Assessing the Entrepreneurial Ecosystem in Tunisia

By

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Abstract

Following the Arab Spring and the Tunisian uprising, many saw Tunisia as a country leading change. A strong willingness to act came along with this shift. Mostly, all the stakeholders in the Tunisian society worked towards tackling the deeply rooted matters from which the Tunisian revolution stems, including the issue of the regional economic disparity.

In this context, numerous people perceived entrepreneurship as a substantial solution for the latter matter, leading to a great vibrancy in the Tunisian entrepreneurial scene. It is therefore paramount to reassess, as a first step, the actual entrepreneurial ecosystem within the Tunisian context and apprehend how its key elements were shaped in order to optimize later on its economic impact.

In our study, we will begin by highlighting the relationship between entrepreneurship and economic development, especially on the regional level. This understanding stands as the rationale behind the goal of this paper. Then, we will provide a state-of-the-art analysis of the Tunisian entrepreneurial ecosystem through a framework that envisions taking into account all the stakeholders and the influencers of the Tunisian environment. We will finally, put forward the current shortcomings to be dealt with, in order to ultimately offer options we can apply to enhance and develop the Tunisian entrepreneurial scene.

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1. Importance of Entrepreneurship in Economy

As entrepreneurship is the primary focus of this study, we would like, as first step, to legitimize our approach by defining this notion and understanding its real importance and impact on an economy, especially within the context of Tunisia.

1.1 Defining entrepreneurship:

A plethora of studies and economists focused on entrepreneurship since the end of the 20th century. As a matter of fact, entrepreneurship and the role of an entrepreneur have been given multiple definitions.

Occupational vs. behavioral entrepreneurship

The most basic definition is the *occupational notion of entrepreneurship*, which defines it as "owning and managing a business on one's own account and risk" [1]. This definition is however very restrictive, in the sense that it excludes any endeavor or entrepreneurial demeanor that does not stem from the individual himself, within an existing structure and confines entrepreneurship into a specific occupation. Indeed, the entrepreneur is not "a fixed state of existence, rather entrepreneurship is a role that individuals undertake to create organizations"[2]. Therefore, we need to transcend the primary definition of entrepreneurship and reach a wider understanding, which takes into account the *behavioral aspect* of the notion and does not restrain entrepreneurs in a certain occupational class. One of the reasons of this approach is that one can have an entrepreneurial demeanor by taking initiative and leading projects within the context of a company.[3] We will therefore adopt a broader definition offered by S. Wennekers and R. Thurik asserting, *"Entrepreneurship is the manifest ability and willingness of individuals, on their own, in teams, within and outside existing organizations, to:*

- *Perceive and create new economic opportunities (new products, new production methods, new organizational schemes and new product-market combinations) and to*
- *Introduce their ideas in the market, in the face of uncertainty and other obstacles, by making decisions on location, form and the use of resources and institutions."* [3]

This definition is more thorough and embraces the entrepreneurship on the individual level, as well as the one on the level of the company, which is mostly known as "corporate entrepreneurship". Indeed, as the definition highlights it, an entrepreneur can seize an economic opportunity "within an organization". Therefore, we cannot consider the entrepreneur, in the broader sense, as an external entity independent from its environment, rather, in the case of "intrapreneurs", the company becomes a vector that enhances its employee's chances to start their own business, foster competitiveness and bolster productivity.

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[1] Sternberg, R., & Wennekers, S. (2005). The Determinants and Effects of Using New Business Creation Using Global Entrepreneurship Monitor Data. *Small Business Economics* 24(3): 193–203.

[2] Gartner, W.B. (1988). "Who Is an Entrepreneur?" Is the Wrong Question. *American Journal of Small Business* 12, no. 4: 11–32.

[3] Wennekers, S., & Thurik, R. (1999). Linking Entrepreneurship and Economic Growth. *Small Business Economics* 13: 27–55.

1.2 Entrepreneurship and Economic Growth:

1.2.1 Views in literature:[4]

There are several economic theories that tackled the link between entrepreneurship and economic growth, either explicitly or tacitly through innovation.

- Schumpeter was one of the first economists to emphasize the importance of entrepreneurship and the role of the entrepreneur in the economic development, in his early work[5]. He mostly stood from the perspective that entrepreneurship is a driver of innovation and in that sense, brings real added economic value. Indeed, in Schumpeter's theory "the innovative activity of entrepreneurs feeds a creative "destruction process" by causing constant disturbances to an economic system in equilibrium, creating opportunities for economic rent. In adjusting to equilibrium, other innovations are spun-off and more entrepreneurs enter the economic system."[6] This approach however, was narrow, as it considered only one aspect of entrepreneurship, which is innovation-based entrepreneurship. Under this assumption, Schumpeter's study led him to the straightforward conclusion that an increase in the number of entrepreneurs leads to economic growth.

- Influenced by Schumpeter's approach, some economists in the early 90's developed an endogenous growth model and focused on the role of innovation as a determinant of economic growth. As a matter of fact, knowledge is underlined as a main factor for productivity enhancement through "intentional innovation by rational, profit-maximizing agents."[6] This formulation though, doesn't take into consideration entrepreneurship as a channel of innovation.

- Writings from economic history helped develop the entrepreneurial theory. They highlighted the crucial role entrepreneurs play in reallocating resources and entering new markets. This comes as a logical continuation to the vision that entrepreneurs seize economic opportunities. Economic growth can then be assessed through employment opportunity creation and research and development expansion.

- Evolutionary economists later on, widened the understanding of entrepreneurship beyond the "innovator" perception. They included the notion that an entrepreneur can bring a new entry, without innovation. Yet, the results of this work were fairly biased, since, from the beginning, an underlying assumption was that entrepreneurship has numerous effects and, on the long run, it ineluctably leads to economic growth.

The table 1.1 gives an overview of the different models and views that developed around the bond between entrepreneurship and economic growth since the 20th century.

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[4] Wong, P.K., Ho, Y.P., & Autio, E. (2005). Entrepreneurship, Innovation and Economic Growth: Evidence from GEM data. *Small Business Economics* 24: 335–350.

[5] Schumpeter, J. (1911). The theory. *First German edition.*

[6] Wong, P.K., Ho, Y.P., & Autio, E. (2005). Entrepreneurship, Innovation and Economic Growth: Evidence from GEM data. *Small Business Economics* 24: 336.

Table 1.1

Assessment of the role of entrepreneurship, drawn from several fields of research[7]

Field of literature	Specific domain	Competition	Innovation	Firm start-ups	Importance of entrepreneurship for economic growth
Historical views	Schumpeter/ Baumol	++	+++	+	++
	Neo-classicals	++	+	0	+
	Austrians	++	+	0	++
Endogenous growth theory		+	+++	0	+
Economic history		++	+++	+	+++
Management literature		+	+++	++	++
Industrial economics	Porter	+++	+++	++	+++
Evolutionary economics	Eliasson	+++	+++	+++	+++

Keys:
0 Not present in the writings
+ Implicitly present in the writings
++ Explicitly present in the writings
+++ Pivotal element in the writings

1.2.2 Opportunity-based vs. necessity-based entrepreneurship:

Concrete and tangible change came with the research of Van Stel and Storey in 2004, building on the earlier work of Evans and Leighton. As opposed to the "Schumpeter" effect that implies that entrepreneurship and new firms stimulate economic growth by creating job opportunities, it was shown that there is a "refugee" effect where high rates of unemployment push people towards self-employment, hence inducing a high level of the entrepreneurial activity. Mostly, this effect was observed in low-income countries and doesn't bring any economic growth.[8]

In light of this distinction, we will consider two major aspects in our analysis of entrepreneurship and its impact on economic growth, in order to obtain a global framework that allows us to compare between multiple entrepreneurial situations in different countries. The first aspect is the economic stage of the country. The second one is the distinction between *necessity-based* and *opportunity-based entrepreneurship*.

The following graph (Figure 1.1) highlights the U-shaped relation between the entrepreneurial activity and the stage of economic development.

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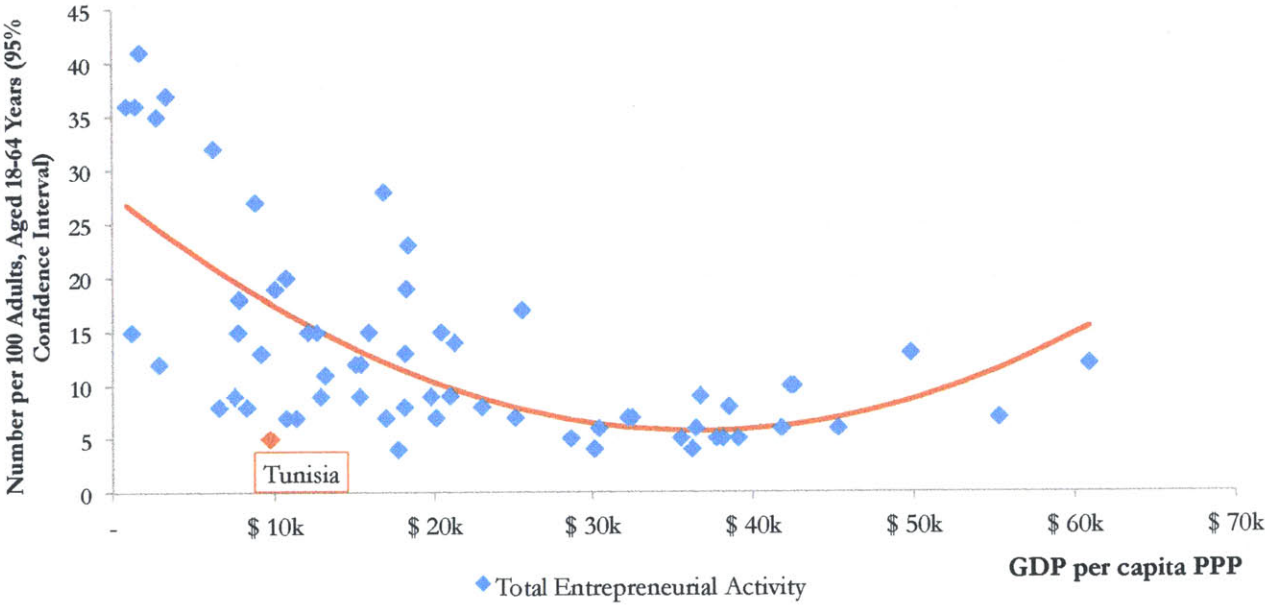
[7] Wennekers, S., & Thurik, R. (1999). Linking Entrepreneurship and Economic Growth. *Small Business Economics* 13: 50.

[8] Wong, P.K., Ho, Y.P., & Autio, E. (2005). Entrepreneurship, Innovation and Economic Growth: Evidence from GEM data. *Small Business Economics* 24: 338.

Figure 1.1

Total Entrepreneurship Activity (TEA) and Income per capita[9]



Source: Xavier, S.R., Kelley, D.J., Kew, J., Herrington, M., & Vorderwulbecke, A. *Global Entrepreneurship Monitor (GEM) 2012 Global Report.*

There are mainly three different economic stages (Porter, 1990):[10,11]

- Factor-driven economies:

This first stage is mainly based on agriculture and low-skilled labor. It is marked by high unemployment rate, along with a propensity to be self-employed outside of the agriculture industry.

- Efficiency-driven economies:

In this second stage, the economy has increased and shifted towards industrialization. The unemployment rate shrunk in favor of growing and wealthier average size of firms.

In this case, it makes more sense for people to be employed in an existing organization, since this latter environment allows them to earn more money, and therefore ameliorate their purchase power, as opposed to the case where they would be self-employed.

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[9] GPD per Capita (PPP) in $US data as from International Monetary Fund. (October 9, 2012). *World Economic Outlook Database October 2012.* Retrieved from http://www.imf.org/external/pubs/ft/weo/2012/02/weodata/WEOOct2012all.xls

[10] World Economic Forum. (2012). *The Global Competitiveness Report 2012–20013*: 8-9. Retrieved from http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf

[11] Acs, Z.J. (2006). How is Entrepreneurship Good for Economic Growth. *Innovations*: 99–100.

Consequently, until this point, we note that there is a negative relation between entrepreneurial activity and economic development, which corroborates the "refugee" effect.

- Innovation-driven economies:

Competitiveness rises and drives the economy towards a new model of services and innovation. Product quality and efficiency become key parameters in production processes. Accordingly, salaries get higher and the standard of living is enhanced. Nonetheless, the entrepreneurial activity increases, conjointly with technological improvement.

In view of the opposite evolution of the entrepreneurial activity during difference stages of economic development, it is important to draw attention to the different types of entrepreneurship. We need to distinguish between *necessity-driven* and *opportunity-driven* entrepreneurship. We will adopt Acs's definition:[12]

- Necessity-driven entrepreneurship is when one "becomes an entrepreneur because he or she has no better option"

- Opportunity-driven entrepreneurship is when one actively chooses "to start a new enterprise based on the perception that an unexploited or underexploited business opportunity exists"

In the case of factor-driven economies, the high rate of entrepreneurial activated is explained by the fact that the lack of employment opportunities drove people towards self-employment. Thus, entrepreneurship becomes a necessary response to an economic entanglement.

Innovation-driven economics, however, confirm the aforementioned "Schumpeter" effect. As a matter of fact, in this type of economy, which shifted towards services and innovation, high created-value is not driven by the number of people as it is the case in efficiency-driven economies. Indeed, technological rapid progress ensures that people can find opportunities to start a business, while bringing tangible added value and innovation advancement, with a minimum number of people. Subsequently, entrepreneurship becomes an embodiment of the opportunities one can find in an economic environment.[13]

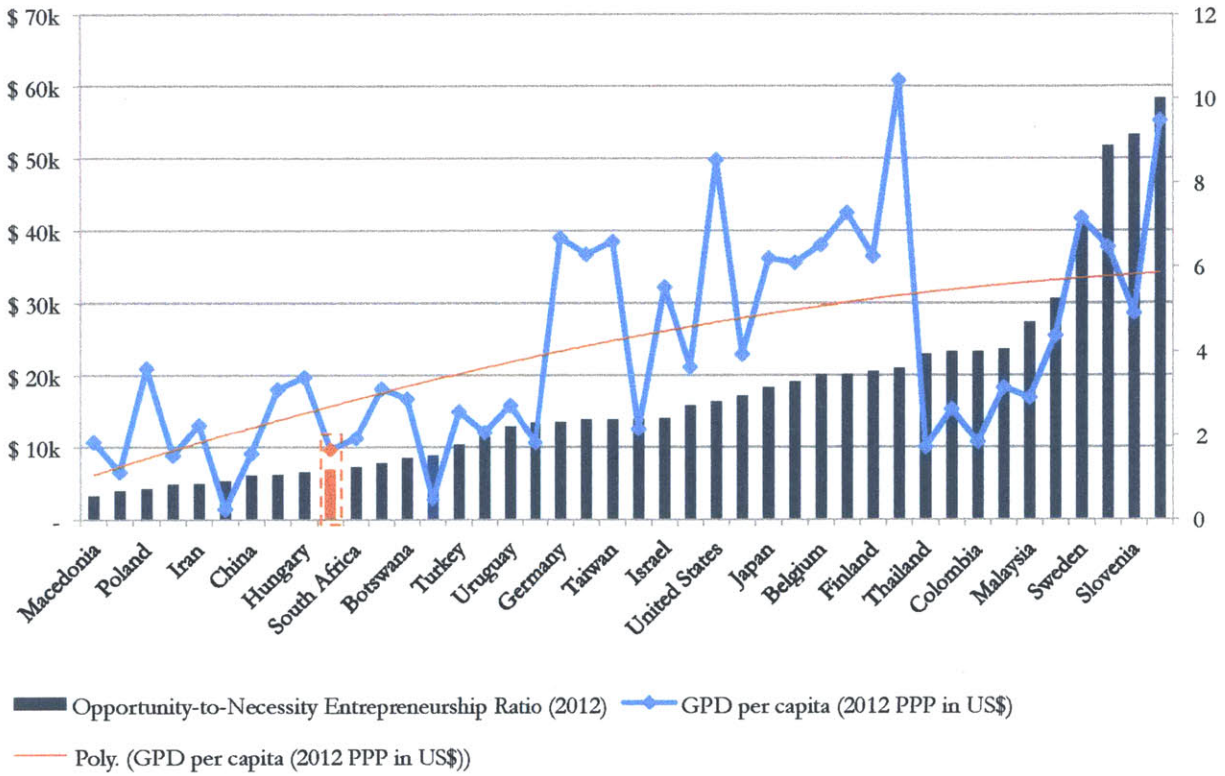
The Global Entrepreneurship Monitor (GEM) program took into account this dual aspect of entrepreneurship. The following graph (Figure 1.2) shows the rise of the ratio opportunity to necessity-driven entrepreneurship, along with the growth of the GDP per Capita (PPP).

[12] Acs, Z.J. (2006). How is Entrepreneurship Good for Economic Growth. *Innovations*: 97.

[13] Acs, Z.J. (2006). How is Entrepreneurship Good for Economic Growth. *Innovations*: 100.

Figure 1.2

Opportunity-Necessity Entrepreneurship Ratio and GDP per capita[14]



Source: Xavier, S.R., Kelley, D.J., Kew, J., Herrington, M., & Vorderwulbecke, *Global Entrepreneurship Monitor (GEM) 2012 Global Report.*

The graph clearly brings forward the fact that there is a correlation between economic development and high level of opportunity-driven entrepreneurial activity (ODE).

Nonetheless, it is still not clear that this specific type of entrepreneurship leads to economic growth, given that the GEM study gives us an image of the entrepreneurial activity at a fixed point of time. As a result, in order to put forward the causality between ODE and economic development, we would need to study the impact of entrepreneurship during a period of time, in one country.

In terms of value chain, an adequate strong ecosystem, whether fixed by the government and/or other stakeholders, sets the structure in which ODE can flourish. Entrepreneurship in turn, drives economic growth.

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[14] GPD per Capita (PPP) in $US data as from International Monetary Fund. (October 9, 2012). *World Economic Outlook Database October 2012*, Retrieved from http://www.imf.org/external/pubs/ft/weo/2012/02/weodata/WEOOct2012all.xls

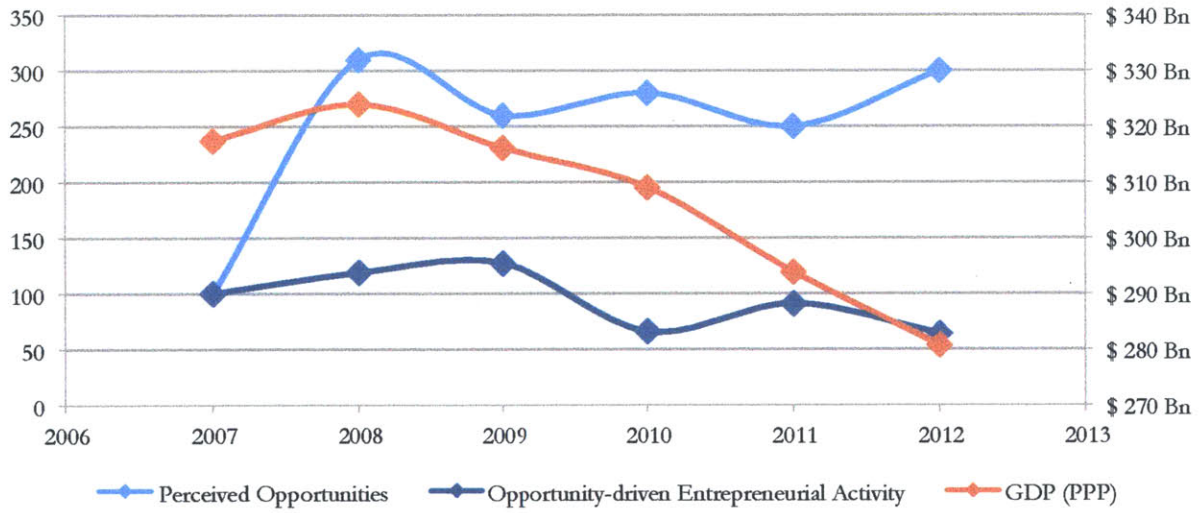
We would want to show how ODE results in economic development. Unfortunately, we didn't find in economic literature, explicit discussions tackling the causality between entrepreneurship and economic development. All the studies we found were highlighting the clear correlation between both elements without going one step further. In a brief and fragile attempt, we would like to show the statement that, given an entrepreneurial ecosystem allowing opportunity-driven entrepreneurship to flourish[15], growth in terms of ODE results in an economic growth.

For this purpose, we will proceed by contraposition and try to demonstrate that non-economic growth[16] engenders a stagnation or decline of ODE.

The figure below (Figure 1.3) highlights the impact of the economic crises on Greece over a period of four years. We note that the decline of the GDP comes along with a deterioration of the perceived entrepreneurial opportunities. In 2009, a year after the beginning of the crisis, there is a clear drop in terms of ODE that still continued afterwards.

Figure 1.3

Opportunity-driven entrepreneurship and GDP (PPP) evolution in Greece[17,18]



Source: Global Entrepreneurship Monitor database.

[15] The entrepreneurial environment in a country shapes the level of entrepreneurial activity. Later in this study, we will develop a framework to analyze the key parameters of this ecosystem, for the case of Tunisia.

[16] Non-economic growth is tantamount to economic stagnation (e.g. GDP growth less than 2%) or economic decline.

[17] Regarding the Perceived Opportunities and Opportunity-driven Entrepreneurial Activity, the respective values found in 2007 are taken as a reference and indexed to 100.

[18] GPD per Capita (PPP) in $US data as from International Monetary Fund. (October 9, 2012). *World Economic Outlook Database October 2012*. Retrieved from http://www.imf.org/external/pubs/ft/weo/2012/02/weodata/WEOOct2012all.xls

We can interpret that economic downturn reduced the window of recognized opportunities. The one-year lag between GDP drop and ODE decline can be seen as the response time for ODE to be impacted by the crisis. Thus, the economic downturn led to the deterioration of ODE.

Therefore, by generalizing the Greek case and by contraposition, we can assume that OED growth leads to economic development.

Nonetheless, it is paramount to note that this a mere sketch for a formal demonstration. This rough outline comes with shortcomings. First of all, the hypothesis that the entrepreneurial ecosystem is the same isn't verified. As a matter of fact, one of the key elements of this ecosystem, which will be discussed later on, is funding. The economic crisis directly impacted this parameter. For instance, access to credit became arduous, as the interest rates rose. Therefore the contraposition is not valid in a formal sense. Moreover, we treated the matter through a case study and admitted generalization was true. This generalization also needs to be proven.

Nevertheless, a formal demonstration of the positive impact of OED on economic growth is beyond the scope of this study. We will therefore assume that this fact is substantiated, which legitimizes our focus, later in this study, on entrepreneurship as a driver of economic growth in Tunisia.

1.3 Entrepreneurship and Regional Development:

Following the previous assertion that ODE leads to economic growth, one can assume that it should be the same case on the regional level, given that a region is an economic subset of the national economy with its own resources.

1.3.1 Impact of Entrepreneurship on regional development:

Different empirical studies found a clear correlation between entrepreneurship and regional economic development.

Building on Reynolds' work (1994, 1999), Folster (2000) tackled the matter by comparing the effect of self-employment, hence entrepreneurship with no distinction, in different regions of Sweden. His research brought "significant support for the notion that increased self-employment has a positive effect on employment". Folster himself highlighted two main shortcomings in his study. The first one is that we need to take into account the different types of entrepreneurship and redirect the public policies accordingly, since "it is not at all certain that this artificially created self-employment has the same characteristics, and the same employment effects". The second issue was that the approach used to model the lag between the peak of start-up activity and its impact on employment, which is seen as the indicator of economic growth, is far from being accurate.[19]

Fritsch and Mueller (2004) gave another interpretation of the impact of entrepreneurship on the regional level, from the German perspective. They did not value regional economic growth

[19] Fölster, S. (2000). Do Entrepreneurs Create Jobs?. *Small Business Economics* 14: 137–148.

only through the lens of job creation; rather they saw that the real added value comes from the "supply-side effects", mainly including efficiency enhancement, amplifying innovation entry and accelerating structural shift.[20]

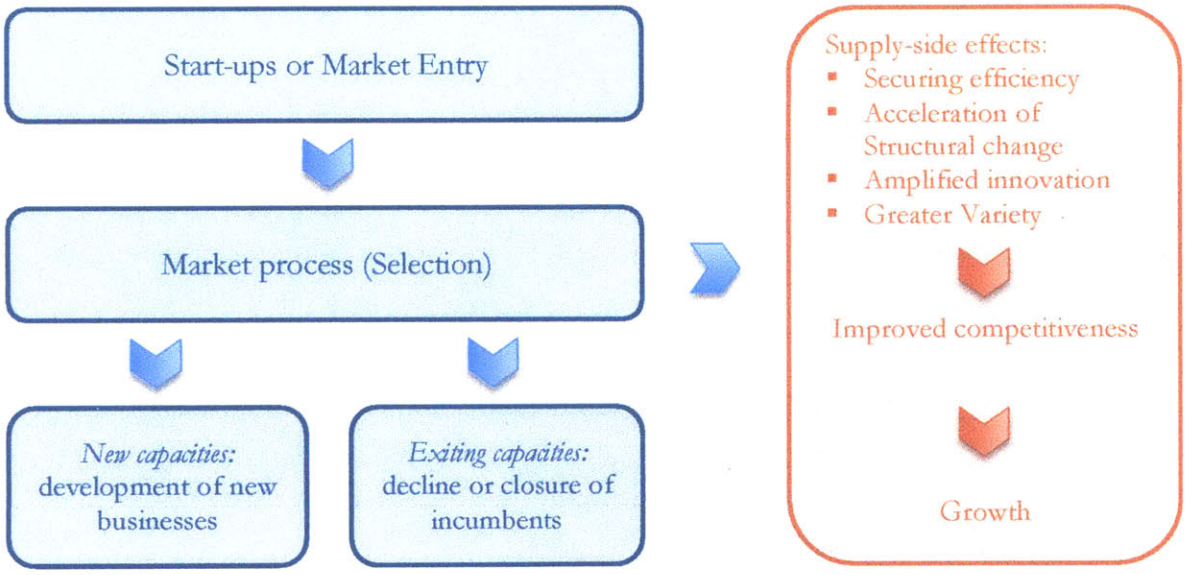
The following figure (Figure 1.4) details their understanding of the impact of entrepreneurship on regional growth.

Therefore, apart from the argument of the net direct job creation in start-ups, Fritsch and Mueller assessed the importance of the indirect effects of entrepreneurship. Indeed, improving competitiveness and efficiency enhancement contributes also to the growth of established firms. Therefore, we need to take into account the job created within these firms.

Even though Fritsch and Mueller's work formally tackles entrepreneurship without distinction between its different types, we can assume that it is mainly about opportunity-driven entrepreneurship.. Moreover, the analysis involves the impact of innovation as part of the supply-side effects, which is as previously developed, correlated to opportunity-driven entrepreneurship.

Figure 1.4

New business formation and the market process



Source: Fritsch, M., & Mueller, P, *Effects of New Business Formation on Regional Development over Time.*

Actually, this model makes sense within the context of efficiency-driven economies, since it also gives an explanation to the growth of the average size of a firm.

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[20] Fritsch, M., & Mueller, P. (November 2004). Effects of New Business Formation on Regional Development over Time. *Regional Studies* Vol. 38.8: 961–975.

1.3.2 Regional economic disparities in Tunisia:[21]

President Moncef Marzouki was perceptive when he asserted that "when the revolution of December 2010 erupted in provincial towns such as Kasserine, Thala, and Douz, it was because people there could no longer bear their poverty and humiliation in contrast to the wealth of the developed coastal cities – and the coastal cities themselves could no longer put up with the corruption and denial of freedoms."[22]

Tunisia is now facing a critical shift after a revolution that rippled the Arab world by giving birth to the Arab Spring and that led the country towards a path of economic transformation, based on democracy. However, it is yet facing major problems, among others unemployment and poverty, which directly affect the youth population. Tunisia had roughly 39.9% of unemployed graduates in 2007.[23]

Background:

Regional disparities in Tunisia are deeply rooted on the structural and institutional scale, giving birth to a feeling of social uneasiness in the interior regions. This sad record is the aftermath of an aggressive political and economical strategy of development on the coastal regions under the Ben Ali regime, while remote places inside the country remained virgin, isolated from modernization. Indeed, the previous president heavily relied on tourism and the textile industry and encouraged the concentration of factories along the coast, especially by using foreign supply chains.[24]

A direct impact of this approach on infrastructure can be observed: the main roads are spreading alongside the coast, making the interior regions geographically isolated. "Investment in infrastructure has been historically neglected, physically isolating communities and undermining their efforts to attract foreign companies to vast tracts of land and select natural resources. Similarly, underinvestment in irrigation has limited the potential agricultural bounty of these regions, limiting many farmers' ability to use the elements available to them."[25] The direct consequences of this lack of investments in interior regions' resources and infrastructure are as follow:

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[21] Dziri, M.H. (2012). Exercising Leadership through Entrepreneurship in Post-Revolution Tunisia.

[22] Marzouki, M. (October 19, 2011). Tunisia's Election. *The Guardian.* Retrieved from http://www.guardian.co.uk/commentisfree/2011/oct/19/tunisia-election-democratic-beacon-arabs

[23] African Development Bank. (2011). *Labor Market Dynamics in Tunisia: The Issue of Youth Unemployment* n°123. Retrieved from http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Working%20Paper%20%20No%20123%20%20PDF%20%20.pdf

[24] Brisson, Z., & Krontiris, K. (2012). Tunisia: From Revolutions to Institutions. *The Reboot, InfoDev.* 3. Retrieved from http://www.infodev.org/en/Document.1141.pdf

[25] Brisson, Z., & Krontiris, K. (2012). Tunisia: From Revolutions to Institutions. *The Reboot.* 3. Retrieved from http://www.infodev.org/en/Document.1141.pdf

- High rates of unemployment: [26]

Regional disparities have led to an increase in unemployment in the interior regions, which are further poorest than the rest of the country. Indeed, more than 35% of the people aged between 18 and 29 were unemployed in 2009 in the Central Western region (Sidi Bouzid, Kasserine, Kairouan) vs. 26% in the Central Eastern region (Monastir, Sousse, Mahdia, Sfax). Northwest regions (Beja, Jendouba, Kef, Siliana) and South West (Gafsa, Tozeur, Kebili) are particularly affected by youth unemployment with rates of 45% and more than 50% respectively, compared to 30% for the Greater Tunis. The important magnitude of the gap between thoses corroborate, without any surprise, the fact that young people aged between 18 to 29 years living in the western regions of Tunisia face a more difficult unemployment situation than those living in areas near the coast.

- Healthcare system: an inability to deliver services:

Following our record of underinvestment in the interior regions of Tunisia, which stands only for 35% of public investment[27], one of the most dramatic aftermaths is the poor healthcare system in those regions. Indeed, "there are 140,000 residents for every one pediatrician in the Kasserine region (and that is only the second highest ratio in the country)".[28] Interior regions are underserved and suffer from a severe lack of infrastructure with regard to the healthcare needs.

- The education system lost its educative purpose:

According to The Reboot's report, in the area of Kasserine, the percentage of illiterate people reaches "15% of the young people between the ages of 10 and 29".[28] The lack of infrastructure, including schools, transportation and roads hinders the establishment of an efficient education system, as distance becomes an obstacle in this case. Again, the harsh reality of poverty is a real setback in those places. Because of this, "a young girl from seaside Nabeul will likely be reasonably well educated, have her health needs largely met, travel over good roadways on her way to school, and have access on par with parts of Europe to technologies that connect her to the rest of the world. Her peer in a rural town is less likely to attend school past the age of 10".[29] More generally, education and unemployment are intertwined. Graduates' unemployment is first of all tied to the results of the baccalaureate exam. Indeed, average results ineluctably lead to a tight range of options for higher education. Often those options lead to a jammed working market. Unemployment is also more or less related to the region of origin and the occupational category to which one belongs. More specifically, unemployment of university graduates is the result of the degree

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[26] Dali, S. (March 1, 2011), Feu identique, conséquences différentes : un aperçu des inégalités régionales en Tunisie. *El Mouwaten.* Retrieved from http://www.elmouwaten.com/modules.php?name=News&file=article&sid=61

[27] African Development Bank. (March 11, 2011). *The Revolution in Tunisia: Economic Challenges and Prospects.* Retrieved from http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/North%20Africa%20Quaterly%20Analytical%20Anglais%20ok_North%20Africa%20Quaterly%20Analytical.pdf

[28] Brisson, Z., & Krontiris, K. (2012). Tunisia: From Revolutions to Institutions. *The Reboot, InfoDev.* 26. Retrieved from http://www.infodev.org/en/Document.1141.pdf

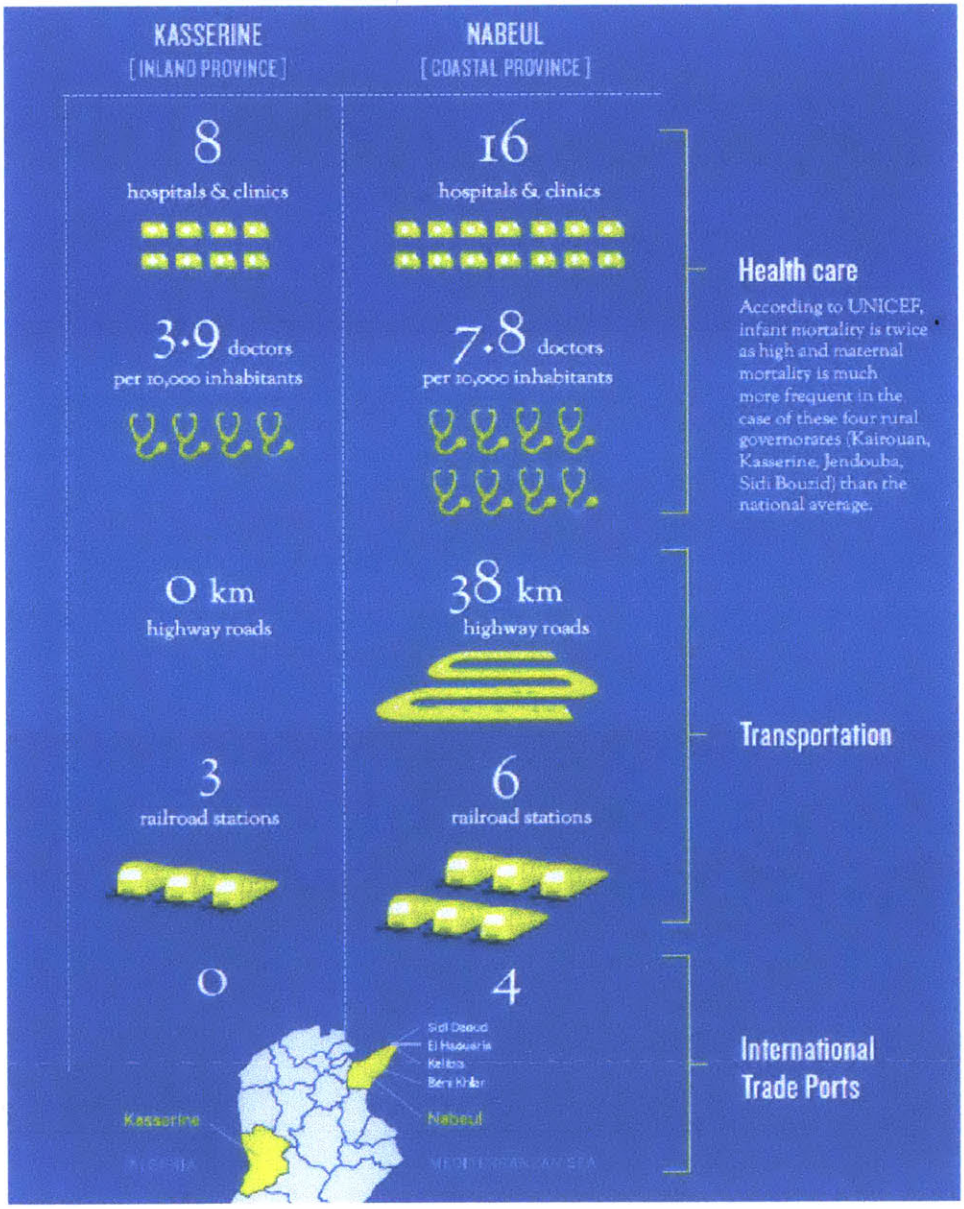
[29] Brisson, Z., & Krontiris, K. (2012). Tunisia: From Revolutions to Institutions. *The Reboot, InfoDev.* 23. Retrieved from http://www.infodev.org/en/Document.1141.pdf

of individual commitment of students, parents and teachers, but also the consequence of a form of regional legacy and social handicap. Naturally, personal efforts are important, but it seems that they do not weigh much compared to the prohibitive regional and social narrative. In other words, the school no longer plays its role of social elevator, neither on the national level nor on the regional one.

The following figure quantifies some of the regional disparities between Nabeul, a coastal province, and Kasserine, a remote interior region.

Figure 1.5

Overview of the regional disparities between the provinces of Nabeul and Kasserine

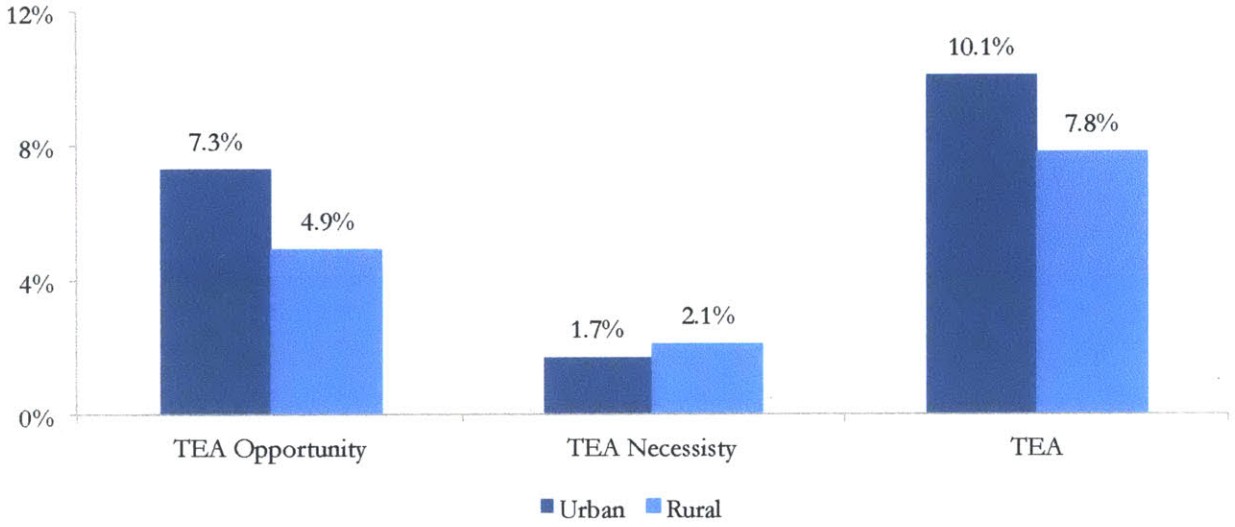


Source: The Reboot. *Tunisia: From Revolutions to Institutions.*

In a 2009 report on entrepreneurship in Tunisia, the GEM program stressed out the differences in terms of Entrepreneurial Activity between the urban environment and the rural one. (Figure 1.6)

Figure 1.6

Urban Vs. Rural Entrepreneurial Activity in Tunisia in 2009



Source: GEM, *2009 Tunisia Executive Report.*

As expected, the TEA in the urban places, which are mainly along the coasts, is higher than the one in the rural environment, representing essentially the interior regions. Most importantly, the TEA Necessity in rural places is higher than in the urban locations. In light of our first definitions of entrepreneurship, we can infer that these results are correlated to the regional economic development. Indeed, regional economic disparity results in a higher level of ODE along the coast, which are economically more advanced than interior regions.

2. Tunisia's Entrepreneurial Ecosystem

2.1 Overview:

The following table shows that, economically, Tunisia is mainly focused on services sector.

Table 2.1

Tunisia: Sectorial composition of GDP, 1990-2007 (%)

Sector	Average Contribution to GDP	Average annual growth rate
Agriculture	**13.4%**	**2.8%**
Industry	**29.2%**	**4.2%**
▪ Manufacturing	17.6%	4.7%
▪ Construction	4.6%	5.8%
▪ Gas, electricity and water	6.2%	2.1%
▪ Mining and quarrying	0.8%	1.6%
Services	**57.4%**	**5.6%**

Source: United Nations, *Assessing Development Strategies to Achieve the MDGs in The Republic of Tunisia*

Nonetheless, the World Economic Forum has classified Tunisia's economy as an efficiency-driven one[30], despite the fact that most of these economies mostly rely on industry.

Accordingly, we can see in the Figure 1.1 that the Total Entrepreneurial Activity in Tunisia is in line with other efficiency-driven countries. Moreover, the difference between opportunity-driven entrepreneurship and necessity-driven one is representative of the latter statement (Figure 1.2). Indeed, even though the Tunisian ODE activity is higher than the necessity-based one, the ratio of Opportunity-to-Necessity Entrepreneurship is still far below the innovative-driven economies average.

This difference with the advanced countries in terms of entrepreneurial activity, explains the common perception that "in Tunisia, we undertake a lot, albeit in the wrong way"[31]

Further on, we will try to understand what drives and shapes the entrepreneurial activity and the common entrepreneurial perceptions in Tunisia.

2.2 Analysis Framework:

For this second part, we will base our analysis on the framework developed by Professor William Aulet, Managing Director of the Martin Trust Center for MIT Entrepreneurship.[32]

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[30] World Economic Forum. (2012). *The Global Competitiveness Report 2011–20012*: 26. Retrieved from http://www3.weforum.org/docs/WEF_GCR_Report_2011-12.pdf

[31] Khanfir, M. (Interview, January 29, 2013).

This framework assesses the entrepreneurial ecosystem in Tunisia, by taking different elements into account. The main hypothesis is that the following constituents shape an entrepreneurial environment:

- Culture:

Values and cultural narratives shape one's behavior. This statement is still true when it comes to entrepreneurship. Different societies perceive it dissimilarly. Some would value the fact of throwing everything away and starting one's own business as something common, whereas others would deem that as utterly unthinkable. Therefore, it is important to understand how the cultural values influence the entrepreneurial activity, in the sense that we need to identify the "adaptive" values as opposed to the "maladaptive" ones, which hinder the establishment of a real entrepreneurial culture.[33]

- The government:

It is substantial to understand the government's role and public policy with regard to the entrepreneurial environment. It can in fact intervene on different levels, including taxes and regulations and resources reallocation that will act as incentives or impediments for entrepreneurs. On a more general level, the government is the main actor when it comes to controlling a general political situation in a country, which directly affects the national economic performance.

- Funding:

Financing is an important leverage that translates the government policies and actions in favor of entrepreneurship and that assesses the weight of the private sector and private investors within the economy.

We will try to understand the financing options available for an entrepreneur in Tunisia, especially within a context of innovation.

- Innovation:

Previously, we emphasized the importance of opportunity-driven entrepreneurship, especially at the regional level. It even becomes paramount when we thoroughly understand that innovation and technological progress is the vehicle through which entrepreneurship leads to economic growth, as exposed in the section 1.3.1.

This element tackles, among other topics, the commitment of big corporations to research and development and the importance of research centers and their efficiency in Tunisia, along with the infrastructure in place, which is a necessary, albeit not sufficient, condition for the success of an innovation entrepreneurial ecosystem.

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[32] Aulet, W.K., (October 14, 2008). How to Build a Successful Innovation Ecosystem: Educate, Network, and Celebrate. *Xconomy.com*. Retrieved from http://www.xconomy.com/national/2008/10/14/how-to-build-a-successful-innovation-ecosystem-educate-network-and-celebrate/

[33] Williams, D. (2005). *Real Leadership*. San Francisco, CA: Berrett-Koehler Publishers.

- Raising an entrepreneur:

We generally witness two types of entrepreneurs, the first one being graduate entrepreneurs and the second one, people opting for acquiring a professional experience before undertaking their own project. The first type is mainly influenced by the education and the environment he or she is evolving in. The second one is conditional upon the supporting environment he can find, mainly the entrepreneurial network in place.

- Education:

  Education should be seen as the primary vehicle that promotes youth entrepreneurship. It indeed can spread awareness by providing tangible training and knowledge about entrepreneurship.

- Entrepreneurial Network:

  Building on the idea that a nation needs to raise its entrepreneurs, networking is a valuable aspect pertaining to this matter. An entrepreneur needs to have an environment in which he can, on the one hand, leverage his connections and reach out and find the right person with the needed skills that will help him develop his project. On the other hand, an entrepreneurs network will support new comers and advise them in their endeavor.

Further on, we will analyze each element and assess it relatively to the Tunisian context. Thereafter, we will provide an overall assessment of the Tunisian entrepreneurial situation.

2.3 Culture:

2.3.1 Culture as a driver of economic development:

If we consider that culture is a set of "attitudes, values and beliefs that…play an unquestioned role in human behavior"[34], then it comes without saying that it shapes the development of a society and more specifically its economic mutation.

Through his analysis, David Landes refutes the understanding of some scholars asserting that one can understand economic development without taking into account the culture's impact on a society. As a matter of fact, a plethora of historical events vouch for the fact that "monocausal explanations will not work" since both culture understanding and economic analysis are fundamental requirements to complete a thorough diagnostic work.[35]

The historian economist backed up his idea through the Argentinian dependency theory and Japan's Meiji restoration that opposes the latter. Argentina and other Latin American countries reduced the causes of the region's economic failure to the despotism of capitalism. Western countries and North America are seen as the stronger and richer ones, which extort resources from the Latin American region without bringing any benefit to local people. Thus, Latin American scholars adopted a defensive position regarding their failure and put the blame on an external agent rather than questioning their values and their own actions. Indeed, this victimization doctrine denotes a "state of inferiority" as if local authorities didn't consent to foreign investments. World war I worsened Argentina's economical situation by aggravating the country's need for funds and hindering its capacity to pay back its creditors, leading to Argentina's own isolation. Lanes contrasts the Argentinian case with the Meiji Restoration. After 1868, Japanese people were facing a world in a constant rapid growth, while their society was still recovering from the end of the Tokugawa Shogunate era. Thanks to the "intrinsic values" – work ethic, national unity and self-discipline - that were deeply rooted in the Japanese culture, Japanese people quickly understood they needed to learn from the Western countries in order to catch up with them. They wittily succeeded in taking what they needed from each country and adapting it to their values.

The difference between Argentina and Japan was cultural. One denied its own mistakes and the other accepted its own failure and worked on correcting it. Bernard Lewis generalized this outcome when he said, "When people realize that things are going wrong, there are two questions they can ask. One is 'what did we do wrong?' and the other is 'who did this to us?'" This comparison shows us therefore culture is a non-negligible determinant to economic growth.

Moreover, Mariano Grondona emphasized also the concept of "intrinsic" values. Actually, in an attempt to develop a cultural typology of economic development, he distinguished between "intrinsic" values and "instrumental" ones[36]. The former embodies collective long-lasting values that shape individual values as part of a group. For instance, patriotism in some nations, among

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[34] Porter, M.E. (2000). Attitudes, Values, Beliefs, and the Microeconomics of Prosperity. In Harrison, L.E., & Huntington, S.P. *Culture matters: how values shape human progress* (p.14), New York: Basic Books.

[35] Landes, D. (2000). Culture Makes Almost All the Difference. In Harrison, L.E., & Huntington, S.P. *Culture matters: how values shape human progress* (pp. 1-13), New York: Basic Books.

[36] Grondona, M. (2000). A Cultural Typology of Economic Development. In Harrison, L.E., & Huntington, S.P. *Culture matters: how values shape human progress* (pp. 44-55), New York: Basic Books.

others the United States, is a prevailing intrinsic value. It is interesting to note that this value in particular gives priority to the nation's welfare rather than the individual's welfare and it can lead the sacrifice of the individual. It is thus important that a nation questions its own values and assess if they are "adaptive" or "maladaptive", hindering the countries progress.[37]

By contrast, instrumental values are temporary and tend to have a mere short-term effect, as they do not shape individual values on the long run and create a "moral imperative". In this sense, all economic values fall within this category, given that money is at the end just a mean to achieve higher goals, among others well-being. Therefore, the process leading to economic development has to be built on intrinsic values and not instrument ones alone. Otherwise, people wouldn't respond at some point to the government's decisions, when a certain level of wealth is reached.

The Calvinistic Protestantism case is a good example illustrating the significance of intrinsic values.[38] Max Weber argued that Protestantism, and more specifically Calvinism, is at the origin of capitalism. In "Institutes of the Christian Religion", John Calvin develops the notion of predestination according to which one's fate precedes one's existence. In this sense, one cannot seek *salvation* through his deeds or his faith and predestination could be tantamount to fatality. However, given the notion of judgment in Protestantism, hence a notion of choice to be done, Calvinists think that everyone can be chosen, by virtue of the fact they are all oblivious to their own fate. Yet, in their understanding, Calvinists deem there should be "plausible signs of election"[39] that would be common denominators among the chosen ones and goodness is seen as one of these denominators. According to Weber, this perspective becomes a paramount inducement to proper behavior, including "hard work, honesty and the thrift use of money and time"[39]. Those values, which also happen to be the ones capitalism is built on, are intrinsic to the Calvinist community, in the sense that Calvinists seek to attain a proper behavior and a quality of soul and all the material wealth they cumulate is just a side effect. Thereafter, the Calvinist values evolved to be as general values deeply rooted in the Western societies, leading to a new economy of "industrial capitalism".[39]

Through this example, we can see that the intrinsic values shaped the society and the individuals in their demeanors, leading to a sustainable economic development.

2.3.2 Culture and Entrepreneurship:

An underlying assumption in Grondona's reasoning, as exposed previously, is that human beings are by essence subjected to temptations. As such, intrinsic values stand as a rampart to those primary needs, in the form of moral imperative, which will prevail in the decision-making process on the individual level.

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[37] Williams, D. (2005). *Real Leadership.* San Francisco, CA: Berrett-Koehler Publishers.

[38] The Expanded 1920 Version Authorized by M. Weber, In Weber, M. (2002). *The Protestant Ethic and the Spirit of Capitalism* (Third Roxbury Edition). Los Angeles: Roxbury Publishing Company.

[39] Landes, D. (2000). Culture Makes Almost All the Difference. In Harrison, L.E., & Huntington, S.P. *Culture matters: how values shape human progress* (pp. 11-13), New York: Basic Books.

Gasse and Tremblay mapped out the decision-making process (DMP) for creating a business start-up (Figure 2.1), therefore highlighting the influence of culture and values on the process.[40]

We'd like to focus on the upfront part of it. We note that there are 2 necessary steps, which lead to the decision of creating one's business start-up. These are the "perceived desirability" and the "feasibility of behavior", which Arenius and Minniti refer to as the "perceptual variables" influencing the "make up" of a nascent entrepreneur from a psychological and a sociological perspective.[41]

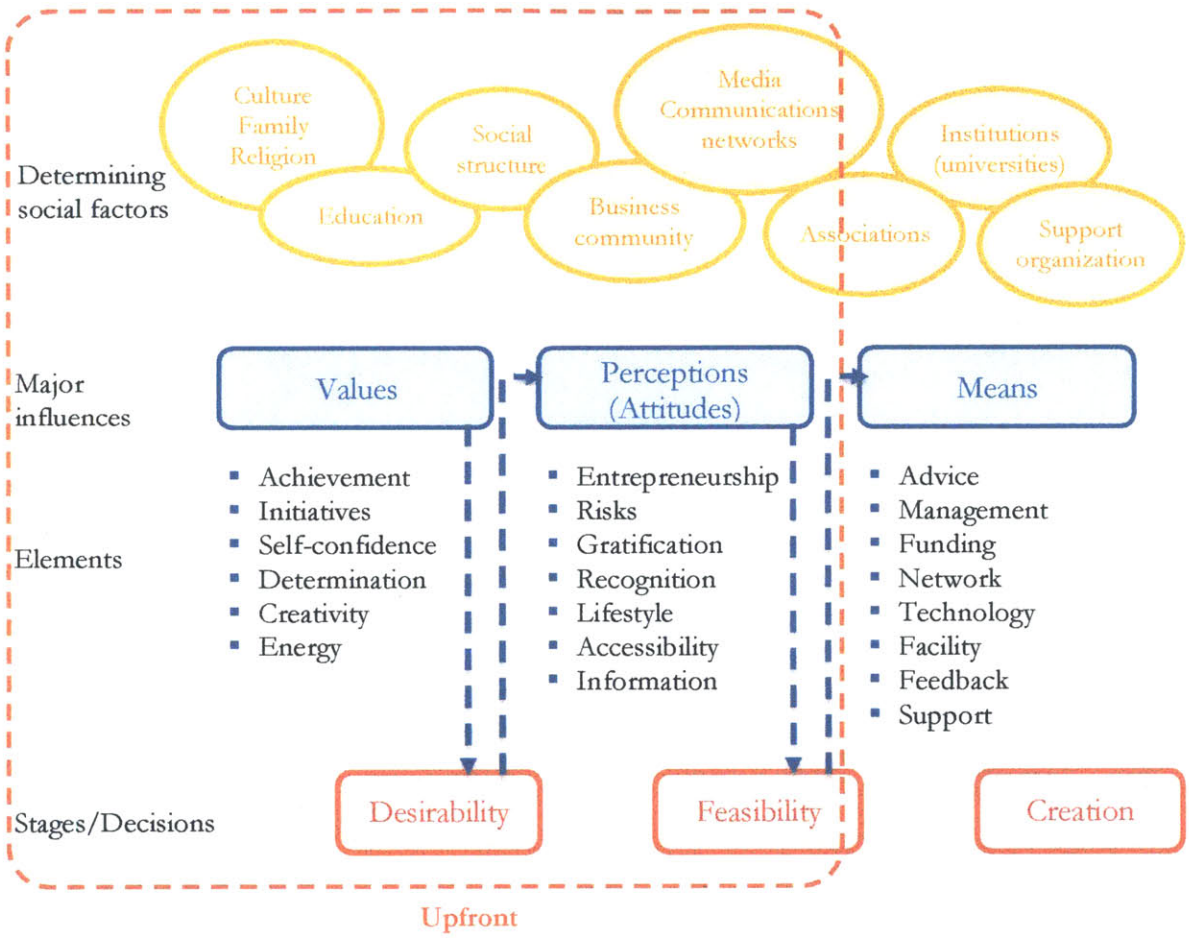
As exposed earlier, social intrinsic values and upbringing environment (i.e. culture family, religion and social structure) shape individual values and one's character, including self-confidence and fear of failure. These latter values in turn, will define the cognitive perceptual variables.

[40] Gasse, Y., & Tremblay, M. (2011). Entrepreneurial Beliefs and Intentions: A Cross-Cultural Study of University Students in Seven Countries. *International Journal of Business* 16.4: 304–314.

[41] Arenius, P., & Minniti, M. (2005). Perceptual Variables and Nascent Entrepreneurship. *Small Business Economics* 24: 233–247.

Figure 2.1

Entrepreneurial process model



Source: Gasse, Y., & Tremblay, M., *Entrepreneurial Beliefs and Intentions: A Cross-Cultural Study of University Students in Seven Countries.*

2.3.3 Influence of culture on Entrepreneurship in Tunisia:

Based on our previous reasoning, we will use the following elements to assess the impact of culture on entrepreneurship:

- Cultural and individual values:
    - Role model of successful entrepreneurs
    - Role of women in the entrepreneurial scene
    - Fear of failure

- Perceptual variables:
    - Desirability of entrepreneurship career choice
    - Perceived opportunities

2.3.3.1 Cultural and individual values in Tunisia:

Role model of successful entrepreneurs:

In a recent study, Gasse and Tremblay gave an empirical proof to the impact of entrepreneurial beliefs and intentions. As seen above, they formalized the role of culture and social values in the decision-making process of a person to start a business. Then they applied their framework in different countries in order to show the cross-cultural aspect of their framework. The study covered seven countries, among others Tunisia. One of the interesting outcomes of this work is that Tunisian students were among the ones who thought that one is not born as an entrepreneur, rather one becomes an entrepreneur through his or her experiences and education.[42]

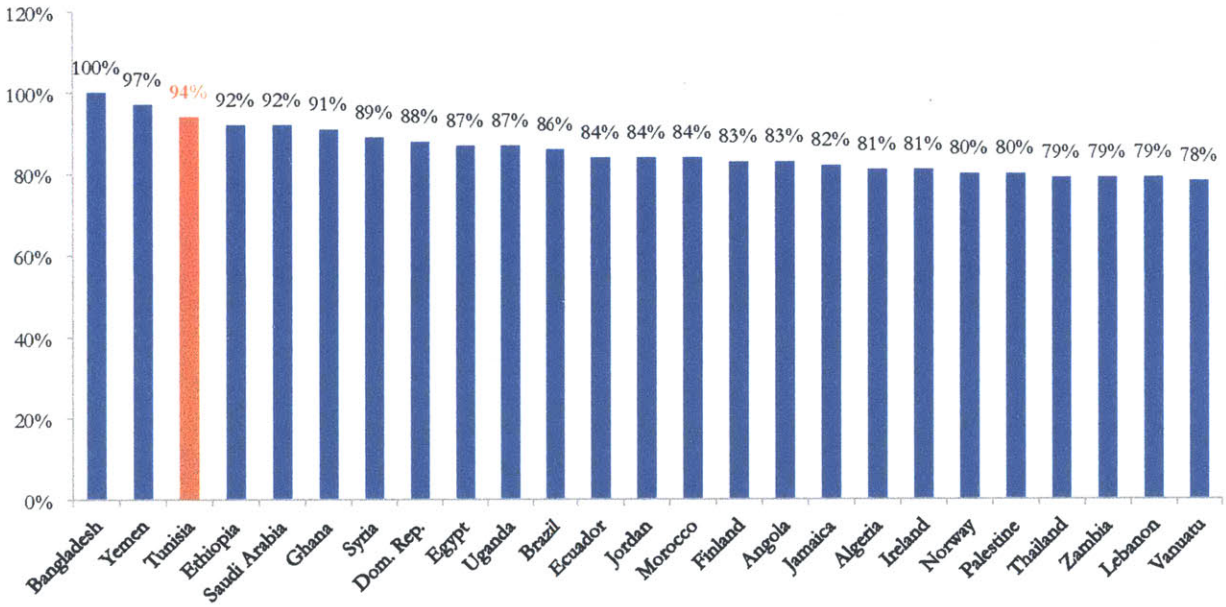
This unfettered Tunisian youth believes in the true role of an entrepreneur as a person who undertakes and evolves with his or her endeavors. This perception has certainly been shaped by the social perception of successful entrepreneurs.

The figure below (Figure 2.2) puts forward the extremely positive status awarded to successful entrepreneurs by the 18 – 64 years old Tunisian society.

[42] Gasse, Y., & Tremblay, M. (2011). Entrepreneurial Beliefs and Intentions: A Cross-Cultural Study of University Students in Seven Countries. *International Journal of Business* 16.4: 309.

Figure 2.2

High Status of Successful Entrepreneurship Benchmark in 2012[43]



Source: Global Entrepreneurship Monitor database.

According to the GEM program, Tunisia is ranked 3rd among 88 countries in 2012[44], which shows a tangible acceptance, not to say idolization, of entrepreneurs by the Tunisian society. They become therefore role models for other people. Role models retroactively shape the "outer layers of a culture" (Hofstede, 1995)[45], which in turn influences the decision-making process for an entrepreneur, as seen previously.

Role of women in the entrepreneurial scene:

There is no doubt about the preponderant role women have in the Tunisian society and the Tunisian cultural narrative.

Since the French protectorate period, scholars were interested in the social status of Tunisian women. Many leading figures, including Tahar Haddad and Shayk Mohamed Fadhel Ben Achour, tried to understand the religious texts under the new light of modernity in order to bring more equity between men and women. Thanks to his modern education and following the steps of his predecessors, after the Tunisian independence in 1956, President Habib Bourguiba initiated the Personal Status Code bringing gender equality in term of civic rights, hence

[43] Latest provided data between 2009 and 2012.

[44] On the figure, we only show the 25 first countries.

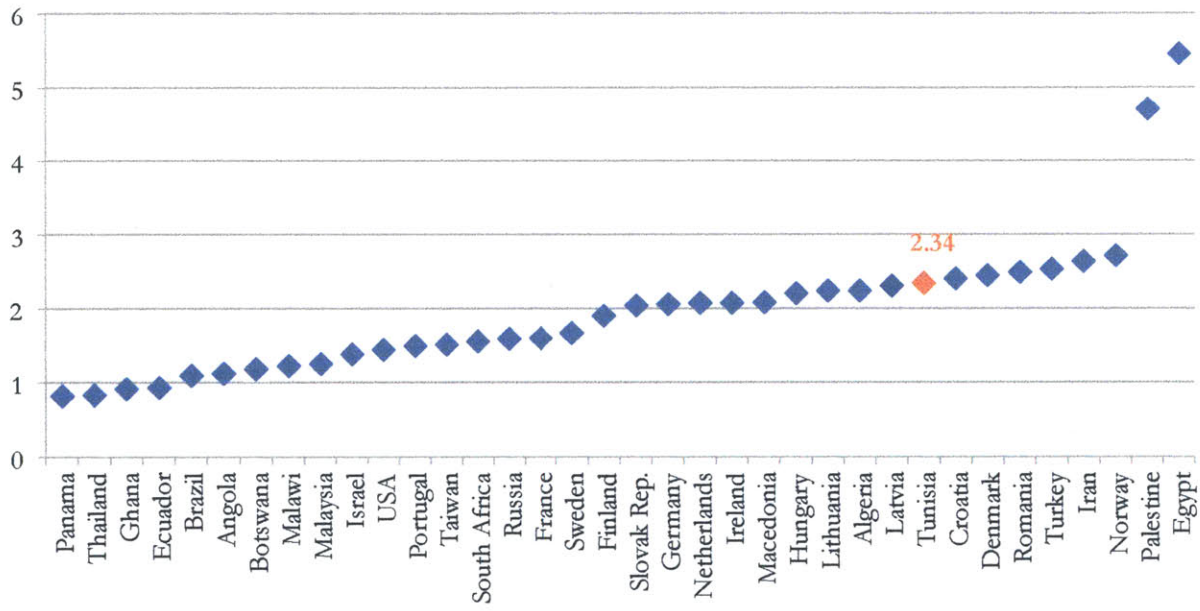
[45] Wennekers, S., & Thurik, R. (1999). Linking Entrepreneurship and Economic Growth. *Small Business Economics* 13: 40.

resolving "the most ancient and the most blatant injustice"[46] in the Tunisian society at that time. One of the main outcomes was the prohibition of polygamy and the equal rights with regard to the decision of a divorce.

Nowadays, Tunisia is seen as "the most progressive Arab country with respect to women's rights"[47] Tunisian women are emancipated and well integrated in the active life. Nonetheless, the following figure (Figure 2.3) shows that there is still a predominance of male entrepreneurship over female one.

Figure 2.3

Male-to-Female Entrepreneurship ratio Benchmark in 2012



Source: Global Entrepreneurship Monitor database.

In a previous GEM study focused on Tunisia in 2009, it was highlighted that we need to take a new parameter into account: the perceived role of women. [48]

Even though women are emancipated in Tunisia, they are still seen as the most fundamental element to the family unity, which is paramount in the Tunisian society since it is a collectivist one. Therefore, women would tend to impose more obstacles on themselves and would have the propensity to feel at the crossroad of different duties and desires, including career, family and

[46] Kefi, R. (August 26, 2006). Et Bourguiba libéra la femme. *Jeuneafrique.com*. Retrieved from http://www.jeuneafrique.com/Article/LIN27086etbouemmefa0/actualite-afriqueet-bourguiba-libera-la-femme.html

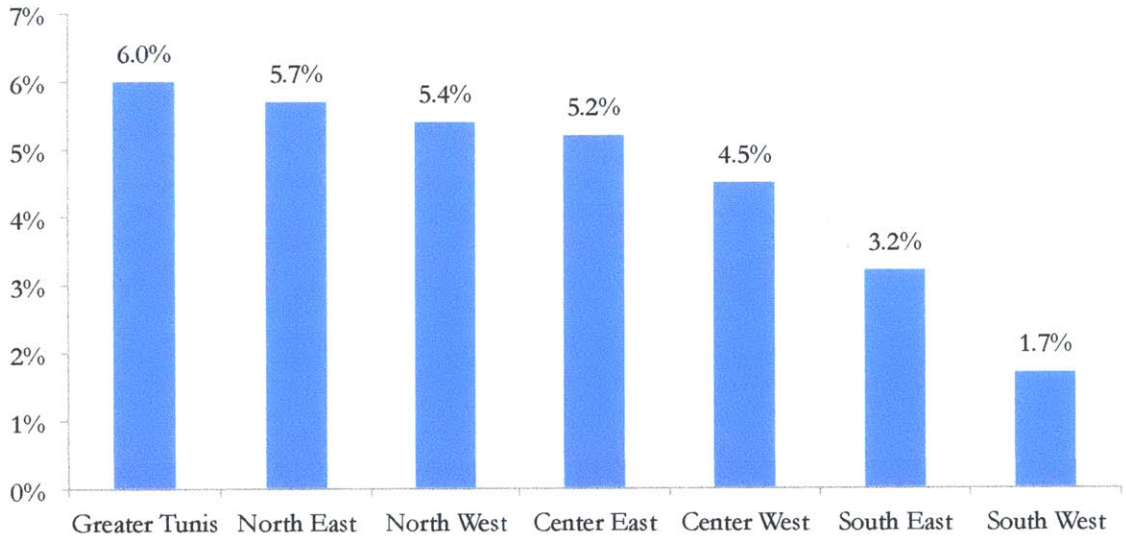
[47] Human Rights Watch. *World Report 2012: Tunisia*. Retrieved from http://www.hrw.org/world-report-2012/world-report-2012-tunisia

[48] Mansouri, F., & Belkacem, L. 2009 Tunisia Executive Report, *Global Entrepreneurship Monitor*: 38-41. Retrieved from http://www.gemconsortium.org/docs/download/2307

personal matters. Moreover, there is no real uniformity of the perception of women's roles and duties across the all the regions in Tunisia. The below figure (Figure 2.4) shows that women have more entrepreneurial mindset in the greater Tunis, where people are relatively more modern and there is more social flexibility. We observe also the same pattern going from the northern coastal regions (Greater Tunis, North East, North West) to the interior regions.

Figure 2.4

Geographic Footprint of Female Entrepreneurial Activity in Tunisia in 2009



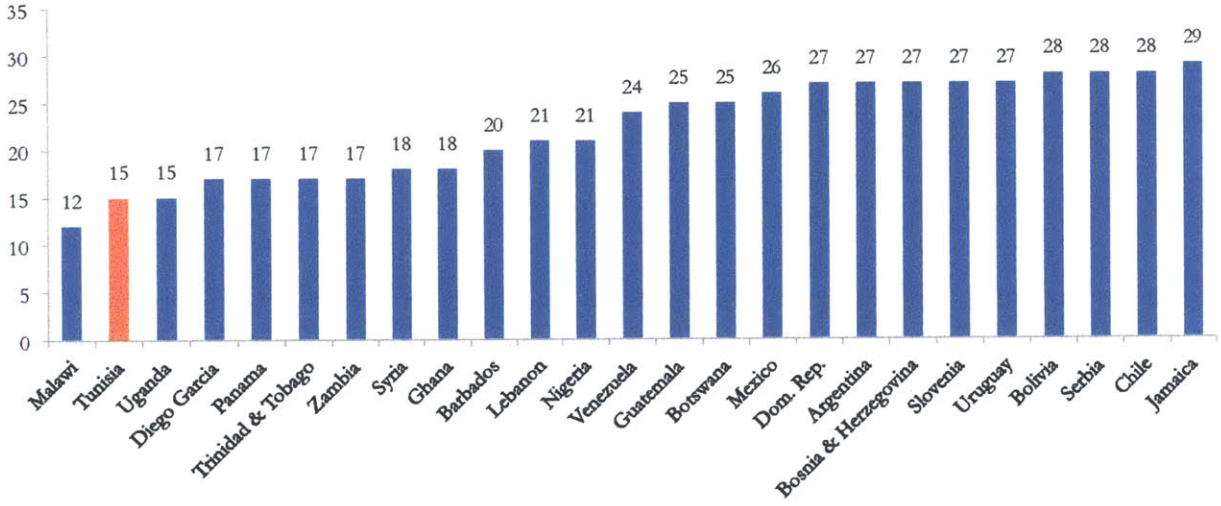
Source: Global Entrepreneurship Monitor, *2009 Tunisia Executive Report.*

Fear of failure:

Fear of failure has been a real inhibitor of entrepreneurial activity. Yet, as displayed in the following figure (Figure 2.5), Tunisia has the 2nd smallest Fear of Failure index among the 88 countries of the GEM study, hence a propensity to take action and undertake.

Figure 2.5

Fear of Failure Benchmark in 2012



Source: Global Entrepreneurship Monitor database.

These results come as a logical continuation to the high status given to the successful entrepreneurs in Tunisia.

Yet, we need to emphasize the fact that, even though there is little fear of failure, many Tunisian people are not risk-takers. The Tunisian administration illustrates well this statement. Indeed, there is an utter deficiency in terms of process optimization. A recent study showed that there are roughly 600,000 people working in the Tunisian administration, whereas only 200,000 people are needed to its well functioning.[49] There are two main factors for this current situation. The first one is that the previous President Ben Ali tried to resorb high unemployment rates by creating job position within the administration, even though they didn't bring any real value to the process. The second reason, which is the important one from a cultural perspective, is that many people who graduate from universities look forward to finding a position within the administration, which is deemed in the folklore, as a secure source of recurring income that doesn't come with an obligation to making many efforts.

This peculiar relation between Tunisians and work has also been noted on the African continent level. Dambisa Moyo argues that foreign aid has been a disaster for African nations and their economic development because most of these countries perceive this recurring foreign aid as a secure source of funding for the government, which actually created a dependency towards Western countries.[50]

Therefore, we need to understand how Africans generally, and Tunisians more specifically, relate to the value of work. In the case of Tunisia, it is common to see work as a constraint

[49] Kallel, M. (Interview, January 26, 2013).

[50] Moyo, D. (2009). *Dead aid: Why aid is not working and how there is a better way for Africa* (1st ed.), New York, NY: Farrar, Straus and Giroux.

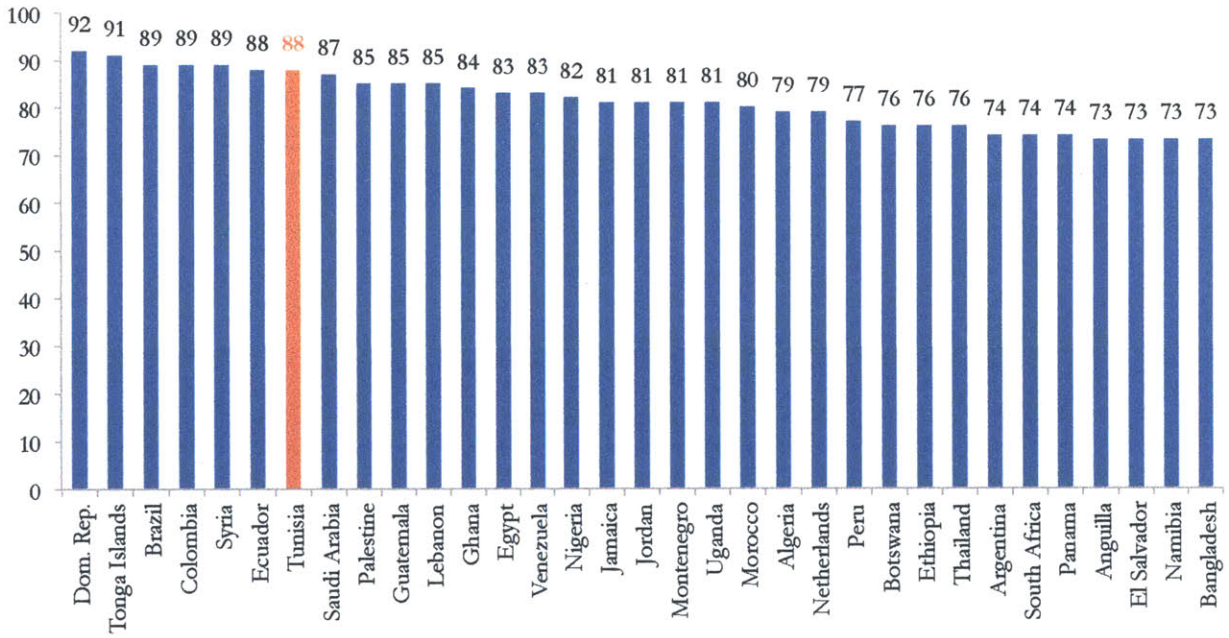
allowing one to earn enough money and enhance one's purchase power. Compared to the Calvinist example used above, the system of values is reversed in Tunisia and riches are a goal, rather than a by-product of one's fulfillment through work.

2.3.3.1 Perceptual variables:

The different values we've analyzed shape one's perception of starting a business. The first characteristic directly linked to the above mentioned values, is the desirability of entrepreneurship as a career choice.

Figure 2.6

Starting a Business as a Career Choice Benchmark in 2012



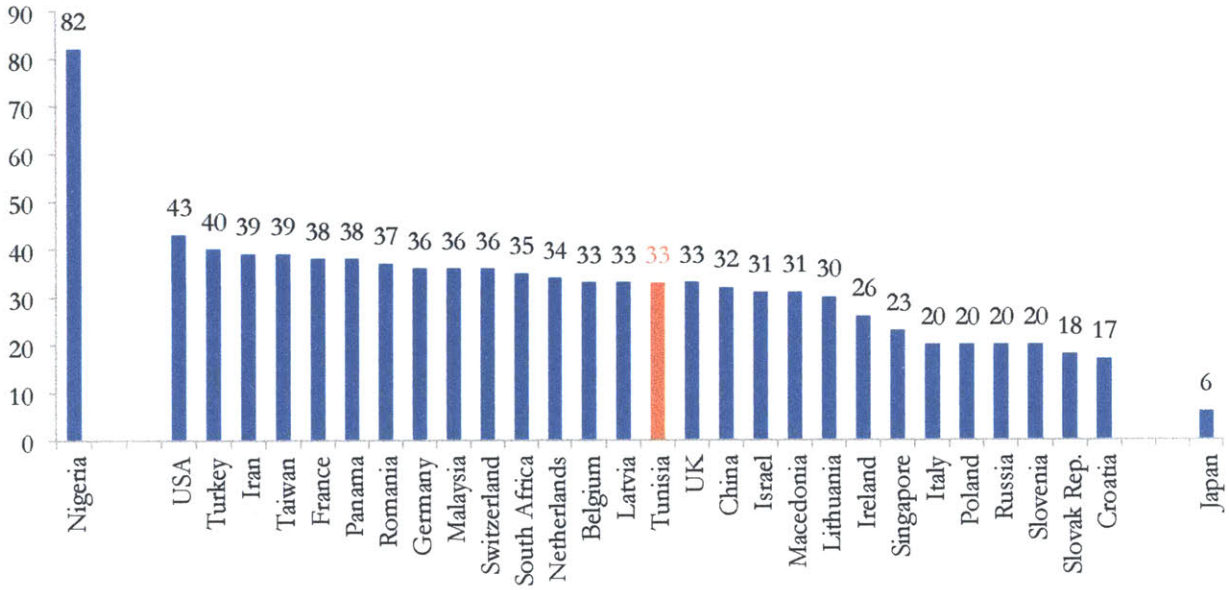
Source: Global Entrepreneurship Monitor database.

Given the positive figures, we have previously found, the latest graph (Figure 2.6) comes as a logic conclusion. Tunisia is indeed ranked 7th among the 85 countries GEM has included into its survey.

Regarding the perceived opportunities however, Tunisia has a low rate (Figure 2.7).

Figure 2.7

Perceived Opportunities Benchmark in 2012



Source: Global Entrepreneurship Monitor database.

This actually can be explained by the fact that the perception of opportunities is shaped by the values, along with the economic context and the business environment. This figure actually represents the mistrust of people in the ecosystem in place.

Nonetheless, there was a tremendous vibrancy around entrepreneurship, following the revolution in Tunisia. Indeed, people started different think tanks and numerous NGO were attracted by the Tunisian case. Mostly, the revolution brought hope of change. People felt that they could undertake and achieve things on different levels.

Notwithstanding this new mindset that came along with the revolution, the vision and understanding of entrepreneurship didn't change in Tunisia. As a matter of fact, "entrepreneurship is still carved into the cultural unconscious, as related to a notion of territory"[51]. Admittedly, entrepreneurship is apprehended as a territory parcel on which one can do whatever he or she wants. Despite the fact that the Tunisian society is a collectivist one, when it comes to entrepreneurship, there is no vision of "shared heritage" by which entrepreneurs can go beyond the fact that they are competing against each other and try to build things and benefit from the synergies.

[51] Khanfir, M. (Interview, January 29, 2013).

2.4 Government:

2.4.2 Overview:

In the case of Tunisia, the policies fostering entrepreneurship fall within the scope of broader policies related to Small and Medium Enterprises (SMEs).

In order to thoroughly appreciate the role of SMEs in the Tunisian economic scene, it appears to be important to draw the historical economic narrative of the country after the revolution. This narrative shaped the socialist-based economy of Tunisia and highlights the evolution of modernizing policies under the influence of globalization.

2.4.2.3 Historical overview:[52]

Given its ethnical and religious homogeneity, Tunisia has been a testing ground for many policy-makers, especially after the Arab Spring. Several reports focused on policy reforms in this country. For instance, the UNIDO published in 2001 a thorough historical analysis of the Tunisian policy reforms in economy.

As detailed in the table below (Table 2.2), Tunisia has been through numerous economic phases since its independence.

[52] Di Tommaso, M.R., Lanzoni, E., & Rubini, L. (2001). *Support to SMEs in the Arab region: the case of Tunisia.* UNIDO/UNDP. UNIDO Italia.

Table 2.2

Historical overview of economic policies in Tunisia since the independence

	Period of time	Focus	Main economic and policy reforms
Phase I	1956 – 1960	Liberalization of the Tunisian economy	Shift towards industry and services Investment in infrastructure Government ownership and control of the banking sector, power, gas and water companies and transportation
Phase II	1961 – 1969	Socialist-based economy	Implementation of the "Ten-year development plan" Government's growing control
Phase III	1970 – 1976	Market economy and private ownership	Government control restraint to the primary sector Privatization of the rest of the economy Focus on agriculture as a primary driver of economic development Development of light industry and SME Fostering foreign investments
Phase IV	1977 – 1986	Economic and social crisis	Fifth and sixth development plan Shift of focus back to government ownership and control
Phase V	1987 – 1996	Economy revitalization and Global Integration	Reduction of the dependency on oil exports Launching of a concrete privatization program with a focus on SMEs Defining free trade zones Instauration of the Investment Incentives Codes towards numerous areas, including high-technology and export-based services Attracting FDI and exports promotion

Source: UNIDO, *Support to SMEs in the Arab Region, The Case of Tunisia.*

The period following the independence (1956 – 60) was mainly directed towards building the basis of the Tunisian economy. It focused on establishing the predominance of Tunisia as an independent nation by repatriating the French citizens working in the Tunisian administration and taking back lands from the French government. The state's main focus was to overpass the impeding factor-driven economy, fostered during the protectorate period, and enhance industry and services. The first step was to start building the infrastructure, which required the government's interventionism, in order to pace according to Bourguiba's rapid expansion and development vision.

In the second period (1961 – 1969), the Tunisian government continued expanding its control over lands and infrastructure. It mainly adopted a socialist economy by implementing the "Ten-year development plan". As such, Ahmed Ben Salah, the minister of Planning and Finance at that time, encouraged a collectivization of agricultural lands, known as the "co-operative experiment".[53]

In 1969, Bourguiba put an end to the socialist approach, as it appeared to bring no added value to the Tunisian economy. This experiment was followed by the reforms of Hedi Nouira in 1970. These reforms were mainly based on a shift towards the private sector and other ones that

[53] Team of Perspective Monde. Adoption d'une réforme agraire en Tunisie. *Sherbrooke University*. Retrieved from http://perspective.usherbrooke.ca/bilan/servlet/BMEve?codeEve=916

can absorb the existing workforce; in this case it was the manufacturing industry. Nouira was aiming to foster a free economy market by enhancing foreign investments through tax exemptions (Law 72-38 of 1972) and administrative cost cutting for industries with high job creation (Law 74-74 in 1974). He developed four main institutions to implement his plans, including the Investment Promotion Agency (API), the Fund for Industrial Promotion and Investment (FOPRODI), the Center for Export Promotion (CEPEX) and finally the Industrial Real Estate Agency (AFI). As exposed by the UNIDO study "Support to SMEs in the Arab Region, The Case of Tunisia", these reforms resulted in a propensity for private investors to concentrate in sectors with rapid returns, including textile and leather goods industries, along with the accentuation of regional economic disparity. Furthermore, the government had still a tight grip on the financial sector.

Nouira's reforms lead to an economic crisis (1977 – 86), mainly due to an "over-dependency" to oil and an excessive amount of foreign debt. An austerity plan (1982 – 86) was implemented, as result. Consequently to the rise of basic commodities prices, including the price of bread, riots broke out as protest in January 1983, leading the government to yield and cancel any price increase.[54]

In 1987, in order to revitalize the economy, the Tunisian government put in place a "Structural Adjustment Plan" with the help of the IMF. As a first step, Tunisia generated funding from the IMF. This income was used in priority to level the macro-economic indicators and stabilize the economic situation in the country. As a second step, the government launched in 1987 the first tangible privatization program, which became to be perceived as an option to restructure state-owned companies. Nonetheless, even though different instances and committees were put in place to deal with the privatization matters, the decision-making process was mainly controlled by the Prime Minister (Law 89-9). Moreover, as part of its liberalization plan, the Tunisian government has set Free trade zones in Bizerte and Zarzis, that grants companies tax exemptions and free capital transfer. If this initiative enhanced on the one hand foreign direct investments, it fostered on the other hand investment in some specific regions at the expense of others. Finally, Investments Incentives Codes were put into place. Their goal is to galvanize some industries, including the high technology one, and to foster offshore companies. Those incentives also marked a tangible willingness from the government's side to focus on SME, by giving access to state allowances through pre-existing government entities, such as the Fund for Industrial Promotion and Investment (FOPRODI).

During the first decade of the 21st century, Tunisia continued fostering its "global integration" program, relying on the same policies, including the promotion of export, and attracting foreign direct investment through technology and industry offshoring, as well as the liberalization of trade with "preferred" partners. The most important partner is indeed the EU, which accounted for 80% of Tunisia's exports and 70% of its imports. These results were also the aftermath of the industrial upgrading plan "mise à niveau" which aimed to enhance the competitiveness of Tunisian businesses vis-à-vis the EU.[55,56]

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[54] Bourguiba, H. (Television broadcast, January 6, 1984). Sequence retrieved from http://www.dailymotion.com/video/x528x_bourguiba-discours-du-pain#.UWNw2YWYFP0

[55] Diop, N. (2008). Tunisia's Global Integration, *Tunisia's Global Integration*, 1(1), 1–145.

2.4.2.4 Current situation:

As seen previously, until the revolution, most of the policies adopted by the Tunisian government tackled the matters related to Small and Medium Enterprises, rather then their creation and their early development. The main reforms conveying this focus are the Investment Incentive Codes, which oriented private investors in SMEs towards specific industries and regions, along with fostering foreign investments. The Tunisian SMEs were encouraged to base their businesses on export. Numerous institutions have been set in place in order to implement this plan.

We have mapped out the different instances (governmental and non-governmental) fostering the role of SMEs in the Tunisian economy (Table 2.3):

Table 2.3

Main institutions involved in SME development policy in Tunisia[57]

Institutions	Type	Program Title	Beneficiaries	Activities	Starting Date
Support center of Small and Medium industries, part of the Investment Promotion Agency (API)	Gov.	Task Force PMI		Technical assistance, for modernization	1998
		National Grant of Outsourcing and Partnership		Promote subcontracting and business partnership through orientation, match-making and promotional activities	1985
Technical Centers	Gov.		Private enterprises	Technical assistance, diagnostic studies, training, technical and market studies, information dissemination	
Bureau de Mise à Niveau	Gov.			Technical assistance, advisory services linked to the "Mise à Niveau" program	1996
Centre de Promotion des Exportations (CEPEX)	Gov.			Support to exports, credit, technical assistance	1973
National Institute for Standardization and Industrial Property (INNORPI)	Gov.		Private enterprises	IP protection, Product and Services quality certificates, Training	1982-2009
Foreign Investment Promotion Agency FIPA	Gov.		Foreign investors	Attract and support FDI	
Industrial Land Agency (AFI)	Gov.		Industrial projects	Implementing infrastructure	1973
Agricultural Investment Promotion Agency (APIA)	Gov.		Agricultural projects	Credit	

[56] In the document, the writer didn't precise the exact date the figures refer to. However, it is deemed that they reflect the end of the 10th development plan (i.e. 2006).

[57] We have highlighted in red the institutions involved in business creation.

Tunisia's Trade, Industry and Handicrafts Union	NGO	Training Center for SMEs Managers (CFDPME)	SMEs	Training SMEs Managers	1980
The Arab Institute Of Business Managers (IACE)	NGO		Private Firms	Information dissemination, training, match-making, managing and marketing support	1984
Venture Capital Investment Vehicle (SICAR)	Fin.		Private firms, especially SMEs	Equity participation, managerial support	1990
National fund to promote and decentralize industry (FOPRODI)	Fin.		SMEs	Credit	1973 (renewed in 1999)
Guarantee National Fund	Fin.		Small Economic Activities	Credit Guarantee	1981
National fund to promote handicrafts and small crafts (FONAPRAM)	Fin.		SMEs promoting graduates' employment	Credit	1981-2005
Financing to encourage innovation in information technologies (RITTI)	Fin.		IT innovative projects and graduates entrepreneurs	Credit	1999
The Tunisian Guarantee Company (SOTUGAR)	Fin.		Manufacturing industries, computer services	Credit Guarantee	2002
European Union	Int.	Euro-Tunisia Enterprise (ETE)	SMEs	Credit, Training	2000-2002
		Euro-Mediterranean SME co-operation		Support business cooperation	
UN Industrial Development Organization (UNIDO)	Int.	Integrated Support to SMEs in the Mediterranean Region		Technical and Financial assistance	
UN Conference on Trade and Development (UNCTAD)	Int.	Mediterranean 2000		Support the modernization of SMEs	

Source: UNIDO, *Support to SMEs in the Arab Region, The Case of Tunisia* & Agencies Website.[58]

From our historical analysis and the current institutional setting related to SMEs, we note the following elements:

[58] Agencies' website include Tunisia Industry portal http://www.tunisieindustrie.nat.tn/ & FIPA portal http://www.investintunisia.tn/

- Institutions impeding opportunity-driven entrepreneurship:

There is only one institution (RITTI) that promotes innovation and technology, albeit information technology. The rest of the organisms are mainly focusing on the financing part, generally speaking, or are oriented towards sectors that give more space for necessity-driven entrepreneurship and where, historically, innovation do not have a strong track-record. These sectors include agriculture and fishing, the textile industry and tourism.

- Policies at the origin of the institutions' shortcoming:

The government is following an aggressive approach aiming to attract foreign direct investments through the industry offshoring. Even though this strategy appears to be fruitful on the short-term, the government's excessive focus on this point is actually felt through the lack of emphasis on "endogenous entrepreneurship" on the long-run. Indeed, by bringing foreign investors, we are not developing technology and innovation, rather we are importing and copying it, which puts Tunisia in a "follower's" position and impedes the innovation-based entrepreneurship that results in high rates of net job creation. This statement is exacerbated by the fact that the main foreign investors are big companies, as opposed to smaller one, which can bring the know-how.

Furthermore, putting together on one side the government's attempt to foster entrepreneurship in particular areas (mainly by easing the taxing burden) and, on the other side its constant promotion of specific sectors cited above, results in a situation where we find regions (mainly interior ones) where access to financing is difficult and taxes are overwhelming; yet there is a promotion of entrepreneurship in non-innovative sectors. This setting actually leads to the rise of necessity-driven entrepreneurship, which doesn't bring job creation.

However, the revolution was a real wake-up call for the government regarding these matters. Indeed, policymakers were more sensitive as to the importance of entrepreneurship. The transition government knew that there was an important gap in terms of venture funding. Indeed, according to the Jasmin Plan (October, 2011), it will create two main funds. The first one is a fund of funds called "Ajyal Funds". It will be composed of a PE fund and other sub-funds focused on infrastructure by sector, including renewable energy. This fund is expected to generate a return of $30Bn and create more than one million jobs. The second fund is named "Caisse de Dépôt et de Consignation" (CDC) and it will mainly focus on investing in infrastructure and supporting SMEs. Improving infrastructure will facilitate the creation of new businesses, especially within interior regions. The CDC will offer a new array of financial instruments, which will be backed by the government, along with new funding opportunities to early-stage businesses.[59]

[59] Ministry of Finance. (September 2011). *Economic and Social Program : the Jasmine Plane.* Republic of Tunisia.

Nonetheless, despite all these measures that foster business creation, a recent article showed that more than 150 foreign ventures left the country since the revolution.[60]

In fact, there are other parameters we still need to take into account in our analysis.

2.4.2 Protectionist model:

As seen in the historical overview, although it started disengaging itself since the beginning of the new century, the Tunisian government still has an overwhelming control of the main economy institutions.

- Pricing policy:

As Mondher Khanfir, Director General of Wiki Start Up, highlighted it, pricing policies are one of the manifestations of the state interventionism.[61] Indeed, the state plays the role of the apprentice sorcerer in different sectors, including the agriculture one. For instance, by fixing the price of milk, this deregulates the whole chain of value, ranging from the raising of livestock to the production of cheese. This overregulation is also seen in olive oil. The Tunisian government centralizes the exportation through the Tunisian Oil Office and therefore fixes the exporting prices. Such policy has a disastrous effect on the market itself, as the actors would tend to reduce their costs as much as possible in order to maximize their profits. This implies that there won't be efforts directed towards marketing, packaging or branding and it is unlikely that the numerous competitors will differentiate themselves in terms of product positioning. Therefore, by overregulated the prices, the state impedes the establishment of a constructive competitiveness that will enhance the product, since it limits the incentives of these actors, hence the absence of a real market economy in Tunisia.

This interventionism falls actually within the scope of an attempt to protect the local market.[62] On the one hand the government has been trying, since the governance of Nouira, to liberalize the trade and knows that we need to open towards external markets and embrace globalization and, on the other hand, it overregulates the exportations in order to protect the interests of the Tunisian consumer.

The overprotection of the Tunisian consumer is a part of the social and cultural narrative and had numerous manifestations since the independence, as seen in the historical overview section. It actually has been fostered in the collective understanding since the revolution. As a matter of fact, one the main reasons of the uprising was the rising cost of living, along with the overwhelming unemployment rate. In this new post-revolution context, prices and purchase power became sensitive subjects, which legitimize the current state interventionism and strengthen a common underlying understanding that being a reformist is tantamount to "governing with moderation, while opening to the international marketing and preserving the

[60] Bernard Y. (February 22, 2012). What's Preventing Foreign Direct Investment in Tunisia?. *Tunsia-Live.* Accessed on April 11, 2013. http://www.tunisia-live.net/2012/02/22/whats-preventing-foreign-direct-investment-in-tunisia/

[61] Khanfir, M. (Interview, January 29, 2013).

[62] Chekir, H. (2013). *Redesigning SME promotion tools in Tunisia* (Master's dissertation).

achievements and national specificities. Reform is perceived as a way of being and leading, mainly by favoring state action in order to shape and control society."[63]

- Excessive foreign currency control:

Furthermore, in his recent study on the "SME promotion tools in Tunisia", Hamouda Chekir noted that there is an excessive foreign currency control. With its conservative policy, the Tunisian government tried to maintain capital control and restricted some of the capital movements to foreign countries, allowing the Tunisian Central Bank a certain range of maneuver in its monetary policy.[64] The government wanted to keep a stable currency, which "prevented Tunisian Companies from considering multiple opportunities, such as expanding their activities in other countries or acquiring assets abroad, and restricted them to the Tunisian Market or exports from Tunisia with an obligation to repatriate all the proceeds from abroad."[62]

2.4.3 The Tunisian Administration:

Even though the structure is in place through the different institutions, it is important to assess how accessible and efficient this structure is.

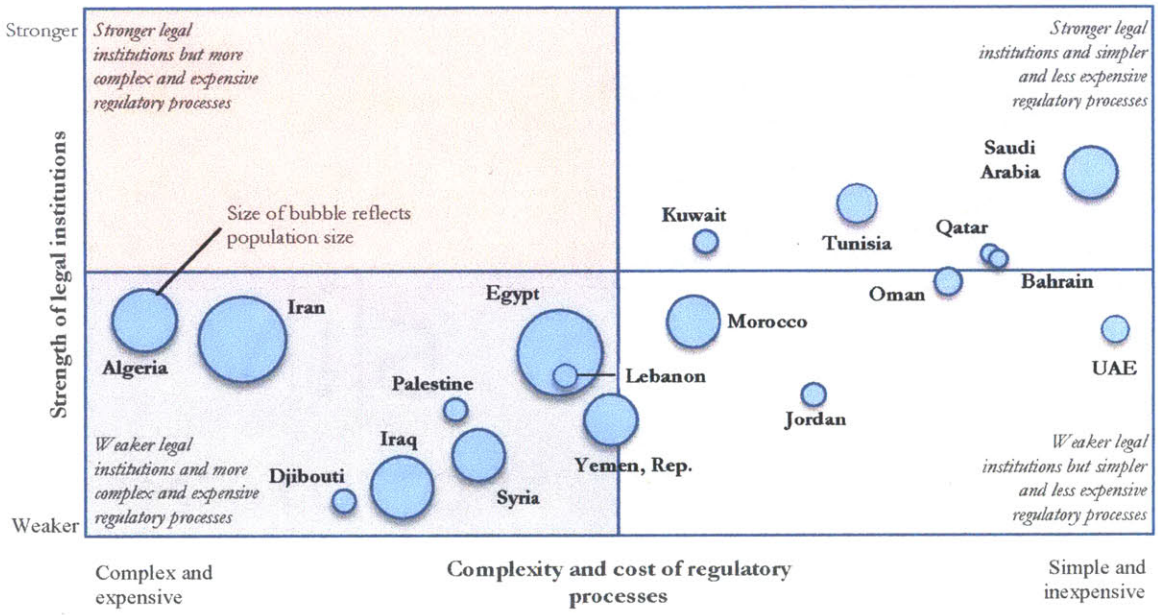
In the recent study Doing Business 2013, the World Bank did a comparative analysis between the MENA countries, by taking into account the strength of legal institutions and the complexity and cost of regulatory processes (Figure 2.8).

[63] Hibou, B. (2006). Le libéralisme réformiste, ou comment perpétuer l'étatisme tunisien. *L'Économie politique*, (4): 9-28.

[64] Jacquet, P. (March 2004). Politique de change, compétitivité et convertibilité du dinar. *Le Manager, le mensuel de l'entreprise*: 92.

Figure 2.8

Average ranking on sets of *Doing Business* indicators by economy and global income group[65]



Source: The World Bank, *Doing Business 2013*.

This figure reports the outcome of the substantial efforts the Tunisian government has done in order to facilitate the creation of businesses. Nonetheless, Tunisia is only performing within the context of the Arab countries. Indeed, on the world scale, it is still struggling with modest results (Table 2.4).

[65] Complexity and cost of regulatory processes refers to the average ranking on starting a business, dealing with construction permits, getting electricity, registering property, paying taxes and trading across borders.

Table 2.4

Ease of Doing Business in Tunisia

	Doing Business 2013 Rank
Starting a Business	66
Dealing with Construction Permits	93
Getting Electricity	51
Registering Property	70
Getting Credit	104
Protecting Investors	49
Paying Taxes	62
Trading Across Borders	30
Enforcing Contracts	78
Resolving Insolvency	39

Source: Doing Business Database.

There are several reasons behind the underperformance of the Tunisian administration when it comes to SMEs and business creation. We'd like to highlight two of them:

- Complexity of the administration's structure:

Tunisia has inherited its administration from the Ottoman Empire and has been influenced by the French administration during the colonization period. It is centralized and perceived to be rigid in terms of process.[66]

Many of the interviewees declared that the Tunisian administration is one of the main reasons that stand as a deterrent from opening a business, especially for foreigners.

There's a real issue on the structural level, as most of the institutions do not have clear instructions on how to proceed and they would be sending the entrepreneur around, bouncing from one party to another without getting things done.

The overcapacity of the Tunisian administration in terms of employees[67] stands as a proof of the intricacy and the inefficiency of the institutions. Moreover, there is no internal management of the employees, as it is the Financial Director in the administration that promotes employees. Therefore, there is no human resources allocation within the Tunisian public institutions.

[66] Tosun, M.S., & Yilmar, S. (November 2008). Centralization, Decentralization and Conflict in the Middle East and North Africa. *The World Bank*. Retrieved from http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2008/11/10/000158349_20081110112652/Rendered/PDF/WPS4774.pdf

[67] Refer to the Culture section.

- Handling privileges:

It is interesting to understand how the Tunisian administration and in particular the employees see and project themselves through what they are doing.

As opposed to the administration in some economically advanced countries, such as Sweden for instance, where the administration is seen to have a supporting role to the citizen, in the Tunisian administration, there is a paradigm for control. According to my interviewees, it overvalues its own position with regard to the citizen, as it is commonly perceived that the administration tries to refocus and redirect entrepreneurs, giving the impression of some "responsible adults trying to supervise and control minors". Therefore, the Tunisian administration doesn't handle citizens' rights; rather it gives "privileges". Mondher Khanfir bluntly rephrases this idea by claiming "there is no private sector in Tunisia, rather a privileged one".

2.4.4 Credit and Funding:

One of the main outcomes that I reached through my interviews is that, even though a revolution happened and it reshaped the society and brought a real vibrancy in the political field, it yet didn't change the business environment and especially, the entrepreneurial ecosystem.

The immutable interventionism of the state in the financial sector stands as a proof of the latter statement. State interventionism in the financial sector comes within the scope of the credit-based economy as, "banks appear to play the role of an institution of protection and security, as well as a monitoring and controlling safeguard".[63] Indeed, in the liberal period, the decision-making process of credit generation is the backbone of state interventionism. In the case of Tunisia, it certainly becomes a new option through which the state can exercise its control while respecting the Maastricht treaty. As Beatrice Hibou explained it, during the 70s and 80s, the Tunisian government created a dependent private sector through the credit-based economy system. Banks, which were mainly state owned, were easily distributing credit, while the Tunisian Central Bank couldn't interfere. The financing was and remains principally through debt and most of the big Tunisian have high debt-to-equity ratios. Therefore, on the contrary of its "economy-liberalization" goal, the state controls the private sector through the financial one and continues to do so by backing-up low quality loans. The ratio of low quality credits over bank liabilities varies between 20% and 40%, whereas the international norm is set to 2%.[63]

In a recent report, the African Development Bank has put forward the need to rethink and redesign the banking system in Tunisia, especially its role as a vehicle enhancing Small and Medium Enterprises, microfinance being one of the key themes. Most importantly, the report cautions the Tunisian government against its interventionism in access to financing. As a matter of fact, "the support of public banks to SMEs and Microfinance should be organized without the government's interference when it comes to granting loans, and promoting grassroots approach, especially for the BFPME and the Tunisian Solidarity Bank."[68]

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[68] African Development Bank. (2012). *Tunisia: Economic and Social Challenges Beyond the Revolution.* Retrieved from http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Tunisia%20Economic%20and%20Social%20Challenges.pdf

2.4.5 Corruption and transparency:

Following our earlier analysis about the Tunisian economy and administration, which is built on a system of privileges, we can note that there are different aftermaths to this intricate situation.

The most important one is the fact that those who do not have access to privileges or connections would resort to follow other directions. This setting is actually favorable for the instauration of corruption. Indeed, corrupts manifests on multiple levels ranging the bribery of a policeman by a simple driver to the aggressive intimidation of higher instances in the government under the previous regime.

- Corruption and informal economy:

Given the difficult access to administration, there is a common belief that "in order to earn money, one needs to take a detour". It became very common to use one's connection to get his or her paperwork done, so their business is not impeded. It is not that these "privileges" are bringing an added value to the business; rather they are preventing the business from being hindered. Therefore, it became conventional to accept bribery, as a solution for resolving logistic and administrative problems, the best example being customs. Moreover, it is commonly perceived that this demeanor has accrued after the revolution, given the weakness of the administration and the political vacuum that came afterwards. [61]

It comes thus as a logical continuation that most of the business people, who are not connected and who connect stand that added "tax burden" of bribery, such as entrepreneurs, would orient themselves towards a more informal economy where they can find an offer which meets their need. A parallel informal market was created and developed to the extent where it offers better quality products than the formal one. In a study done by the Friedrich Schneider, the informal economy was valued at 38.4%[69] of the total Gross National Product in 2002 and it is deemed that this ratio currently reaches 50% of the GDP, excluding the non-market sector. [61]

- Government fighting a previous strategy of intimidation:[70]

Corruption on the higher levels was one of the drivers of the Tunisian revolution. The Trabelsi clan was interfering in business opportunities and public interests were diverted towards a very small circle of people close to the former President Ben Ali, political corruption being well spread.

The transition government has been fighting this phenomenon since it came in power. This goal became one of its top priorities. For instance, an independent commission, the National Commission of Investigating Corruption has been put into place to address all the corruption cases and take measures accordingly. Furthermore, the Tunisian government started cooperating with the Organization for Economic Co-operation and Development

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[69] Schneider, F. (July 2002). *Size and Measurement of the Informal Economy in 110 Countries.* In Workshop on Australian National tax center.

[70] OECD. (2011). *Evaluation du Cadre d'Intégrité dans le Secteur Public en Tunisie.* Retrevied from http://www.anticor.tn/uploads/tx_wdbiblio/cadre-integrite.pdf

(OECD) in order to find and put in place an efficient and sustainable anticorruption mechanism. In parallel with this endeavor, a national anticorruption awareness program was launched through a governmental portal AntiCor.Tn, where different factions are invited to take part into the process, including the civil society and the citizen himself.

2.5 Funding:

2.5.1 Small and Medium Enterprises' Funding:[71]

Funding for SME can be broken down to two main channels: Equity financing and Short and medium-term investment loans.

2.5.1.1 Mechanisms strengthening equity:

There are mainly 4 funds acting towards equity financing for SMEs in Tunisia:

2.5.1.1.1 National fund to promote handicrafts and small craft (FONAPRAM):

The National Fund to Promote Handicrafts and Small Craft was established in 1981 and works within the legal framework described by the Decree n°2005-2024 of 18 July 2005.

This fund aims to promote handicrafts and craft SMEs owned by Tunisian citizens. The company's equity is composed by a cash injection from the project's promoter and an endowment from the state. Equity has to be superior to 40% of the total project's cost.

The total needed investment structure varies a as follows:

Total Investment (TND)	Capital Stock Equity	Personal Financing in Cash
Under TND 10,000	90%	10%
TND 10,000 to TND 50,000	80%	20%
Above TND 50,000	60%	40%

Nevertheless, the investment is limited to projects which cost are lower TND 50,000 and can be leveled-up to TND 80,000 for graduates starting their own business.[72]

The investment is redeemed over 11 years with no interest.

2.5.1.1.2 National fund to promote and decentralize industry (FOPRODI):

The fund was created in December 1973 and provides investments up to TND 10M for entrepreneurs and SMEs focusing on decentralized industries defined by the Decree n° 94-492, including agriculture and fishing, transportation, education, healthcare and international trade. As a requirement, the equity-to-project cost ratio has to be between 30% and 40%.

For new entrepreneurs, the FOPRODI takes part in the project either through an endowment or by taking participation in the company:

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[71] Governmental Investment Portal Tunisieindustrie.Nat.Tn and online documents on the portal. There are disparities between the documents downloaded from the website and data on the website itself.

[72] There's a disparity between the figures we find in the English version of the government's portal as opposed to the ones within the French version. We use here the figures we find in the English version of the website.

- *Endowment:*

If the cost of the total project is lower than TND 1M, then the FOPRODI provides a maximum of 60% of the capital required and the entrepreneur provides a minimum of 10% of the same ratio. The endowment is practically provided by retail banks accredited for the management of the FOPRODI.

The endowment is paid back over 12 years, including a five-year grace period, with an interest rate of 3%.

- *Equity participation:*

The project's cost is higher than TND 1M. A third party can also take part in the project. This party is either a capital risk investment company (SICAR) or a Risk Mutual Fund (FCPR). The investment is then structure according to the project's cost as follows:

	First Tranche (Up to TND 1M)	Second Tranche (TND 1M to TND 5M)
Entrepreneur	Minimum of 10% of the needed capital	Minimum of 20% of the second tranche
FOPRODI	Maximum 60 % of need capital	Maximum 30% of the second tranche
SICAR or FCPR	Minimum of 10% of needed capital and limited to 50%	Minimum of 20% of the second tranche and limited to 50%
Others	The rest	The rest

The FOPRODI's participation are bought back by the company to the profit of the project's promoter over 12 years at an interest rate readjusted to the nominal rate plus the rate used by the Tunisian Central Bank in its call for tenders.

Moreover, the FOPRODI allows grants for new entrepreneurs that cover 70% of the cost of the feasibility study. This grant has a maximum of TND 20,000.

2.5.1.1.3 Financing to encourage creativity and innovation in information technologies (RIICTIC):

Launched in 1998, the Financing to Encourage Creativity and Innovation in Information Technologies vehicle focuses on helping graduates who attempt to develop an innovative project related to information technology.

The fund's scope is limited to projects with a cost lower than TND 200,000 for real people investing in the project for a personal interest, and than TND 500,000 for investing companies. It requires that equity cover at least 50% of the cost of the project. Furthermore, the entrepreneur needs to contribute at least with 2% of the equity in cash.

The RIICTIC's investment comes as either an endowment or equity participation. The fund's investment is limited to TND 120,000, which is roughly equivalent to 49% of the total equity, assuming that the equity contribution to the project is equal to 50% of a total capital of TND 500,000.

According to the instrument used, the cession of the participations to the benefit of the entrepreneur or the reimbursement of the endowment spreads over 7 years at a nominal interest rate, plus a rate fixed by the Tunisian Central Bank.

Furthermore, RIICTIC allows grants covering 70% of the study cost, albeit limited to TND 10,000, along with Capex grants, including 10% of the investment in PP&E (limited to TND 10,000) and 50% of the investment in intangibles (limited to TND 60,000).

2.5.1.1.4 Capital risk investment company (SICAR) or a Risk Mutual Fund (FCPR):

SICARs and FICARs are substantial investment vehicles in the Tunisian financing scene.

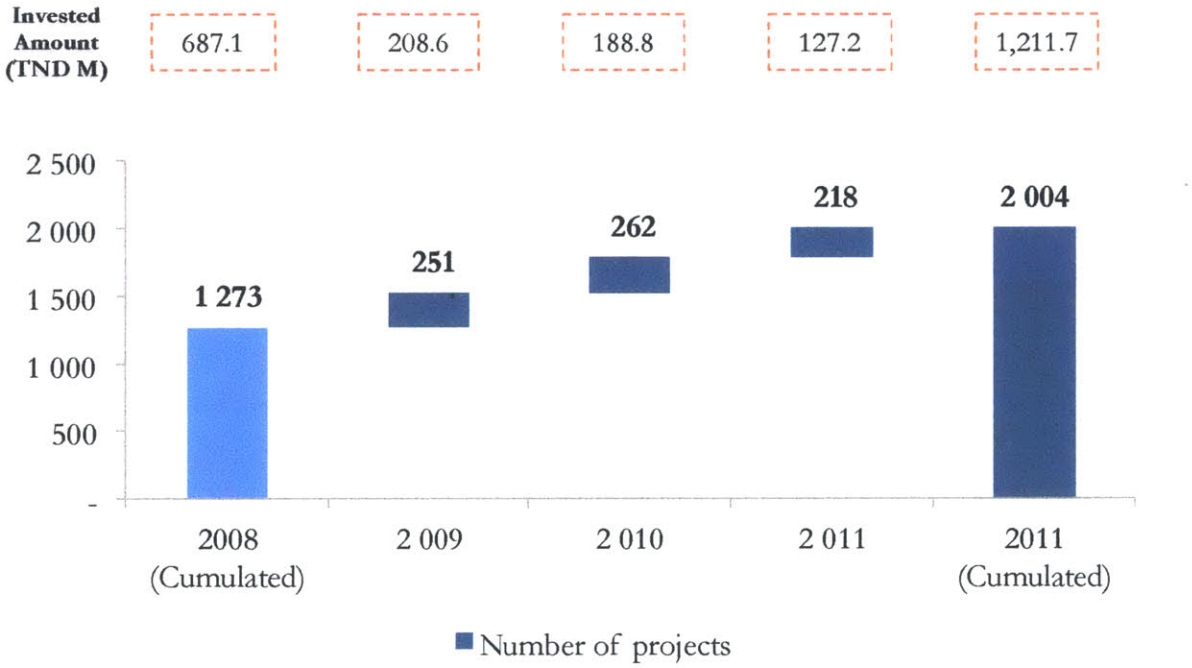
SICARs invest in numerous projects, particularly those benefitting of the intervention of the FOPRODI and the RIICTIC, through equity minority shareholding. Whereas the FCPRs only fund projects in which the FOPRODI is investing.

These funds have recently played an important role in enhancing the Tunisian economy. Indeed, they contributed in start-up creation, developing competitiveness and brought a real financial and strategic follow-up for the companies they are investing in.

The graphic below (Figure 2.9) offers an overview of the investments evolution.

Figure 2.9:

2009 – 2011 SICAR Funds Annual Investments



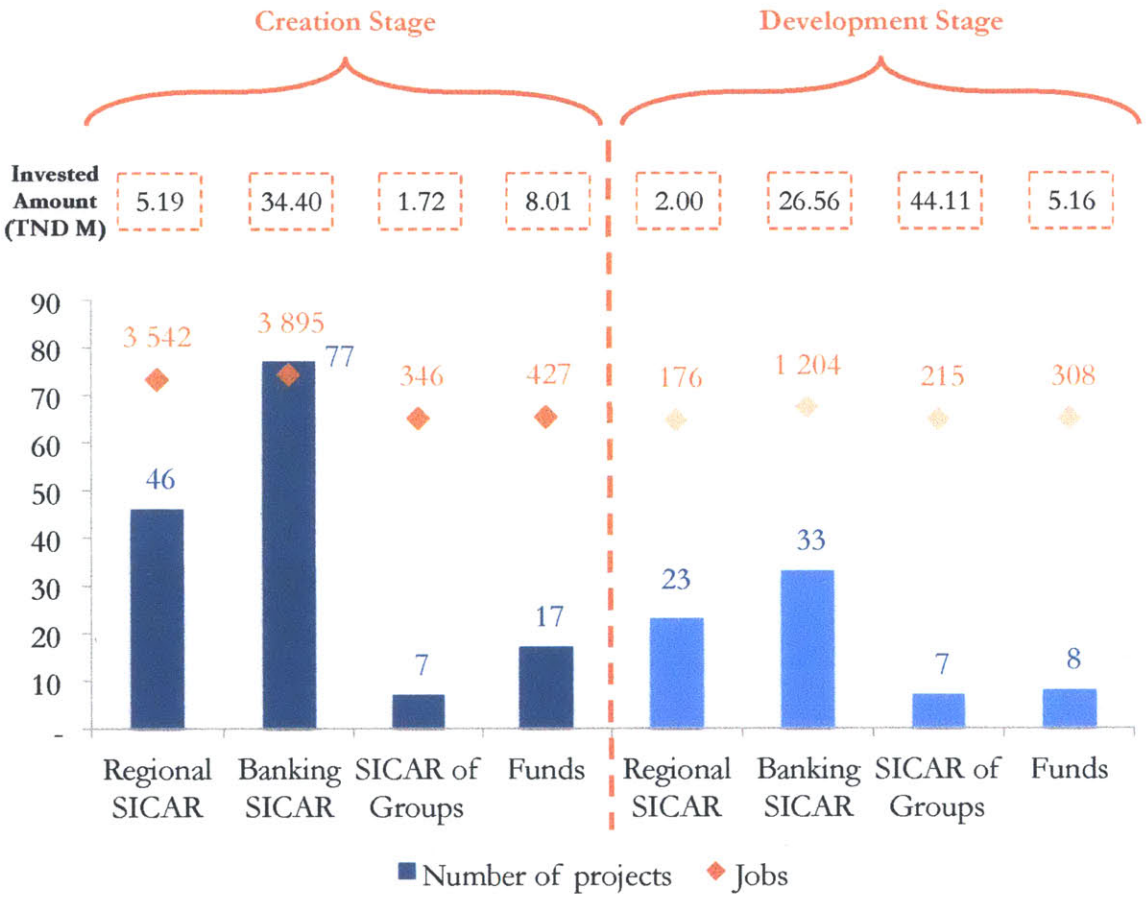
Source: ATIC, *2011 Activity Report.*

From 2008 to 2011, the SICARs investments grew by a compound annual growth rate of 20.8%. This growth can be explained by two main parameters. The first one is the evolution of number of funded projects. The second one is a clear growth of investment per project from TND 539,700 to TND 604,600, representing a total increase of 12%.

SICARs' role in economy is reflected by the players operating in the investment sector. There are four groups of SICARs: Regional SICARs, Banking SICAR, SICAR of groups and other funds. They fund projects in the creation stage and in the development one. We can see the contribution of the different factions in terms of investment and job creation, according to the investment stage (Figure 2.10).

Figure 2.10:

2011 SICAR Funds Investments by operator and investment stage



Source: ATIC, *2011 Activity Report.*

- Legislative framework:[73,74]

SICARs are regulated by the article 1 of the law n°2008-78 (December 22, 2008). Since the 1st of January 2009, their sphere of action has been redefined. They now principally buy equity participations, for their own account or for a third party. The investment is practically done through a wide range of equity-based securities, among which common shares, preferred share. The Investment Incentives Codes provide a clear description of the type of projects these vehicles invest in:

- Projects created by new entrepreneurs
- Projects that fall within the scope of Small and Medium Enterprises
- Companies investing in innovation and technology development
- Companies located in developing areas, enjoying taxation advantages and operating in the agriculture and fishing sector.
- Upgrading companies falling within the scope of the national Upgrading Program[75]
- Turnaround investments

SICARs have an obligation to use at least 65% of the contributed capital needs by the end of the year following the investment of the Partners.

The abovementioned requirements and definitions apply also the FCPRs.

- SICARs and FCPRs difficulties:[76]

- Tunisia remains a limited market and there's an important constraint on the locally raised funds.
- We lack information and monitoring in Tunisia, which makes the identification of sustainable and viable innovative projects difficult.
- The due diligence exercise is also impacted due to the lack of information and human and financial resources.
- As seen in the government section, there is still a propensity to use credit financing rather than equity funding.

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[73] Acofis Tunisie. (March 2012). *Présentation de la législation régissant les SICAR et les FCPR (Janvier 2012).* Retrieved from http://acofis-tunisie.over-blog.com/article-presentation-de-la-legislation-regissant-les-sicar-et-les-fcpr-janvier-2012-102135757.html

[74] The impact of the decree n°2011-99 is not taken into account.

[75] Refer to the Government section.

[76] ATIC. *2011 Activity Report.* Retrieved from http://atic.org.tn/images/atic/documents/rapport%20dactivit%20atic%202011_20%20juin%202012.pdf

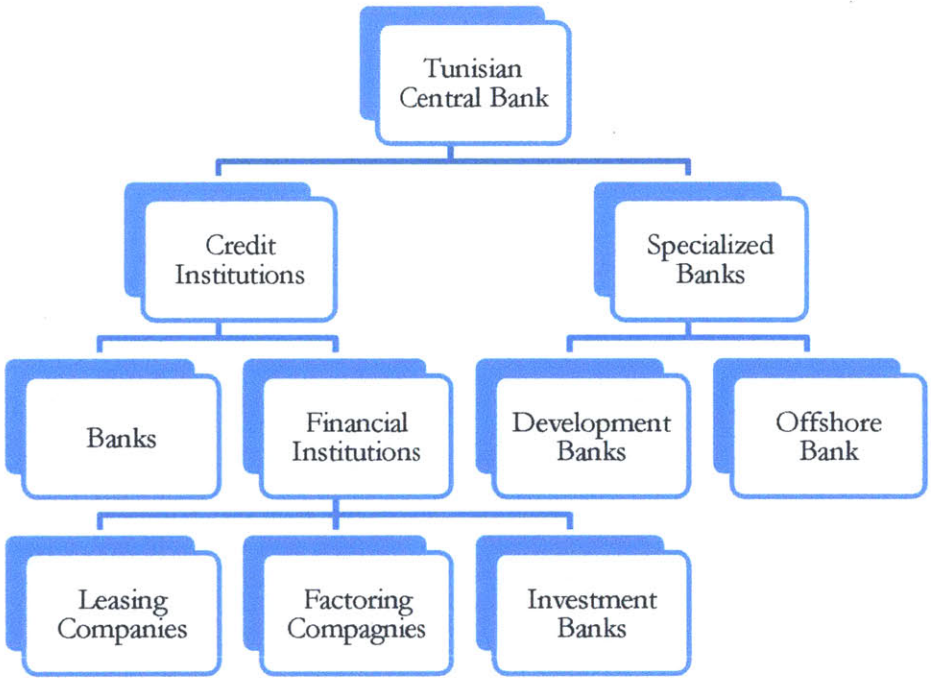
2.5.1.2 Mechanisms strengthening debt:

As exposed in the Government section, although the Tunisian banking system offers other financing tools, credit financing remains the most wide spread financing solutions, leading to high leverage ratios in the Tunisian companies.

The Tunisian banking system is structure as follows (Figure 2.11):

Figure 2.11:

Structure of the Tunisian Banking System



Source: TunisiaIndustrie.Nat.Tn portal

Regarding credit financing for entrepreneurs, there are two main vehicles, which are the Tunisian Solidarity Bank (BTS) and the Bank for Financing Small Businesses (BFPME).

2.5.1.2.1 the Tunisian Solidarity Bank (BTS):

The BTS is a credit institution created in 1997. It is owned by private investors at 62% and by the state and state-owned companies at 38%[77]. It targets higher education graduates as well as people who completed a professional training, with no sector focus.

The Tunisian Solidarity bank works within the scope of explicit goals:

- Support the access to micro-credit for new entrepreneurs with no financial guarantor.
- Investing in micro-projects, with high potential of revenues generation and job creations. There is neither a focus sector and nor specific geographic footprint within the Tunisian territory, as part of the investment policy.

This vehicle offers short and mid-term investment loans for the purpose of equipment acquisition or working capital funding. The maximum investment is TND 25,000 for professional training graduates and TND 100,000 for higher education graduates and entrepreneurs developing spinoff companies or projects related to agriculture. The debt redemption reaches, in average, 7 years at an annual interest rate of 5%.

2.5.1.2.2 Bank for Financing Small Businesses (BFPME):

The Bank for Financing Small Businesses deliver credits for projects that are not related to real estate or tourism, for the purpose of PP&E acquisition, covering the cost of intangibles or the cost of working capital. The cost of these projects ranges from TND 80,000 to TND 5M.

THE BFPME invests as following:

Project Cost (TND '000)	Maximum BFPME's Investment (%)[78]	Maximum BFPME Investment (TND '000)
80 to 200	100%	200
200 to 500	50%	250
500 to 1,000	50%	500
1,000 to 2,000	40%	800
2,000 to 3,000	30%	900
3,000 to 5,000	25%	1,250

Mid and long-term loans are co-financed with other institutions. Mid-term loans (2 to 7 years) are redeemed at a yearly interest rate of money market rate + 2.75% to 3.25%. Long-term loans (7 to 10 years) are repayable at a yearly interest rate of money market rate + 3.5% to 4.5%.

2.5.2 Funding Innovation:

During the recent decades, awareness around the importance of innovation and technical progress, as drivers for global competitiveness, has spread. Particularly, many funding

[77] Tunisian Ministry of Interior portal, Retrieved from http://www.commune-tunis.gov.tn/template/fr/bts.htm

[78] As % of the project's cost.

instruments have been put into place in order to enhance the innovation process. The table below (Table 2.5) offers a benchmark of the current innovation investment instruments.

Table 2.5

Benchmark of the innovation investment instruments in Tunisia

Investment vehicle	Managing body	Scope of action	Beneficiary	Characteristics
Federated Researches Program (PRF)	Ministry of Higher Education, Scientific Research and Technology (MESR) and the General Directorate of Scientific Research (DGRS)	Enhance scientific research and technology	Doctoral students willing to work full-time on priority research sectors	Renewable 12-month contract
National Program for Research and Innovation (PNRI)	General Directorate of Innovation and Technological Development (DGIDT)	Enhance synergies between companies and research facilities	A partnership of at least one company, one technical center and one public research center	Government support of 80% of the project's cost, limited to TND 200K. The company contributes to the rest
Research Results enhancement Fund (VRR)	MESRS and the General Directorate of Research Enhancement (DGVR)	Enhance synergies between companies and research facilities	Researcher in partnership with a company for a 3-year long project	The endowment covers recruitment, patent costs and feasibility study costs
IN'TECH[79]	Company for Supporting and Managing Spin-off Funds (SAGES Capital)	Support the creation of innovative start-ups	New innovation and technology entrepreneurs and expanding IT SMEs	Projects with a global cost between TND 100K and TND 5M
FOPRODI	Agency for the Promotion of Industry and Innovation (APII) and Banking FCPRs and SICARs	Support the creation of innovative start-ups	Refer to 2.5.1.1.2	Refer to 2.5.1.1.2
RIICTIC	APII and the Ministry of Information and Communication Technologies (MTIC)	Support the creation of innovative start-ups	Refer to 2.5.1.1.3	Refer to 2.5.1.1.3
Seed Capital Funds	Phenicia Seed Fund – Altermed Fund[80] and IKDAM Gestion[81] (Only two active seed	Support the creation of innovative start-ups	Refer to 2.5.1.1.4	Refer to 2.5.1.1.4

[79] The IN'TECH is Risk Mutual Fund (FCPR).

[80] Private fund.

[81] IKDAM is a public seed fund, composed of 4 Regional SICARs gathering a total of TND 1M.

	funds in Tunisia) Those are considered as FCPRs			
R&D Investment Premium (PIRD)	Bureau for the Upgrading Program (BMN)	Develop innovation activity within companies	Private and public companies focusing on specific sectors, including agriculture and fishing, healthcare services, environment services, industry and IT services	Grant covering the cost of the product development study, the prototyping cost and PP&E acquisition
Priority Technology Investment (ITP)	APII and BMN	Develop innovation activity within companies	Industry companies or companies providing services related to industry	Grant covering material investments (Conception and R&D materials), immaterial investments (Techcial assistance, implementation of quality-check system)

Source: Presentation on *Public instruments financing Innovation in Tunisia* in Alternative Finance Seminar (April 2012) and Nadia Ben Miled-M'rabet, *National Innovation System in Tunisia.*

Despite the existence of quite developed investment instruments for innovation, the innovation investment environment still presents some shortcomings:

- Communication problem:

The system in place is quite developed. Yet, many entrepreneurs are not aware of the current instruments in place and do not know how they can get the information. It is actually the high degree of advancement of the innovation investment structure and its complexity that give birth to this situation, as there is neither a clear unique institution to which an entrepreneur can refer, nor is there an institution solely dedicated to innovation.

Moreover, the current setting has consequences in terms of efficiency. We can note that there are for some investment instruments more than one managing body, which creates a management conflict and directly impacts the required time for investing.

- Low correlation between investment instruments and the innovation creation chain of value:

There are mainly two parts of the chain of value that are not covered by the investment instruments:

  - Pre-seed phase:

There is no fund investing in the pre-seed phase (cost roughly between TND 10,000 to TND 30,000). This stage is the most volatile one, as the entrepreneur is still defining his innovative idea. The main issue is that vehicles in place are not risk-takers. Indeed, the RIICTIC, for instance, has only funded one project since its beginning until 2011[82]

- No post-investment follow-up:

Most of the investment vehicles do not follow-up with the entrepreneurs once the investment is done. There is no monitoring and support.

Case of Carthage Business Angels:

As a response to the need of more risk-taking investors, Carthage Business Angels was created. It is the first association of Business Angels in Tunisia.

It has mainly two goals. The first one is to facilitate the identification of potential innovative projects. The second one is to enhance an entrepreneurs' network allowing business angels and projects' promoters to connect easily.

The introduction of business angels can substantially contribute to the development of the Tunisian investment scene.

On the one hand, business angels will be more risk-takers and therefore will be willing to fund pre-seed phase projects. Mostly, the business angels' real-added value is in term of follow-up. Indeed, they bring tangible experience on the table and monitor the start-ups and projects evolution. Furthermore, they will introduce the entrepreneurs to the right person and try to leverage their contact portfolio for the benefit of the project.

On the other hand, business angels bring a real diversity in terms of focus sectors. We've seen that the vehicles in place have been orienting entrepreneurs and projects' promoter toward information and communication technologies, whereas business angels can focus on other areas such as energy innovation for instance. On a larger scale, these new investors can bring real impact on the innovation environment structure in Tunisia, by creating a legal framework for new private investors, towards a more market economy.

[82] OMNI Conseils, & Carthage Business Angels. (April 2012). *Public instruments financing Innovation in Tunisia.* Presented at the Alternative Finance Seminar.

2.6 Invention:

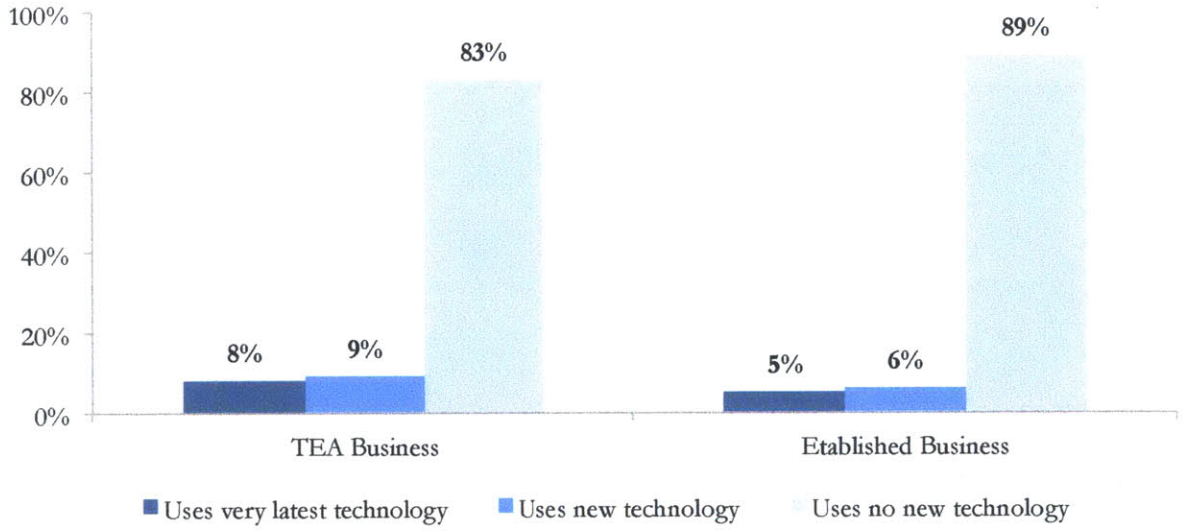
2.6.1 Overview:

As seen in the first part of this study, innovation plays a paramount role in economic development, as it brings high-added economic value, whether we are talking about disruptive innovation or incremental one. It is certainly enhanced by the free competition in the market and stimulated by the degree of technologic and scientific advancement within one country. Indeed, most advanced countries are basing their economies on knowledge commercialization, mainly driven by knowledge itself and invention.

Entrepreneurs in Tunisia became increasingly aware of the importance of innovation and technology in the Tunisian economy. Nonetheless, innovation, in its broader sense including innovation within industrial processes, still plays a restrained role, despite the government substantial efforts towards this goal. Indeed, the figure below (Figure 2.12) shows that the use of technology is yet scarce, estimated at 17% for entrepreneurs and 11% for established businesses.

Figure 2.12:

Innovation: use of technology



Source: GEM, *2009 Tunisia Executive Report.*

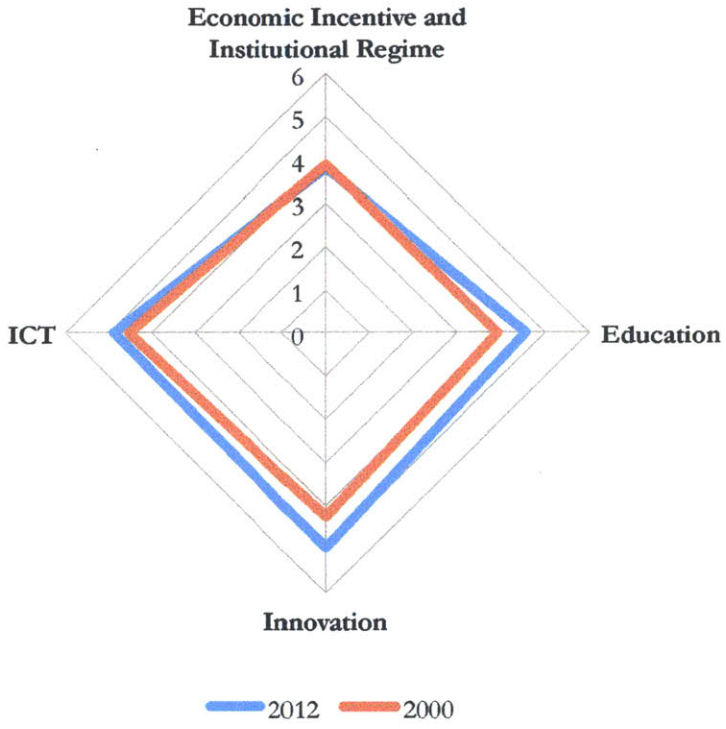
Nevertheless, the Tunisian government has been promoting and fostering an economy of knowledge, mainly by implementing policies enhancing scientific researches since the early 90's. For instance, we have seen in the Funding section, that many financial instruments such as the VRR were created towards this goal.

The World Bank has benchmarked the state of advancement of each country in terms of knowledge economy. It uses a main index, known as the Knowledge Economy Index. This index is built on four key elements: the economic incentive and institutional regimes, education, innovation and ICT.

The following graph gives an overview of the evolution of Tunisia with regard to these four elements (Figure 2.13).

Figure 2.13:

2000 Vs. 2012 Knowledge Economy Index evolution in Tunisia



Source: World Bank, *KAM Home database.*

According to the World Bank, Tunisia's KEI stayed overall stable from 2000 to 2012 and gained 9 places in the world ranking, although it is still below the average of upper middle-income countries.[83] It is however important to highlight that the Economic Incentive and Institutional Regime sub-index remained idle. The tax burden and regulatory system for innovation in Tunisia is deemed to harbor the same constraints it had in 2000. The Innovation index however rose slightly thanks to the increasing number of patents granted and the scientific publications. This latter rose from roughly 700 publications in 2000 to approximately 4,000 ones in 2009[84].

[83] World Bank. KEI and KI Indexes (KAM 2012) Database. Retrieved from http://info.worldbank.org/etools/kam2/KAM_page5.asp

[84] Hammouti, B. (2010). Comparative bibliometric study of the scientific production in Maghreb countries (Algeria, Morocco and Tunisia) in 1996-2009 using Scopus. *Environ. Sci*, 1, 70-77.

However, all these efforts in scientific researches weren't translated in concrete projects with tangible added economic value[85], which reveals a problem in the transition from pure knowledge to knowledge commercialization. It is therefore paramount to understand how this transition is done. As a matter of fact, the main channel of knowledge commercialization in Tunisia is Research-based Spin-offs (RBSO). We'll define a RBSO as a company, which has one of the five following characteristics[86]:

- One of its founding members is either a public institutions or an academic researcher
- It uses a patent issued by a public research center or a university
- It started in an incubator or in a technology park with the support of a research institute
- One of its investors is a university or a laboratory
- It was directly founded by a research institution

In our forthcoming analysis, we will first look into the existing infrastructure supporting innovation in Tunisia. Then, we will discuss the spin-offs and especially the research-based spin-offs as indicators for the efficiency of technology transfer.

2.6.2 Infrastructure supporting innovation:[87]

Since the implementation of the law n°96-6 of January 31, 1996, the Tunisian government worked towards developing and fostering the infrastructure dedicated to research on the national scale. The innovation environment in Tunisia has therefore well expanded since the 90's and it is composed nowadays of numerous elements, including laboratories and research unities in universities, along with public research institutions, technical centers and technology parks.

A recent study done in January 2012 after the revolution, offers an assessment of the "national innovation system in Tunisia" with a thorough benchmark of the innovation infrastructure.

2.6.2.1 Research structures:

The principal research structures found in Tunisia are university laboratories and research units on the one side, and public research institutions on the other side.

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[85] Wiki Start Up. (2012). État de l'art de l'essaimage en Tunisie & son impact sur la dynamique de création d'entreprises: 41. Retrieved from http://wikistartup.files.wordpress.com/2012/12/essaimage-en-tunisie.pdf

[86] Wiki Start Up. (2012). État de l'art de l'essaimage en Tunisie & son impact sur la dynamique de création d'entreprises: 37. Retrieved from http://wikistartup.files.wordpress.com/2012/12/essaimage-en-tunisie.pdf

[87] Ben Miled-M'rabet N. (2012). Le Système National d'Innovation en Tunisie. Retrieved from http://www.tunisianindustry.nat.tn/fr/download/ci/innovation.pdf

- Public research institutions (PRI):

Each institution is under the tutorship of a different ministry, according to its sector of activity. There are currently 33 active PRI, among which 14 are dedicated to technology and innovation, covering numerous sectors as described in the following table (Table 2.6).

Table 2.6

Innovation and technology oriented public research institutions in Tunisia

Name	Location	Sector
Biotechnology Center of Borj-Cedria	Borj-Cedria	Biotechnology
Technology and Research Center in Energy	Borj-Cedria	Conventional type of energy and renewable energies
Technology and Research Center in Water	Borj-Cedria	Water technologies and waste water management
National Research Center in Material Sciences	Borj-Cedria	Material Sciences
National Center of Nuclear Science and Technology	Tunis	Nuclear technologies for economic and social development
National Research Institute in physic-chemical analysis	Tunis	Enhance knowledge and techniques about physic-chemical analysis
National Institute of Sea Technologies and Science	Tunis	Oceanography, marine fisheries, marine environment studies
Biotechnology Center of Sfax	Sfax	Biotechnology
Institute of Arid Regions	Mednine	Combating desertification, enhancing agricultural techniques
National Institute of Nutrition and Food Technologies	Tunis	Food and Nutrition
Pasteur Institute	Tunis	Biology
International Center of Environmental Technologies	Tunis	Environmental Technologies
Research and Study Center for Telecommunications	Tunis	TIC
Remote Sensing National Center	Tunis	Aerial technologies for data processing in priority sectors including agriculture and environment

Source: Ben Miled-M'rabet, N. *Le Système national d'innovation en Tunisie.*

- University laboratories and research units:

These infrastructures play a key role in both fundamental research and applied one. University research units are composed of a group of at least 6 people cooperating in research around topics of national priority. Whereas, research laboratories are composed of at least 12 people, including 4 professors and 4 doctoral students. The Superior Council of Scientific Research and Technology fixes the scope of research of the latter. There are currently 131 research laboratories covering a wide range of scientific topics.

2.6.2.2 Technology parks:

As part of its strategy oriented towards the development of Information and Communication technologies, the Tunisian government launched the first Technology Park, named El Ghazala, in 1997. It brought tangible results, as it hosted 88 companies and generated 1770 job opportunities as of March 2010. It is now monitoring the implementation of an ICT cyber parks network over the Tunisian territory.

Technology parks are therefore seen as a conglomerate of infrastructures that host projects strongly related to research and technology development, generally with a focus on a specific sector of activity. We can find for instance in technology parks business incubators (Pépinières).

As detailed on the Government Industry portal, these structures have clear set goals:

- Develop high-level skills allowing to manage innovative projects
- Promote scientific research national priority industries and sectors
- Enhance technological innovation
- Foster the creation and incubation of research-based spin-offs
- Develop innovative projects with high added value
- Stimulate the creation of jobs, especially for graduates of higher education.
- Promote public - private partnership
- Foster foreign direct investments

It is also interesting to highlight that part of the government's agenda, through the development of technology parks, is to impede the brain drain, by training and keeping the Tunisian workforce on its soil.[88]

The following figure gives an overview of the geographic footprint of technology parks in Tunisia, as well as the projects being studied (Figure 2.14).

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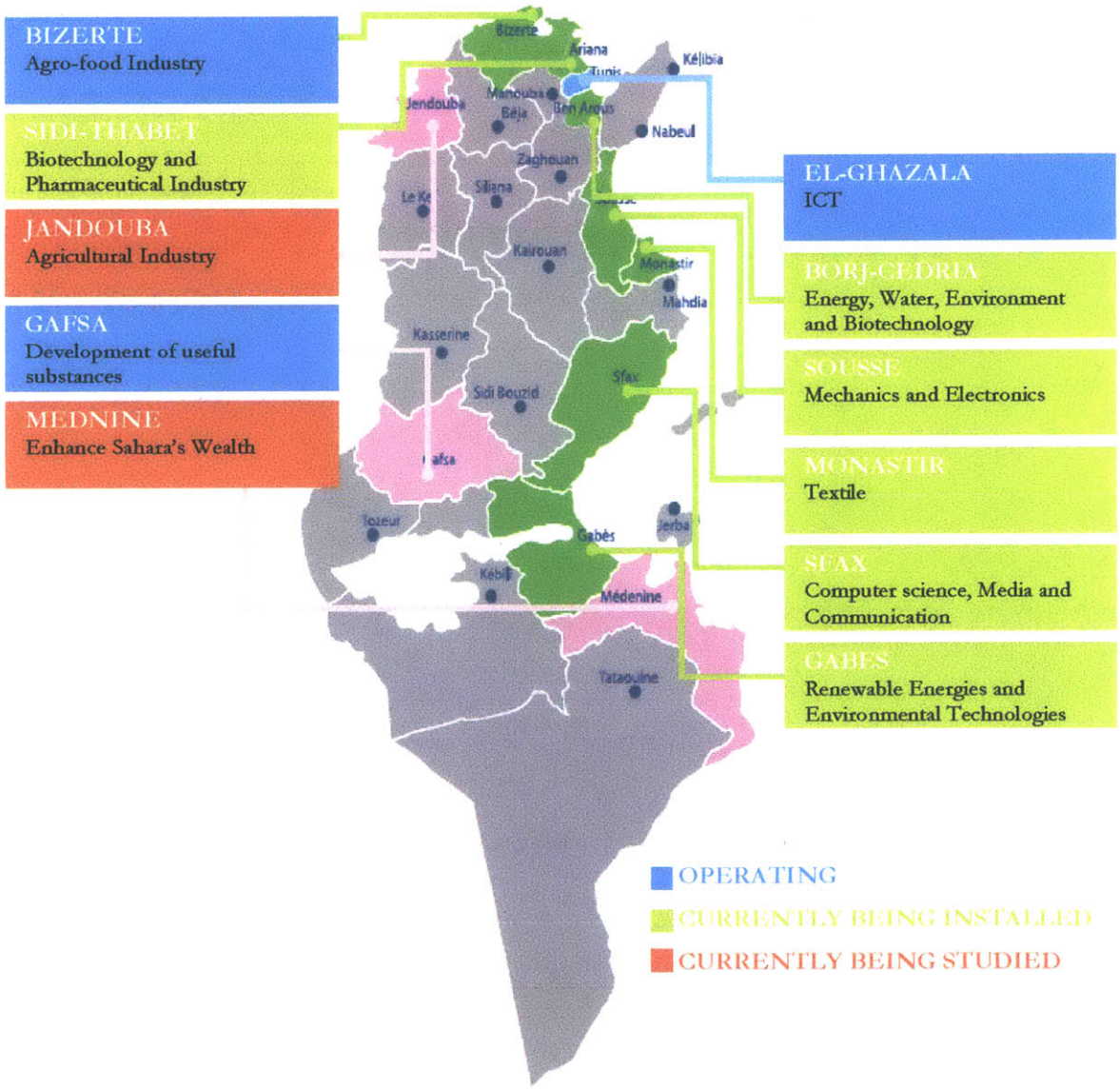
[88] Harbi, S., Amamou, M., & Anderson, A. R. (2009). Establishing high-tech industry: the Tunisian ICT experience. *Technovation, 29*(6), 471.

Figure 2.14

Geographic Footprint of Technology Parks in Tunisia



Source: Ben Miled-M'rabet N., *Le Système national d'innovation en Tunisie*, updated with the information from the Government Portal, TunisieIndustrie.Nat.Tn.

2.6.2.3 Business incubators (Pépinières):

The first business incubators were meant to promote entrepreneurship among young graduates. They were therefore implemented within universities at the latest of the 90's. The vision of business incubators has evolved since then, along with the government policies and goals. These infrastructure are playing a substantial role in promoting regional entrepreneurship

and helping Tunisia alleviate the innovation and technology gap separating it from more advanced countries. We can currently find 25 business centers spread over technology parks and public research institutions, along with engineering schools and Higher Institutes of Technology Studies (ISET).

The Tunisian government defines a business incubator as a hosting structure, offering[89]:

- Advice and expertise to the formalization of projects
- PP&E, including an office space, a telephone line, Internet, etc.

Furthermore, business centers offers other advantages to entrepreneurs, including:

- Two permanent business center members, personally in charge of supporting the project
- A financial expert who supervises and assists the implementation of its business plan
- A technical expert who helps with the technical part of the project
- An accountant who helps with the legal and accounting aspect
- A representative of a SICAR Company who helps with the market research and in building a strong financing case
- An expert from a large company who supports entrepreneurs envisioning a scaling on the international scene

The Tunisian government has therefore thoroughly thought about supporting entrepreneurs in their endeavor. Nonetheless, it is important to bear in mind that most of the documents and information we've built our analysis on, come from the Government portal and other government-ordered reports. Thus, there is a high probability of bias in the information we found, that doesn't reflect the whole image of the infrastructure supporting innovation in Tunisia.

As a matter of fact, our field-based revealed that, despite the fact that entrepreneurs are offered the right needed physical infrastructure, there is no real support for the project's promoter. Indeed, the people that are brought over to help have, in reality no prior entrepreneurial experience, which weakens the supporting role they should have. Furthermore, these infrastructures are managed by the government through the Agency for the Promotion of Industry and Innovation (API) and the Ministry of Trade and Industry, who aren't partnering with private players in order to bring incentives and enhance competition between supporting characters for the new entrepreneurs.

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[89] Ben Miled-M'rabet N. (2012). Le Système National d'Innovation en Tunisie: 37. Retrieved from http://www.tunisianindustry.nat.tn/fr/download/ci/innovation.pdf

2.6.2.4 National Institute of Standardization and Industrial Property (INNORPI):

Intellectual property is one of the key milestones leading from pure knowledge to knowledge commercialization. Protecting IP, through patents, supports the enhancement of a market economy where innovation and technology can be a real key competitive advantage and lead to "supply-side effects".[90] Apart from the protective advantage, patents also bring a "knowledge advantage" as they will be a reference that will enhance knowledge diffusion through a uniformed structure, which can be used on the international scale.

With this goal in mind, the Tunisian government has put in place the National Institute for Standardization and Industrial Property (INNORPI), which:[91]

- Centralizes and coordinates all the work, studies and surveys in different areas
- Fixes the requirement for standards on the national level
- Certifies compliance of products, services and management systems and manages brands to national standards
- Delivers innovation patents
- Register trademarks marks and drawings and industrial designs
- Manages the rights industrial property

The INNORPI embodies the Tunisian intellectual property system within the World Institute of Intellectual Property (WIPO).

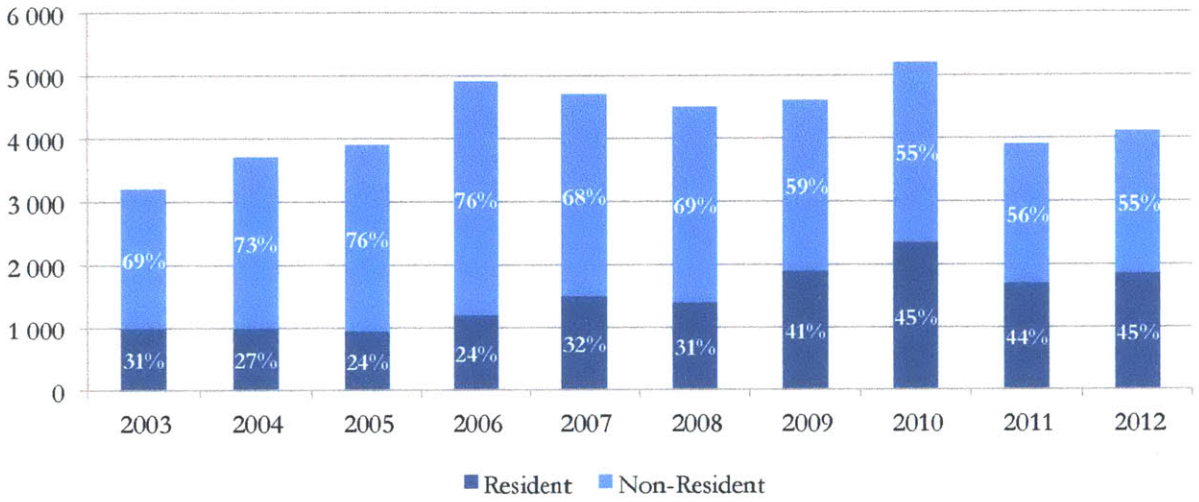
It approximately takes 18 months to publish a patent application after the filing. The following graph (Figure 2.15) gives an overview of the historical evolution of the innovation patents from 2003 to 2012 along with the contribution of Tunisian residents and non-residents.

[90] Refer to the "Impact of Entrepreneurship on regional development" section.

[91] INNORPI Portal. Retrieved from http://www.innorpi.tn/Fra/innorpi-en-bref_11_6

Figure 2.15

2003 – 12 Evolution of the number of innovation patents application



Source: INNORPI Portal.

Nonetheless, the use of patents by SMEs is still limited, mainly because of the complexity of the Tunisian IP system and the lack of awareness about how it works, along with the high patent costs.[92]

A study drawn up by Samia Haddad corroborated our on-field findings, with regard to the patent system's shortcomings within the Tunisian innovation system. Although the structure is set, many entrepreneurs find there are discrepancies when it comes to the application of the support. It is commonly pointed out that innovation is undervalued, as there is no structure specialized and in charge of the commercial valuation of innovation.[93]

2.6.3 Spin-offs:[94]

The government has seen spin-offs as a main vehicle allowing the shift from public to private economy, by enhancing private investments. They are also a solution to the regional economic disparity issue. Wiki Start Up has recently done a thorough study evaluating the current state of spin-offs in the Tunisian economy.

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[92] INNORPI. La protection de la propriété industrielle au service des PME. Retrieved from http://www.innorpi.tn/Fra/image.php?id=63

[93] Haddad, S. Création des entreprises innovantes en Tunisie. Résultats d'une étude exploratoire.

[94] Wiki Start Up. (2012). État de l'art de l'essaimage en Tunisie & son impact sur la dynamique de création d'entreprises. Retrieved from http://wikistartup.files.wordpress.com/2012/12/essaimage-en-tunisie.pdf

The Tunisian government defined a Spin-Off Charter (law n°2005-56) in 2005 in order to enhance the rate of created start-up by recent graduates and especially in priority development regions. Companies are indeed the best vehicles to promote start-up growth. As of the end of 2011, there were 45 companies that signed the charter. Nonetheless among these companies, only 19 entities, majorly public companies, have practically realized spin-off operations, which pushes us to question the commitment of Tunisian companies and their awareness about their role as drivers of "intra-entrepreneurship".[95] The example of Poulina, one the biggest private groups in Tunisia, partially explains the impact of the disparity in terms of number of realized spin-offs. Indeed, Poulina succeeded in creating 94 companies, which is the performance among Tunisian companies. It successfully integrated "spin-off" as part of its strategy by automating the process and leverage the agreements the group already has with its financial institutions. Most of the created start-ups are based on a service-outsourcing business model, including for instance delivery drivers and rental of construction machinery.[96]

Nevertheless, the study pinpoints that standardizing the spin-off process actually impedes innovation, as there is no more difference between high added value projects and other low added values ones.

The main contributors to innovation are the research-based spin-offs (RBSO) as defined previously. The RBSOs in fact represent the transfer of technologies and invention from the infrastructures supporting innovation to the real market. The Tunisian government worked towards bringing together scientific research institutions and companies, mainly through the implementation of financial policies and instruments, including the VRR, the PIRD and PNRI.[97]

Despite the encouraging results stemming from such decisions and policies, there are still deficiencies that need to be dealt with, apart from the ones linked to the financing and the patents:[98]

- An impeding administrative process:

  The administrative is too overwhelming for a researcher, as it requires him or her to go through approximately 10 steps in order to create the company. This actually delays the entrepreneurial phase itself, including the production phase. Indeed, researches perceives the fact of going through each step and getting the approval for each one, along the intricate legislative framework, as important obstacles that lower the incentives to create their own company. For instance, it takes 34 months for a project to be legally a company, notwithstanding the six and half years needed for the validation phase and the feasibility one, which include the access to the patent, the development of the prototype and the field-testing.

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[95] Wiki Start Up. (2012). État de l'art de l'essaimage en Tunisie & son impact sur la dynamique de création d'entreprises: 11. Retrieved from http://wikistartup.files.wordpress.com/2012/12/essaimage-en-tunisie.pdf

[96] Wiki Start Up. (2012). État de l'art de l'essaimage en Tunisie & son impact sur la dynamique de création d'entreprises: 14. Retrieved from http://wikistartup.files.wordpress.com/2012/12/essaimage-en-tunisie.pdf

[97] Refer to the Funding section.

[98] Wiki Start Up. (2012). État de l'art de l'essaimage en Tunisie & son impact sur la dynamique de création d'entreprises: 57, 58 and 63. Retrieved from http://wikistartup.files.wordpress.com/2012/12/essaimage-en-tunisie.pdf

- A researcher confined to pure research:

The researcher is not perceived as key element in RSBOs, as there is a lack of support for those committed to projects stemming from promising research results. As a matter of fact, there is no guarantee for these researchers to return to their previous positions once they undertake an entrepreneurial project.

Furthermore, the current setting emphasizes research publications to the extent that researches are not giving enough space to take initiatives and concretize interesting research results into tangible projects, adding to the fact that there is no innovation management structure within research institutions.

2.7 Raising an Entrepreneur:

We distinguish between two types of entrepreneurs according to their "entry level". The first is the graduate entrepreneur and the second is the experienced professional who chose to promote his or her own project. The first one is mainly shaped by the education system from which he or she would be freshly graduating and the second will mostly rely on the supporting networking he can reach out to.

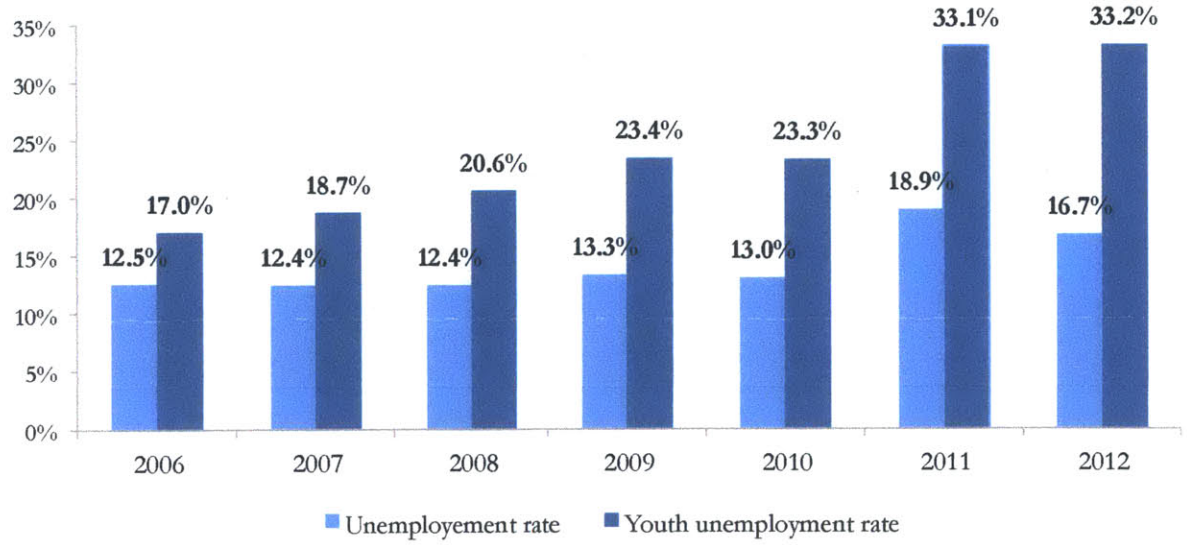
2.7.1 Education:

2.7.1.1 The Education-to-Employment issue:

It is commonly agreed that the Tunisian youth drove the Tunisian uprising, one of the main reasons being a deeply rooted problem of youth unemployment, especially among graduates. Indeed, the number of unemployed people in Tunisia sore from 429,700 in 2006 to 653,800 in 2012, while the active population rose from 3.4 million to 3.9 million during the same period, which is tantamount to an evolution of the unemployment rate from 12.5% to 16.7%. Furthermore, the main part of the unemployment issue results from high youth unemployment rates[99], which peaked to 33.2% in 2012. (Figure 2.16)

Figure 2.16

Evolution of the unemployment rate in Tunisia



Source: National Institute of Statistics (INS).

There is a substantial difference between the figures before and after 2011, which can be explained by a change in nomenclature and calculation methods. Nonetheless, the

[99] Under 30 years old.

unemployment rate didn't shrink after 2011, which calls for immediate action, for the people can indeed withstand the low-paced political change, whereas the economic needs remain urgent.

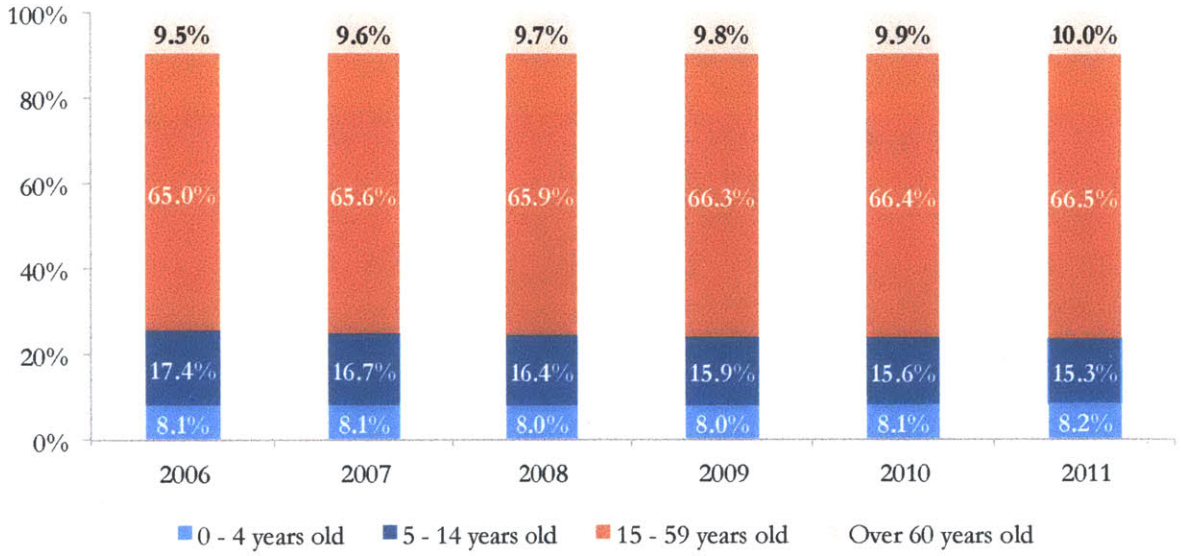
There are multiple drivers to this situation, mainly:

- A structural shift within the Tunisian population:

The ageing signs of the Tunisian population have started to manifest since the 80's. Tunisia is largely ahead of the average level of the group of intermediate countries it is supposed to belong to, and very close to developed countries in terms of demography. Indeed, we can see in the figure below (Figure 2.17) that the percentage of the population in the active age[100] increased from 74.5% in 2006 to 76.5% in 2011. On the one hand, this is the result of the Family Planning program, which was applied in the 60's. The Tunisian government began to implement the program in order to control the population growth. On the other hand, there is a substantial increase in life expectancy to 75.24 years[101] as the healthcare conditions improved, along with a decrease in the mortality rate.

Figure 2.17

Evolution of the population structure in Tunisia



Source: National Institute of Statistics (INS).

- Large number of graduate market entrants:

The higher education in Tunisia is mainly public. As of 2012, there were 195 public universities vs. 44 private ones, with a total number of students of 339,619 in the higher

[100] Above 15 years old.

[101] CIA World Factbook. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/fields/2102.html

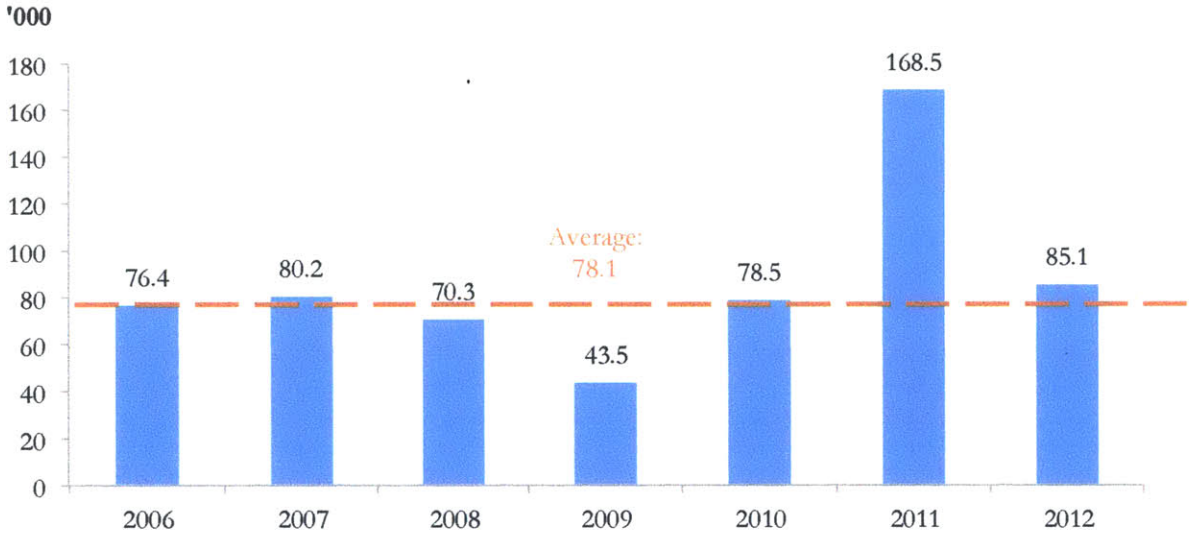
education.[102] There were 74,133 students graduating at the end of the academic year 2011[103], corroborating the OECD's statement that there is a yearly outflow of roughly 80,000 graduates in Tunisia.[104]

- Low rate of job creation:

Apart from 2009 where job opportunities shrunk due to the crises and in 2011 where they rose following the revolution, job creation has been overall constant evolving around an average of 78,100 created job positions per year. (Figure 2.18)

Figure 2.18

Evolution of Created Jobs



Source: National Institute of Statistics (INS).

The slow rate of job creation, along with high number of entrants, has certainly contributed to the high unemployment rate among graduates. Nevertheless, the issue is deeper than what it appears. Indeed, the offer brought by universities, in terms of graduate students, doesn't meet the requirements and demands of the job market, whether the issue is in terms of area of focus or quality of training.

The governments' recurrent control over the higher education system and the companies' restrained commitment led to a disarticulation between universities and the job

[102] Ministry of Higher Education and Scientific Research. (2011). *L'enseignement supérieur en chiffres* [Brochure]. Retrieved from http://www.mes.tn/francais/donnees_de_base/2012/dep_fr2011_2012.pdf

[103] Ministry of Higher Education and Scientific Research data. Retrieved from http://www.mes.tn/francais/donnees_de_base/p_etud.htm

[104] OECD. (2012). Promoting Graduate Entrepreneurship in Tunisian Universities. *OECD Local Economic and Employment Development (LEED) Working Papers*, 2012/18, OECD Publishing. http://dx.doi.org/10.1787/5k913fsjhkd8-en

market. In a recent report, the U.S. - North Africa Partnership for Economic Opportunity (NAPEO) asserted that one of the main issues with the Tunisian education system is that "there is little communication between universities and local industry in order to ensure that university education properly equips students to meet the labor needs of the private sector. As a result, students are not graduating with the appropriate skills."[105]

2.7.1.2 State of the art of entrepreneurship in the educational system:

New policies and government actions evolved around the idea of a shift towards a knowledge economy, where entrepreneurship is perceived as an important vehicle that can absorb unemployment. Education is an area, which witnessed different reforms within the scope of this goal.

Since 2000, a first reform aiming the elementary system, came with the act No. 2002-80 of July 23, 2002, which was amended in February 2008. This act redefines the status of the students and the role of education. According to the article 7, school is indeed committed to support the "development of the students' skills and abilities and ensure his right to build himself in a way that sharpens his critical thinking, in order to develop his judgment, self-confidence and sense of initiative and creativity." Furthermore, the article 57 asserts that those traits fall within the goal of developing "entrepreneurial skills".[106] As a matter of fact, before this act, the student has been seen, for a long time, as a passive element of an educational system, strongly impregnated by the French educational system, where theory prevails over the practical approach and where children were just receiving information. Numerous skills, including initiative and creativity are now deemed as being substantial for the student's development.

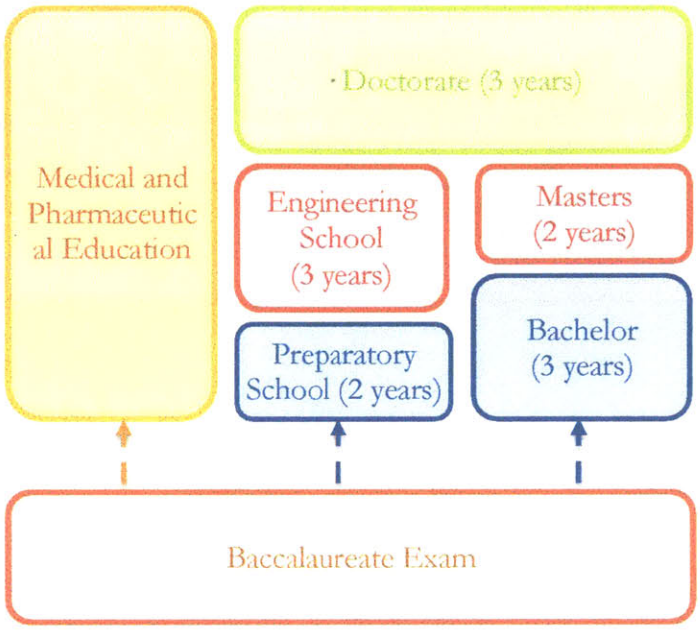
Those skills were, later on, in the center of the higher education's reform of 2008 that was restructured as following. (Figure 2.19)

[105] Zuabi, V. (2012). Building Higher Education Partnerships in the Maghreb: 11.

[106] Ministry of Justice. (February 11, 2008). Loi n°2008-9 du 11 février 2008, modifiant et complétant la loi d'orientation n°2002-80 du 23 juillet 2002, relative à l'éducation et à l'enseignement scolaire. Retrieved from http://www.e-justice.tn/fileadmin/fichiers_site_francais/droits_homme/legis_nat/sante/L_9_11fevrier_2008.pdf

Figure 2.19

Higher Educational System in Tunisia[107]



Source: M'henni, H. *Les différentes étapes du système d'éducation en Tunisie.*

Through the new reform, students are given the opportunity to be exposed to the entrepreneurial culture, albeit a limited exposure. Indeed, they can choose to take 3 course modules in relation with entrepreneurship during their bachelor degree.

Many shortcomings can be highlighted in regard to these programs, the main ones being the lack of training of teachers and the redundancies between the different modules. Moreover, entrepreneurship is seen as a process and therefore, the academic approach is mainly functional giving to the student an exposure to a wide range of subjects without a real in-depth knowledge of a specific one.[108]

In 2009, the Tunisian government launched a new entrepreneurship track for undergraduates, with the support of the World Bank.

Initially, it is required from an undergraduate student to write a thesis at the end of his or her studies. Yet, the Ministry of Higher Education and Scientific Research agreed that, for undergraduate students tacking the entrepreneurship track are allowed to deliver a business plan at the end of their studies instead of a thesis. The idea behind this new approach is that new graduates would directly open their start-up after university. The goal was thus, to enhance self-

[107] Technical training aside.

[108] Mezghani, L. (January 2011). *Entrepreneuriat, L'enseignement de l'entrepreneuriat.* Presented to the Employability Commission.

employment, while spreading awareness around entrepreneurship among the Tunisian youth population. The concerned students were given a thorough support ranging from "business training and personal coaching", along with the support of external parties with a real entrepreneurial experience and the mentoring university professors. At the end of the track, the student is required to deliver a business plan, which can be used in a business plan competition in order to raise seed capital.[109]

The experience lasted from February to June 2010 and 1,702 students took part in it, which is equivalent to 9.1% of the student population. It is interesting to pinpoint the distribution of the students' participation. Indeed, Gafsa, an interior region, was the region with the highest participation, with 28.7%, whereas students from Tunis have a low participation of 1.9%.[110] This can be explained by different factors. The first one is the efficiency of the advertisement around the track, which cannot be ensured to be equal in all the regions. The second is the high rate of unemployment among graduate students, as this rate is higher in the interior regions and therefore, entrepreneurship and self-employment can be seen as a concrete exit opportunity.

The outcome of this experience showed that the self-employment rate rose among the students taking the entrepreneurship track compared to the control group. Nonetheless, there was no progress nor in terms of overall employment neither regarding the quality of the jobs after the experiment, even though most of the participants self-reported that they enhanced their business skills, along with their network.[111]

This results pushes us to question the role of companies and what they are looking for. But most of all, whether it is to reach a stable equilibrium between the job and universities offer in terms of graduates and training programs or to enhance the rate of research-based spin-offs and the rise of young graduate entrepreneurs, the Tunisian education system unquestionably requires the intervention of companies, their involvement and commitment in the higher education environment.

2.7.1.3 University partnerships:

In a recent study regarding university partnerships, Flo Frank and Anne Smith reflected upon the function of partnerships and their structure.[112] They distinguish between the following structures:

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[109] Premand, P., Brodmann, S., Almeida, R., Grun, R., & Barouni, M. (December 2012). Entrepreneurship Training and Self-Employment among University Graduates, Evidence from a Randomized Trial In Tunisia. *Policy Research Working Paper* n° 6285: 7.

[110] Premand, P., Brodmann, S., Almeida, R., Grun, R., & Barouni, M. (December 2012). Entrepreneurship Training and Self-Employment among University Graduates, Evidence from a Randomized Trial In Tunisia. *Policy Research Working Paper* n° 6285: 9.

[111] Premand, P., Brodmann, S., Almeida, R., Grun, R., & Barouni, M. (December 2012). Entrepreneurship Training and Self-Employment among University Graduates, Evidence from a Randomized Trial In Tunisia. *Policy Research Working Paper* n° 6285: 18 – 21.

[112] Frank F., & Smith A. (2000). The Partnership Handbook. *Minister of Public Works and Government Services Canada.*

Table 2.7

Typology of partnerships

Types	Defining Characteristics	What This Type Does Well	What This Type Does With Difficulty
Strategic Alliance	▪ Loose structure ▪ Broad agenda - indeed part of its purpose is to develop a vision and an agenda ▪ Often political	▪ Synthesizes issues into vision ▪ Raises profile around a theme or an geographic area ▪ Develop strategic intent ▪ Helps raise (public) resources	▪ Delivers project activity ▪ Makes difficult decisions, tends to seek consensus ▪ Bring about change in its members
Joint venture project	▪ Formal structure ▪ Project specific ▪ Time limited ▪ Limited membership	▪ Single outcome delivery ▪ Resource planning ▪ Focus on objectives, inputs and responsibilities	▪ Developing strategy ▪ Accommodating representatives
Joint venture company	▪ Limited liability ▪ Separate ownership/ executive ▪ Formal structure	▪ Managing partner risk ▪ Strong executive action ▪ Helps raise (private) resources ▪ Managing resources	▪ Generating strategy on behalf of others ▪ Managing growth ▪ Expanding its "ownership"
Network	▪ Loose association ▪ Equality of status ▪ Widespread membership (formal or informal)	▪ Information exchange ▪ Lobbying/influencing ▪ Consultation ▪ Building relationships for future projects ▪ Co-ordination	▪ Managing resources ▪ Winning resources ▪ Acting strategically
Process partnership (e.g. partnership sourcing)	▪ Highly-structured usually at customer/funder instigation ▪ Raising quality standards ▪ Cost control	▪ Product and service innovation ▪ Long term service relationships ▪ Managing change ▪ Quality assurance	▪ Strategy development ▪ Consensus ▪ Respond to political pressures
Pressure/campaign group	▪ Wide membership ▪ Single focus ▪ Politicized	▪ Winning resources ▪ Achieving political change ▪ Engaging voluntary support	▪ Managing resources ▪ Relating to other groups with different aims ▪ Delivering results

Source: OECD, *Promoting Graduate Entrepreneurship in Tunisian Universities*

Using this typology, the OECD assessed the role of university partnerships in Tunisia. This study has put forward numerous interesting points:[113]

- The university partnerships are mainly restrained to the local level and the scarce international ones are actually an individuals' relationship, between one person from a Tunisian university and another one from a foreign university.

- The matter of partnership is basically shaped by the common understanding of the concept, which is seen as a way of accepting each other's existence, rather than a way of building of synergies that can result from the rapprochement of two institutions. Therefore partnerships between universities do not emphasize knowledge and practice sharing, which are substantial, especially within the context of the entrepreneurship-oriented policies.

- In terms of structure of partnership, the most common one is the "strategic alliance", evolving around "loose networks". We find very few "join ventures" and some, but not many, "process partnerships" from which companies can benefit in terms of recruiting.

- Most of the current partnerships are basically aiming to dwindle the unemployment among graduates and there is not much focus on research and technology transfer.

2.7.2 Network for entrepreneurs:

Recent studies leaned towards understanding the role of entrepreneurial networks as part of the start-up creation process.

One of the most interesting approaches with regard to this goal is Sarasvathy's, where he actually assessed the weight of networks within the context of the particular entrepreneurial reasoning. Sarasvathy opposes, indeed, the managerial and strategic causal reasoning to the entrepreneurial effectual way of thinking.[114] The first one is a top-down approach where one sets goals first and then he or she finds the most effective strategy or way that will allow him or her to achieve those goals. By contrast, the effectual approach is about using the tools available in your current environment. Through the effectual way, entrepreneurs have actually little control over the goal. As a matter of fact, final objectives are not fixed from the beginning; rather they are mutable and result from the dynamic process of undertaking, the principal idea being that the main focus is on the control of means rather than the end itself.[115]

In light of this perspective, entrepreneurial network, whether it is the social network or the effectual one, is a key resource of the entrepreneurs' environment and therefore becomes substantial to the business creation and growth. The network can, thus, be seen as vehicle

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[113] OECD. (2012). Promoting Graduate Entrepreneurship in Tunisian Universities. *OECD Local Economic and Employment Development (LEED) Working Papers*, 2012/18, OECD Publishing: 41–52.

[114] Sarasvathy, S. D. (2001). Causation and effectuation: toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy Of Management Review*, 26(2) : 243-263. doi:10.5465/AMR.2001.4378020

[115] Dew, N., Read, S., Sarasvathy, S. D., & Wiltbank, R. (2009). Effectual versus predictive logics in entrepreneurial decision-making: Differences between experts and novices. *Journal Of Business Venturing*, 24(4), 287-309. doi:10.1016/j.jbusvent.2008.02.002

bringing support, as it becomes a catalyst to the interaction between the entrepreneur and his or her environment and helps in finding and defining the current opportunities.[116]

We have seen that the Tunisian government worked towards supporting the entrepreneurs, especially through the infrastructures in place and their services, albeit limited. There are also are other players, mainly networks, acting towards this goal.

2.7.2.1 Tunisian Entrepreneurship and Spin-off Association (ATUPEE):

The ATUPEE is an association, which aims to enhance the entrepreneurial culture in Tunisia. It has set two main goals for its course of action:[117]

- Actively promote the role and the mechanisms of spin-off as an opportunity for self-employment and for business creation, especially among the youth population.

- Create a space and platform in which all the stakeholders and interested players can connect and share information and experiences.

In order to reach these goals, the association opted for a practical approach. As a matter of fact, it organizes regular entrepreneurial meetings in informal contexts, called "Café Entreprendre". Numerous subjects are tackled during these events in order to spread awareness around entrepreneurship in Tunisia, including innovation-based entrepreneurship, the support for entrepreneurs in Tunisia, the main hurdles in the entrepreneurial scene, etc. Moreover, they are implementing projects in relation with entrepreneurial education at all stages and they have put in place a competition to select the best comprehensive pedagogical project in entrepreneurship. Furthermore, they are deeply involved in entrepreneurial mentoring, as they take part in recruiting mentors for business incubators and they train them.[118]

2.7.2.2 The Arab Institute Of Business Managers (IACE):

The Arab Institute Of Business Managers (IACE) was created in October 1984. It is a Think Tank "uniting more than 400 Business Managers". The IACE grew to be a preponderant network supporting entrepreneurs and projects concretization.[119] It aims to:[120]

- Create a connecting space for business leaders and enhance the communication between the stakeholders in the Tunisian business environment.

- As a Think Tank, one of its main purposes is to foster the exchange of ideas, experiences and reflections. As such, the IACE provides many publications and organizes different events including conferences, symposia, workshops and meetings. Recently, it organized a successful supporting event covering all the Tunisian territory for a weekend, during

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[116] Faiez, G., & Younes, B. (2012). A cognitive approach for analyzing the influence of effectual network on entrepreneurs actions. *Interdisciplinary Journal Of Contemporary Research In Business, 3*(9), 1409-1431.

[117] ATUPEE Portal. Retrieved from http://www.atupee.org/atupee.html

[118] ATUPEE. (2011). Programme ATUPEE 2011/2012. Retrieved from http://www.atupee.org/doc/programme2012.pdf

[119] Global Entrepreneurship Week, Tunisia. Retrieved from http://tn.unleashingideas.org/users/host

[120] IACE Portal. Retrieved from http://www.iace.tn/?page_id=2688

which entrepreneurs facing impediments in their projects could directly meet and discuss about the potential solutions with real experts in law, accounting, administration, etc.

- Actively trains entrepreneurs and assist them in the entrepreneurial endeavor from legal, administrative and business perspectives. Indeed it offers visits, courses and advices in order to facilitate fledgling entrepreneurs' entry into the market.

The IACE has also been an active player representing the Tunisian entrepreneurial scene on the international level. Indeed, the Arab Institute Of Business Managers is the main host and organizer in Tunisia of the Global Entrepreneurship Week event, founded by the Kaufmann Foundation.

Altogether, the IACE embodies the new emerging civil society and its new role in the Tunisian entrepreneurial ecosystem. Civil society actually grew and gained influence since the revolution. It still yet presents a considerable untapped potential that can be used for supporting and developing entrepreneurship in Tunisia.

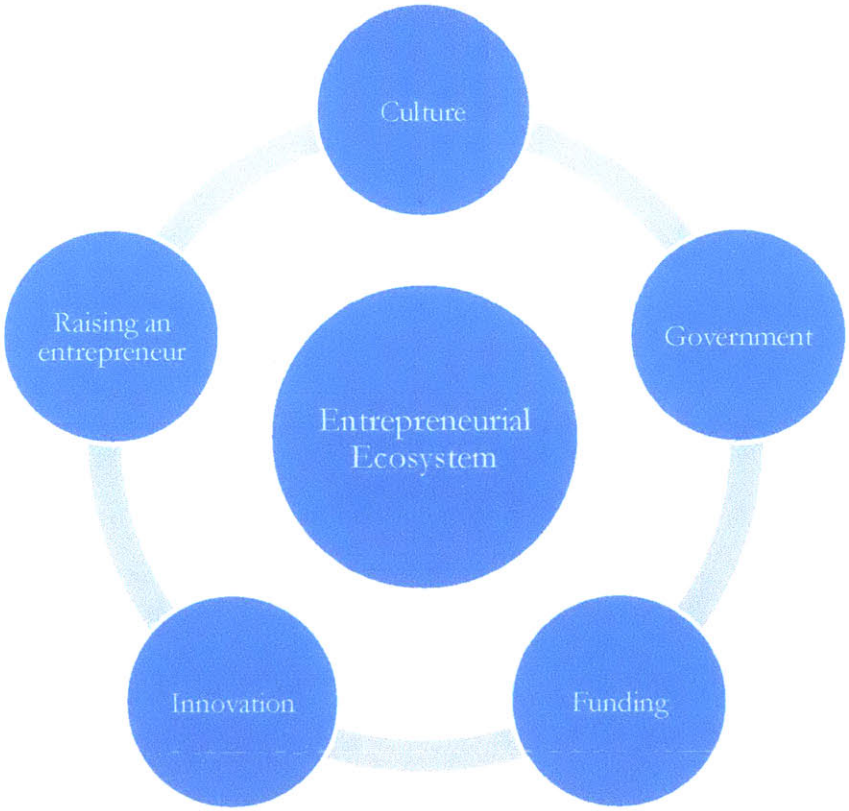
3. Conclusion and Recommendations

3.1 Analysis Summary:

Our study allowed us to highlight the main characteristics of the Tunisian entrepreneurial ecosystem. We have mainly focused on the elements we deem substantial for the development of a sustainable entrepreneurial environment.

Figure 2.20

Analysis Key Elements



Many sub elements are paramount parts of the analysis. Indeed, the Government section includes an analysis of the current Tunisian market, as shaped by the different economic policies. In the Innovation section, we took the infrastructure into account, but we specifically focused on the infrastructure supporting innovation, since we have already tackled the matter of basic physical infrastructure in the first part of this study.

The following table summarizes our findings when it comes to the strengths and weaknesses of the Tunisian entrepreneurial ecosystem. (Table 2.8)

Table 2.8

Overview of the Entrepreneurial Ecosystem in Tunisia

	Strengths	Weaknesses
Culture	▪ Successful entrepreneurs are extremely well perceived by the Tunisian society, which means: – Entrepreneurship is seen as a befitting professional activity, from a social point of view. – Success stories can play key roles in enhancing entrepreneurial trends within society and therefore install a more deeply rooted entrepreneurial orientation. ▪ Women have a preponderant position within the Tunisian society, thanks to a social and cultural narrative that lead to their emancipation and their social and financial independence. The Tunisian environment, indeed, gives the opportunity for women to undertake. ▪ There is little fear of failure in Tunisia. Failure isn't thus an impediment to entrepreneurship, as it is the case in many other countries.	▪ Media are not leveraged enough in order to make success stories of entrepreneurship a part of the local "cultural outer layer". ▪ Currently in Tunisia, men still undertake more than women, despite the favorable environment. This situation is actually due to the perception of family by women, as the latter are still the center around which the family unit is built. This perception leads to a propensity to choose professional carriers with a more secure source of income. ▪ Despite the fact that Tunisians are impervious to failure to a certain extent, there is a general risk-averse attitude. As a matter of fact, many Tunisians tend to look for positions with a secure source of income, which pushes us to question the value of work and its incentives within the Tunisian cultural narrative. ▪ In spite of the vibrancy around entrepreneurship that followed the Tunisian uprising, the perceived opportunities to undertake are still low compared to some other countries such as Nigeria.
Government	▪ A government sensible and aware of the need of liberalizing trade and disengaging in order to shift towards a real market economy. ▪ Tunisia generally, and the Tunisian society more specifically, are a favorable environment for change and implementing new polices, given the ethnical and religious homogeneity in the country. ▪ An economy open to international partners by promoting import and export businesses. ▪ Tunisia has been focusing on the	▪ Notwithstanding the recent attempts to switch to a more liberal economy, the Tunisian economic policies are overall still impregnated by the Tunisian socialist narrative, based on a strong interventionism of the state: – The Tunisian government has applied rigid pricing policies, which undermined the competition and precluded the establishment of a real economy of market. These actions were mainly driven by a strong will to protect the local market economy and the Tunisian

development of SMEs since the 90's. After the Tunisian uprising, this interest was strengthened and government started reassessing its policies towards SMEs and start-ups. The latter are being seen as a solution for the regional economic disparity. The government therefore launched two major funds, being the CDC and Ajyal Funds that aim for the development of the regional infrastructure and support of SMEs.

- Fighting corruption is one of the priorities of the current transition government. An instance has been put in place to ensure the implementation of anti-corruption measures and foster global transparency.

consumer.
  - As opposed to its policies promoting export and import trades, the government maintained an excessive control over foreign currency. In fact, the main actors affected by these policies were the Tunisian players, thus giving an edge to foreign businesses.
- There were also some asymmetries in the strategy of import and export promotion:
  - Most of the trade is with done the EU, without trying to enhance partnerships with new international players, such as China. This situation, made Tunisia extremely dependent of Europe.[121]
  - The excessive focus on bringing foreign companies has impeded the development of "endogenous innovation-based entrepreneurship".
- Although the situation has been evolving since the Tunisian revolution, there is a lack of focus on innovation in terms of policies, apart from ICT.
- An impeding administrative process due to many reasons:
  - An intricate administration structure, which has a large number of institutions, leading to overlapping scopes of action and numerous legal and administrative "gaps".
  - An intricate long centralized process with high interventionism of the state.
  - Adding to the complexity of the processes, there is an overcapacity in the Tunisian administration that lowers the global efficiency
  - There is a peculiar perception of the entrepreneur from the Tunisia administration point of view, as people who need supervision and

[121] Such trade policies made the Euro crisis directly impact the Tunisian economy. This dependency becomes a real impediment, especially when we know that Tunisia is in a real need of external funding given the post-uprising context and the need to invest in the local infrastructure. Mostly, the lack of diversity in international partners made the IMF and the Global Capital Markets the primary source of funding for Tunisia, rather than borrowing from other international players such as China, although Qatar has lent money to the Tunisian government.

		control, rather than citizens to whom the administration provides a service. This leads to a global culture of "handling privileges" in the Tunisian public administration. – The difficult access to the Tunisian administration enhanced the development of a parallel informal economy.
Funding	▪ All the financing tools are present in Tunisia, ranging from a wide area of equity instruments to a large choice of debt ones. ▪ There are quite developed investment instruments for innovation, especially ones focusing on the shift from inventions in research centers to innovation and fostering technology transfer.	▪ There is a high propensity to use debt funding rather than equity financing, which leads to a high average leverage ratio. Actually, debt financing presents many risks for start-ups, especially at the seed-funding phase. ▪ Many entrepreneurs suffer from the lack of clear communication around the investment vehicles and the investment tools. ▪ Pre-seed funding is lacking in Tunisia, which impedes the creation of start-ups and the shift from pure knowledge to knowledge commercialization. ▪ Most of the investment vehicles restrain their role to the investment itself, as there is no support for the entrepreneurs and no follow-up. ▪ There is a need to enhance the role of the private sector, especially SICARs in early stage investments.
Innovation	▪ The government has developed an important infrastructure supporting innovation, including university labs, research centers, technology parks and business centers. ▪ The process to get a patent, one of the main milestones for invention commercialization, has been centralized through one institute. ▪ The government has identified and focuses on spin-offs, including research-based spin-offs (RSBO), as a paramount vehicle in the knowledge economy.	▪ There is a substantial regional disparity with regards to the basic physical infrastructure, which hinders the whole economy in interior regions. ▪ Although most of the infrastructures for innovation are supposed to come along with services, there is a tangible lack of support for entrepreneurs, among others in technology parks and business incubators. ▪ The private sector's role in enhancing innovation-based entrepreneurship is limited, as the government manages most of the infrastructures in place. ▪ Researchers, who play a preponderant role in the creation of RSBOs are restrained to pure research: – The government emphasizes the need of publishing papers at the expense of the researchers' time to practically develop and prototype

			their inventions. – There is no guarantee for researchers to return to their previous position once they start a venture. – The administrative process for the commercialization of an invention is too long and overwhelming.
Raising an Entrepreneur	▪ Redesign of the Tunisian education system by emphasizing the need to enhance creativity and initiative from early stages. ▪ Integration of entrepreneurial modules in the Tunisian higher education. ▪ Recent experience implementing an Entrepreneurship track for undergraduates that brought promising results with regards to self-employment.	▪ A substantial education-to-employment issue, where the type and quality of training in the higher education doesn't match the demand in the job market. ▪ Companies are not involved with the higher education. ▪ The entrepreneurial education is still at its early ages. ▪ There is little support for start-up creation within universities. ▪ The Entrepreneurial network needs to be further enhanced outside the control of the state. The recent development of the Civil Society will be a key element towards this goal.	

3.2 Recommendations & Future Directions:

Following our analysis, we have highlighted the main strengths and weaknesses of the entrepreneurial ecosystem in Tunisia. We will now expose our perspective with regard to the next actions to take in order to improve the environment in question:

- *Enhance the role of civil society:*

  – Promote the role of NGOs and entrepreneurial networks, as players providing sourcing for innovation from universities, through business plan competitions and boot camps. The civil society will therefore play its role of effectual network by giving students the tools to find opportunities to undertake in the current environment. As a supply-side effect, these types of events and competitions will probably influence the social network of the young entrepreneurs and foster the Love Money[122] contribution.

  – Develop the Business Angels network throughout all the regions of Tunisia. Business Angels can indeed have a strong support to the fledgling entrepreneurs, along with providing pre-seed capital. As such, by inviting new players in the Tunisian entrepreneurial scene, we would multiply the influencers and players, including the government, and have a more stable and efficient ecosystem with equitably distributed roles.

[122] Pre-seed contribution from the family and friends.

- *Streamline the administrative process:*

  - Put in place one sole structure that will liaise with entrepreneurs and SMEs, in order to deal with the current issue of the Tunisian administration complexity. This structure would be in charge of all the administrative matters and of informing the entrepreneurs about the different financial players and financing instruments and options.

  - Develop, through this new structure, an automated system by giving the option for entrepreneurs to complete the administrative processes online, along with providing a face-to-face support by the institution in question.

  - Optimize the number of employees in this structure, by implementing a system of monitoring that can assess the efficiency of each one's work.

  - Allocate a proper HR department that will be in charge of training the staff on bringing a quality service and enhance their efficiency.

  - Launch a marketing campaign regarding this structure among the entrepreneurial communities.

- *Enhance the efficiency of capital access:*

  - Change the role of BFPME from a simple retail bank for SMEs to a bank providing both equity and debt financing including seed capital loan and grants.

  - Mostly, bring support to the companies invested in by providing follow-up and consultancy services.

  - Bring the FOPRODI under the management of the BFPME in order to simplify the funding process through one administration.

  - Enhance the mechanism of guarantee for start-ups by co-investing with private funds and provide for entrepreneurs state-owned guarantor such as the CDC. This action would certainly allow financial players to take riskier investments.

- *Adapt in the Investment Incentives Code:*

  - Implement favorable fiscal measures for business angels and risk-takers entrepreneurs.

  - Apply tax incentives for companies towards investing in research institutes, engaging with the higher education and contributing to RSBOs creation.

  - Restrict financial incentives only for risk-taker SMEs and innovative projects with high growth potential, as opposed to the current tax incentives for big companies developing projects with low added value.

- *Develop basic infrastructure within the interior regions:*

  - Create a fund that invests in the development of basic infrastructure in remote interior regions and enhance the basic standard of living to a decent level in these places. As such, we will be able to ensure the basic requirements for living and making business in these areas.

- *Strengthen the role of technology parks:*

  - Enhance the marketing and capacities of technology parks through public-private partnership and invite civil society to take part in these infrastructures. As such, they would be able to provide pre-seed funding for entrepreneurs, along with high quality support and services.

  - Attract investments from other new international players, including China, India and South Africa, in the technology parks and business incubators and focus on bringing foreign start-ups, which can bring a real knowhow.

- *Engage researchers in the RBSO creation process:*

  - Incentivize technology transfer and applied research leading to innovation, while assuaging the importance research publications.

  - Ensure researchers the possibility to getting back to their positions if they choose to embrace the entrepreneurial path.

  - Put in place a special structure within universities and research structures that takes care of the patent applications, in an attempt to lighten the patent process burden for researchers.

- *Engage the private sector and the civil society in higher education:*

  - Unionize the companies through a structure that will represent the current market needs and engage this new structure with the Ministry of Higher Education and Scientific Research in order to rethink the higher education content in accordance with the job market requirements.

  - Build on the recent successful entrepreneurial track experience and integrate this new aspect into the higher education.

  - Create in every university an office in charge of bringing support for start-up creation. These offices would be managed through public-private partnerships and would be engaging the civil society.

Tunisia has a very large potential to be one of the beacons of innovation in Africa, thanks to its highly educated people and its favorable cultural setting. Moreover, after the revolution, we have witnessed many members of the Tunisian diaspora coming back with a strong will to invest and develop entrepreneurship, bringing along diversified skills and new perspectives. Nonetheless, there is still a real need of change in the financial system and specific measures

need to be taken in order to leverage the current trend and vibrancy around entrepreneurship. In this context, international partners can bring tangible added value. France and Germany were the first to seize this unique opportunity and worked toward the rapprochement between Europe and Tunisia, as opposed to the United States and Canada that had a limited contribution to entrepreneurship in Tunisia.

We have tried to understand the intricate Tunisian entrepreneurial ecosystem and how its elements are intertwined. We after offered a first sketch of the actions to be taken in order to optimize the efficiency of this environment. Further research should focus more on social entrepreneurship and on the development of regional entrepreneurship over the Maghreb region as a whole. This would give another dimension to the subject by highlighting the potential synergies coming from such a rapprochement.

References

Acofis Tunisie. (March 2012). Présentation de la législation régissant les SICAR et les FCPR (Janvier 2012). Retrieved from http://acofis-tunisie.over-blog.com/article-presentation-de-la-legislation-regissant-les-sicar-et-les-fcpr-janvier-2012-102135757.html

Acs, Z. (2006). How is entrepreneurship good for economic growth?. Innovations: Technology, Governance, Globalization, 1(1), 97-107.

African Development Bank. (2011). Labor Market Dynamics in Tunisia: The Issue of Youth Unemployment n°123. Retrieved from http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Working%20Paper%20%20No%20123%20%20PDF%20%20.pdf

African Development Bank. (2012). Tunisia: Economic and Social Challenges Beyond the Revolution. Retrieved from http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/Tunisia%20Economic%20and%20Social%20Challenges.pdf

African Development Bank. (March 11, 2011). The Revolution in Tunisia: Economic Challenges and Prospects. Retrieved from http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/North%20Africa%20Quaterly%20Analytical%20Anglais%20ok_North%20Africa%20Quaterly%20Analytical.pdf

Arenius, P., & Minniti, M. (2005). Perceptual Variables and Nascent Entrepreneurship. Small Business Economics 24: 233–247.

ATIC. 2011 Activity Report. Retrieved from http://atic.org.tn/images/atic/documents/rapport%20dactivit%20atic%202011_20%20juin%202012.pdf

Aulet, W.K., (October 14, 2008). How to Build a Successful Innovation Ecosystem: Educate, Network, and Celebrate. Xconomy.com. Retrieved from http://www.xconomy.com/national/2008/10/14/how-to-build-a-successful-innovation-ecosystem-educate-network-and-celebrate/

Ben Miled-M'rabet N. (2012). Le Système National d'Innovation en Tunisie. Retrieved from http://www.tunisianindustry.nat.tn/fr/download/ci/innovation.pdf

Bernard Y. (February 22, 2012). What's Preventing Foreign Direct Investment in Tunisia?. Tunsia-Live. Accessed on April 11, 2013. http://www.tunisia-live.net/2012/02/22/whats-preventing-foreign-direct-investment-in-tunisia/

Bourguiba, H. (Television broadcast, January 6, 1984). Sequence retrieved from http://www.dailymotion.com/video/x528x_bourguiba-discours-du-pain#.UWNw2YWYFP0

Brisson, Z., & Krontiris, K. (2012). Tunisia: From Revolutions to Institutions. The Reboot, InfoDev: 23. Retrieved from http://www.infodev.org/en/Document.1141.pdf

Chekir, H. (2013). Redesigning SME promotion tools in Tunisia (Master's dissertation).

CIA World Factbook. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/fields/2102.html

Dali, S. (March 1, 2011), Feu identique, conséquences différentes : un aperçu des inégalités régionales en Tunisie. El Mouwaten. Retrieved from http://www.elmouwaten.com/modules.php?name=News&file=article&sid=61

Dew, N., Read, S., Sarasvathy, S. D., & Wiltbank, R. (2009). Effectual versus predictive logics in entrepreneurial decision-making: Differences between experts and novices. Journal Of Business Venturing, 24(4), 287-309. doi:10.1016/j.jbusvent.2008.02.002

Di Tommaso, M.R., Lanzoni, E., & Rubini, L. (2001). Support to SMEs in the Arab region: the case of Tunisia. UNIDO/UNDP. UNIDO Italia.

Diop, N. (2008). Tunisia's Global Integration, Tunisia's Global Integration, 1(1), 1–145.

Faiez, G., & Younes, B. (2012). A cognitive approach for analyzing the influence of effectual network on entrepreneurs actions. Interdisciplinary Journal Of Contemporary Research In Business, 3(9), 1409-1431.

Fölster, S. (2000). Do Entrepreneurs Create Jobs?. Small Business Economics 14: 137–148.

Frank F., & Smith A. (2000). The Partnership Handbook. Minister of Public Works and Government Services Canada.

Fritsch, M., & Mueller, P. (November 2004). Effects of New Business Formation on Regional Development over Time. Regional Studies Vol. 38.8: 961–975.

Gartner, W.B. (1988). "Who Is an Entrepreneur?" Is the Wrong Question. American Journal of Small Business 12, no. 4: 11–32.

Gasse, Y., & Tremblay, M. (2011). Entrepreneurial Beliefs and Intentions: A Cross-Cultural Study of University Students in Seven Countries. International Journal of Business 16.4: 304–314.

Grondona, M. (2000). A Cultural Typology of Economic Development. In Harrison, L.E., & Huntington, S.P. Culture matters: how values shape human progress, New York: Basic Books.

Haddad, S. Création des entreprises innovantes en Tunisie. Résultats d'une étude exploratoire.

Hammouti, B. (2010). Comparative bibliometric study of the scientific production in Maghreb countries (Algeria, Morocco and Tunisia) in 1996-2009 using Scopus. Environ. Sci, 1, 70-77.

Harbi, S., Amamou, M., & Anderson, A. R. (2009). Establishing high-tech industry: the Tunisian ICT experience. Technovation, 29(6), 471.

Hibou, B. (2006). Le libéralisme réformiste, ou comment perpétuer l'étatisme tunisien. L'Économie politique, (4): 9-28.

Human Rights Watch. World Report 2012: Tunisia. Retrieved from http://www.hrw.org/world-report-2012/world-report-2012-tunisia

INNORPI. La protection de la propriété industrielle au service des PME. Retrieved from http://www.innorpi.tn/Fra/image.php?id=63

International Monetary Fund. (October 9, 2012). World Economic Outlook Database October 2012, Retrieved from http://www.imf.org/external/pubs/ft/weo/2012/02/weodata/WEOOct2012all.xls

Jacquet, P. (March 2004). Politique de change, compétitivité et convertibilité du dinar. Le Manager, le mensuel de l'entreprise: 92.

Kefi, R. (August 26, 2006). Et Bourguiba libéra la femme. Jeuneafrique.com. Retrieved from http://www.jeuneafrique.com/Article/LIN27086etbouemmefa0/actualite-afriqueet-bourguiba-libera-la-femme.html

Landes, D. (2000). Culture Makes Almost All the Difference. In Harrison, L.E., & Huntington, S.P. Culture matters: how values shape human progress, New York: Basic Books.

Mansouri, F., & Belkacem, L. 2009 Tunisia Executive Report, Global Entrepreneurship Monitor: 38-41. Retrieved from http://www.gemconsortium.org/docs/download/2307

Marzouki, M. (October 19, 2011). Tunisia's Election. The Guardian. Retrieved from http://www.guardian.co.uk/commentisfree/2011/oct/19/tunisia-election-democratic-beacon-arabs

Mezghani, L. (January 2011). Entrepreneuriat, L'enseignement de l'entrepreneuriat. Presented to the Employability Commission.

Ministry of Finance. (September 2011). Economic and Social Program : the Jasmine Plane. Republic of Tunisia.

Ministry of Higher Education and Scientific Research. (2011). L'enseignement supérieur en chiffres [Brochure]. Retrieved from http://www.mes.tn/francais/donnees_de_base/2012/dep_fr2011_2012.pdf

Ministry of Justice. (February 11, 2008). Loi n°2008-9 du 11 février 2008, modifiant et complétant la loi d'orientation n°2002-80 du 23 juillet 2002, relative à l'éducation et à l'enseignement scolaire. Retrieved from http://www.e-justice.tn/fileadmin/fichiers_site_francais/droits_homme/legis_nat/sante/L_9_11fevrier_2008.pdf

Moyo, D. (2009). Dead aid: Why aid is not working and how there is a better way for Africa (1st ed.), New York, NY: Farrar, Straus and Giroux.

OECD. (2011). Evaluation du Cadre d'Intégrité dans le Secteur Public en Tunisie. Retrieved from http://www.anticor.tn/uploads/tx_wdbiblio/cadre-integrite.pdf

OECD. (2012). Promoting Graduate Entrepreneurship in Tunisian Universities. OECD Local Economic and Employment Development (LEED) Working Papers, 2012/18, OECD Publishing. http://dx.doi.org/10.1787/5k913fsjhkd8-en

OMNI Conseils, & Carthage Business Angels. (April 2012). Public instruments financing Innovation in Tunisia. Presented at the Alternative Finance Seminar.

Porter, M.E. (2000). Attitudes, Values, Beliefs, and the Microeconomics of Prosperity. In Harrison, L.E., & Huntington, S.P. Culture matters: how values shape human progress, New York: Basic Books.

Premand, P., Brodmann, S., Almeida, R., Grun, R., & Barouni, M. (December 2012). Entrepreneurship Training and Self-Employment among University Graduates, Evidence from a Randomized Trial In Tunisia. Policy Research Working Paper n° 6285.

Sarasvathy, S. D. (2001). Causation and effectuation: toward a theoretical shift from economic inevitability to entrepreneurial contingency. Academy Of Management Review, 26(2) : 243-263. doi:10.5465/AMR.2001.4378020

Schneider, F. (July 2002). Size and Measurement of the Informal Economy in 110 Countries. In Workshop on Australian National tax center.

Schumpeter, J. (1911). The theory. First German edition.

Sternberg, R., & Wennekers, S. (2005). The Determinants and Effects of Using New Business Creation Using Global Entrepreneurship Monitor Data. Small Business Economics 24(3): 193–203.

Team of Perspective Monde. Adoption d'une réforme agraire en Tunisie. Sherbrooke University. Retrieved from http://perspective.usherbrooke.ca/bilan/servlet/BMEve?codeEve=916

Tosun, M.S., & Yilmar, S. (November 2008). Centralization, Decentralization and Conflict in the Middle East and North Africa. The World Bank. Retrieved from http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2008/11/10/000158349_20081110112652/Rendered/PDF/WPS4774.pdf

Weber, M. (2002). The Protestant Ethic and the Spirit of Capitalism (Third Roxbury Edition). Los Angeles: Roxbury Publishing Company.

Wennekers, S., & Thurik, R. (1999). Linking Entrepreneurship and Economic Growth. Small Business Economics 13: 27–55.

Wiki Start Up. (2012). État de l'art de l'essaimage en Tunisie & son impact sur la dynamique de création d'entreprises. Retrieved from http://wikistartup.files.wordpress.com/2012/12/essaimage-en-tunisie.pdf

Williams, D. (2005). Real Leadership. San Francisco, CA: Berrett-Koehler Publishers.

Wong, P.K., Ho, Y.P., & Autio, E. (2005). Entrepreneurship, Innovation and Economic Growth: Evidence from GEM data. Small Business Economics 24: 335–350.

World Economic Forum. (2012). The Global Competitiveness Report 2011–20012. Retrieved from http://www3.weforum.org/docs/WEF_GCR_Report_2011-12.pdf

Zuabi, V. (2012). Building Higher Education Partnerships in the Maghreb.