



Part II-a

FIRES-Reform Strategy for Italy

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Document Identifier

Part II, chapter 1 of D5.12 An institutional reform strategy for Germany, for Italy, and for the UK

Version

2.0

Date Due

M36

Submission date

06-03-2018

WorkPackage

5

Lead Beneficiary

UU



Change log

Version ¹	Date	Amended by	Changes
1.0	01-03-2018	Mark Sanders	First Draft
2.0	04-03-2018	Mark Sanders	Final Draft

Partners involved

Number	Partner name	People involved
1.0	UU	Mark Sanders, Andrea Herrmann, Elisa Terragno Bogliaccini
1.0	Polimi	Luca Grilli, Gresa Latifi
1.0	Pecs University	Balasz Pager, Laszlo Szerb

¹Please start with version 0.1. All minor changes will lead to a new number (0.2, 0.3, 0.4 etc.). The first complete draft will get the number 1.0. Again all minor revisions will lead to a new decimal number (1.1, 1.2, 1.3 etc.). A major revision will become 2.0 etc. etc. Until there is a final version which will be called 'final'.

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List of abbreviations

CME : Coordinated Market Economy.....	8
EU : European Union	passim
FIRES : Financial and Institutional Reforms to build an Entrepreneurial Society	passim
GEI : Global Entrepreneurship Index.....	passim
i.e. : id est	passim
ISV : Italian Startup Visa	26
LME : Liberal Market Economy	8
M&A : Mergers and Acquisitions	17
MME : Mediterranean Market Economies	8
MRE : Minimum Required Effort.....	35
NUTS : Nomenclature des unités territoriales statistiques	31, 32, 33
OECD : Organization for Economic Cooperation and Development	9, 33, 45, 49
PA : Patent Act	15
R&D : Research and Development	12, 22, 25, 26
REDI : Regional Entrepreneurship and Development Index.....	passim
s.r.l. : Società a responsabilità limitata	38, 41
SBA : Small Business Act	24
SME : Small and Medium Enterprise.....	passim
TRIPS : Trade-Related Aspects of Intellectual Property Rights	15
UK : United Kingdom	13, 18
VC : Venture Capital	passim
WEF : World Economic Forum	8, 9, 44, 45

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Executive summary

This report on Italy illustrates the FIRES-approach to formulating a tailored institutional reform strategy to promote a more Entrepreneurial Society in Europe. It is part of a deliverable that presents a menu of 64 reform proposals and illustrates how we propose one should systematically analyse the situation before selecting and proposing reforms. After carefully analysing Italy's historically rooted institutional foundations, we triangulate historical, qualitative and quantitative information to identify Italy's strengths and weaknesses. Based on this diagnosis we selected 14 proposals from the 64 presented in Part I to be most relevant for Italy.

Diagnosis

Italy has a long and proud history. Many of the institutions that shape an Entrepreneurial Society have their roots in Italy. Italy has seen the birth of modern banking, invented intellectual property rights protection and boasts the oldest universities in the world. Even today Italy boasts a highly innovative small and medium sized entrepreneurial sector that competes on quality at the global level. Where Italy could strengthen its entrepreneurial ecosystem is in the area of **boosting human capital investments** and more importantly, **opening up opportunities for the young and talented** to engage in productive and innovative venturing in Italy. In the recent crisis, but also before, Italy has seen an exodus of talent. This diaspora had benefits in the past. It created demand for Italian products abroad and served as an alternative for high domestic unemployment. But with an ageing and shrinking population such an exodus suggests there are more opportunities abroad than at home. And of those that do stay and start-up ventures, most complain about cumbersome bureaucracy resulting in **lacking growth ambitions** and stunted economic dynamics. Taking these ailments to our menu of policy interventions and reform proposals in Part I of this report, we selected the fifteen most suitable interventions. They are listed in Table 1. In column 1 we find the number under which they were presented in Part I of the full report (downloadable [here](#)) and column 2 gives the section number in that report where one can read more of the background and general motivation for the proposals. Column 3 lists the title and 4 the full proposal, where column 5 gives a short motivation linking the proposal to the analysis presented above and column 6 fits it into the Italian context. We may identify six clusters of proposals.

Table 1: The FIRES-reform proposals for Italy

#	Section	Title	Proposal	Explanation	In Italy
1	3.1.2	The Rule of Law	We propose to further strengthen the current rule of law monitoring and enforcement mechanisms to ratchet up the performance of all Member States on issues related to rule of law, government effectiveness and protection of property rights.	Deficiencies in these factors negatively impact all agents in the entrepreneurial ecosystem and induce people to conduct activities and keep their capital in the shadow economy. Even the poorest EU member countries are higher medium-income countries, and neither the VoC literature nor arguments à la Rodrik (2008) provide any support for the view that these countries can compensate for these deficiencies through other institutional measures.	It takes too long to settle commercial disputes in civil cases. This creates uncertainty and works in the advantage of large, established and incumbent firms. An entrepreneurial society needs fast, predictable and clear legal proceedings to thrive. A lot has been done, but more is needed still.
8	3.2.4	Taxation of Corporate Income	The Union should strive to reduce and ideally remove the discrepancies in member countries between statutory and effective corporate income tax rates, which may result from tax-reducing depreciation rules, inventory valuation rules or other more ad hoc country- or industry-specific tax reductions.	Their removal would create transparency and contribute to levelling the playing field for all firms regardless of their size, age, industry or nationality. Competition among member states is good, but it should be competition on corporate tax rates and not on complex, opaque fiscal deals and schemes. Moreover, when it comes to corporate taxation, member states should treat all firms equally.	This general advice we would give to the Commission and would also apply to Italy. Founders in Italy complain about taxes but more than their level, their complexity and unpredictability makes growing a firm unattractive.
10	3.2.5	Taxation of Dividends and Capital Gains	Complexities should be removed when possible. Instead, countries should aim for dividend and capital gains tax rates with few exceptions and few (opaque) concessionary schemes.	Here, the Eastern European countries, such as Poland and Estonia, have exemplary models in which the tax rates are at reasonable levels and the effective tax rate is largely independent of other circumstances. Arguably, the reason for this clarity is that the design of these systems date back no further than 1989. A radical redesign from the ground up is probably not feasible in older member states, but they should nevertheless strive for similar improvements to simplicity and transparency.	See proposal 8. A tax system benefits from an occasional cleaning-up. Simplicity and transparency should be the goal, not necessarily reducing rates for targeted groups. But at an overall tax pressure of 64% against 40.8% in Europe, Italy should also reduce taxes.

#	Section	Title	Proposal	Explanation	In Italy
14	3.3.2	Private Wealth	Our proposal is that in regions where family ties are strong, there should be institutional arrangements that would promote lending from private funds especially from the family to ventures.	In FIRES-Deliverable 2.2 (Dilli and Westerhuis 2018) it was shown that these cross-national differences in family financing are result of the differences in extent to which individuals feel socially obliged towards their family members, shaped by the strength of family ties. These family ties are result of the historical family arrangements. As a result, the share of family financing is expected to be much higher in regions where traditionally the family group has priority over the individual (strong family ties), common in the Eastern European and the Mediterranean countries context compared to the North Western European countries where the individual and individual values have priority over family (weak family ties).	Italy has a strong family based tradition. This creates opportunities also for financing ventures, especially in their early stages. Italy could consider banking on extended family ties to increase the flow of financial resources into entrepreneurship. The Anglo-Saxon Angel and VC model may be less appropriate in the Italian context.
19	3.3.4	Banking	Increase the mandatory equity ratio in banking gradually to 10-15% to have more skin in the game and allow banks to take on more risk responsibly in their lending portfolios.	Given that European banks operated profitably at much higher equity ratios in the past whereas non-European banks continue to do so, this proposal only requires a sound implementation and transition strategy. Gradually building up the equity buffer while at the same time accumulating more publicly guaranteed SME-loans in the portfolio is a balanced approach. Higher required equity buffers will increase the price of credit and some might argue that this will reduce credit and investment in the aggregate. We feel, however, that such price increases will only drive out the marginal investment projects and most of these are currently found in the secondary, speculative investments that Bezemer (2014) deems unproductive.	Italy still has a rather diverse and locally embedded banking system. This can be an asset in the entrepreneurial society, but these small, local banks are increasingly brought under European rules and supervision made for large, system banks. By requiring higher equity in banks, they can justifiably engage in riskier but also in the long run more productive lending.
28	3.4.2	Employment Protection Legislation	CMEs can provide a model for MMEs, which show more similarities to CMEs in many respects than LMEs.	Less regulation on permanent employment is likely to be linked with high-growth aspirations among entrepreneurs particularly in the Mediterranean Market Economies (MMEs) whereas no change is observed in the other institutional constellations. Given that Coordinated Market Economies (CMEs) are shown to perform rather well in innovative entrepreneurial activity, while being characterized by moderately liberal labor market institutions, centralized wage setting institutions and high levels of social security. We therefore conclude that a policy of radical liberalisation following the Liberal Market Economies (LMEs) model is perhaps not the only way.	Italy has already implemented some fundamental reforms in the labour market in recent years. In part this was done under pressure of the financial and eurocrisis and external creditors. The general direction of these reforms was right, but Italy should not forget that of the MMEs it is actually closest to the CMEs and should seek to combine flexibility with social security.
31	3.4.3	Employment Protection Legislation	Establish or strengthen training programs to prepare workers for new occupations	Archanskaia et al. (2017) show that countries with a low rate of substitution between inputs in routine production, will not be able to gain a comparative advantage in high-value products that are intensive in non-routine tasks. As a result, they will end up specializing more and more in routine-intensive products and experience lower wage growth. Geurts and Van Biesebroeck (2016) further show that the pattern of firm-growth in Belgium indicates that young firms under-adjust to good news. As a result, many promising firms scale up too slowly and they might miss out on opportunities in a fast-paced global market.	In a more flexible labour market, more flexible and mobile employees are key. Italy will not be isolated from technological and economic trends and flexibility is needed to engage opportunities and exit declining jobs, industries and trades. We propose Italy invests in the flexibility of its workforce.
32	3.4.4	Confidentiality Agreements and Barriers to Mobility	To promote the mobility of people and their knowledge across firms, we propose to lift the legal enforceability of confidentiality agreements between employers and their employees.	Of course, there can be justified instances in which confidentiality is needed to protect the legitimate interests and privacy of customers, but confidentiality agreements and especially non-compete clauses are more often used to prevent knowledge from flowing freely between firms and sectors.	Specifically, for Italy, this proposal should be understood in light of the two above, arguing for investment in mobility and reducing barriers for switching jobs, industries and occupations. This will create opportunities for the young and talented to remain actively engaged in Italy and reduce the brain drain to the rest of Europe. Specifically the "reinstatement" provision in employment protection is often mentioned as a burden on small and young firms.
35	3.4.5	Social Insurance Systems	Embracing the principles of flexicurity, we propose to carefully consider the impacts of reforms on young SMEs and not force them to take on high risks and burdens.	The general guiding principles the European Commission have formulated do not include structural and careful attention to what such reforms would mean for start-ups and young SMEs. While the specifics can and will vary country by country, we can infer that an important component of a policy that makes society more innovative and entrepreneurial involves making the individual's social insurances as portable as possible when changing jobs and moving between salaried employment and self-employment.	It is tempting for governments with tight budgets to have employers pick up the bill for their employees' social security. This, however, tends to reduce mobility and strengthens the insider-outsider effect. On the labour demand side, such schemes work in (relative) favour of large firms and blocks young firms expanding. This keeps youth unemployment up and pushes also educated Italian youngsters to leave.
40	3.5.2	Product Market Regulation	Excessive barriers to new business formation and new entry should be lifted where possible.	This, however, seems to be part and parcel of the EU policy agenda already. Our consortium supports that effort with the caveat that well justified barriers to entry are useful to keep unproductive or even destructive ventures out (Stenholm et al. 2013; Darnihamedani et al. 2018). It should be easy for challengers to enter (and exit) but these challengers should be serious.	Key in this proposal is "excessive". Founders in Italy report quite a wide variety of bureaucratic and administrative barriers to starting up a venture in Italy. Some of these barriers may serve a valid purpose, but simplicity, transparency and predictability are then required also. Data shows Italian SMEs spend 52% more time dealing with bureaucracy than their European competitors and WEF ranks Italy 44th on doing business index. There is a lot of room for improvement.

#	Section	Title	Proposal	Explanation	In Italy
45	3.6.3	Knowledge Diffusion after Failure	We propose to set up publicly funded “entrepreneurial knowledge observatories” where knowledge accumulated in the entrepreneurial process is collected, curated and freely diffused.	Our consortium agreed that a lot of useful knowledge, perhaps of a more applied and tacit nature, is generated in the entrepreneurial process, particularly when ventures fail. That knowledge is lost when entrepreneurs do not share their experiences. However, as that is not their core business and private incentives are absent, it makes sense to publicly fund the collection, curation and diffusion of that knowledge.	Creating a real hub, rich in events, infrastructure, and networking between teams could be useful for the Italian Startup Ecosystem. This involves concentration. Today Milan (14,7%), Rome (8,5%) and Turin (4,7%) have less than 30% of the total number of startups (and these data are flattered). Our research has shown how geographical proximity is important for success. It is a tough choice, but it would be useful to invest in a start-up capital (Milan) with a national function.
48	3.7.2	Knowledge Generation	Both the EU and its member states should create healthy, well-funded, academic institutions that allow Europe’s best and brightest to pursue their research interests.	In the literature, there is also broad consensus that basic research is a pure public good (Salter and Martin 1991; Pavitt 1991). It therefore makes perfect sense to channel more of the EU budgets to an activity that provides such evident positive spillovers throughout the Union.	For the Italian context it is important to open up its academic institutions. Many reforms have already been undertaken, but most in a time of ageing, financial constraints and budget cuts. With vested interests and gilded contracts hard to reform, the rate at which Italian academic institutions open up for competition and meritocracy is slow. It makes little sense to spend a lot of money on institutions before such structural issues have been addressed. Unfortunately the (poor) students, not the ageing staff is driven out.
55	3.8.2	Creativity in primary and secondary education	Push for reforms in primary and secondary education that promote creativity, a willingness to experiment, a tolerance of failure and out-of-the-box thinking.	More appreciation for creativity (and therefore tolerance of deviant behaviour) will probably shift the balance from business oriented to more creative entrepreneurship. Evidence from field experiments (Weitzel et al. 2010; Urbig et al. 2012) and in the FIRES-project (Lauritzen et al. 2017) suggest that creative entrepreneurs are more socially oriented than strictly business-oriented entrepreneurs. Promoting creativity in primary and secondary education, to the extent possible, is therefore a long-term strategy to promote productive entrepreneurship that will create innovative, sustainable and inclusive growth (Stam et al. 2012).	Italy’s educational system can be characterised as traditional. The State sets the curriculum, provides uniform tests and most children attend public schools. The curriculum is demanding, geared towards cognitive skills and textbook based, leaving little room for creativity and diversity. Italy considers its educational system of high quality, but making pupils work hard is not the same as teaching them useful skills. Countries ranking high on e.g. the WEF, OECD and EU rankings, such as Finland and Norway have less homework and formal testing and more autonomy for highly trained and well paid professionals.
57	3.8.2	Education in the Entrepreneurial Society	To promote the integration of Europe’s knowledge base we propose to make English the (mandatory) second language and promote its instruction in primary and secondary education systems throughout the European Union.	We would like to stress, however, that we do not see this as part of building a European identity or culture. Rather, as a tool to enable citizens in the Union, and in particular those that end up in business and/or science, to exchange knowledge efficiently and effectively. Effective communication requires a common language and English qualifies as the Lingua Franca of modern science in most academic disciplines as well as global business.	Italy ranks 20 out of 27 EU countries plus Turkey when it comes to knowledge of English as second language. This is a handicap when Italy seeks to compete at the EU or global level.
59	3.8.4	Universities	We propose to educate the young and bright minds of Europe how to be more entrepreneurial before they make their career choices.	Recognizing the importance of this European model of knowledge diffusion, European universities can take a larger role in the transition to a more Entrepreneurial Society in Europe. This starts with simple no-regret policies that have been proposed before (i.e. the European Commission’s Entrepreneurship 2020 Action Plan).	Many universities started offering courses focused on startups. Courses usually taught by a researcher with no work experience outside academia, and clearly no past in startups. With the average curriculum dealing with business plans and how to get financing. We lack a startup culture and those trying to provide it have no idea what they are talking about. We are still in the phase where everyone is teaching and few doing.

Cluster 1: The Legal System

Proposal 1 seeks to address the complexity of the Italian legal system. Procedures take too long and more importantly, this differs markedly across the territory. We believe it would help not only entrepreneurs in Italy when the judicial system effectively settles disputes and while progress is being made, this remains an important area of reform. A stable and predictable system of Rule of Law and high quality government is essential for any Entrepreneurial Society and an effective judicial system is essential to ensure it.²

² European Quality of Government Index can be found [here](#) and shows Italian regions decidedly lags its European competitors.

Cluster 2: Tax Reforms

Proposals 8 and 10 seek to address the tax burden on especially growing firms. Italy has generous tax exemptions for SMEs, but should evaluate the tax burden over the entire lifecycle of firms. A fiscal penalty on growth is to be avoided. More important than low statutory tax rates, are clear, transparent and predictable tax liabilities. With an overall tax pressure of 64% (against 40% in the EU on average), a general reduction in corporate income taxation is probably wise as well. It is better to have low taxes on broad tax bases by making

Cluster 3: Financial Resources

Proposals 14 and 19 seek to strengthen the flow of financial resources into entrepreneurial venturing in Italy. We do not focus on the Anglo-Saxon angel and VC model of venture finance, but rather aim to strengthen Italy's traditionally strong arms-length banking sector and the flow of private wealth through strong family ties.

Cluster 4: Mobility of Talent

Proposals 28, 31, 32 and 35 seek to improve the mobility of talent while at the same time maintaining the level of social security that Italians value highly. That is, given the high levels of risk adversity, it seems prudent to not create the much needed flexibility by just liberalising labour markets, wage formation and social security. Instead, we propose measures that are closer to the *flexicurity* systems which Coordinated Market Economies are testing. Moreover, Italy could try to enhance the mobility of its labour force over sectors and occupations by investing in training and lifting legal barriers to such mobility.

Cluster 5: Coping with Regulatory Burden

Proposals 40 and 45 address the cumbersome regulatory barriers to starting and growing firms in Italy, while at the same time setting up knowledge centres or "Observatories" to support such venturing. At the same time Italy should reduce the complexity and opacity of regulation and develop one-stop-shops for entrepreneurs that need help navigating the regulatory requirements that remain.

Cluster 6: Educational Reforms

Proposals 55, 57 and 59 seek to reform the Italian education system in the direction of a more flexible, mobile, modern and creative type of graduate. The set of skills that current cohorts of pupils and students need to succeed in a globalised and open European economy is not easy to put down in a curriculum. But creativity, out-of-the-box thinking and communication skills help Italian youngsters be the jacks-of-more-trades that entrepreneurial ventures look for.

Concluding Remarks

The proposals, individually and in combination, aim to strengthen the knowledge base and talent pool from which Italian entrepreneurs can draw and aim to open opportunities for not only starting but also growing firms in all regions in Italy. All regions stand to benefit from these interventions. But, due to the fact that density and clustering tend to promote the quality and impact of entrepreneurial venturing, the same policy improvements will probably benefit already prosperous regions most. Nevertheless, that should not stop policy makers from pursuing these interventions as it is the Italian citizens, not its regions per se, that the national government should care about. It is advisable, however, to also set up automatic transfer systems that will help maintain high quality of life throughout the country.

Of course these proposals will need a much more detailed discussion and only form the starting point, not the final word in the policy debate. Moreover, even if eventually adopted, our proposals all require careful implementation and evaluation to complete the policy cycle. The general elections Italy has recently had, will hopefully give the new government sufficient mandate to start implementing a long term reform agenda that goes beyond the obvious and superficial "deregulate, subsidize and educate" approach that is all too common in entrepreneurship policy. We hope our proposals can serve as an inspiration.

Introduction

In Part I we have introduced 64 proposals for a more Entrepreneurial Society in Europe. Inevitably, however, these proposed reforms are general and motivated from a broad base of evidence and scientific debate. The resulting table thus gives us a menu of possibly useful interventions that would have to be implemented at different levels in the European Union. To support more entrepreneurial venturing in Europe, however, institutions need to be supportive of individual entrepreneurial ventures “on the ground”. That is, supporting institutions should work in very specific contexts. To implement an effective strategy, European policy makers therefore must work simultaneously and coherently across policy making levels and jurisdictions. Reforming e.g. intellectual property rights protection is an international discussion, whereas proposals related to taxation, social security and education are typically matters of national or even regional policy, while policies to promote knowledge exchange between academic and research institutes and the local entrepreneurial ecosystem, is best organised at the regional or local level. In recognition of these layered interactions, we have carefully analysed the relevant policy making institutions and their legal and political competencies on the nine areas of policy making identified in Part I of this report. The results of that analysis in FIRES working package 6 are reported in detail in D6.2. With that analysis in place we now present our seven-step approach to formulating an effective reform strategy at the country level.

- Step 1: Assess the most salient features of the institutional complex in place and trace its deep historical roots (WP2).
- Step 2: Assess the strengths and weaknesses and flag the bottlenecks in the entrepreneurial ecosystem using a structured data analysis (WP4).
- Step 3: Identify, using careful primary data collection among entrepreneurial individuals (i.e. founders) what most salient features characterize the start-up process and where entrepreneurs face barriers (D5.1).
- Step 4: Map the results of step 2 and 3 onto the menu of policy interventions developed in Part I of this report to identify potential interventions for the country under investigation.
- Step 5: Carefully consider the list of proposals in light of the historical analysis under step 1 and fit the proposed reforms to the relevant local, regional and national institutional complex in place.
- Step 6: Identify who should change what in what order for the reform strategy to have the highest chance of success (WP6).
- Step 7: Experiment, evaluate and learn and return to step 1 for the next iteration.

In this second part of this report we will illustrate this cycle from step 1 to 5. Step 6 is described in D6.2 for Part I and D6.3 reports on the results of the policy round tables where the resulting draft reform strategies were discussed. As we cannot implement the proposed policies to execute step 7, instead we have summarized the resulting reform strategies for Italy, Germany and the United Kingdom into three policy briefs that were presented and discussed with policy makers in these respective member states. The policy briefs and summaries of these round tables in the annex complete this deliverable.

1. Step: Financial and Institutional Reforms for an Entrepreneurial Society in Italy

Italy, like all Mediterranean EU Member States, has gone through an intense period of economic and political turmoil in the past 10 years. Since the fall of Bear Stearns, armies of consultants from inside and outside the country have beset the country with good advice on how to reform the Italian economy. And successive Italian governments have implemented quite dramatic reforms in many areas. The advice, however well-intended, was typically aimed at stabilization and increasing Italy's ability to service and repay its foreign debts. Labour market liberalisation served to weaken workers' bargaining position, thus lowering wage pressure to achieve internal devaluation and regain cost competitiveness in the Eurozone. Financial market reforms aimed to stabilize banks and reduce risks by regulating them to invest in more liquid, marketable assets. Investments in R&D and more fundamentally in education and knowledge accumulation stagnated, and Italy, like Greece and Spain saw an exodus of young, talented Italians because a lack of opportunities drove them to look elsewhere. Our policy advice and the reform strategy we propose, will not aim to stabilize the country. It is time to look ahead. Too much stability will turn an economy into a graveyard. Instead, our policy advice is aimed at reigniting Italy's entrepreneurial spirit. Our proposals aim to mobilize, but not weaken labour to create inclusive growth; to free up the financial resources for inherently risky experimentation that is essential for sustainable growth; and to draw Italy's talented and knowledgeable young into new ventures so that growth is innovative. Moreover, consecutive Italian governments struggled to fit the many foreign recipes into the Italian context. In our approach we will at least make an effort to fit our proposals to size. In order to do so, this country report will first discuss at some length the most salient aspects of Italian history and the evolution of the most relevant institutions in labour, financial and knowledge allocation as well as more recent initiatives in entrepreneurship policy.

1.1. Deep rooted institutions in Italy

Mezzogiorno

Italy has been a unified State since 1861 and it has been a bicameral parliamentary democracy under the current constitution since 1948. Indeed, Italy has a long and rich history that influenced and permeated areas well beyond its geographical boundaries. The Italian city-states of the Renaissance saw the rise of banking. The seat of the Catholic Church in Rome left a deep imprint and the principles of Roman Civil Law persist in continental European legal traditions. In many ways, the deep-rooted institutions in Italy are the deep-rooted institutions of Europe.

Yet, Italy also has its own peculiarities. Most notable among these, it is the sharp divide between North and South that persists in Italy to this date, well-known as "Italian Mezzogiorno" problem (Ichino and Magi, 2000). The division of Italy dates to the 6th century, with the sack of Rome in 568, and persists until today. In the middle of the 18th century the country was organized into seven separate States: The Kingdom of Sardinia (with Piedmont and Liguria), the Kingdom of the Two Sicilies,

the Papal State (Lazio, Umbria, the Marches, and parts of Emilia and Romagna), Lombardy-Veneto which was under Austrian rule, controlled directly from Vienna while the Grand Duchy of Tuscany and the duchies of Parma and Modena were dependent on the Habsburg scions (Barbagallo, 2001). Only in 1860 with the *Italian Risorgimento* the territory was brought together again into a single politically organized community (Barbagallo, 2001). There is, however, still no consensus whether the unification of the country was a good thing or not. Some voices claim that Italy was never a single country and that the Southern part of the country could indeed be viewed more as a colony of the North (i.e. Glass, 1996).

The debate on how deep the division between the North and the South of Italy really is, has not been settled. According to Cafagna (1989), there were remarkable differences between the Kingdom of Two Sicilies and the States in Centre-Northern Italy, particularly in the agriculture even before the unification. Daniele and Malanima (2007), in contrast, claim that any heterogeneity among the Italian States in those days was not as severe as to be defined as a “sharp” gap between the North and the South of the country. According to them, the neat divide started to emerge only after 1913 when the rapid pace of growth in Northern Italy became more visible, thus creating a gap that reached a 20% higher per capita GDP in the North of the country than the rest of the country.

A large body of literature has explored several reasons responsible for the division of the country even after unification. Many argue that the geography and the lack of infrastructure to reinforce the communication between the regions have continuously widened the economic and social differences (Barbagallo, 2001). In addition, the North of Italy enjoyed the natural preconditions of becoming an industrial hub due to its location close to European markets such as France, Germany and the UK, whereas the Southern part of the country remained more anchored to traditional sources of income for generating economic development because it lacked such access (King, 1985). Whatever the historical roots and reasons, the division is still very real today and policies to address it have met limited success.

To open the avenue for convergence between the two areas, *Cassa del Mezzogiorno*, or the “Fund for the South” was created in the early 1950’ (Baum et al., 1990). Its main goal was to encourage economic growth and industrialization in the Southern part of the country. According to D’Attorre (1987), there are many good reasons to be sceptical about “The Cassa” initiative. A serious weakness of the fund is related to the public work projects and the jobs it aimed to create, which were either short-term or highly inadequate (Bohlen, 1996). Moreover, the fund was highly criticized for the promotion of “large-scale capital-intensive projects” which required specific absorptive capacities. Since those capacities were more developed in the North, the project better suited the needs of Northern capitalists. Such institutional failure ended up promoting criminal behaviour and the mafia. Under this scenario, while the North was growing, the South continued to lag (Spooner, 1984).

Nowadays, regional differences are still obvious in institutions such as schools, public administrations, hospitals and the large private corporations that are located in the different regions (Ichino and Maggi, 2000). The judicial system, which is the backbone of a modern state, works differently in the Northern and Southern part of Italy. In the South, to get a ruling in civil cases still takes much more time than in the North, even though the legal system and e.g. the career paths for judges have essentially been the same in both parts of the country for 150 years now (Tabellini, 2010).

This gap between the two regions in fact, requires the policy makers to bear in mind that any reform strategy that one proposes for the North, should not blindly be suggested to the South of the country as well. Italy probably needs different policy interventions in the two regions in line with the deep rooted institutional framework inherited from the past.

1.2. Institutions for knowledge creation and diffusion in Italy

Patents

A key institution of the entrepreneurial ecosystem is represented by intellectual property or patents. The usage of patents as an institution to encourage knowledge production and its diffusion is relatively old. In fact, it was in Italy where the first real patents appeared. There is a lot of discussion among historians whether Florence or Venice were the first to grant patent rights on innovations. There was strong and systematic interest of the Venetian Republic in promoting inventions long before 1400, but it was the city of Florence which recorded Filippo Brunelleschi as the first patentee in 1421. He was not only granted an exclusive right of 3 years to use his invention³, but also protected his work from potential imitators. The patent stated clearly that all those that pretend to replicate the invented device, should be burned at the stake (Frumkin, 1945). This patent, however, was still very *ad hoc* legislation.

The first system of legal intellectual property rights protection was adopted by the Venetian Senate on March 19, 1474. The decree enacted called upon every person who invents ingenious devices, to disclose their invention first to *Provveditori di Comun*. Doing so would benefit the inventor by protecting him for 10 years, thus excluding anyone else (Long, 1991).

“There are in this city, and because of its grandeur and virtue there come to us from other places, men of great genius, apt to invent and discover a variety of ingenious devices. And if it were provided that the works and devices discovered by such persons could not be imitated by others who may see them, stealing away the inventor’s honour, such men would exercise their genius and invent and make devices of no small utility and benefit to our commonwealth. Therefore, it is decreed by the authority of this Council that any person in this city who invents any novel and ingenious device, not made previously in our dominion, as soon as it is reduced to perfection, so that it can be used and exercised, shall give notice to the office of our Provisioners. It is being forbidden to all others in our land to make any other device which imitates and resembles the invention, without the consent and license of the author, for up to ten years” From the Venetian State Law, dated 1474.

Relying on what is stated above, the Statute is clear on several things that still characterise patents today. The decree mentions the originality of the work as a substantial ingredient in the way of getting a patent, industrial applicability – when mentioning “no small utility and benefits” and its protection by the exploitation for 10 years. One of the early Venetian patent receivers was Galileo Galilei for his invention of a “Mechanism for Raising Irrigation Water to Fields” in 1594 (Maynard, 1980). With the foundation of the Kingdom of Italy in 1861, the country implemented a patent law, similar to that in most industrialized economies (Moradei, 2009). But Italian legislation on intellectual

³ The patented device was about heavy loads transportation on rivers.

property has evolved a lot since then. The actual regulation of patents in Italy is now administrated by the provisions of the Civil Code (Arts. 2584-2591) and the “Patent Act” (Royal Decree No. 1127 of 1939) as amended by Law No. 338 of 1979 (‘PA’). Today’s Italian patent law has also been revised to act in accordance with the patent provisions of the TRIPS Agreement of 1995. The patent does not substantially differ from its initial form, except nowadays it is granted for 20 years, but with no warranty of extension thereafter (Holden, 2004). Also, the width, breath and extent of patent protection has changed substantially over time.

The debate on patent protection is not new to Italy. According to Sirilli (1986) the rise of technical and scientific development and the role of economists in the acknowledgement of patents as an indicator of innovation (see e.g. Schmookler, 1966; Scherer, 1965) have both driven the debate. Textbook economics claims that without patent rights inventors would have no incentives to produce the valuable knowledge they produce. But Sirilli (1986) shows for Italian inventors (who applied for a patent) that three-quarters of the respondents admitted that the absence of patent protection would not have prevented them from making the invention. Patents, also in Italy, serve a useful purpose in keeping track of and building a public registry of useful inventions, but it is especially the commercially applicable *“devices of no small utility and benefit to our commonwealth... not made previously in our dominion, as soon as it is reduced to perfection”* that should be registered and protected from imitation. Thus, like in many industrialized countries, also in Italy there is much debate about the usefulness of patents and the application of strict rules of protection of intellectual property as they are applied today (see for example Panunzi 2012). In this debate Italy could take a leading role and support experiments to bring patents back to their origin. That is, to credit the inventor for his work while ensuring the commonwealth may benefit from it.

Universities

The role of the university has changed and it has evolved into an institution that is expected to operate as ‘an economic actor in its own right’ (Etzkowitz, 1998). The traditional perception of the university as ‘an isolated island of knowledge’ (Klofsten and Jones-Evans, 2000) or ‘an ivory tower isolated from society’ (Etzkowitz, 2004) is diminishing more and more, also in Italy (Riviezzo and Napolitano, 2010). And there is abundant research on identifying the transition process of different universities into their new role. To understand the route of this transition it is of great importance to know the origin of the Italian institutions and the circumstances under which they were established.

In fact, Italian Universities rank among the oldest in the world. The University of Bologna is the oldest recognized university established in 1088 (Università di Bologna, n.d.). Other Italian universities that have obtained the official status of university institutions early in the Middle Ages include Padua, Naples, Rome, Perugia, Pisa and Florence (Simonini, 1954). These universities emerged as institutes where theology, law and philosophy were taught and their histories are all a long struggle to keep external influences from clerical and secular authorities out and conquering and protecting scholarly and academic freedom. Today, these institutions are typically very broad institutions of academic research, that are publicly funded, but retain high levels of autonomy and focus on academic knowledge creation and diffusion.

On the more applied sciences, the Italian educational landscape saw the first technical universities arise at the end of the 19th century. The oldest technical university in Italy is based in Torino and was established in 1859 under the name *Scuola di Applicazione per gli Ingegneri* (Technical School for Engineers). In 1906, it transformed into what today is known as *Politecnico di Torino*. Its creation coincided with the new era of industrialization that put the focus on Electrotechnics and Building Science (Politecnico di Torino, n.d.). Today, this university aims to enhance technological and scientific research capabilities and to integrate them into a higher education framework (Statute of Politecnico di Torino, 2011).

The second technical university of the country was founded only 4 years later (i.e. 1863) and it is the *Politecnico di Milano*. Indeed, its original name was *Istituto Tecnico Superiore* ("Higher Technical Institute") and the only majors that were taught were Civil and Industrial Engineering. In 1987, the school in accordance to its statute, experienced a territorial diffusion process expanding to regional campuses of Como (1987) and Lecco (1989), and regional facilities in Cremona (1991), Mantova (1994) and Piacenza (1997) (Politecnico di Milano, n.d.). Both technical universities notably were founded in the North, where the industrialisation of Italy took off.

The other two technical universities of the country are much younger. Politecnico di Bari is in the capital city of the Apulia region and was established in 1990 (Politecnico di Bari, n.d.). The group of Italian technical universities was enlarged further by another institution which previously used to be The University of Ancona. Lately, it changed its name to *Università Politecnica delle Marche* and it is recognized as a technical university starting from 2003 (Politecnica delle Marche, 2017). These institutions are based in the Middle and South of the country and are important actors in the respective local industrial ecosystems.

Of course, in recent decades, Italian universities and Polytechnics have increasingly started to teach entrepreneurship and engage in technology transfer, i.e. generating spin-offs/spin-outs. Still the literature on the topic considers entrepreneurship education in Italy "immature" (Iacobucci and Micozzi, 2012). There is only a small number of universities (mainly business and economics schools) that have been offering entrepreneurship courses and the topic is slow to diffuse. Considering the pressure to adopt new global trends and the Italian economy to shift from the "traditional" sector to a more "high-tech" oriented one, the change is rather slow and has appeared only from 2000 onwards. Iacobucci and Micozzi (2012) consider the presence of entrepreneurial content in technological and scientific schools still highly unsatisfactory. Entrepreneurship is hard to teach from books and articles alone and more involvement of entrepreneurs in (academic) education is an obvious way to improve the situation. Italian universities and polytechnics have a proud history and tradition to build on, but must consider preparing for their role in the Entrepreneurial Society.

1.3. A short history of financial development in Italy

Reforming the Italian institutional scene for a more Entrepreneurial Society also requires a deep understanding of its most significant financial institutions. Wishing for a vibrant Silicon-valley style venture capital sector will not change that. Italy is a well-known example of a bank-based economy

and it is of a great relevance to summarize its historical development and the culture that prevails in these institutions.

Modern banking has its roots in Italy. In fact, the rise of banking system dates back to Medieval and Renaissance Italy and originated in the prosperous and rich cities of Florence, Venice and Genoa (Hoggson, 2007). The Bardi and Peruzzi Families led banking in 14th century Florence, expanding with new branches in many other parts of Europe (Hoggson, 2007). In the 15th century the de Medici bank, which was established in 1397 by Giovanni de Medici (Goldthwaite, 1995), made a distinguished imprint in the development of banking and became the most important financial institution in Europe in the 15th century (The Economist, 1999). The de Medici bank grew into the most international bank of Italy (The Economist, 1999) and for decades was a highly respected bank in Europe (De Roover, 1999). It used its massive network to a degree that it attracted and maintained the Vatican as its largest client. Till 1434, more than half of the bank's revenues flowed through the Rome “branch” (which accompanied the pope around on his travels). The strong ties with Rome and Vatican brought the bank enormous influence on customers and the church itself (The Economist, 1999).

But many more banks were founded and operated throughout the centuries. Italy has still in existence *Banca Monte dei Paschi di Siena*, headquartered in Siena, Italy, which has been operating continuously since 1472 (Boland, 2009). The Economist recently agreed that this bank is the oldest surviving bank not only in Italy but probably in the whole world (The Economist, 2017). Saving the bank in recent years could thus almost be considered a matter of conservation of cultural heritage.

In the period between 1527 and 1572 the city of Genoa became the origin of important banking family groups such as the Grimaldi, Spinola and Pallavicino families who were especially dominant and wealthy. Families like the Doria, Pinelli and the Lomellini (Duggan, 2013; MacDonald and Gastmann, 2000) also rose as big players in banking during the 16th century. Banking in the Renaissance and after, was very much a family business and it mainly catered to the needs of rich merchants who wanted to settle large transactions over increasing distances and needed sophisticated products, such as insurance for cargoes at sea, trade credits and currency exchange services.

The first publicly held Italian bank that looked somewhat like a bank today, taking deposits and giving loans, was established in Milan in 1894. Gradually then, small industrialists and a rising middle class created demand and supply of what we consider to be traditional banking services. These banks are still operating today and typically served society for centuries (Hertner, 2016). The role of these banks in Italy was particularly relevant in the industrialization and modernization of agriculture in Europe after the World War I. As shown by seminal work of Gerschenkron, banks were necessarily important in the countries that were not as backward as Russia was but also not as advanced as the UK. Much of Europe, including (Northern) Italy was in the middle of this spectrum. This positioned banks to play a vital role in the industrialization process i.e. to finance the modern industry (Sylla, 2002). One important step that contributed to fuel economic development was the Bank Law issued in 1936 (R.D.L. 375/36) that reformed the whole system by, among other things, establishing a different nature for institutes devoted to different types of credit activities and limiting shareholding's linkages between industrial and financing activities to alleviate possible conflicts of interests. A new reform in 1993 (D.Lgs. 385/93), aimed at increasing privatization of the banking system and enlarging the array of activities of banks. Until about 2004 there was some consolidation in the Italian banking

sector but despite this M&A activity, concentration moved against the trend. That is, there were less banks in 2004 (800) than in 1985 (1100), but the market share of the largest five also fell over this period (Goddard et al. 2007; Coccoresse, 2013), implying consolidation took place among smaller banks and competition actually increased at the top. European legislation (e.g. the 2004 New EU take-over directive), implemented to further integrate European financial markets, have stimulated further consolidation in banking (ECB, 2017). But Italy's banking system still has many small, diverse, relationship-based cooperative banks that supported its SMEs also during the crisis (Castellani, 2018). Moving towards a very consolidated banking sector as in e.g. the Netherlands or UK, Italy may risk losing this system of small, diverse and arms-length relationship banking and risks credit being allocated more to real estate (mortgages) and traded financial assets. (Goddard et al., 2007; ECB, 2017). From the perspective of the entrepreneurial Society, that would be a loss. But to justify financing experimental venturing with bank credit, current mandatory reserve ratios are insufficient. Historically, when banking in Italy made its biggest contributions to the country's development, they were much higher.

1.4. Labour markets in Italy

There are many studies describing the role of labour market regulations and their impact on entrepreneurial activity. According to Henrekson (2014) labour market institutions that are important for entrepreneurship belong to three groups: (a) labour market regulations (especially job security mandates), (b) wage-setting institutions and (c) social insurance systems (including health insurance). Concerning its labour market institutions, Italy has commonly been grouped with other Mediterranean peers such as Spain, Portugal and Greece. Despite important differences, these countries are all characterized as institutional environments with (a) higher employment protection and (c) lower social security than other more continental European countries. Union bargaining coverage is often extended through provisions and so (b) trade unions control large parts of the labour market without being representative of large parts of the workforce (Dilli et al. 2016; Hassel 2014). We cover these aspects of the labour market briefly for Italy from a historical perspective.

As compared to other institutions (patents, universities, banks) that originated from the 15th century (or earlier), modern labour market regulation and labour relations formed much later, when Italy became a republic State and industrialisation caused the organisation of labour in the early 20th century. Italy's welfare state dates to right after the World War II and both labour regulations and social security were frequently reformed even in the recent crisis.

Employment protection

As for the employment protection in Italy, the dismissals were first regulated in 1966. According to the Law No. 604 any unfair dismissal obliges employers to either hire back workers or pay compensation based on individuals' experience and firm size (Boeri and Jimeno, 2005). For workers with less than two and a half years of tenure, the compensation ranged between 5 and 8 months. For those with two and a half and 20 years of tenure, the compensation varied from 5 to 12 months. The above regulation applied to firms with more than 60 employees while others with less than 60 had to pay half the severance pay (Boeri and Jimeno, 2005). Four years later, i.e. in 1970 The *Statuto dei Lavoratori* (Law

No. 300) became stricter for any firm with more than 15 employees, who had to hire back workers and pay their foregone earnings in case of unfair dismissals while firms with less than 15 employees were totally exempted (Leonardi and Pica, 2006). Historically, Italy was considered one of the strictest countries in terms of employment protection legislation (e.g. Lazear, 1990; Bertola, 1990; Nicoletti et al., 1999) whereas the same institutional arrangements had proven to represent a barrier to entrepreneurship in general (Golpe et al. 2008) and to ambitious entrepreneurship in particular (Henrekson et al., 2010). Important reforms were introduced in 2003 with the Biagi reform (Cirillo et al., 2017) and more recently with the Monti-Fornero reforms of 2012 and the “Jobs Act” of 2014 (Tiraboschi, 2012; Carinci, 2015). These reforms moved Italy’s labour market firmly in the direction of the *flexicurity* camp. The most significant modifications include the easing of dismissal regulation, more emphasis on active labour market policies and a new supervising national authority to enhance coordination among public and private actors (Raulli, 2017). More generally, Italy has decided to move from security of employees and jobs, to security of income and work. In general, such reforms should support a more entrepreneurial society in Italy, but careful evaluation of these reforms will have to show how they work out in the Italian context.

Wage bargaining

Regarding the wage setting institutions, this is based on the tripartite agreement of 23rd July 1993. It relies upon the industry-wide bargaining model, applied at the national level (Eurofound, 2009). As Calmfors and Driffill (1988) have shown, such a system of wage bargaining, tends to increase wage pressure, which in turn may result in high long run unemployment. Specifically, for entrepreneurs, such national coverage implies that vested interest parties can directly influence a major cost component for any employer. More importantly, these vested interest parties will also negotiate many additional job-related rights and entitlements that have limited portability across industries and sectors and are easy for incumbents to administer, but put a large burden on new ventures. Trade unions for example negotiate the terms of pensions, sickness and maternity leave, working hours per week, month and year, leave and education on the job. In the Italian, corporatist tradition employers, State and workers will negotiate in relative harmony (Regini, 1997), but Italy also has a strong history of class struggle and communism (Kertzer, 1980), making the unions more militant and willing to strike for their rights than in other Continental European countries. They share this labour militancy with the Mediterranean countries, although even in these countries, strikes are declining and labour relations seem to become more harmonious (Gall, 1999). Alternatively, one can interpret this as trade unions becoming less powerful and representative as organisation rates decline in new industries. As unions typically protect the position of their (long-term employed) members, this levels the playing field for more entrepreneurial employers. Reforms in this area should respect the tradition of paying decent wages for decent jobs.

Social security

The social insurance system is an institution in labour markets that at present in Italy is typically less developed compared to other European countries, but that, compared to the rest of the

Mediterranean countries, it is probably one of the most developed. Social insurance was first introduced between 1898 (work injuries) and 1919 (old age, invalidity and unemployment). In the period 1945-1975 the Italian welfare state was expanded a lot (see Ferrera, 2005 for an overview). A generous state funded pension, universal health care, constitutionally guaranteed unemployment benefits and social security benefits were put in place and typically funded on a pay as you go basis. These systems have all been built up after World War II and have a relatively short history. Still, some rights are considered inalienable and the pay as you go financing implies that current generations have paid for the social security and entitlements they were (implicitly) promised would also be available for them in the future. Reforming such systems can then be politically complicated, but in the 80s and 90s and more recently after the financial crisis, we have seen significant reforms in this domain. This suggests that social security is probably not a deeply rooted institution and reforms can be proposed to promote more entrepreneurship. Such reforms should not lower protection and security, but rather make entitlements and rights more portable across jobs and industries.

1.5. The role of the Catholic Church

Among the institutions that left a deep imprint in continental European legal traditions are certainly the seat of the Catholic Church in Rome and the principles of the Roman Civil Law. During the Middle Ages, the Catholic church was particularly active as a source of corporatism through the various sponsored function-based groups and institutions including universities, guilds of artisans and craftspeople, and other professional associations. The establishment of a system that relies on guilds involved the allocation of power to regulate trade and prices to guilds (Wiarda, 1997). The role of the Catholic Church was evident also during the industrialization. While accompanying the process, it managed to maintain its influence on large parts of the population. In particular, the Church played an opposing role towards the growth of towns, emigration and large enterprises (Federico and Toniolo, 2002, p. 209). Nowadays, the Catholic Church in Italy is still characterized by widespread worship and churches. In fact, besides the presence of church buildings as historical monuments and heritage from the past, their presence is still pervasive through institutions such as schools, hospitals, nursery schools, rest homes, shelters for the chronically ill and the handicapped, special institutions for education and retraining, publishing houses etc. (Garelli, 2007). This rich religious past qualifies Italy as the nation with the most baptized Catholics, at 97% (55 million) of the population (Garelli, 2007).

The various religious institutions have been in place for centuries and still very much today represent integral and structural components of the social relationships that characterize the Italian territory (Garelli, 2007). As in the United States philanthropy is the norm, the Catholic Church has a long-standing tradition of charity. Moreover, the Catholic Church promotes a more inclusive model of economic governance and values relationships and, at the end it is an important facilitator of social cohesion. What this implies for entrepreneurship is hard to say. On the one hand, Catholics exhibit high external locus of control, making them perhaps less prone to challenge the status quo (Shrauger and Silverman, 1971); but on the other, Catholicism preaches forgiveness and thereby is generally more tolerant towards diversity and failure. Whatever the case, Catholicism is deeply rooted in Italy and must be considered when one wants to reshape institutions to enhance entrepreneurial dynamics.

With the new Pope, Catholicism may now be more tolerant and open to experimentation and new approaches.

1.6. Rule of law

Putnam et al., (2006) wrote “Corruption is widely regarded as the norm, even by politicians themselves, and they are cynical about democratic principles... Trapped in these interlocking vicious circles, nearly everyone feels powerless, exploited, and unhappy ” to discuss the problems on how to make democracy work effectively in Italy. However, things do not look this bleak, nowadays. According to Graubard and Cavazza (1974), the ineffectiveness of public administration in Italy during the early time was mainly related to the so called, “clientelismo” – which was a sort of political patronage allowing certain groups of citizens to connect to politicians through special laws and a system of kickbacks offered to public officers for influencing public decisions. The signs of a diminished tolerance toward corruption in Italian society appeared especially in the 80’s (see Cazzola, 1988), and the fight against public bribery and corruption was further propelled by the “Mani pulite” (literally “Clean hands”) judicial investigation into political corruption held in Italy in the early 1990s, that led to the disappearance of many political parties and to the end of the so called “First Republic”.

These improvements are hopeful, but should not lead to the conclusion that the work has been done. Corruption and organized crime organizations have not been wiped out. They are still present in Italy and at times heavily condition economic activities⁴ (see e.g. D’Onza et al., 2016; Spanò et al., 2016; Spanò et al., 2017; Allini et al., 2017). The FIRES-reform proposals in Part I all build on the assumption that an effective and fair government is in place and as we have stated in proposal 1, there is no alternative to fixing these problems, when that assumption is violated.

1.7. Recent entrepreneurship policies in Italy

In this section, the laws and policies that have shaped the Italian entrepreneurship ecosystem and some of their implications and peculiarities will be shortly discussed. This will be done in a chronological manner starting at the beginning of the “Second Republic”.⁵ Some laws and policies from earlier moments in time will be added because of their relevance in the development of the latter.

1.7.1. The First Republic

The Sabatini “Vecchia” (Old Sabatini)

In the after-war period, several laws were introduced in industrialized countries to raise financing of projects, especially those dedicated to scientific activity (Rolfo and Calabrese, 2010). However, in Italy, a more technological focus was intended with, for example, the 1965 Sabatini Law (Law 1329). It was created with the purpose of providing subsidies for tool and machinery purchases (Baldassarri, 1993).

⁴ For example, there is some evidence that organized crime has profoundly influenced the location of foreign direct investments (FDI), further increasing the gap between the North and the South of the country (Daniele and Marani, 2011).

⁵ “Mani pulite”, the extensive process who put up for trial the main party “Democrazia Cristiana”, marked the end of the First Republic and the beginning of the Second Republic. This period is chosen as a starting point because it signified a true “new beginning” in political terms.

The instrument got a lot of attention because it represented the most important source of financial support for firms investing in new machinery and capital equipment (Santarelli and Sterlacchini, 1994).

Law 44

In the eighties, other complementary laws were introduced of which most were specifically dedicated to young SMEs and entrepreneurs. For example, Law 44, introduced in 1986. This law was dedicated to support young (under 35) entrepreneurs in the south of Italy, a region which at the time showed a very low degree of competitiveness and, most importantly, its young citizens were commonly perceived as good potential entrepreneurs -it mainly intended to aid and prepare them to succeed despite the present market imperfections (Battistin et al., 1998).

1.7.2. The nineties and the “Second Republic”

In the 1990s, Italy was still highly dominated by small businesses. More than 99% of active firms employed less than 50 employees and less than 3,000 firms employed more than 250 employees (UnionCamere, 2005). In fact, increasingly more attention was paid to SMEs by industrial policy – especially concerning innovation, which was usually thought to be of sole concern to larger firms. In addition, improvements in the bureaucratic structure of state-aid-provision entities created a more “SME-friendly” environment. It is relevant to note that, at the national level, systems of support have favoured process innovation rather than product innovation (Rolfo et al. 2010).

Law 317/91

At the very end of the First Republic and under the last Christian Democratic coalition, Law 317 was passed in 1991. This law replaced previous programmes addressing innovation and consisted of providing either financial incentives or tax benefits to industrial firms of less than 200 employees and services/retail/tourism firms of less than 75 employees, that were willing to adopt microelectronics-based machinery (Santarelli & Sterlacchini, 1994).

Law 488/92

In 1992 Law 488 was introduced in order to facilitate finance to firms located in “under-exploited” areas in the country. The programme was focused on firms specializing in manufacturing, extraction, production and distribution of electric/steam/water energy, construction. Only a mere 5% was directed to those focused on information technologies. The amount of financing given was assessed according to the areas in which the firms would operate and their dimensions, giving privilege to less developed areas and smaller enterprises –to which 50% of the resources were allocated.

Law 598/94

Law 598 was introduced in 1994 by the first Berlusconi government and could be considered one of the first and biggest innovation policies of the Second Republic. The intended purpose of this initiative was to provide subsidies of a regional character to SMEs, focused mainly on the subsidisation of industrial R&D and technological development projects. The financial aid given would be either in the form of a grant, guaranteed loans or interest subsidies on each particular project (Incentivi MCC, n.d.).

Every region had its own set of specific entry requirements and therefore the programme implications may differ from region to region (Banca Prossima, n.d.). Among all regions, craft enterprises were excluded whereas cooperatives were admitted (Europroject, n.d.).

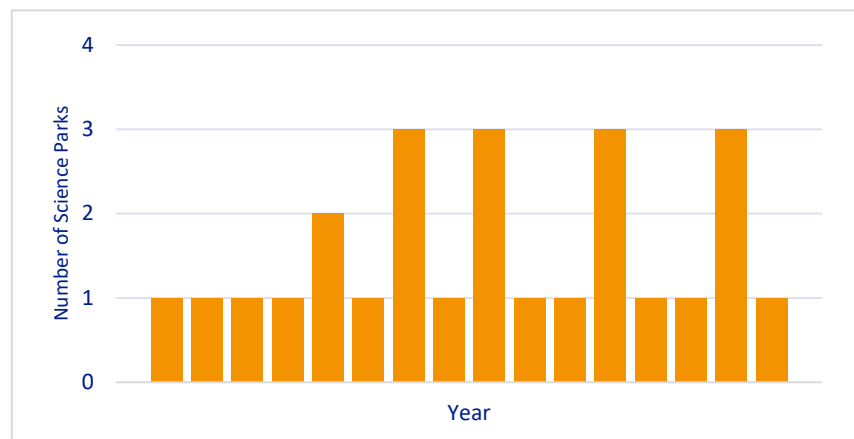
Law 140/97 and Law 449/97

In 1997, laws 140 and 449 were introduced as the “urgent measures for the rebalancing of public finance” (Gazzetta Ufficiale, 1997). These were mainly concerned with the modification of previous laws regarding employment and expenses covered by public finance programmes and generally amounts granted were reduced.

Science Parks

In the 1990s, according to The Bank of Italy survey of 2012 on Science and Technology Parks, there was a ‘boom’ in the number of science parks. Figure 1 below summarizes the frequency of science park creation between the 80s and 2008 (Liberati et al., 2013).

Figure 1: Foundation of Italian Science Parks (Liberati et al., 2013)



It is important to note that there was quite some heterogeneity in birth of different science parks across the country. For instance, Turin has a very well-known and prestigious university and because of that, the regional government focused on policies which regard initiatives such as incubators and science parks. Therefore, today we see two highly regarded science and technology parks, the Environment Park and the Bio-Industry Park (Salvador, 2010) in Turin.

Road Map for Italy

At the end of the 1990s the Ministry for University and Scientific Research introduced the research programme “Road Map for Italy”, which mainly aimed its attention at SMEs’ innovative and policy needs. The programme covered 300 SMEs with low levels of technology, and examined areas such as product and process development, internal competencies, support of suppliers and industrial customers in the innovative process, adoption of information technology, the role of human resources and the obstacles to innovation. The most relevant result of the research programme was that

entrepreneurs intervene too much and too long in Italian firms; in fact, in many cases, it is the background of the entrepreneur what determines the ultimate success of the firm. This has had big consequences for the technological culture of SMEs in Italy (Rolfo et al. 2010).

1.7.3. The new millennium and most recent policy developments

Environmental Concessions (L.388/2000)

The Environmental Concessions law introduced at the turn of the millennium seeks to give provisions on the taxation of business income, establishing a tax relief system for SMEs that make environmental investments. Under the law, it is specified that such expenses should not be related to mandatory environmental regulations but rather tax exemptions apply to investments of voluntary character. Furthermore, the share of corporate income destined for such investments is not taxable. As a lot of energy and resource saving equipment and investments would fall under this legislation, the program gives Italian SMEs an incentive to develop sustainable business practises and potentially develop new competitive advantages in doing so.

Small Business Act

In 2008, the European Commission launched the Small Business Act (SBA) which was aimed at improving the framework for SMEs and reducing the obstacles and regulations which prevented SMEs from becoming –and remaining- successful. In 2009 Italy was one of the first EU countries to approve the SBA proposal and adopt it domestically. The approval of this programme allowed for the immediate mandatory and continuous monitoring of SME policies and, for the arrangement of “one law a year” regarding small firms (Ministero dello Sviluppo Economico, n.d.). One of the main implications expected from the implementation of the SBA in Italy was to alleviate unemployment, as the empowerment of SMEs usually gives better results in terms of lower unemployment, than medium-big sized firms. Some of the interventions under the SBA include:

- *Law 29/2009-2* was adopted to facilitate access to credit. The Ministry of Economic and Financial Affairs issued provisions concerning the procedures and conditions for the public subscription of special bank bonds. It consisted of the commonly known ‘Tremonti Bond’, through which the banks that subscribe to it, obtain a financial provision to be allocated to the granting of loans to businesses. In order to improve the firm usage of laws 662/96 and 266/97 –passed in the late 90s- in 2009 the budget was raised to 1.6 billion euros, tripling of the maximum amount of each intervention (from 500,000 euros to 1.5 million euros).
- *Law 185/2008*, proposed to guarantee the integrity of credit and avoid any charges to businesses, was passed with the specific decree that demands any administration at any time to certify its own debt.
- *Law 78/2009*, ‘Manovra anti-crisi’ was passed to promote the reinvestment of profits in capital goods. Furthermore, regarding the relationship between business and public administration, the law intends to make resources available on occasion of the budget adjustment.

- *Law 99/2009 'Legge Sviluppo'*, provided a broad mandate to the government to reorganize regulatory obligations for companies. It also provided a legislative decree for the reorganization and reform of the fundamental incentive programs for companies. Overall, the law required special attention to interventions for SMEs, to which the administration must, among other things, allocate at least 50% of resources. Furthermore, this law sought to favour the creation of business networks with its 'Network contract' – "the agreement by which two or more companies are obliged to jointly exercise one or more economic activities that fall within their respective social objects in order to increase their reciprocal capacity for innovation and competitiveness on the market" (art. 1).
- "*Unique Communication*" was also launched in 2009. It gave the possibility for starting a business by sending a single communication to the Chamber of Commerce – containing information which until then had to be sent to all sorts of entities in different forms. Regarding innovation – and this time not only in technological terms -, in order to increase SME competitive advantage, a specific decree was introduced in 2009 which made available €700 million as first endowment for innovative investments.
- *Law 82/2009* aimed to facilitate experimental development programs, possibly including activities of industrial research concerning product and/or process innovations aimed at replacing and/or eliminating chemical substances. The resources available for the implementation of the interventions amounted to €80 million.

Other initiatives regarding the sustained growth of SMEs included: the fund for competition and innovation; the fund for rescue and restructuring of businesses in difficulty; the fund for districts and business networks; measures for the automobile sector, domestic appliances, furniture and apparel; the National Innovation Fund (for patents); the Made in Italy Fund (for internationalization); and various fiscal initiatives (Ministero dello Sviluppo Economico, 2009). The Italian crisis response, at least initially, was to strengthen its innovative SME sector and initially even increase spending to maintain investment in innovation and R&D.

Restart Italia!

The Programme labelled "Restart Italia!" was launched by the Ministry of Economic Development in 2012 with the aim of significantly reshape the Italian entrepreneurial environment in order to promote economic growth and employment –under the premise that start-ups contribute to the revival of its productive sectors. Overall the project envisioned outcomes such as the development of innovation and entrepreneurship culture, social mobility, transparency and meritocracy and the attraction of foreign factors of production. The report published accompanying the programme laid out 1) the definition and aim of a start-up, 2) the stages and associated difficulties and solutions proposed, 3) the role of territories and 4) mechanisms through which evaluate the progress of the programme and its impact on the Italian economy and society.

The arguably most significant result of the implementation of the *Restart Italia!* programme was the newly recognized status of start-ups –as innovative enterprises of high technological value- as it was introduced into the Italian legal system. For the very first time, these enterprises could officially make

use of new instruments and support measures which were specified in the legislation. The resulting “Law 221/2012” is an organic and coherent policy for which public support for innovative entrepreneurship represents a new way of thinking about industrial policy-making (Ministero dello Sviluppo Economico, 2012).

Bando Horizon 2014-2020

The initiative introduced in 2014 aimed to provide guidelines and support for the period 2014-2020 and its financial allocation was composed of €180 million. Of this sum, €150 million were particularly destined to R&D projects located in Italy’s least developed regions (Basilicata, Calabria, Campania, Puglia e Sicilia) and €30 million to those considered in transition (Abruzzo, Molise and Sardegna).

The Italian Start-up Visa

Originally the Italian Start-up Visa (ISV) programme was introduced in June 2014 with the aim of facilitating self-employment visas to non-EU citizens who were interested in launching an innovative start-up in Italy. The initiative was composed of a novel procedure which was characterised by being “fast-track” –never taking more than 30 days to be issued-, centralised, digitalised, bilingual and free of charge. The committee evaluating the applications was (and still is) formed by the presidents of five key associations of the Italian innovation ecosystem –including business angel firms, university incubators and others. The ISV was, in addition, also supportive of both individual applications and those jointly submitted by partnerships; and was also accessible for non-EU citizens who wanted to become shareholders of an innovative Italian startup incorporated by third parties.

Start-up Act

Italy’s Start-up Act was first published in 2015⁶ presents a package of tools which is composed of all policies and programmes initiated by the government since Restart Italia! in 2012. Its main purpose was to achieve a suitable and encouraging environment for the formation and development of innovative firms which would significantly favour economic growth and employment. Furthermore, it sought to achieve knowledge spill-overs within the Italian economy and to increase the support for production oriented towards high-tech and high-skilled sectors. Expected indirect effects of these measures included greater social mobility; stronger links between academic institutions and firms; incentives for risk-taking regarding business ventures; and increasing Italy’s attractiveness for foreign labour and capital.

Industria 4.0

The National Plan “Industria 4.0” was introduced to be effective from 2017 onwards and it is referred to as “the opportunity for all firms who wish to take advantage of the opportunities provided by the fourth industrial revolution”. The programme was mainly designed for firms operating in the manufacturing sector which wanted to become more competitive in terms of innovation and technology, and was intended as “a great deed of trust from the government to enterprise”. This was

⁶ Other versions have been published since 2015 onwards.

the case as the programme was to be applied without –or as little as possible- constraints by bureaucratic processes or subjected to territorial or sectorial selection. The programme would invest in all stages of the life cycle of firms, particularly focusing on investment support in the digitalisation of production, in the development of employee productivity, in the training of applicable skills and in the development of new products and procedures. The general plan of *Industria 4.0* is based upon three main principles: operate in a logic of technological neutrality, intervene with horizontal rather than vertical or sectorial action, and act on enabling factors (Ministero dello Sviluppo Economico, 2017).

1.8. Conclusions

In conclusion we should take away a few important lessons from the above. First, Italy has a long and proud history of supporting a vibrant entrepreneurial economy of locally embedded, often family owned small and medium sized firms that make up a major share of its economy. That ecosystem was supported by banks, patents and universities early on and industrialization, especially in the North, brought deep rooted but modern financial, labour and knowledge institutions to Italy. Their deep historical roots could pose challenges, when considering reforms, but instead their history probably makes it easier to modernize Italy's entrepreneurial ecosystem. From more recent policy initiatives we conclude that national policy makers in Italy have clearly recognised the importance of supporting Italy's Entrepreneurial Society. Moreover, we note that recent policy initiatives are well-informed and well-targeted. Policy makers try to reduce the regulatory burden and remove undue barriers. Policies are less particular and targeted at entrepreneurial venturing in general, and instruments lose their sectoral, geographic and size related barriers. Building on its specific history, Italy is well-positioned to promote more entrepreneurship in its economy. In the next steps we will use quantitative and qualitative information to identify what factors are holding Italian entrepreneurs back.

2. Step: Data Analysis with GEI and REDI for Italy

2.1. Italy's starting position

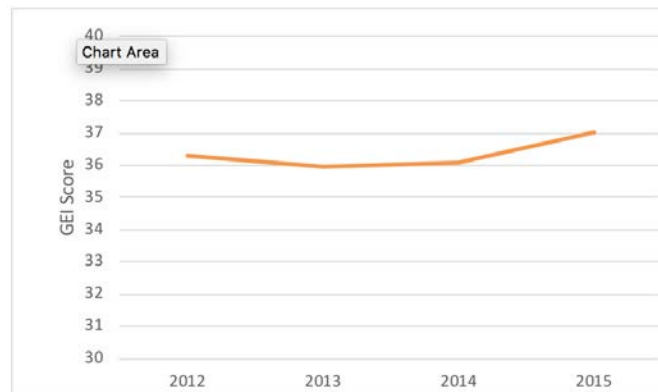
According to Table 2, Italy ranks 30th in the Global Entrepreneurship index with 41,4 points. Among the G7 countries Italy ranks last.

Table 2: GEI Ranking Based on 2016 Data

Rank	Country	GEI	Rank	Country	GEI
1	United States	83,6	34	Colombia	38.2
2	Switzerland	80,4	35	Greece	37.1
3	Canada	79,2	36	Jordan	36.5
4	United Kingdom	77,8	37	Hungary	36.4
5	Australia	75.5	38	Uruguay	35.0
6	Ireland	73,7	39	Croatia	34.0
7	Sweden	73,1	40	South Africa	32.9
8	France	68,5	41	Malaysia	32.7
9	Netherlands	68,1	42	Lebanon	31.5
10	Finland	67,9	43	Belize	30.0
11	Hong Kong	67,3	44	Kazakhstan	29,7
12	Austria	66,0	45	Morocco	29,2
13	Germany	65,9	46	Macedonia	29,1
14	Israel	65,4	47	Peru	28,4
15	Taiwan	59,5	48	India	28,4
16	Chile	58,5	49	Bulgaria	27,8
17	Luxembourg	58,2	50	Panama	27,7
18	Qatar	55,0	51	Thailand	27,4
19	Estonia	54,8	52	Iran	26,8
20	Korea	54,2	53	Mexico	26,4
21	Slovenia	53,8	54	Egypt	25,9
22	United Arab Emirates	51,7	55	Georgia	25,8
23	Poland	50,4	56	Russia	25,2
24	Portugal	48,8	57	Argentina	24,0
25	Cyprus	48,0	58	Jamaica	22,2
26	Spain	45,3	59	Indonesia	21,0
27	Slovakia	44,9	60	Ecuador	20,5
28	Turkey	44,5	61	Brazil	20,3
29	Puerto Rico	42,1	62	Guatemala	18,5
30	Italy	41,4	63	El Salvador	16,7
31	China	41,1	64	Cameroon	15,4
32	Latvia	40,5	65	Burkina Faso	13,2
33	Saudi Arabia	40,2			

At rank 30 in this selection of 65 countries it is between China and Puerto Rico globally and between Latvia and Slovenia in Europe (in black). Italy is trailing in the league of developed, but ahead of the emerging economies. Its score is almost the same than that of China (31st). However, it is almost twice of that of India (48th), Russia (56th) and Brazil (61st).

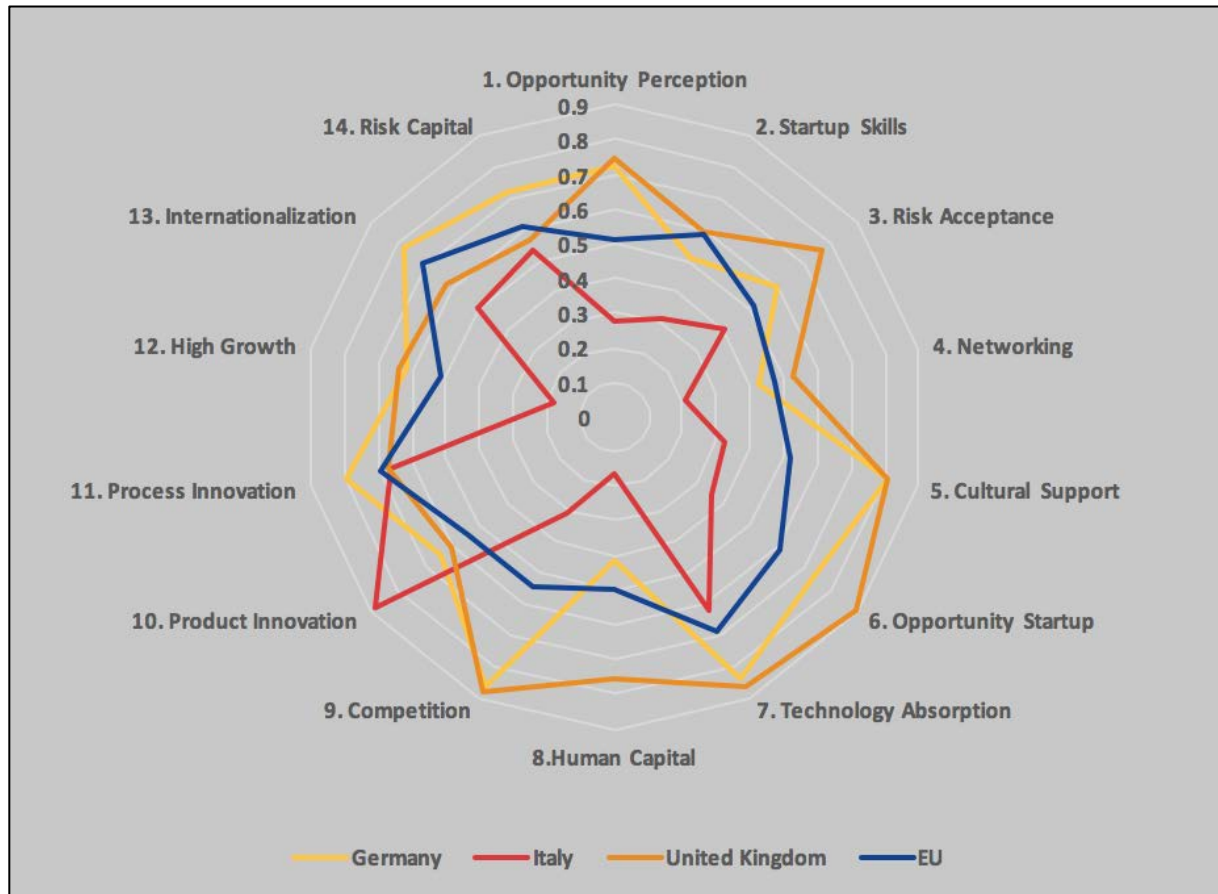
Figure 2: Italy GEI-index 2012-2015



By looking at Figure 2, it is apparent that progress in Italy has not been impressive, having risen by only 0,7 points in the GEI scale.⁷ However, such slow progress is as can be expected. The index is based on institutional factors that are slow and very hard to change. The value of the GEI-index approach is more in identifying in what institutional areas progress is most urgently needed. For that we have to break down the overall score in its components.

⁷ In the GEI the score for Italy can be interpreted as relative to a maximum score of 100 for a (fictional) country that would score highest on all 14 pillars. Table 1 shows the US scores 83,6 on the country level GEI.

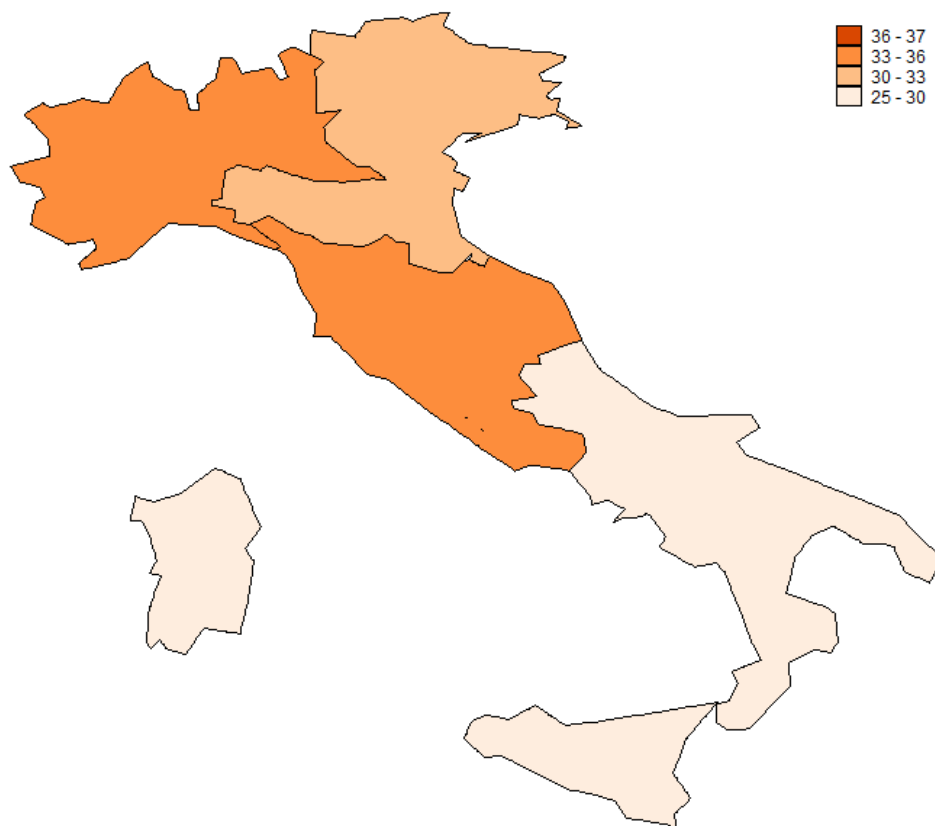
Figure 3: Radar-plot GEI comparison Italy



From Figure 3 we can see that Italy is performing below the European Union average on almost all aspects of the Entrepreneurial Ecosystem that the GEI-REDI methodology includes. The scores on the 14 pillars are markedly low for “Opportunity Perception”, “Networking”, “High Growth” and “Human Capital”, but overall the Italian entrepreneurial ecosystem needs strengthening on almost all fronts.⁸ Only in “Product Innovation” and “Process Innovation” Italy scores above the European average (and even above Germany and the United Kingdom). These high scores indicate that Italy’s long tradition of industrial policies to support innovative SMEs (see above) pay off. But as the entrepreneurial ecosystem approach argues that bottlenecks in the system reduce the efficiency of the whole, Italy should focus on making the radar plot “rounder” and invest most of its energy in addressing the aspects of the ecosystem that are lagging behind.

⁸ Here the pillar scores are normalized to 1 (or 100%) for the best scoring country on any of the pillars. Italy scores 0.9 on pillar 10, product innovation, signifying there it score 90% of the highest country score on that pillar. Likewise, for High Growth it scores only 20%.

Figure 4: REDI map of Italian Regions



Region	REDI-scores 2012-2014
Nord-Ovest	33.5
Nord-Est	32.6
Centro	33.5
Sud	25.7
Isola	26.7

If we zoom in on the regional level, in Figure 4 we see that Italian regions all score in a relatively narrow band between 25.7 and 33.5, with the expected Southern regions lagging the Center and North. We observe in Figures 5 and 6 that the pattern for all Italian NUTS-2 regions is roughly the same as that of the country. We do see slightly more rounded radar-plots for the North and Centre in Figures 5 and 6, but the picture of a strongly unbalanced entrepreneurial ecosystem is robust.⁹

⁹ Note that here the reference group is the set of 125 European NUTS-1/2 regions in 24 EU Member States that are available in the REDI-index dataset presented in D4.4. For example, note now the score for Italian regions on “Product Innovation” is 1, implying here Italian regions score highest in Europe.

Figure 5: Radar-plot REDI 2012-2014

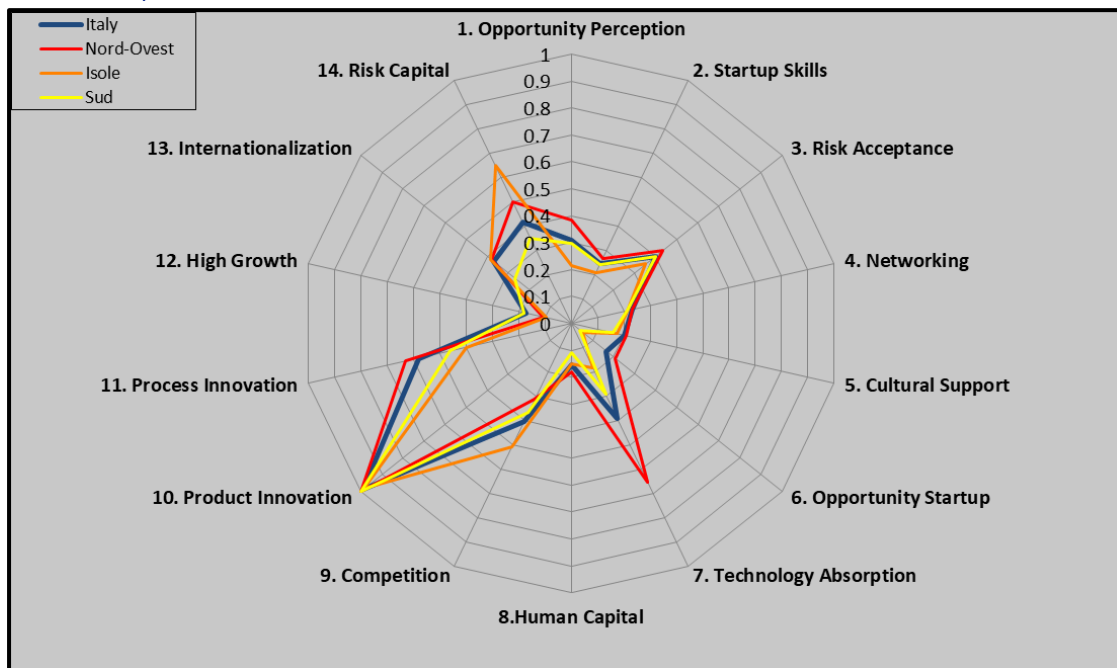
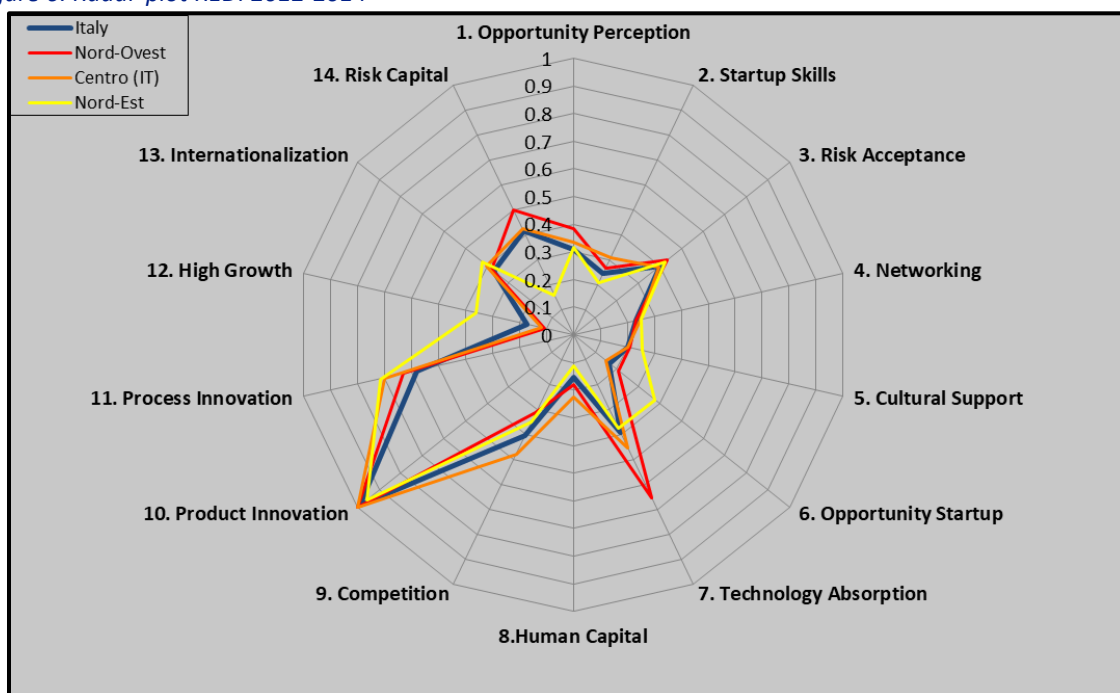


Figure 6: Radar-plot REDI 2012-2014



The good news for Italy is, that with small improvements in its weakest pillars, large improvements in the ecosystem are likely to be achieved. Moreover, from the regional radar plots it seems that the same weaknesses hold back Italy’s entrepreneurial society across all regions. This implies national level policies to promote “high growth” and “human capital” are likely to benefit entrepreneurship throughout the territory. In the next subsection we go into more detail on the construction of the

composite index and its pillars for the “Centro” region. The appendix also presents the report cards for the other NUTS-2 regions in Italy.

2.2. A more detailed quick scan

From a quick-scan of the Italian entrepreneurial ecosystem, we may conclude that (further) reforms are likely to be beneficial. Fortunately, Figures 5 and 6 above have shown that all Italian regions would benefit from efforts to improve the same weak pillars. This gives the national government the opportunity to formulate policies that will benefit advanced and backward regions alike. Most urgently, all regions in Italy would have to address the lack of High Growth Aspirations and Human Capital. Improvements on these aspects would alleviate the most prominent bottlenecks in the system in all regions of Italy. But before we draw this rather general conclusion, it is good to dig a little deeper into what underlies Italy’s regions low scores on these pillars of the ecosystem.

As explained in FIRES-reports D4.2 and D4.4, the REDI-index is composed of 14 pillars that bring together information on institutions and individual entrepreneurial agency. Together, this data reveals the quality of the entrepreneurial ecosystem along fourteen relevant dimensions. Without going into technical details in this report¹⁰, the intuition behind each of the pillars is that data on individual entrepreneurial agency (taken from the Global Entrepreneurship Monitor adult population survey data) is combined with relevant institutional quality indicators (taken from a wide variety of reputed international institutions, such as World Bank, Freedom House and OECD). The unique feature of the REDI-index is that it builds on the assumption that institutions and individual agency are complements.

That is, high levels of e.g. high opportunity perception in a low-quality institutional environment, will contribute little. Likewise, low opportunity perception in a high-quality institutional environment is also a sign of weakness in the entrepreneurial ecosystem. To improve the score on a given pillar, policies should seek to first improve the weakest link and then aim to increase both institutional quality and individual agency together. Especially because of the latter, the menu of possibly effective interventions is not limited to the scores on the institutional quality indices alone. The same logic is then also imposed on the pillars that make up the three sub-indices: Attitudes, Abilities and Aspirations.

In Table 3 below we present the full REDI-report card for the region “Centro” and illustrate how this report card can be used to identify the areas in which institutional reform is urgently advised.¹¹ For example, the score on the pillar on “High Growth” signifies that in Centro the score on this pillar is only 12% of the highest score observed in 125 European NUTS-2/1 regions on this pillar. The pillar combines information on Clustering (0.40) in the region with the prevalence of Gazelle start-ups (0.38) among the new firms founded in the region. Using an algorithm that combines the scores on individual agency and institutional quality, a score per pillar, per sub-index and ultimately for the entire region is computed. At every level, the algorithm rewards a balanced development within and across pillars and punishes the score when bottlenecks are present. The low scores are marked red.

¹⁰ We refer interested readers to the relevant FIRES-deliverables D4.2 and D4.4 and the technical annex to D4.1 for further details.

¹¹ The REDI- report cards for the rest of the area scan be found in Appendix I and give a similar picture for Nord-Est, Nord-Ovest, Sud and Isola.

Table 3: REDI Report Card Italy-Centro

		PILLARS	INSTITUTIONAL VARIABLES		INDIVIDUAL VARIABLES	
Entrepreneurial Attitudes	Opportunity perception	0.34	Market Agglomeration	0.46	Opportunity Recognition	0.57
	Start-up skills	0.31	Quality of Education	0.65	Skill Perception	0.34
	Risk Acceptance	0.39	Business Risk	0.69	Risk Perception	0.37
	Networking	0.25	Social Capital	0.46	Know Entrepreneurs	0.37
	Cultural support	0.20	Open Society	0.35	Career Status	0.85
Entrepreneurial Attitudes 28.1						
Entrepreneurial Abilities	Opportunity startup	0.15	Business Environment	0.27	Opportunity Motivation	0.67
	Technology Absorption	0.45	Absorption Capacity	0.37	Technology Level	0.85
	Human Capital	0.23	Education and Training	0.45	Educational Level	0.39
	Competition	0.48	Business Strategy	0.90	Competitors	0.35
Entrepreneurial Abilities 29.9						
Entrepreneurial Aspirations	Product innovation	1.00	Technology Transfer	0.79	New Product	1.00
	Process innovation	0.70	Technology Development	0.57	New Technology	0.96
	High growth	0.12	Clustering	0.40	Gazelle	0.38
	Globalization	0.40	Connectivity	0.65	Export	0.55
	Financing	0.43	Financial Institutions	0.56	Informal Investment	0.64
Entrepreneurial Aspirations 42.6						
GEI		33.5	Institutional	0.54	Individual	0.59

In Entrepreneurial Aspirations, the low score on “High Growth” signals that in Centro the aspirations to found high growth firms are a constraint on high quality entrepreneurship in general. We see this bottleneck is also prevalent in other Italian regions, suggesting that perhaps national policy action is called for. As the individual variables reflect responses of individuals to their institutional environment, this red flag suggests we should think about policy interventions and institutional reforms that promote cluster formation (as clusters tend to stimulate high growth start-ups in particular) but also other interventions that would stimulate firm growth, in particular in small and young firms. Labour market reforms as proposed under the recent “Jobs Act”, can for example prove to be beneficial in removing the penalty on growth that is present in many firm size related social security and labour market protection provisions. It will probably take some time for such reforms and interventions to show up in the report card, as the numbers will only change when people respond to the new situation by starting more ambitious and successful firms. But such fundamental reforms are what we suggest

should be preferred over more direct but less fundamental policies that would boost the indicators directly, but superficially.

Similarly, the report card flags “Human Capital” and “Opportunity Driven Entrepreneurship” as weaknesses in the Entrepreneurial Abilities, whereas in Attitudes, the pillars “Networking” and “Cultural Support” reduce the overall quality of the entrepreneurial ecosystem. For “Human Capital” both “Educational Level” and “Training” warrant attention, whereas for “Opportunity Driven Entrepreneurship” it is especially the poor quality of the business environment that keeps the pillar down. Italian entrepreneurs seem to see opportunities, but are held back by deficient human capital and a daunting bureaucracy in starting up new ventures. To address these weaknesses, targeted interventions to improve the business environment will be needed, whereas reforms in the educational system are also advised. Not because the Italian education system does not deliver high quality graduates, but because that quality currently does not seem to flow into entrepreneurial venturing.

In Entrepreneurial Attitudes the pillar on “Networking” is weak because of a lack of successful role models (individual), whereas the “Cultural Support” pillar is weakened by the low system wide score on “Open Society” that negates the relatively high score for “Career Status”. It is not straightforward to come up with reforms that improve these aspects, but below we will make some suggestions.

2.3. A tide lifting all boats or investing in excellence?

Having identified the weakest pillars for the regions of Italy, we can simulate what would happen if we would improve these weaknesses. Of course, such an exercise has a high counterfactual character and it is far from clear what it would entail to actually change the (situation and then the) scores in reality. But it does bring to the fore an important trade off that policy makers face. In Table 4 we list the regions of Italy and their original REDI-scores in column 3. In column 4 we have increased all regional scores by 10% as a benchmark scenario. By reversing the algorithm, we can then compute by how much what pillars and variables would have to be increased to achieve that 10% increase. Assuming (quite arbitrarily and without claiming any empirical support for this assumption) that increasing a pillar score by one unit of the index is about equally difficult across pillars and variables, we can then compute the minimum required effort (MRE) to achieve this improvement.

By taking this total MRE and reallocating it across regions, we then compute a scenario in which we maximize the country score for Italy in column 5. This typically involves strengthening the already strong entrepreneurial ecosystems in Nord-Ovest and Nord-Est and Centro. In column 6 we report the regional REDI-scores when instead the MRE is allocated to maximize the score of the least performing regions, Sud and Isola. This exercise, although one should not attach too much weight to the exact numbers, does reveal an important trade-off that our research has revealed is generally important.

Table 4: Summary Table on new REDI scores after different versions of optimization

Region code	Region Name	Original REDI score	Modified REDI score 10% increase	Modified REDI score optimization	Modified REDI score poorest region
ITC	Nord Ovest	33.5	36.8	36.3	33.5
ITF	Sud	25.7	28.2	29.1	31.9
ITG	Isole	26.7	29.4	29.8	31.9
ITH	Nord Est	32.6	35.9	35.7	32.6
ITI	Centro	33.5	36.9	36.5	33.5

It should be clear from Table 4 that what is best for the country is not best for all regions. This is a dilemma that we typically identify at the regional, national and EU-level. The trade-off is evident. In a globalized economy, where competition implies that only the best can thrive, countries (and regions and cities within regions) do best if they concentrate their efforts and talent to excel. Clustering, density and smart specialization have large benefits in creating sustainable competitive advantages. But as the core-regions join cities and regions on the global frontier, they also tend to pull away from the regions that stay behind. Such unequal outcomes may have severe political backlashes and are hard to justify from an equity perspective. Policy makers must balance centripetal and centrifugal forces at every level of policy making. What is true within regions (economic activity and innovation cluster in the cities) is true in countries and the European Union as a whole.

Figure 7: Before within country optimization

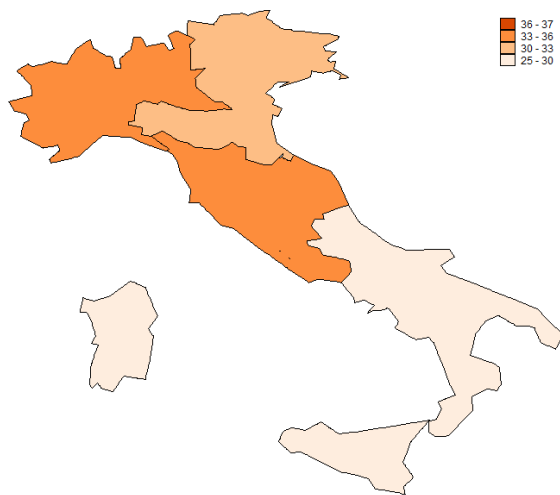


Figure 8: After within country optimization

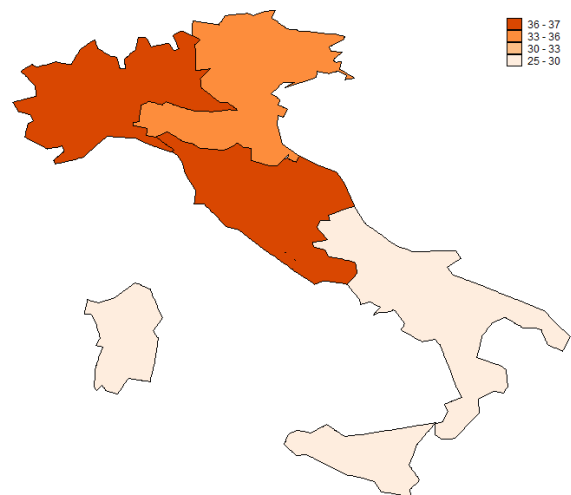


Figure 9: Before poorest area optimization

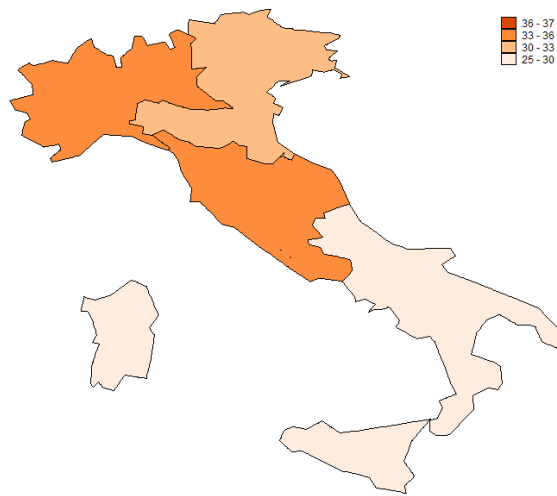
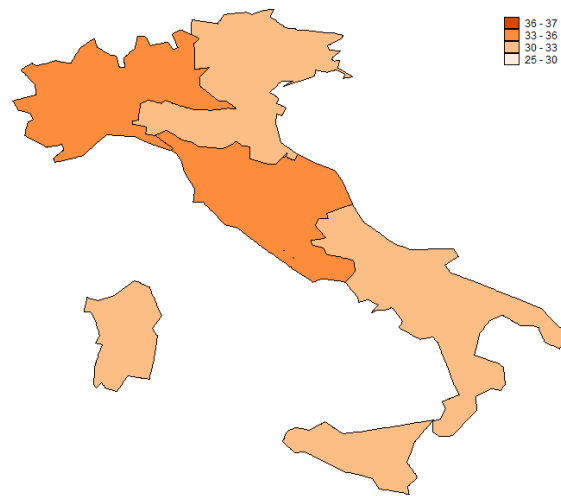


Figure 10: After poorest area optimization



A difficult balance always needs to be struck between on the one hand giving mobile and talented citizens the opportunity and freedom to come together and develop goods and services that compete at the global level and on the other hand maintaining decent standards of living and levels of economic activity for those they leave behind. We can illustrate the resulting distribution of REDI-scores in maps, where it is clear that what is best for the country as a whole is not optimal for all regions and tough choices have to be made.

More geographic mobility in the country would ensure that all Italians can benefit, even if not all Italian regions do so to the same extent. But given the history of Italy with its strong regional identities, a policy that invests in strengthening already strong regions may be politically infeasible and a (national) reform strategy should rather aim to lift all boats on the tide.

2.4. Overall conclusions GEI-REDI analysis

Our reading of the data above reveals that in all Italian regions and the country as a whole the main bottlenecks in the entrepreneurial ecosystem are low ambition levels (High Growth), the lack of skills and education (Human Capital) and an entangled business environment (Opportunity Start-up) that feeds back into a low familiarity with ambitious entrepreneurship and a rather closed culture (Networking and Cultural Support). It is dangerous, however, to rely exclusively on data and aggregate indices, even if they are composed of a broad set of sub-indicators. It is always important to complement a data based quick scan with common sense and more qualitative information to contextualize and complete the diagnosis. Only after triangulating the results above with the historical analysis, literature review, expert judgement and more qualitative survey results below, we can map the diagnosis onto our menu of interventions to propose tailored reforms for Italy.

3. Step: Triangulating History, Data and Survey results

3.1. Regulatory barriers to entrepreneurship in Italy

Table 5 below shows the results of a survey conducted among some 130 Italian founders in 2017-2018. The results largely confirm but also nuance the impressions from the coarser data based analysis presented in the previous section. The survey elicited a lot more information, specifically about the order of labour, financing and knowledge acquisition decisions in young firms and in the FIRES-project these results were presented in much more detail in D5.1 and the three scientific publications that came out of this work. Here we only briefly show the results of an open question: “Which regulatory requirements did you perceive as major obstacles during venture creation?” that was asked towards the end of the survey.

Respondents mentioned bureaucratic procedures, which are long and time consuming and a lack of knowledge and clarity concerning regulations of the specific sectors in which the company operates, or regulations about employment, taxes, etc. Several specifically mentioned the obligation to go through a notary when registering a new company and the complexity of the existing laws and specific procedures for setting-up a company (s.r.l.), which leads to the necessity of hiring an accountant (commercialista) when registering a company. A notary and accountant, who take care of administrative procedures, mean quite a substantial financial burden for a start-up. Still these costs are lower than possible fines that apply in case any mistakes are made during the administrative and legal procedures to be followed during the start-up process. These high levels of expenditure that are necessary for registering a new company (notaio, commercialista, imposta di registro etc..) come on top of an already rather high obligatory start-up capital (capitale sociale). Major barriers to growing the firm are then high taxes on employment and the (perceived) difficulty (and the involved costs) related to firing employees once hired (especially after apprendistato).

The answers show a relevant lack of institutional support, be it in the form of bureaucratic or fiscal procedures. Policies discussed above, that have tried to tackle these lacking elements, have apparently not been successful. The answers to this open question obviously differed from one respondent to the next, but they were coded to compare the answers also across countries. Table 5 below reports the number of times the respondents mentioned a coded aspect, but it should be clear that respondents were not prompted to list these topics in the survey. That is, they were free to answer the question in any way they wanted unrestricted by a pre-defined list of options. Coding terms were based on clusters that were identified in the raw data ex post. The way the question was asked, however, did lead the respondents in a specific direction. Respondents were asked to think about *regulatory requirements* explicitly excluding for example problems of hiring qualified personnel or attracting external financiers.

It is therefore quite telling that respondents still mentioned “Difficulties obtaining finance” in the top-10. From the GEI-REDI analysis we observe that the availability of risk capital, although it does not seem to be the most pressing problem, is indeed a matter of concern, confirming the importance of triangulating across methods to formulate an accurate diagnosis. In earlier research in the FIRES-project and beyond the absence of a vibrant angel and VC investment community has been linked to

unfavourable fiscal circumstances (Henrekson and Sanandadji, 2017), tight regulation on institutional investors and difficulties in making smooth and profitable exits (e.g. Bottazzi and Da Rin, 2002) in secondary markets and we will make some suggestions for reform for Italy in this area also.

Table 5: Results survey on regulatory obstacles in Italy

Regulatory Obstacle	Times mentioned
Which regulatory requirements did you perceive as major obstacles during venture creation?	131
None	28
Difficulties with bureaucratic procedures	19
No answer	13
Taxes	7
Difficulties with obtaining finance	7
Lacking clarity regarding regulations	5
Constantly changing regulatory environment	5
Safety regulations	5
Legal requirements to involve a notary	4
Legal Initial Capital Requirements	3
Specific requirements related to energy sector	3
Lacking protection by law for invoice payment	2
Legal requirements for approval	2
Specific regulations related to ICT sector	2
Complicated tax system	2
Legal Insecurity	2
Too high contributions for employees	2
GDPA	1
Confusing industry codes	1
Legal requirements for company standardization	1
Unjust tax system	1
Unequal employment law	1
Excessive number of regulations	1
Registration tax	1
Data protection laws	1
Lacking protection from incumbents	1
INPS registration requirements	1
Difficulties with obtaining government funding	1
Difficulties with transition of legal form	1
High labour costs	1
Lengthy approval process of new products	1

Tax to certificate accounting books	1
Requirements for accountant	1
Lacking protection by law for capital transactions	1
Regulatory requirements for buildings	1
Overwhelming financial rules	1
Registration costs	1

In the top-10 we also see that the founders confirm the problem of a poor quality business environment. Many mention bureaucracy and complicated legal and regulatory requirements to start a firm. It seems it is unclear and rather complicated to start a venture in Italy. As we have argued in part I of this report, some barriers to entry can be justified and work to increase the quality of start-ups that overcome such barriers, but from the survey we get the impression that this is not how Italian barriers to entry work. We should, however, not over interpret these results.

3.2. Founders’ suggestions for reforms in Italy

In the same survey, we also asked: “What can policy makers do to facilitate venture creation?”. The results of that survey are listed in Table 6 below. Again, bureaucracy and finance are listed as the

Table 6: Results survey on suggested policies in Italy

Policy Suggestions	Times mentioned
In your view, what could policy makers do to facilitate venture creation?	99
Reduce bureaucracy	21
Facilitate financing for small businesses	16
Reduce time and difficulty of bureaucracy through online procedure	7
Provide better information about how to start a business	7
Provide better training to people for starting businesses	6
Reduce tax rates for small businesses	5
Provide guidance	4
Provide incentives for hiring people	4
Avoid constant policy changes	3
Provide better networking opportunities - ITA	2
Develop policy specific to industry	2
Improve situation specific to energy sector - ITA	2
Create feeling of support for entrepreneurs	2
Simplify documentation requirements - ITA	1
State employees should take care of bureaucratic burdens of start-ups	1
Provide accountant	1
Align academia and industry	1
Eliminate the need to have a notary for registration	1

Abolish need for contract lawyers	1
Facilitate procedures for approval - ITA	1
Centralise information for starting business - ITA	1
Create tax incentives for VC in certain sectors	1
Reduce costs for certification	1
No Answer	1
Decrease taxes on investments	1
Provide notary	1
Help start-ups to get known to public	1
None	1
Incentivise demand	1
Create more flexibility in employment law	1
Facilitate entrance of graduate in ventures	1

top priorities by the founders. Consistent with earlier results respondents suggest a reduction of bureaucratic procedures, registration costs, regulatory complexity and instability. Specifically some suggest making the registration of a new company easier – e.g. make it possible to complete all administrative steps via the Internet, with very low registration costs. It seems, however, that policies to create such a streamlined registration process have already been put in place.

Also, on financial support and incentives, founders suggest a reduction in taxes in general and especially taxes on employment, abolishing the necessity to provide initial start-up capital investment (capitale sociale, equal to 10.000 euros for s.r.l.) and facilitating access to capital (mainly in the form of bank loans) and stimulate a venture capitalist culture (which in Italy is still very limited). Also some proposed providing grants (finanziamento “a fondo perduto”) for those companies which present a valid business proposal and promising business plan and installing a “no-tax period” during the initial years of activity of a start-up company.

Interestingly, founders also see a role for the government in promoting a “Networking Culture” by facilitating networking between companies and young professionals, so that companies can more easily identify appropriate and competent potential employees in their specific sector (especially in smaller cities or towns). Some proposed the government tries to diffuse an “entrepreneurship culture” within schools and universities, so that young people are familiar with this career option when choosing their career paths; thereby facilitating the diffusion of more “entrepreneurial mindsets”, while preparing students during their university education more appropriately (i.e. through more practically relevant studies) for their future work in start-ups. Finally, it was suggested that those who teach or make laws regulating entrepreneurship have an entrepreneurial background and past experience, so that they have an understanding of the challenges and concrete effects of things they propose and teach.

Again, we find general support for the weaknesses the raw data already flagged and can use the results to nuance our policy suggestions. With this final question, however, we guided respondents to think about what active policies the government could undertake. The resulting policies are therefore all action oriented, whereas the FIRES-approach to improving the entrepreneurial ecosystem,

sometimes justifies more long term and indirect measures to improve the overall institutional environment. It is probably better to not take the survey responses too literally and rather interpret what founders are really signalling when they propose the government provide more guidance, information and training. Where founders signal a lack of information and training and call for a more stable policy environment, we can interpret this as general support for a more fundamental reform approach that creates institutional support for those providing such services and knowledge.

3.3. Conclusions

In sum, the survey has confirmed most of the weaknesses identified in the data based quick scan but also provided some interesting additional information. For example, the need to create a stable institutional framework that is above all transparent and clear, is information that is hard to gather from quantitative data. The survey was therefore useful in confirming and nuancing some of the results we obtained above. But because of the way the questions were phrased and because of the limited perspective also founders have, the proposed interventions typically fall in the “deregulate, subsidize more, tax less and educate the young” approach that so many cities, regions and countries have attempted for three decades now. It is only logical that founders should mention, when asked for the most important barriers and possible policies, that they should mention those they perceived most important in their personal experiences. And there certainly is valuable information in that experience. But as a guide to policy it is insufficient (as is an approach based on data only), and the true value of this information is revealed when combined with information from other sources. The triangulation of our historical, quantitative and qualitative information for Italy, though necessarily limited in scope and depth, reveals enough information to now draw our diagnosis and turn to treatments.

4. Step: Mapping onto the FIRES-reform proposals

Formulating a reform strategy to strengthen the entrepreneurial ecosystem is not unlike treating a patient. In the previous sections we have considered the medical history of the patient, used an advanced diagnostic tool to scan for her health problems and asked the patient how she felt and what she believed would be good treatments. Based on all this information we can come to a diagnosis and mapping that diagnosis onto the menu of available treatments, propose a treatment that fits the patient. Italy has a long and proud history. Many of the institutions that shape any Entrepreneurial Society have their roots in Italy. Italy has seen the birth of modern banking, invented intellectual property rights protection and boasts the oldest universities in the world. Even today Italy boasts a highly innovative small and medium sized entrepreneurial sector that competes at the global level. Innovative entrepreneurship has deep historical roots in Italy. But time has progressed and the environment has changed. To face the challenges of the future, Italy will have to build on its strengths but should urgently address its weaknesses. Italy could strengthen its entrepreneurial ecosystem in the area of boosting human capital investments and more importantly, opening up opportunities for the young and talented to engage in productive and innovative venturing in Italy. Italy has seen in the recent crisis, but also before, an exodus of talent. It seems there are more opportunities abroad than at home. And of those that do stay and start-up ventures, most complain about cumbersome bureaucracy resulting in lacking growth ambitions and stunted economic dynamics. Taking these ailments to our menu of policy interventions and reform proposals in Part I of this report, we can select the fifteen most suitable interventions. They are listed in table 6 below.

Table 7: The FIRES-reform proposals for Italy

#	Section	Title	Proposal	Explanation	In Italy
1	3.1.2	The Rule of Law	We propose to further strengthen the current rule of law monitoring and enforcement mechanisms to ratchet up the performance of all Member States on issues related to rule of law, government effectiveness and protection of property rights.	Deficiencies in these factors negatively impact all agents in the entrepreneurial ecosystem and induce people to conduct activities and keep their capital in the shadow economy. Even the poorest EU member countries are higher medium-income countries, and neither the VC literature nor arguments à la Rodrik (2008) provide any support for the view that these countries can compensate for these deficiencies through other institutional measures.	It takes too long to settle commercial disputes in civil cases. This creates uncertainty and works in the advantage of large, established and incumbent firms. An entrepreneurial society needs fast, predictable and clear legal proceedings to thrive. A lot has been done, but more is needed still.
8	3.2.4	Taxation of Corporate Income	The Union should strive to reduce and ideally remove the discrepancies in member countries between statutory and effective corporate income tax rates, which may result from tax-reducing depreciation rules, inventory valuation rules or other more ad hoc country- or industry-specific tax reductions.	Their removal would create transparency and contribute to levelling the playing field for all firms regardless of their size, age, industry or nationality. Competition among member states is good, but it should be competition on corporate tax rates and not on complex, opaque fiscal deals and schemes. Moreover, when it comes to corporate taxation, member states should treat all firms equally.	This general advice we would give to the Commission and would also apply to Italy. Founders in Italy complain about taxes but more than their level, their complexity and unpredictability makes growing a firm unattractive.
10	3.2.5	Taxation of Dividends and Capital Gains	Complexities should be removed when possible. Instead, countries should aim for dividend and capital gains tax rates with few exceptions and few (opaque) concessionary schemes.	Here, the Eastern European countries, such as Poland and Estonia, have exemplary models in which the tax rates are at reasonable levels and the effective tax rate is largely independent of other circumstances. Arguably, the reason for this clarity is that the design of these systems date back no further than 1989. A radical redesign from the ground up is probably not feasible in older member states, but they should nevertheless strive for similar improvements to simplicity and transparency.	See proposal 8. A tax system benefits from an occasional cleaning-up. Simplicity and transparency should be the goal, not necessarily reducing rates for targeted groups. But at an overall tax pressure of 64% against 40.8% in Europe, Italy should also reduce taxes.

#	Section	Title	Proposal	Explanation	In Italy
14	3.3.2	Private Wealth	Our proposal is that in regions where family ties are strong, there should be institutional arrangements that would promote lending from private funds especially from the family to ventures.	In FIRES-Deliverable 2.2 (Dilli and Westerhuis 2018) it was shown that these cross-national differences in family financing are result of the differences in extent to which individuals feel socially obliged towards their family members, shaped by the strength of family ties. These family ties are result of the historical family arrangements. As a result, the share of family financing is expected to be much higher in regions where traditionally the family group has priority over the individual (strong family ties), common in the Eastern European and the Mediterranean countries context compared to the North Western European countries where the individual and individual values have priority over family (weak family ties).	Italy has a strong family based tradition. This creates opportunities also for financing ventures, especially in their early stages. Italy could consider banking on extended family ties to increase the flow of financial resources into entrepreneurship. The Anglo-Saxon Angel and VC model may be less appropriate in the Italian context.
19	3.3.4	Banking	Increase the mandatory equity ratio in banking gradually to 10-15% to have more skin in the game and allow banks to take on more risk responsibly in their lending portfolios.	Given that European banks operated profitably at much higher equity ratios in the past whereas non-European banks continue to do so, this proposal only requires a sound implementation and transition strategy. Gradually building up the equity buffer while at the same time accumulating more publicly guaranteed SME-loans in the portfolio is a balanced approach. Higher required equity buffers will increase the price of credit and some might argue that this will reduce credit and investment in the aggregate. We feel, however, that such price increases will only drive out the marginal investment projects and most of these are currently found in the secondary, speculative investments that Bezemer (2014) deems unproductive.	Italy still has a rather diverse and locally embedded banking system. This can be an asset in the entrepreneurial society, but these small, local banks are increasingly brought under European rules and supervision made for large, system banks. By requiring higher equity in banks, they can justifiably engage in riskier but also in the long run more productive lending.
28	3.4.2	Employment Protection Legislation	CMEs can provide a model for MMEs, which show more similarities to CMEs in many respects than LMEs.	Less regulation on permanent employment is likely to be linked with high-growth aspirations among entrepreneurs particularly in the Mediterranean Market Economies (MMEs) whereas no change is observed in the other institutional constellations. Given that Coordinated Market Economies (CMEs) are shown to perform rather well in innovative entrepreneurial activity, while being characterized by moderately liberal labour market institutions, centralized wage setting institutions and high levels of social security. We therefore conclude that a policy of radical liberalisation following the Liberal Market Economies (LMEs) model is perhaps not the only way.	Italy has already implemented some fundamental reforms in the labour market in recent years. In part this was done under pressure of the financial and Euro crisis and external creditors. The general direction of these reforms was right, but Italy should not forget that of the MMEs it is actually closest to the CMEs and should seek to combine flexibility with social security.
31	3.4.3	Employment Protection Legislation	Establish or strengthen training programs to prepare workers for new occupations	Archanskaia et al. (2017) show that countries with a low rate of substitution between inputs in routine production, will not be able to gain a comparative advantage in high-value products that are intensive in non-routine tasks. As a result, they will end up specializing more and more in routine-intensive products and experience lower wage growth. Geurts and Van Biesebroeck (2016) further show that the pattern of firm-growth in Belgium indicates that young firms under-adjust to good news. As a result, many promising firms scale up too slowly and they might miss out on opportunities in a fast-paced global market.	In a more flexible labour market, more flexible and mobile employees are key. Italy will not be isolated from technological and economic trends and flexibility is needed to engage opportunities and exit declining jobs, industries and trades. We propose Italy invests in the flexibility of its workforce.
32	3.4.4	Confidentiality Agreements and Barriers to Mobility	To promote the mobility of people and their knowledge across firms, we propose to lift the legal enforceability of confidentiality agreements between employers and their employees.	Of course, there can be justified instances in which confidentiality is needed to protect the legitimate interests and privacy of customers, but confidentiality agreements and especially non-compete clauses are more often used to prevent knowledge from flowing freely between firms and sectors.	Specifically, for Italy, this proposal should be understood in light of the two above, arguing for investment in mobility and reducing barriers for switching jobs, industries and occupations. This will create opportunities for the young and talented to remain actively engaged in Italy and reduce the brain drain to the rest of Europe. Specifically the "reinstatement" provision in employment protection is often mentioned as a burden on small and young firms.
35	3.4.5	Social Insurance Systems	Embracing the principles of flexicurity, we propose to carefully consider the impacts of reforms on young SMEs and not force them to take on high risks and burdens.	The general guiding principles the European Commission have formulated do not include structural and careful attention to what such reforms would mean for start-ups and young SMEs. While the specifics can and will vary country by country, we can infer that an important component of a policy that makes society more innovative and entrepreneurial involves making the individual's social insurances as portable as possible when changing jobs and moving between salaried employment and self-employment.	It is tempting for governments with tight budgets to have employers pick up the bill for their employees' social security. This, however, tends to reduce mobility and strengthens the insider-outsider effect. On the labour demand side, such schemes work in (relative) favour of large firms and blocks young firms expanding. This keeps youth unemployment up and pushes also educated Italian youngsters to leave.
40	3.5.2	Product Market Regulation	Excessive barriers to new business formation and new entry should be lifted where possible.	This, however, seems to be part and parcel of the EU policy agenda already. Our consortium supports that effort with the caveat that well justified barriers to entry are useful to keep unproductive or even destructive ventures out (Stenholm et al. 2013; Darnihamedani et al. 2018). It should be easy for challengers to enter (and exit) but these challengers should be serious.	Key in this proposal is "excessive". Founders in Italy report quite a wide variety of bureaucratic and administrative barriers to starting up a venture in Italy. Some of these barriers may serve a valid purpose, but simplicity, transparency and predictability are then required also. Data shows Italian SMEs spend 52% more time dealing with bureaucracy than their European competitors and WEF ranks Italy 44th on doing business index. There is a lot of room for improvement.

#	Section	Title	Proposal	Explanation	In Italy
45	3.6.3	Knowledge Diffusion after Failure	We propose to set up publicly funded “entrepreneurial knowledge observatories” where knowledge accumulated in the entrepreneurial process is collected, curated and freely diffused.	Our consortium agreed that a lot of useful knowledge, perhaps of a more applied and tacit nature, is generated in the entrepreneurial process, particularly when ventures fail. That knowledge is lost when entrepreneurs do not share their experiences. However, as that is not their core business and private incentives are absent, it makes sense to publicly fund the collection, curation and diffusion of that knowledge.	Creating a real hub, rich in events, infrastructure, and networking between teams could be useful for the Italian Startup Ecosystem. This involves concentration. Today Milan (14,7%), Rome (8,5%) and Turin (4,7%) have less than 30% of the total number of startups (and these data are flattered). Our research has shown how geographical proximity is important for success. It is a tough choice, but it would be useful to invest in a start-up capital (Milan) with a national function.
48	3.7.2	Knowledge Generation	Both the EU and its member states should create healthy, well-funded, academic institutions that allow Europe’s best and brightest to pursue their research interests.	In the literature, there is also broad consensus that basic research is a pure public good (Salter and Martin 1991; Pavitt 1991). It therefore makes perfect sense to channel more of the EU budgets to an activity that provides such evident positive spillovers throughout the Union.	For the Italian context it is important to open up its academic institutions. Many reforms have already been undertaken, but most in a time of ageing, financial constraints and budget cuts. With vested interests and gilded contracts hard to reform, the rate at which Italian academic institutions open up for competition and meritocracy is slow. It makes little sense to spend a lot of money on institutions before such structural issues have been addressed. Unfortunately the (poor) students, not the ageing staff is driven out.
55	3.8.2	Creativity in primary and secondary education	Push for reforms in primary and secondary education that promote creativity, a willingness to experiment, a tolerance of failure and out-of-the-box thinking.	More appreciation for creativity (and therefore tolerance of deviant behaviour) will probably shift the balance from business oriented to more creative entrepreneurship. Evidence from field experiments (Weitzel et al. 2010; Urbig et al. 2012) and in the FIRES-project (Lauritzen et al. 2017) suggest that creative entrepreneurs are more socially oriented than strictly business-oriented entrepreneurs. Promoting creativity in primary and secondary education, to the extent possible, is therefore a long-term strategy to promote productive entrepreneurship that will create innovative, sustainable and inclusive growth (Stam et al. 2012).	Italy’s educational system can be characterised as traditional. The State sets the curriculum, provides uniform tests and most children attend public schools. The curriculum is demanding, geared towards cognitive skills and textbook based, leaving little room for creativity and diversity. Italy considers its educational system of high quality, but making pupils work hard is not the same as teaching them useful skills. Countries ranking high on e.g. the WEF, OECD and EU rankings, such as Finland and Norway have less homework and formal testing and more autonomy for highly trained and well paid professionals.
57	3.8.2	Education in the Entrepreneurial Society	To promote the integration of Europe’s knowledge base we propose to make English the (mandatory) second language and promote its instruction in primary and secondary education systems throughout the European Union.	We would like to stress, however, that we do not see this as part of building a European identity or culture. Rather, as a tool to enable citizens in the Union, and in particular those that end up in business and/or science, to exchange knowledge efficiently and effectively. Effective communication requires a common language and English qualifies as the Lingua Franca of modern science in most academic disciplines as well as global business.	Italy ranks 20 out of 27 EU countries plus Turkey when it comes to knowledge of English as second language. This is a handicap when Italy seeks to compete at the EU or global level.
59	3.8.4	Universities	We propose to educate the young and bright minds of Europe how to be more entrepreneurial before they make their career choices.	Recognizing the importance of this European model of knowledge diffusion, European universities can take a larger role in the transition to a more Entrepreneurial Society in Europe. This starts with simple no-regret policies that have been proposed before (i.e. the European Commission’s Entrepreneurship 2020 Action Plan).	Many universities started offering courses focused on startups. Courses usually taught by a researcher with no work experience outside academia, and clearly no past in startups. With the average curriculum dealing with business plans and how to get financing. We lack a startup culture and those trying to provide it have no idea what they are talking about. We are still in the phase where everyone is teaching and few doing.

In column 1 we find the number under which they were presented in Part I and column 2 gives the section number where one can read more of the background and general motivation for the proposals. Column 3 lists the title and 4 the full proposal, where column 5 gives a short motivation linking the proposal to the analysis presented above.

The proposals individually and in combination aim to strengthen the knowledge base and talent pool from which Italian entrepreneurs can draw and aim to open opportunities for not only starting but also growing firms in all regions in Italy. It is likely that, even though all regions stand to benefit from these interventions, the fact that density and clustering tends to promote the quality and impact of entrepreneurial venturing, will imply that the same policy improvements will benefit already



prosperous regions most. Still, that should not stop policy makers from pursuing these interventions as it is the Italian citizens, not its regions per se that the national government should care about. It is advisable, however, to also set up automatic transfer systems that will help maintain high quality of life throughout the country.

Of course these proposals will need a much more detailed discussion and form the starting point, not the final word on the policy debate. Moreover, even if adopted, our proposals all require careful implementation and evaluation to complete the 7-step policy cycle presented in the introduction to this Part. But based on our analysis of the situation, we propose the patient consider this set of interventions to restore health to its ailing entrepreneurial ecosystem.

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Appendix

Pillars, individual and institutional scores for all regions

Nord Ovest (IT)

	PILLARS		INSTITUTIONAL VARIABLES		INDIVIDUAL VARIABLES	
Entrepreneurial Attitudes	Opportunity perception	0.38	Market Agglomeration	0.63	Opportunity Recognition	0.55
	Start-up skills	0.27	Quality of Education	0.66	Skill Perception	0.27
	Risk Acceptance	0.43	Business Risk	0.69	Risk Perception	0.44
	Networking	0.23	Social Capital	0.46	Know Entrepreneurs	0.33
	Cultural support	0.21	Open Society	0.36	Career Status	0.81
Entrepreneurial Attitudes 28.3						
	Opportunity startup	0.21	Business Environment	0.35	Opportunity Motivation	0.62
	Technology Absorption	0.65	Absorption Capacity	0.36	Technology Level	1.00
	Human Capitals	0.18	Education and Training	0.41	Educational Level	0.33
	Competition	0.31	Business Strategy	0.89	Competitors	0.21
Entrepreneurial Abilities 30.1						
Entrepreneurial Aspirations	Product innovation	1.00	Technology Transfer	0.67	New Product	1.00
	Process innovation	0.63	Technology Development	0.58	New Technology	0.86
	High growth	0.11	Clustering	0.46	Gazelle	0.34
	Globalization	0.38	Connectivity	0.72	Export	0.50
	Financing	0.50	Financial Institutions	0.63	Informal Investment	0.68
Entrepreneurial Aspirations 42.0						
	GEI	33.5	Institutional	0.56	Individual	0.57

Sud (IT)

	PILLARS		INSTITUTIONAL VARIABLES		INDIVIDUAL VARIABLES	
Entrepreneurial Attitudes	Opportunity perception	0.30	Market Agglomeration	0.44	Opportunity Recognition	0.52
	Start-up skills	0.24	Quality of Education	0.44	Skill Perception	0.53
	Risk Acceptance	0.40	Business Risk	0.69	Risk Perception	0.38
	Networking	0.21	Social Capital	0.40	Know Entrepreneurs	0.38
	Cultural support	0.16	Open Society	0.29	Career Status	0.95
Entrepreneurial Attitudes 23.7						
Entrepreneurial Abilities	Opportunity startup	0.04	Business Environment	0.10	Opportunity Motivation	0.59
	Technology Absorption	0.29	Absorption Capacity	0.22	Technology Level	0.80
	Human Capitals	0.11	Education and Training	0.36	Educational Level	0.20
	Competition	0.37	Business Strategy	0.79	Competitors	0.32
Entrepreneurial Abilities 18.2						
Entrepreneurial Aspirations	Product innovation	1.00	Technology Transfer	0.51	New Product	1.00
	Process innovation	0.46	Technology Development	0.40	New Technology	1.00
	High growth	0.18	Clustering	0.34	Gazelle	0.50
	Globalization	0.27	Connectivity	0.47	Export	0.51
	Financing	0.35	Financial Institutions	0.44	Informal Investment	0.63
Entrepreneurial Aspirations 35.2						
GEI		25.7	Institutional	0.42	Individual	0.59

Isole (IT)

	PILLARS		INSTITUTIONAL VARIABLES		INDIVIDUAL VARIABLES	
Entrepreneurial Attitudes	Opportunity perception	0.21	Market Agglomeration	0.36	Opportunity Recognition	0.44
	Start-up skills	0.21	Quality of Education	0.42	Skill Perception	0.48
	Risk Acceptance	0.35	Business Risk	0.69	Risk Perception	0.31
	Networking	0.21	Social Capital	0.41	Know Entrepreneurs	0.36
	Cultural support	0.17	Open Society	0.32	Career Status	0.83
	Entrepreneurial Attitudes 21.6					
Entrepreneurial Abilities	Opportunity startup	0.05	Business Environment	0.14	Opportunity Motivation	0.52
	Technology Absorption	0.18	Absorption Capacity	0.21	Technology Level	0.57
	Human Capitals	0.15	Education and Training	0.35	Educational Level	0.32
	Competition	0.51	Business Strategy	0.79	Competitors	0.48
	Entrepreneurial Abilities 19.8					
Entrepreneurial Aspirations	Product innovation	0.98	Technology Transfer	0.50	New Product	1.00
	Process innovation	0.40	Technology Development	0.39	New Technology	0.92
	High growth	0.10	Clustering	0.30	Gazelle	0.38
	Globalization	0.38	Connectivity	0.41	Export	0.72
	Financing	0.65	Financial Institutions	0.43	Informal Investment	0.91
	Entrepreneurial Aspirations 38.8					
GEI		26.7	Institutional	0.41	Individual	0.59

Nord Est (IT)

	PILLARS		INSTITUTIONAL VARIABLES		INDIVIDUAL VARIABLES	
Entrepreneurial Attitudes	Opportunity perception	0.32	Market Agglomeration	0.39	Opportunity Recognition	0.59
	Start-up skills	0.21	Quality of Education	0.61	Skill Perception	0.24
	Risk Acceptance	0.42	Business Risk	0.69	Risk Perception	0.42
	Networking	0.25	Social Capital	0.47	Know Entrepreneurs	0.36
	Cultural support	0.26	Open Society	0.40	Career Status	0.91
Entrepreneurial Attitudes 27.4						
Entrepreneurial Abilities	Opportunity startup	0.38	Business Environment	0.49	Opportunity Motivation	0.79
	Technology Absorption	0.38	Absorption Capacity	0.32	Technology Level	0.79
	Human Capitals	0.11	Education and Training	0.41	Educational Level	0.18
	Competition	0.35	Business Strategy	0.61	Competitors	0.48
Entrepreneurial Abilities 28.1						
Entrepreneurial Aspirations	Product innovation	0.96	Technology Transfer	0.62	New Product	0.93
	Process innovation	0.72	Technology Development	0.58	New Technology	0.96
	High growth	0.36	Clustering	0.46	Gazelle	0.65
	Globalization	0.42	Connectivity	0.52	Export	0.66
	Financing	0.16	Financial Institutions	0.56	Informal Investment	0.36
Entrepreneurial Aspirations 42.3						
	GEI	32.6	Institutional	0.51	Individual	0.59

Centro (IT)

	PILLARS		INSTITUTIONAL VARIABLES		INDIVIDUAL VARIABLES	
Entrepreneurial Attitudes	Opportunity perception	0.34	Market Agglomeration	0.46	Opportunity Recognition	0.57
	Start-up skills	0.31	Quality of Education	0.65	Skill Perception	0.34
	Risk Acceptance	0.39	Business Risk	0.69	Risk Perception	0.37
	Networking	0.25	Social Capital	0.46	Know Entrepreneurs	0.37
	Cultural support	0.20	Open Society	0.35	Career Status	0.85
Entrepreneurial Attitudes 28.1						
Entrepreneurial Abilities	Opportunity startup	0.15	Business Environment	0.27	Opportunity Motivation	0.67
	Technology Absorption	0.45	Absorption Capacity	0.37	Technology Level	0.85
	Human Capitals	0.23	Education and Training	0.45	Educational Level	0.39
	Competition	0.48	Business Strategy	0.90	Competitors	0.35
Entrepreneurial Abilities 29.9						
Entrepreneurial Aspirations	Product innovation	1.00	Technology Transfer	0.79	New Product	1.00
	Process innovation	0.70	Technology Development	0.57	New Technology	0.96
	High growth	0.12	Clustering	0.40	Gazelle	0.38
	Globalization	0.40	Connectivity	0.65	Export	0.55
	Financing	0.43	Financial Institutions	0.56	Informal Investment	0.64
Entrepreneurial Aspirations 42.6						
	GEI	33.5	Institutional	0.54	Individual	0.59



Conclusion
Text here.