on the price front, but also to emphasize the other inherent values in renewable energy sources that do not exist in fossil fuels, such as reliability and sustainability. It is important to present those values in a way that justifies the higher energy prices charged to prospective clients.

THE CHALLENGE

There are rumors about government plans to abolish energy subsidies gradually over the next five years, which is encouraging news for renewable energy. However, government plans are always characterized by uncertainty and sudden changes. Over Seas still intends to invest in renewable energy, but its main challenge will remain to formulate a value proposition that is not centered only on the price. Mahran needs to consider all of this when he develops his proposal on how to improve his division's profitability for the company officers.

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Enabling Entrepreneurship in Egypt Toward a Sustainable Dynamic Model

The objective of this report is to assess the current status of entrepreneurship in Egypt, and offer strategic and actionable recommendations that would enable entrepreneurship and significantly impact the Egyptian Economy.

The report represents a fresh look at entrepreneurship in Egypt and the support mechanisms currently at play, offering an assessment of initiatives and challenges at hand and providing multi-level recommendations on how to tackle them.

On a deeper level, this work aims at constructively questioning the entire model by which we view the tasks of entrepreneurial support in Egypt, and develops a new mechanism to replace the existing model currently in operation; a more dynamic, comprehensive, and flexible model that allows both for a feedback mechanism as well as for customization, acknowledging that new businesses demand different types of support based on their stage of development and of the industry in which they operate.

This report starts with a brief introduction explaining the importance of entrepreneurship and its potential for driving economic growth. Sections I and II offer a transversal snapshot, an assessment of the Egyptian economy and its entrepreneurial sector and the problem it faces. Sections III, IV and V present three levels of recommendations, from the most paradigm-altering to the most punctual.

Section I discusses Egypt's economic and entrepreneurial fundamentals, seeking to give an overview of the local economy and put it in perspective, by use of international comparisons gathered from the most recent surveys. With high levels of unemployment and underemployment, as well as a strong pre-disposition for private work and below-trend new business creation ratio, Egypt displays both the will and the need for entrepreneurship—promising to maximize its impact.

Section II begins by looking more particularly at existing initiatives and support organisations. The main handicap of those organisations is the lack of coordination and the duplication in the tasks conducted, which is significantly inefficient and prevents specialisation and scalability. Some of the major problems in the Egyptian entrepreneurial environment are identified, including the negative reputation associated to business, the emphasis on 'formal' and textual reforms more than their enforcement, weak contract enforcement, and the lack of collaboration in business relationships. Those challenges point to a clear conclusion: there is a clear necessity for an actionable plan to support Entrepreneurship in Egypt.

This actionable plan is subsequently developed on three levels.

Section III is concerned with the holistic model of entrepreneurship currently at work: a linear process, it is a succession of tasks and of support organisations until the economic venture is on its feet. This model needs to be replaced with a dynamic, self-sustainable model where cooperative work by individuals with the entrepreneurial, technical, and managerial skills respectively join forces to develop a project which will itself feed back into the pool of qualified persons.

Section IV deals with the strategic, long-term impact actions. These include: Changing the entrepreneurial Mindset, prioritizing of target sectors, coordinating initiatives, developing an

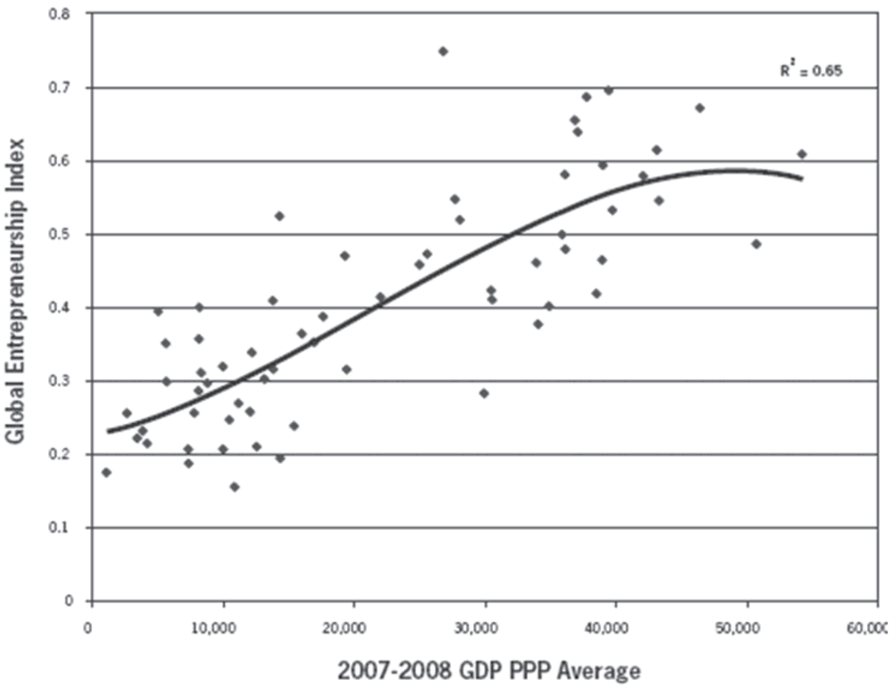

Figure 1. Entrepreneurship and GDP, purchasing power parity (PPP)
Source: Acs and Szerb (2008)

innovation network, and giving more attention to management skills development and to financing opportunities.

Section V develops the third and last level of recommendations and suggests some punctual, focused interventions with a potentially large impact; such as the creation of an Entrepreneurship Advisory Board, a Ministry for Entrepreneurial development, reviewing business-related legislation, integrating incubators in innovation-education matrix, improving the image of entrepreneurship in the public eye, including entrepreneurship in the elementary and secondary education curricula, revamping schools of Commerce in public universities, and supporting the creation of angel funding networks, and private venture capital funds.

The future belongs to countries with a solid and dynamic private sector, capable of creating jobs, contributing to GDP growth, and generating innovative ideas.

But the development of entrepreneurship is seldom automatic or spontaneous. Concerted efforts by all stakeholders in the national economy, led by an enlightened government, are necessary to create the environment and conditions for value-creation.

The policies developed in Egypt, in this report and in the future, need to have a clear finality:

Encouraging new knowledge-driven business creation, particularly in high added-value domains, in view of creating an economy with clear areas of competitive advantage and nascent clusters of competitiveness.

Entrepreneurship is a potential major source of job creation, of growth, of innovation for Egypt. A strong, dynamic entrepreneurial sector can bring the entire national economy into new directions, breaking the bounds of the traditional economic sectors the economy is built upon.

The link between Entrepreneurship and economic development has been proven by a growing body of research including, most notably, the work of Acs and Szerb (2008) who developed the "Global Entrepreneurship Index", largely based on data from the Global Entrepreneurship Monitor data which we use across this paper.

They identify a positive and strong relationship between entrepreneurship and economic growth, with findings consistent with the various stages of countries' development. The graph to the left, plotting GDP versus Global entrepreneurship Index scores, graphically illustrates this positive relationship.

This report has been designed to be output-oriented, with an emphasis on developing recommendations to be implemented by the various stakeholders, and providing an actionable plan for the way forward. The role of entrepreneurship support organisations, whether State-sponsored or non-governmental, was given particular thought, for their importance and crucial role.

A coherent, target-oriented strategy for Egypt's entrepreneurial community is missing. This report hopes to fill this important gap.

While Entrepreneurship necessarily entails business creation and self-employment, it differentiates itself from the latter two in several points:

- Entrepreneurship assumes innovation—new products, new production methods, new markets.
- Entrepreneurship creates added-value: the market value of the output must be greater than the combination of input. Reselling may be a business, but it is not entrepreneurship.
- Entrepreneurship entails risk-taking: failure is an option, but must be transformed into a learned lesson feeding into the next venture.
- And Entrepreneurship does not just "happen." From the French "*entreprendre*," "to do" or "to undertake", entrepreneurship assumes intelligence built around a good idea; boldness and risk-taking based on great effort.

I. EGYPT: ECONOMIC AND ENTREPRENEURIAL PROFILE

Egypt has registered, in the second half of the past decade, a strong growth performance, culminating in a 7.2% GDP growth rate in 2007 and 2008, before slumping back—due in no small figure to the global crisis—to 5.2% in 2009.

This growth is led by the private sector: in 2005, 2006, 2007 and 2008, the private sector explained 63%, 60%, 72% and 68% of total growth, respectively.

Furthermore, it is led by high-skills sectors, such as manufacturing, communications, and financial services, as well as capital-intensive industries, such as construction.

Unemployment officially hovers at 9.3% (2009); yet unofficial figures, combined with underemployment estimations, put the unemployment problem at significantly higher figures.

More than half of the Egyptian working force is employed in the agriculture and government sectors. Only 13% are employed in manufacturing; 11% in the hospitality industry.

Demographic growth shows few signs of abatement. With a 1.9% annual growth rate, we are looking at a population increase of 1.5 million persons a year (estimation for the period 2002-2015).

Most importantly however, is the Egyptian demographic profile, which heavily skewed towards youth. With 32.8% of the population below the age of 15 and 19.5% between the ages of 15 and 24, we are looking at 52.3% of the population below the age of 25 (UN-ESCWA estimations for 2010). This demographic profile can either be seen as an unstoppable pressure—or as an unequalled demographic window of opportunity, with a strong and youthful population reaching the labour market and taking part in the productive process.

Country name and GDP per capita	Sees good opportunities for starting a business in the next 6 months	Expects to start a business in the next three years	Often sees stories in media about successful new businesses	Current active involvement in setting up a business they will own/ co-own	Involvement in nascent, or current ownership/ management of a business	Adult population who received any training in starting a Business	Quality of entrepreneurship education; ranking from 1-5
Angola	74	27	46	19.3	26	-	-
Bolivia	52	38	60	17.4	45.6	19.1	2.6
Colombia	65	60	57	13.8	36.7	40.0	3.2
Egypt	40	35	57	7.9	20.2	7.5	1.8
India	58	33	81	6.9	27.6	13.1	-
Iran	35	36	53	5.9	15.7	28.9	2.4
Mexico	59	26	52	9.3	17.8	15.5	3.0
S. Africa	60	13	69	5.7	9.9	13.8	2.5
Turkey	47	21	63	3.2	10.7	6.3	2.7
Greece	35	13	55	5.3	22	17.0	2.5
Israel	39	14	57	3.5	10.6	12.8	-
USA	44	7	73	5.9	18.7	-	2.9

Table 1. Cross-country comparisons of entrepreneurship readiness.

Source: Global Entrepreneurship Monitor (GEM). All figures are as percentage of adult respondents (ages 18-64) unless otherwise specified.

There is therefore wide room for expansion of the Egyptian private sector, preferably via new enterprise creation, to strengthen the leading growing sectors in the economy, and provide employment opportunities—and make use of—a diverse and strong labour force.

ENTREPRENEURSHIP IN EGYPT AND THE REST OF THE WORLD

How does Egypt compare to other countries worldwide in terms of readiness for entrepreneurship?

Until recently this was a difficult question to answer, but a growing body of research, led by the Global Entrepreneurship Monitor (GEM) report. The GEM conducted surveys and opinion polls within the expert and non-expert community in Egypt. Below are a few comparisons with select countries around the world across a few main indicators

It should be noted in this context that the results appear particularly optimistic in the case of Egypt; research analysis professionals point out the necessity of normalizing Egyptian survey results to bring them in line with comparable results from other countries.

Furthermore they do not distinguish between “opportunity-based” and “necessity-based” entrepreneurship; the former entails spotting a market opportunity and taking it, while the latter refers to self-employment due to lack of other options.

Some definitions tend to only consider the ‘opportunity-based’ variety as real entrepreneurship. In this report, distinction is based not on the impetus but on the characteristics of the business creation process.

This caveat notwithstanding, the numbers remain particularly promising. With 35% of surveyed individuals suggesting they plan to start a business within the next three years, it becomes clear that there is a large potential for enterprise creation in Egypt.

Nevertheless, from the final two columns we see that few people are indeed trained and equipped to start and manage their business; entrepreneurship education appears to be of low

	Funding	Training	Networking	Marketing	Admin	Area of focus
Social Fund for Development	●	●	●	●	●	
Industrial Modernisation Centre	●	●	●	●		Special programmes for industrial production
ITIDA	●	●	●	●		IT industries
SME Development Unit, Ministry of Finance		●	●			
Middle East Council for Small Business and Entrepreneurship			●			Emphasis on networking
Nahdet El Mahrousa		●	●			Social Entrepreneurship
Ashoka		●		●	●	Social Entrepreneurship
Entrepreneurs Business Forum (EBF)		●	●			Entrepreneurship Development
Endeavor		●	●	●		high-growth, innovative ventures
Alashanek ya Baladi (AYB-SD)	●	●		●		Micro and small entrepreneurship
EJB		●	●		●	
WEL Program, AUC		●	●			Women entrepreneurs
Centre for Entrepreneurship Cairo University		●	●		●	Students
European Training Foundation (ETF)	●	●	●	●		

Table 2. Inventory of entrepreneurship-related initiatives in Egypt

quality and penetration in the Egyptian market.

Furthermore, this apparent readiness to join the private marketplace does not translate as optimistically as the raw number would suggest.

Compared to states in similar economic conditions, Egypt's prevalence of entrepreneurial activity appears below the trend—pointing out at both a structural weakness, and an opportunity for development.

The immediate goal is therefore to capitalize on the apparent readiness of the Egyptian society for entrepreneurship.

This report will therefore analyze the strengths and weaknesses of the Egyptian entrepreneurial sector, while integrating innovative lessons from around the world, to develop actionable suggestions, ready to be implemented at once.

ENTREPRENEURSHIP IN EGYPT: INITIATIVES & CHALLENGES

The following section attempts to answer this question: where do we stand? It is therefore a critical assessment of the efforts made, and left to be made, regarding entrepreneurship support in Egypt.

Many initiatives exist, generally developed in response to a particular and specific need. Others have begun with the ambition of supporting young ventures through the various stages of their development, often only to fall in the trap of non-scalability.

Following this, we develop an overview of the main difficulties and challenges facing the Egyptian entrepreneurial environment.

1. Entrepreneurship support initiatives in Egypt: a first assessment

This section does not have the pretension of conducting an evaluation of all entrepreneurship support organisations in Egypt. Rather, it aims at giving a quick and handy overview of the

	Level 1	Level 2	Level 3
Intervention targeting the...	Entrepreneur / Company, at a micro-level	Entrepreneurial environment, at a meso-level	Community/ country as a whole, at the macro level
Administrative and institutional reforms	Taxes and incentives for innovative and entrepreneurial ventures	Cutting the business-related red-tape	Improved economic environment; better physical & institutional infrastructure
Education and skill development	Specific training for entrepreneurs, via incubators, etc.	Graduate level education	Including entrepreneurial education in elementary schooling
Financing strategy	Developing seed and angel funding, from its current personal "family and friends" Scheme	Presence of diversified sources of venture funding	Developing an improved system of equity funding; efficient stock market and listing regulations
Mindset	"Failure" is a possible outcome for a new business	Entrepreneurship is a valuable career choice	Better image of businesspersons in the community

Table 3. Categories of interventions to build entrepreneurial ecosystems

main organisations available on the Egyptian market, and the tasks they perform or which represents an area of strength. It is acknowledged that this table is very simplified, and may be omitting some minor information.

That most of those organisations are present across the various phases of the entrepreneurship process, which we will discuss at length later in this report, is both proof of their commitment to the development of entrepreneurship in Egypt, but also of possible duplication of their tasks.

Save for a few organisations that target particular sectors of the industry or the society, most initiatives herein described conduct the same set of tasks vis-à-vis nascent entrepreneurs. Not only is this less efficient, as it precludes specialisation, but it also perpetuates a "hand holding" culture, with an organisation accompanying a same entrepreneur throughout multiple steps of the process, on the assumption that tailored support is best offered—while it only creates a higher level of dependency of the entrepreneurs on the support organisations, making it significantly more difficult for the entrepreneurial venture to fly of its own wings once it has passed the establishment stage.

2. Main challenges in the entrepreneurship market in Egypt

This section seeks to highlight the main problems facing the practice, not the theory, of Entrepreneurship in Egypt. This section has benefited greatly from a series of interviews conducted with experts in the Egyptian entrepreneurial marketplace.

The following table covers what would be considered as the essentials issues that face entrepreneurship: administrative barriers, lack of education, absence of appropriate financing, and unsupportive mindset.

There is no silver bullet to tackle each one of those issues. In fact, intervention can be divided into three main categories:

رجال الأعمال «الأكثر فسادا»
فى عيون المواطنين

أظهرت دراسة أجرتها جامعة
القاهرة بشأن رأى المواطنين فى
الفساد، أن رجال الأعمال والتجار، هم
الفئة الأكثر فسادا فى عيون المواطنين،
نظرا لقدرتهم على التحكم فى أسعار
السلع ومدى توافرها فى الأسواق

Figure 2. Al-Ahram Newspaper, 17 February 2010

Level 1: those that target individual entrepreneurs or projects, offering an unshared, 'private' support to the specific target of the intervention;

Level 2: which target the entrepreneurial environment, i.e. the conditions in which entrepreneurs in particular evolve. Those reforms touch the general entrepreneurial public, with potential 'spillovers' to the rest of the economy.

Level 3: Interventions that will either involve, or benefit the whole community by facilitating or improving conditions for other sectors of the economy besides entrepreneurshipCells contain the most direct interventions for each of those essential issues, at each outreach level. Interventions that have already been undertaken or are in the course of action are highlighted.

It becomes clear that our interventions so far have focused heavily on providing support to entrepreneurs on an individual level, whether it's in seed funding, training or 'incubation' services; some initiatives have also attempted to improve the business environment by cutting red-tape, offering administrative 'one-stop shops' to facilitate paperwork, and improve the work of commercial litigation courts.

But we realize that our policy interventions are lacking at Levels 2 and 3—addressing the business community as a whole, then the economy at wide.

Yet cross-country research points out (Monitor, 2009) that beyond what we traditionally deem to be the most important elements—such as VC funding, incubation, etc, "other policy areas are more important to entrepreneurial success", such as the mindset, skills development and education at all levels, and financing strategies beyond venture capital funds.

The challenges facing Egyptian entrepreneurs follow them from the earliest stages, with a lack of societal exposure and trust vis-à-vis entrepreneurs, to the administrative difficulties and lack of institutional support they face and, at a later stage, to a deficient culture of cooperation. The section below elaborates on those challenges as follows:

A. Entrepreneurship is a word unheard of to most of the Egyptian public; indeed, until recently no term existed for it in Arabic. The concept is largely foreign and indistinct from

MSME creation. The silver lining is that it is relatively unscathed by the negative reputation effect that the term "business" suffers from—which is a factor to capitalize upon.

B. Businesspersons have a very negative reputation, due relate to numerous high-profile scandals of non-performing loans. Businesspersons are near-automatically assimilated to thieving dishonest tycoons. A recent Cairo University survey (February 2010) showed that people believe that "businesspersons are the most corrupt" socioeconomic category.

C. Emphasis in Entrepreneurship support has so far been put on *nominally* easing administrative burdens—which is severely insufficient.

Egypt's improvement in the World Bank's 'Doing Business' ranking is proof of the formal legal and regulatory reforms.

But large ranking jumps, year-to-year, are not just proof of success—but also that we had a very low ranking to begin with. Currently, Egypt is ranked 106th over 183 countries.

Furthermore, such rankings reveal an unavoidable bias in the calculation methodology. While Egypt may have, for example, successfully simplified the process to start a business- putting it at a 24th position and pushing up the overall ranking—if elements such as contract enforcement remains particularly weak (we are at the 148th position) it is likely to act as a binding constraint, and hamper the entire business creation process.

D. Existing government-led initiatives are excellent but are drastically insufficient, and only limitedly scalable. Organisations such as the Social Fund for Development, as well as the Industrial Modernisation Centre provide remarkable services to thousands of companies every year—which remains painfully short of covering the 1.34 million nascent stages across the country.

According to experts, the model of "nursing" or "hand holding" to a nascent business may be effective but is assuredly not efficient, as it limits the number of companies that can be served and does not allow them to take part in the initiative. The purpose is not to standardize the assistance offered—far from it. There is a balance to be achieved between an inefficient nursing model, and a supply-driven, perhaps equally inefficient, one.

E. Weakness of contract enforcement, as mentioned earlier, can constitute a severe binding constraint on collaboration, as well as discourage business creation in a sector operating, at least in its first phase, on thin margins and tight schedules that cannot afford delays in payments, deliveries, etc.

In environments of weak contract enforcement and limited legal recourse, parties usually revert to alternative enforcement mechanisms, with voluntary binding arbitration being one. This mechanism remains relatively weak in Egypt still.

F. Absence of a collaboration culture in business relationships

Entrepreneurial ventures in Egypt are a lonely business. With an average start-up team of 2.21 people, entrepreneurs favour very small, and for nearly half of them, individual ventures.

Individuals do not seek to complement one another, despite deliberately knowing they are unlikely to be a 'one (wo)man band', and that a solo act can only hamper their medium and long-term growth. Teamwork is a drastically missing skill, from Entrepreneurs in general, as well as from their staff, and the Egyptian society at large.

As one expert put it—"teamwork in Egypt is about one person doing all the work, and everyone sharing in the credit"…

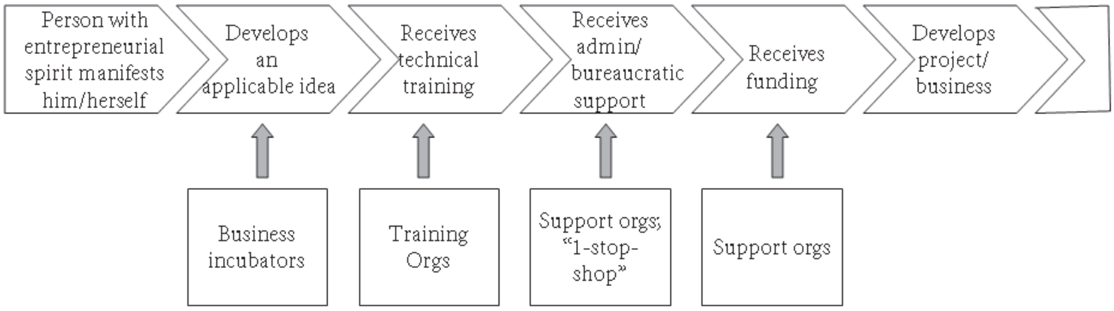

Figure 3. The general profile of the entrepreneurial business creation as it currently stands
Source: Authors

III. TOWARDS A DYNAMIC MODEL OF ENTREPRENEURSHIP IN EGYPT: THE TEAM MODEL

This section and the following present our recommendations for various stakeholders and at multiple levels of interventions, going from the paradigm shifting modification of the way we view the entrepreneurial model, to the strategic recommendations which we grouped in six categories, down to rapidly actionable, implementable stepsThe dynamic model of entrepreneurship we develop is based on 3 principal pillars, augmented by a support one; for the sake of consistency, the strategic and actionable recommendations we put forth will follow the order and logic of those pillars.

As it stands, entrepreneurship is an almost linear process, with support organisations intervening at various stages to answer punctual needs—and sometimes to *'hold the entrepreneurs' hand'*, in the words of one expert, until their venture is successful, before moving onto another 'case'. Effectively, the model covers only the start-up phase of the business.

Currently, the process a nascent entrepreneurial venture is as follows:

a. The emergence of the "entrepreneur," an exogenous event, represents the beginning of the process.

b. The next step is for the entrepreneur to develop an applicable, feasible idea with possible market opportunities; business incubators were created to answer this particular need.

c. Once that idea is developed, the entrepreneurs can seek technical training, to improve their ability to implement their ideas. It is very possible that such training be provided by the same organisation or government-dependent body that assisted in the development of the project idea into a business plan in the previous phase.

d. The following step, particularly complex in the Egyptian environment, has the entrepreneur navigating the difficult bureaucratic environment to register his ideas into recognized and protected intellectual property when appropriate—as well as legally establishing his business. Once again, a number of organisations were developed to answer this need.

e. the entrepreneur, in need of funding, will be supported by family and friends at a first stage, and potentially by a loan or grant from a non-governmental organisation or a private fund.

f. Once the business is established and operative, the role of support organisations, as well as any follow-up to the entrepreneurial venture, ends.

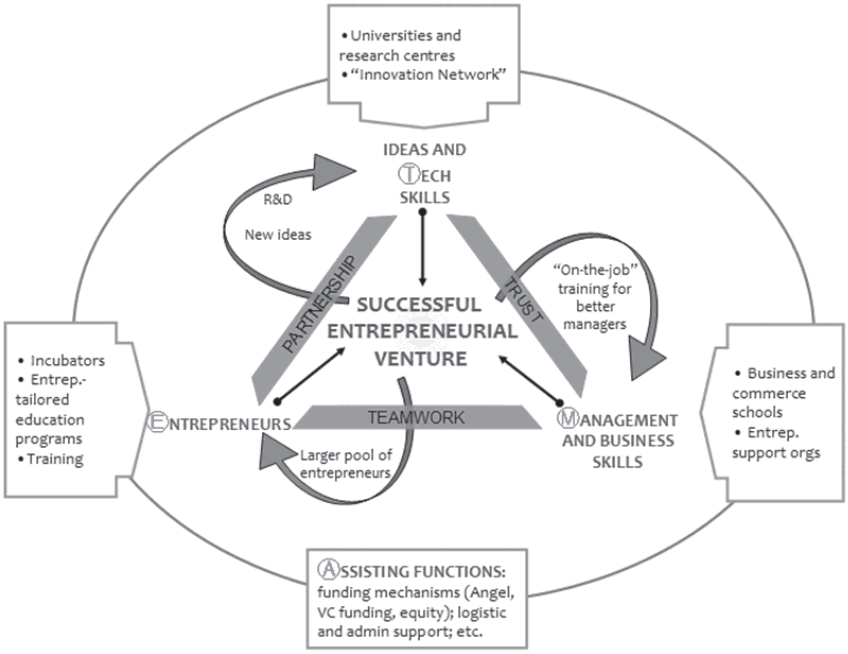

Figure 4. The Recommended T-E-A-M Model

Source: Authors

Clearly, the linear model is ineffective. It discourages specialisation in support functions and does not allow for the customization of support depending on the various industries.

Furthermore, the system as it stands fails to assist the development of the business beyond the initial phase or assist its long term growth; nor does it systemize feedback into the system from the successful business venture, to support further growth.

We need to evolve into a collaborative, dynamic system as described in the next page.

The recommended T-E-A-M Model is organized around the three pillars of enterprise development, along with the support of a number of enabling functions which regard the health and viability of the entrepreneurial environment as a whole. The model pillars are therefore as follows:

- Technical skills and ideas development
- Entrepreneurs
- Assisting and enabling functions
- Management and business skills

The Recommended T-E-A-M Model

a. The collaborative efforts of management capacities, ideas and technical skills, with the entrepreneurial spirit come together in an equal partnership—an element missing from the linear model, which expects all skills to be acquired by the same individual and does not encourage cooperation, despite it being crucial to ensure growth opportunities for the company.

b. They benefit from the elaborate and nurturing complex organisational support from educational institutions, incubators, and training organisms.

c. They operate in a healthy entrepreneurial environment, with the support of the necessary institutions, such as funding organisms.

d. The feedback mechanism of the system is also crucial to its functioning; it also introduces the long-term life of the venture in the model.

The successful business venture generates new ideas for growth, which is transformed, via re-investment of profits (or via further external funding) into projects allowing for the growth of the venture or, alternatively, the creation of a new one;

It could also serve to fund research and development to create the production technology necessary to bring those new ideas to life.

The successful venture not only encourages new entrepreneurs, it also creates them. A successful collaborative venture will develop the entrepreneurial spirit of some of the team members—some who will go on to lead future ventures.

Working on a new company with limited staff both demands, but crucially also generates versatility. The on-the-job training and exposure to a multitude of managerial and administrative issues offers a skill-building opportunity probably unmatched in the realm of formal education.

As those researchers, entrepreneurs, and managers are already parts of an entrepreneurial system (and acquainted with the environment) they will be better integrated in the system and more capable of tapping its resources, to find the support, training, etc, that they require, before they begin a venture of their own—again, with the right partnerships and in the same spirit of cooperation.

e. The system therefore becomes autonomous and self-sustaining.

IV. STRATEGIC RECOMMENDATIONS

The following are a series of strategic recommendations, or guidelines, by definition long term. Which does not mean they shouldn't be tackled immediately—quite the opposite—but that their impact will be increasingly felt with time.

Our recommendations will follow the pillars of the dynamic TEAM model:

A. Changing the entrepreneurial Mindset: attitude, risk, coordination, partnership

This takes the first position in the list of strategic recommendations, both for importance and urgency, as well as for the multiple levels of intervention necessary.

All three levels detailed on page 11 [entrepreneur/ entrepreneurial environment/ community-wide] suffer from negative perspective on entrepreneurship.

At level 1, entrepreneurs need to enter the business realm and address risk with a positive attitude, fully-aware that failure is an option—but from which they can recuperate, and should learn from.

Equally importantly though, entrepreneurs need to start thinking cooperatively.

The era of lone geniuses has passed, and the future belongs to inter-disciplinary collaborative ventures. The development of Teamwork skills is key.

At level 2, business-related regulations, on the part of the State as well as private organisations, must engage with entrepreneurs. Banks, for example, must consider entrepreneurs as long-term solvent clients and partners, and be understanding, without jeopardizing their own interest of course, of the difficulties or limitations of entrepreneurs.

At level 3, the image of entrepreneurs and businesspersons in the community need to be amended and improved: rather than profiteers, they should be viewed as they truly are—as important contributors to the economy and society as a whole.

B. Building a Knowledge infrastructure for Innovation, and Entrepreneurship

Two of the major pillars of entrepreneurship are innovation and value creation. Both of which would increase significantly if more 'knowledge' were to be made accessible to entrepreneurs and entrepreneurial ventures. Steps need to be taken towards the active dissemination of knowledge into the Egyptian economy.

	Local Sources of Knowledge	International Sources of Knowledge	
Sources	Local Universities and Research Centers	Businesses and Business Personnel	International Universities, Publications and Research Institutions
Means of Knowledge Transfer	1) Creating efficient programs to coordinate between Egyptian entrepreneurs and local universities & research centers. 2) Encourage business / product innovation through tax breaks and other financial and non-financial incentives	1) Actively promote international franchises as a means of direct knowledge transfer. 2) Encourage, rather than discourage, the employment of international experts in local companies to make use of their extensive expertise.	1) Improved collaboration between local and international knowledge centers. 2) Widely encourage the systematic review and use of various international publications in local education.

Table 4. Means of knowledge transfer
Source: Authors

Egypt's universities and research centres hold a wealth of knowledgeable individuals, often working on cutting edge theoretical and applied science. But for most, their ideas do not reach beyond the academic or at most the prototypical stage. Conversely, entrepreneurs are often hard-pressed to find the technical knowledge required and the qualified thinkers and skilled workers capable of carrying the project to fruition. Therefore, there is an urgent need for a coordination system to ensure that the innovative ideas are effectively channelled, and ultimately commercialized.

C. Management skills development

Not unlike technically qualified personnel and entrepreneurs, good managers are hard to come by. Management skills range from personal or first level skills—such as planning and organisation, etc—to managing teams, all the way to leadership.

Aside from the strictly managerial skills however, a host of soft skills is also necessary not only for managers, but for all parties to the entrepreneurial venture. Unfortunately, our education system does not equip students with those skills, and they are, further down their career, penalized by their absence. It is therefore necessary to provide all, but the partners to the entrepreneurial venture in particular, with those skills.

D. Access to support

Coordinating institutional initiatives

As shown in the second chapter of this report, government and non-governmental initiatives do not coordinate activities. The result is an absence of complementary planning, a duplication of tasks, and a limited market outreach, mostly geographically concentrated on Cairo and Alexandria. Better coordination would allow for specialisation, better handling of an increased number of beneficiaries, and better coverage of services countrywide.

The reliance of organisations one on the other will have positive, secondary side-effects: as organisations will naturally seek the best organisations to work with—resulting in a system of 'natural selection' of the most efficient organisations, weeding out the least reliable, and pulling

		Education and Humanities	Social Sciences	Medicine	Scientific, Technical and Engineering	Others
Egypt	1995	35.0	41.2	7.4	10.2	6.1
Iran	2003	17.6	27.5	7.3	38.2	9.3
Jordan	2002	30.0	26.0	10.0	30.0	4.0
Lebanon	2003	21.2	38.8	8.5	25.7	5.8
China	1994	22.8	9.4	8.9	46.8	12.1
Korea	2002	23.4	20.4	7.3	41.1	7.9
Colombia	1996	17.1	43.2	9.1	28.5	2.2
Mexico	2002	15.0	42.0	8.0	32.0	4.3

Table 5. Distribution of University students by fields of study (percent, most recent year)

Source: The World Bank, "the road not traveled: education reform in the Middle East and North Africa", 2005.

up the entire entrepreneurship support environment into higher work standards.

Financing opportunities

Financing is often cited as one the major hurdles for new businesses; for many experts however finance is often sufficiently available—but not accessible or properly advertised.

- The lack of information regarding appropriate sources of finance—which may include direct lending, micro-loans, commercial loans and government-supported loan programmes—translates into the need for a mapping of available financing and its dissemination to potential beneficiaries.
- Angel funding networks and venture capital funds need to be developed, allowing for an injection of funds when necessary for the growth of the business.
- A State funding facility, which could particularly target sectors prioritized or deem of high-value to the economy.

E. Evolution towards a knowledge-based economy

As knowledge takes its rightful place as a production factor with labour and capital—ultimately replacing capital as a productive driving force—it maps the future orientation of global growth.

Without neglecting traditional manufacturing processes, which very much stand to be supported and grown, it is undeniable that the infusion of knowledge directly into nascent and existing businesses is key to growing entrepreneurial ventures and creating highly innovation and value adding businesses.

Bringing Egypt to become a knowledge-based economy is closely pertinent to the recommendations on prioritisation developed below.

F. Prioritisation and clusters selection

While we know that Egypt must target high added-value productive sectors, the question of 'selecting' priorities or designing clusters of competitiveness is a very tricky one—both because it hopes that a centrally-determined area of specialisation will be as efficient as one developed by market forces, but also because it supposes that the decision-makers will select a set of industries that will be attuned with the country's industrial profile.

Obviously, this is not always the case.

How do we select areas of competitiveness?

For this task, it is only reasonable that we:

- build upon our current areas of specialisation or competitiveness, to move to more sophisticated sectors with higher added-value
- avoid heading towards areas in which we are particularly behind—this would only represent sunk investments with no possibility of catching-up with market leaders
- ensure that the necessary factors for the success of a sector of the economy be present before we seek to develop it (it would be foolish, for example, to attempt to develop a high-tech industrial sector if the education system does not
- provide adequately trained staff and technicians). In this respect is it interesting to look at the main fields of study in Egypt:

Egypt has the lowest rate of students in Scientific, technical and engineering fields in the MENA region, with a mere 10.2%. Comparatively, 38.2% of all Iranian students or 31% of their Tunisian counterparts choose that domain. In South Asia, the mean is of 30.8%—with China at a towering 46.8%.

Obviously, the intention is to ignore developing technical industries—quite the contrary. The take-away from this graph is that more work is necessary to bring our technical education skills up to the required level.

Development economics literature offers models to determine the industrial clusters a local economy can move towards given its existing industrial profile; see for instance Hausmann and Klinger (2006). Further research needs to be conducted in that direction.

How to select a model of entrepreneurship development?

Research suggests four different models of entrepreneurship; their appropriateness depends on the region or the country:

The first model may appear to be the most interventionist or the most demanding of all four. This is, however, inaccurate, as all four models demand great efforts and support from the state and other organisations.

a. The classic model necessitates assistance to a university-led research process, to connect them with entrepreneurs/marketers (via the suggested "Innovation Network" we discuss below) and to help finance the venture, by making funding sources available.

b. The anchor firm model requires state intervention for an earlier stage than above. Attracting the 'anchor firm(s)' necessitates both the creation of a strong physical and institutional infrastructure, as well as an actively attractive policy for such firms—which could include tax breaks, industrial zones, facilitated labour regulations, etc.

c. The "homegrown genius" demands alertness—spotting this "genius" and allowing them to develop its project. On a latter stage, the government should be capable of capitalizing on this company's success and encourage the creation of new ventures, generally in the same or in connected sectors to the original firm.

d. Likewise, an event-driven model requires a rapid reactive policy from the state and support organisations. In the face of adversity and to prevent further shrinking of the local economy,

In the Egyptian case, we recommend a mix of the first two models.

Greater efforts need be exerted to attract selected productive foreign direct investment. Costa Rica's competitiveness in hardware and computer parts, for example, is based in large part to its success in attracting Intel to establish its main North America plant there.

The creation of free zones in Egypt is a good initiative, but weak infrastructure remains a problem keeping Egypt from achieving its full potential as an attractive Foreign Direct Investment destination. Better incentives need to be offered to high added-value foreign direct investment than to low-end industrial ventures.

In the same time, support to existing research institutions needs to be increased, their profile raised, and their exposure to potential partners. Strategic Recommendation #4 provides a suggested solution for this.

V. ACTIONABLE STEPS

The following section attempts to bring about an action plan for some key issues facing Egyptian entrepreneurship today, by offering actionable suggestions based on best practices around the world on how to implement them.

Boxes, scattered throughout that section, offer interesting international experiences and best practices from around the globe.

While each country, each economy is different, there is much we can learn from international experience in entrepreneurship—if we find the most appropriate experience, and eventually conduct the necessary modifications for it to fit Egypt's industrial profile.

A. Create a Ministry for Entrepreneurship Development

Many government ministries today have programs and initiatives relating to the development of entrepreneurship and/or small and Medium businesses. Though it is nice to see all these efforts started across the various government bodies, there remains a strong lack of coordination between the different initiatives in absence of a unifying overall national strategy for Entrepreneurship, and the authority to implement it.

- The Small and Medium Enterprises Development Unit is an excellent initiative but is insufficient to answer the specific needs of the entrepreneurial sector
- In addition, a number of initiatives dependent of other ministries operate independently, as do other government-sponsored initiatives, such as the Social Fund for Development.
- As we head into a period of better and more relevant state support to Entrepreneurship, a centralized agency to link support services and government programmes becomes necessary.
- There is therefore a need to have a single government body coordinating the various national organisations.

B. Create the Entrepreneurship Advisory Board (EAB)

- There is an urgent need for a unified voice to lobby for the interest of Entrepreneurs.
- For this reason, we suggest the creation of an Entrepreneurship Advisory Board, to be composed of entrepreneurs, as well as representatives from the non-governmental support sector, from the private funding sectors, as well from the most relevant government ministries and organisations
- This Board would serve as an interface between Entrepreneurs, the State, and other relevant stakeholders in the community.
- The Board would also assume the tasks of Ombudsman for small businesses.

C. Include entrepreneurship in the elementary and secondary education curricula

- Liaise with the ministry of Education, most notably with its Technological Development Centre to integrate positive models of businesspersons in the elementary school curricula.
- On the secondary school level, include basic business skills as part of the essential courses

taught, most notably courses on economics and commerce/business administration; or as standalone programmes.

D. Redesign schools of Commerce in public & private universities

- All across Egypt's universities, there is not a single compulsory class, module or training on entrepreneurship, despite its proven importance and the global trend towards the inclusion of entrepreneurship in university curricula
- In cooperation with the ministry of higher education and with the few private universities that have them, design courses on entrepreneurship can be taught at the undergraduate levels
- Encourage universities to recruit entrepreneurs to teach those classes as guest speakers.
- Introduce the culture of summer and graduate internships in Egyptian universities, potentially making it a graduation requirement
- Develop continuing education courses for mid-career professionals.

E. Improve the image of entrepreneurship in the public eye

The media plays a major role in shaping public perceptions and media organizations need to step-up to their role as educators as well as entertainers:

- Mainstream, independent and specialized media sources must be regularly invited to entrepreneurship-related events, conferences.
- Establish a weekly column in a major newspaper where issues of entrepreneurship and self employment are discussed.
- Entrepreneurs and entrepreneurship support organisations need to be in touch with the business/economic news editors of various media outlets, making themselves personally known to them and assuring their availability to them (and following up on this assurance)
- TV program featuring success stories of various local entrepreneurs, and highlighting their journey, perseverance, and struggles

F. *InnovNet*: The Egyptian Innovation Network

- Long-term autonomous project with full work autonomy and openness of membership, operating under the umbrella of the Entrepreneurship Advisory Board
- Members of the *InnovNet* would be entrepreneurs as well as researchers, professors, and technically qualified personnel
- Provides a forum for contact, exchange, and relationship development between those two elements of the production triangle at the heart of the entrepreneurial model.

G. Diversify funding sources, via the creation of angel funding networks, and private venture capital funds

- Encourage banks to lend to small businesses—potentially via a minimum SME lending requirement
- Streamline regulation and support for buy-outs and mergers
- Support the creation of angel funding networks
- Establish new VCs, with government assistance at first
- Support, when necessary, the emergence of sector-specific VC and equity funds
- Coordinate with funds in other countries and regions, in the Middle East and beyond: Dubai-based funds, for example, have some experience dealing with Egypt-based entrepreneurs in various domains
- Encourage links between local and international VC funds, transferring knowledge and experience from the latter to the former.

H. Review business-related legislation

- Ensure that existing legislation, such as:
    - Tax legislation

- Use of stock options
- Competition law
- Commercial courts
- Bankruptcy law

Does not interfere with the businesses' launch or growth—nor is prohibitively discouraging to entrepreneurs

- Improve the functioning of economic arbitrage and commercial courts, to ensure a speedy dispute resolution process and ensure a real legal protection all.
- Develop tax incentives for entrepreneurs, as well for R&D institutions
- Encourage input from entrepreneurs during the drafting of economic legislations

I. A more streamlined integration of the innovation-education matrix

- Purpose is to integrate incubators with universities, research centers, and ultimately with the industry
- Better integration of incubators will also mean the necessity of creating more 'specialized' incubators—for certain industries and for certain targeted publics
- This will allow incubators to begin working with future entrepreneurs at the beginning of their career
- A clear presence or representation of incubators on campuses will also assist in changing the students' mindset—explicitly offering business creation as an alternative when they graduate
- It also has the clear advantage of seeking the budding entrepreneurs rather than waiting for them to seek it
- The Jordanian experience (see box) offers an interesting institutional approach.

J. Encourage the creation of alternative entrepreneurship models: Franchising

- Franchising is among the most interesting and growing ways of expansion in international markets
- A partnership between the franchisor, who owns the brand but also provides the technology, training, know-how, and quality control, and the franchisee—the local entrepreneur who provides accurate knowledge of the local market's needs and is responsible for the implementation of the production system
- Franchises touch upon all areas of economic activity—from retail to child care
- Attracting franchising opportunity requires a stable economy and solid credit ratings

At current outlooks, Egypt is fully qualified to take franchising to the next level, and diversify out of traditional franchising options (fast food and retail, primarily) into higher-added value firms.

K. Markets Opportunities: The Demand side of Entrepreneurship

Just as the of the above is a recipe for assisting the emergence of entrepreneurs by working with factors that affect the supply of entrepreneurs, efforts must also be taken to drive the 'demand for entrepreneurs' side of the equation.

These can include:

- Government programs aiming at purchasing quotas from newly established businesses
- Readily available studies on the different market opportunities available
- Readily available reports on different industries. These can work closely with initiatives to develop clusters of competitiveness and include market studies, supplier information, industry publications, and related feasibility studies.

CONCLUDING NOTES

- The potential for entrepreneurship development in Egypt as a source of economic growth remains very real.
- Despite the official and enduring commitment of the State, reforms remain incomplete, and must go beyond legislation reforms—necessary as those may be—to their implementation and, optimally, to changing the mindset of implementers. Entrepreneurship needs to become a positive societal value. Particularly in the mind of those in a position of power or control vis-à-vis entrepreneurs, the link between assisting entrepreneurs and social and economic improvement needs to be present.
- Legal and entrepreneurial environment reform is not about unlocking a series of closed doors—but a door with multiple locks. Conducting the least constraining reforms without the more difficult will not bring us closer to our goal. In fact, it can even be counterproductive as disappointment on the part of entrepreneurs as well as reformers could slow down the reform pace.
  As such, those legal and institutional reforms need to be conducted in parallel, in concerted efforts, and publicly so, if we are to guarantee a positive response from the market.
- Such a wide effort necessitates the involvement of numerous governmental and non-governmental stakeholders, which begs the creation of umbrella institutions to interface and to coordinate with their respective members to achieve carefully planned tasks.
- Further research remains necessary, particularly in terms of prioritisation and the creation of clusters of competitiveness, which, we believe will both involve, and lead the entire economy.
- While our recommendations largely tackle the entrepreneurial infrastructure and hence address the entirety of the business environment, certain specialised areas of entrepreneurship, such as micro- and small-entrepreneurship development and social entrepreneurship, warrant a closer look to determine if tailored measures would be necessary to assist them in particular.

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Expert meetings and interviews

The following experts and practitioners have graciously shared their time, knowledge and ideas with us, and we are greatly indebted for their contribution. Of course, all shortcomings remain our own.

Mr. AbdelKarim Mardini, Google

Dr. Ahmed Ezzat, Endeavor Egypt, Managing Director

Mr. Ahmed Laiali, The Information Technology Industry Development Agency, ITIDA

Dr. Aliaa El Mahdi, Faculty of Economics & Political Science Dean, Cairo University

Dr. Ashraf Sheta, Shetatex / American University in Cairo

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Mr. Eric Zoetmulder, Occidental Oriental Consult

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This special edition of *Innovations* is published in partnership with the
El-Khazindar Business Research and Case Center, American University of Cairo

with assistance from
Endeavor Global, Egypt
T.A. Telecom
and
The Ewing Marion Kauffman Foundation

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