



Analyzing the innovative start-up opportunity to sustain innovative entrepreneurship in Southern Italy: Evidences from the Apulian area

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Abstract: The purpose of this paper is to investigate entrepreneurs' adoption of the "innovative start-ups" as legal tools introduced in Italy to sustain entrepreneurship by, considering Southern Italy (Apulian Area) characterized by an economic fabric made of SMEs in the primary and tourism sectors, and few large industries as a research setting. A qualitative analysis has been carried out investigating public databases reserved for companies benefiting government subsidies, by considering a period ranging from the 1st of January 2014 to the 31st December 2020. Findings suggest that the start-up legal tools helped entrepreneurs both in building up their business and revitalizing traditional business. Results also reveal a tendency to invest in a new business idea, supporting the reconversion of a regional economic fabric, highlighting how such innovation patterns and economic performance affect the different industrial structures, and the relevance of the start-up to sustain innovative entrepreneurship.

Keywords: Decree-Law 2.0; Business idea; Innovative business; Start-up; Southern Italy

1. Introduction

On a general level, creativity and innovation represent a binomial that features the story of many entrepreneurs (Okpara, 2007), whose origins don't necessarily entail experience in large companies contexts. One of the most widely known examples is perhaps Steve Jobs, Apple's founder, who designed the first Mac computer with his friend Steve Wozniak in his home garage (www.theguardian.com/technology/2014/dec/05/steve-wozniak-apple-starting-in-a-garage-is-a-myth). A similar story is that of Jeff Bezos, founder of Amazon, who seems to have left his previous \$223.000-a-year job to build the most famous e-commerce platform in the world, also from his home garage (www.forbes.com/profile/jeff-bezos). These stories have several elements in common: The two founders followed up on their business idea simply from a garage equipped with computers, to then become undiscussed market leaders. Those entrepreneurs who found young and innovative businesses, matching creativity with innovation, are usually known as "start-upper" (Blank and Dorf, 2010), a name deriving from fresh and original business ideas usually launched as a start-up. About start-ups, the literature usually refers to the neo-natal phase of a business activity, which immediately follows the business idea. Indeed, the start-up is the first embryonic stage in the birth of a company (Koontz, 2010).

More adherently to our scope, the term is often used, nowadays, in the context of the New Economy, to generally indicate a new company, which launches itself on the market by proposing an innovative business idea, especially in the field of new technologies (Blank and Dorf, 2020). In a broad sense, "doing" start-ups also coincides with the attitude to innovate, getting involved, setting up an entrepreneurial idea. This is also the reason why the start-up scene has come under the magnifying glass of the media, in recent years, and has caught the attention of local governments (Reina et al., 2018). In Italy, national policymakers pay close attention to the strategic value of Industry 4.0 and to the promotion of business ideas in this sector where highly mechanized and automatized material goods are produced (Strange and Zucchella, 2017). This results in the provision of a series of financial policies to make sure that Italian companies and entrepreneurs benefit from this new industrial revolution (Lucchese et al., 2016). The Italian government introduced the legal framework for innovative start-ups, propelled by the need to find alternative solutions to the rampant economic and employment crisis that affected particularly badly the younger generation (Reina et al., 2018). The phenomenon of start-ups, and its new legal regime, were recognised for the first time as a new instrument in 2012, with the so-called Decreto Crescita 2.0. (Decree-Law 179/2012, converted in Law 221/2012). The Decree-Law 179/2012 established that this new type of organizational model would benefit from several operational, fiscal and economic incentives to cooperate with Universities, Research Institutes or Incubators intending to relaunch entrepreneurship (Gualandri et al., 2016; Reina et al., 2018). Therefore, the term start-up, already synonym of "innovative", assumes a further connotation in the eye of the law. Innovative start-ups, in particular, came to denote, in the crisis legislation, that innovative legal regime tasked with revolutionizing the market and economy of the country, by leveraging innovative entrepreneurship (Cortese et al., 2015; Sestino, 2018), usually based on deep technology integration (e.g., as for *Internet of Things* devices, Artificial

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Intelligence) aimed to revitalize the traditional business (Sestino et al., 20120) or enable new innovative business (Sestino & De Mauro, 2021). The Italian entrepreneurial fabric is made of SMEs (Fusco, 2010) mostly concentrated in Northern Italy (48.4%), 27.5% in the North-West and 20.9% in the North-East. 30.5% of Italian SMEs are located in the South of Italy and on the Islands, while the remaining 20.1% are based in Central Italy. At a regional level, Lombardy is the first industrial area of the country, with a weight of 16.7%. Following, in the top ten positions, we can find Lazio (9.4%), Veneto (8.8%), Campania (8.4%), Emilia -Romagna (8.3%), Piedmont (7.8%), Tuscany (7.2%), Sicily (6.7%), Apulia (6.1%) and Marche (2.9%) (Istat, 2019). Data also reveal a polarized territorial distribution, highlighting the strong gap between Northern and Southern Italy, both in terms of providing a business environment capable of unleashing the full potential of operating companies, and in terms of attractiveness and propensity to the development of new entrepreneurial realities. Innovative start-ups (compliant to the Decreto Crescita 2.0.), are not immune from this reality: 55.4% of them is based in the northern area of the peninsula, mainly in Lombardy (22.2%), Emilia-Romagna (12%), Veneto (7.8%) and Piedmont (6.1%). Only to lesser extent start-ups populate the South and the Islands (23%) where the most dynamic regions are Campania (6.3%), Sicily (4.9%) Sardinia (2.4%) and Calabria (2.3%): it emerges clearly how, despite Southern Italy's numerous unexpressed potentialities, unlike Northern Italy, it is still behind technologically (Icrids, 2019). For this reason, initiatives to support entrepreneurship and innovation could be positively perceived and adopted in the South. Starting from this assumption, this work aims to investigate – through an exploratory research design – how the innovative start-ups' legal regime, introduced by the Decreto Crescita 2.0, was adopted at the local level, as a tool to sustain regional and local entrepreneurship in the Apulia region, with a particular focus on the Taranto area that is considered an emblematic case study. The exploratory research design has been defined as such because we considered the Apulian area and, in particular, the province of Taranto as a specific representative setting for the phenomenon under investigation (“exploratory embedded single-case study”) to better analyse the consequences of the normative intervention in the real-life context in which it occurred (Yin, 2009). This choice is indeed due to the relevance of the considered areas for the Italian Gross Domestic Product (GDP), and for the national competitiveness on international markets (Quercia and Polito, 2020). Aside of the tourism and agriculture vocation, the Apulian area and, mainly, the province of Taranto has, in fact, represented for a long time a nerve centre for Italy and Europe - in which policymakers recently recognized the centrality of their intervention in sustain the growth of new technology-based firms (Grilli, 2014) - driven by the economies of the ILVA steel mill (formerly Italsider, now owned by Arcelor Mittal), of the ENI refinery, and the related transport industries of the cargo port (Lai et al., 2019; Sestino, 2017). Moreover, by considering other countries in Southern Europe recent studies (i.e., Busom and Vélez-Ospina, 2020), investigated the impact of direct support for business investment in R&D and innovation varies new business, by shedding light on firms that obtain public support in a recession differ from firms that obtain it during expansions, in sustaining their investments and the relevance of such legal tools. Therefore, our work poses the following research questions:

RQ1. *How did the adoption of the innovative start-up tool take place in the Apulian area?*

RQ2. *How did the adoption of the innovative start-up tool take place in the Taranto area, traditionally known for its heavy industrial vocation?*

To address the proposed research questions, we conducted a sample analysis (census), recurring to the freely accessible Business Register database (start-up section, available at www.startup.registroimprese.it) since, according to the relevant literature (Heirman and Clarysse, 2004), using a database that gathers information on companies benefiting from government subsidies can be an effective way to analyse the sample of firms in question. Subsequently, we extracted, filtered, and studied the sample to obtain information concerning some useful parameters (Lind et al., 2008) on the start-ups birth rate, the georeferencing, the business sectors and the revenues, considering a period ranging from the 1st January 2014 to the 31st December 2019, and shedding some light on how innovative start-ups have been adopted as a company form in the investigated areas. We leaved out the 2020 due to the COVID-19 pandemic and the global economic slowdown.

Our results may offer relevant contributions to literature, and local practices. First, our findings contribute to the literature on innovation management, and more specifically to the literature related to the institutional underpinnings for different organizational forms, sustained as we analysed by new legal tools. Second, our findings contribute to management literature by shedding light on how the creative destruction made up by such new innovative start-ups generates a transformation process could positively impact the economic fabric of an entire region, by driving new investments in innovative entrepreneurship activities, by revitalizing innovation patterns and economic performance related to different industrial structures and institutions, and by explaining how such legal tools used in sustaining entrepreneurship relate to economic performance at the firm, industry, regional, and city level. Furthermore, our work carries managerial implications for policymakers and local managers, who want to successfully introduce new legal tools aimed to sustain innovation in their areas, and for entrepreneurs in catching the most suitable tools to support their innovative business ideas.

2. Theoretical Background

In the world of entrepreneurship, one of the most inflated terms is undoubtedly that of start-ups: Traditionally, the literature refers to start-ups to indicate those companies operating in highly technological fields, drawing their origins from the IT and network sectors (Anokhin and Wincent, 2012; Hsieh and Wu, 2019), that slowly broadened their horizons by expanding into other areas, such as energy, manufacturing, (Antonietti and Gambarotto, 2019), but also for instance food (Franceschelli et al., 2018), united by the innovative production method w.r.t. similar companies in the sector.

The innovative activity that characterizes these businesses must be traced back to the method of production and of service delivery which takes more technological connotations than traditional ones, by the integration of new technologies or IT-based tools (Sestino et al., 2020). It is not possible to attribute a univocal definition to the term innovation, but we retain Schumpeter's assumption (2000) quite clarifying, defining innovation as a "creative destruction" that cancels the previous state and creates new operating conditions for the market. This creative destruction generates a transformation process that starts from the idea and reaches its concrete application. One of the most acclaimed definitions of start-up as an innovative, scalable and repeatable company is attributed to Steve Blank, a serial entrepreneur from the Silicon Valley, an iconic place when it comes to revolutionary business ideas (Blank and Dorf, 2010; Blank, 2013) due to the experiences of all the ITC firms and social media companies (i.e., Apple, Facebook, Twitter, Instagram) that began there their business as start-ups (Marwick, 2017). To better understand the synergy required for innovation activities, it must be considered that the convergence of various stakeholders and knowledge hubs (Breznitz and Taylor, 2014) – such as the aforementioned large technology companies, the Universities a source of human and intellectual capital and venture capital ready to invest in innovative projects – is what makes this region a favourable ground for evolving into a structure commonly known as a technological cluster (Braunerhjelm and Feldman, 2007; Koepp, 2003). According to the model proposed by Bank, the scalable size of a start-up refers to the ability of the company to increase its size – and consequently its customers and its revenues – even exponentially, without the employing a proportional number of resources. A start-up, to be considered as such, must, therefore, be able to exploit economies of scale (Blank and Dorf, 2020; Blank and Euchne, 2018). For what concerns the replicable business model, we refer to the ability of the business to be replicated in different contexts and different periods, without being revolutionized in its nature (Blank, 2013; Bruyat and Julien, 2001). To clarify, a start-up can be innovative even without offering a "new" service or product, since the products or services it supplies are provided through a non-traditional business model, which allows it to replicate its business and to exploit economies of scale. According to this paradigm, a start-up can grow rapidly and be able to scale, only when it manages to immediately obtain large capitals, which it can obtain by drawing on third party capital (Åstebro and Bernhardt, 2003) – such as incubators (Aernoudt, 2004), business angels (Aernoudt and Erikson, 2002), venture capital funds (Hellman and Puri, 2002) – that can support or directly participate in the business risk in exchange of equity participation. Since these are investors who need to have their capital remunerated, the natural goal of a start-up is to sell the business when still in an embryonic phase and at the first growth of entrepreneurial activity, in order to create a larger company or achieve the stock exchange listing (Blank and Euchne, 2018).

In the Italian scenario, after the economic crisis of 2008, financial and economic recovery was better achieved by new companies, characterized by a strong rate of innovation in their business models, projected towards the revolution of pre-existing market sectors or the creation of new ones (Antonioli et al., 2013; Antonioli and Montresor, 2019). This led the Italian legislator to recognize, among the many tools necessary to enable growth, the importance of granting to the most innovative business ideas easier access to the market, both for the development of new products and improving employment among young people (Gualandri et al., 2016). As previously mentioned, the Italian legislator introduced a set of rules aimed at encouraging the development of innovative companies with a technological impact, identified as innovative start-ups. The *ratio* underlying this discipline is to foster sustainable growth, technological development, new entrepreneurship, youth employment and social mobility, the development of a new entrepreneurial culture and the creation of a more stimulating and favourable context for innovation, as well as to attract talents, capitals, and innovative companies from abroad (Reina et al., 2018). Thus, for the first time in Italy, the regime of the innovative start-up came into force (sect. IX, art. 25), to formally regulate those joint-stock companies – sometimes constituted in a cooperative form – whose shares – or shares representing the share capital – are not listed on a regulated market or on multilateral trading systems, and whose innovativeness must be sought in the corporate purpose (Gualandri et al., 2016; Sestino, 2018).

For what concerns the corporate purpose – and thus the exclusive or prevalent core business – it is explicitly clarified that it must concern the development, production, or marketing of innovative products or services with high technological value. More specifically, *ex art. 25* paragraph 2, the allowed company forms for the establishment of a start-up are joint-stock companies (s.p.a.), limited partnerships for shares s.a.p.a., limited liability companies s.r.l. (and s.r.l.s), or cooperative companies. To choose the most suitable form, the study of the various corporate forms' characteristics considers various aspects, such as the liability of the shareholders, the probability bankruptcy of the company, income taxation, contributions, etc. Usually, the s.p.a. and the s.a.p.a. are less popular for setting up a start-up, as they have a very complex government structure and a higher minimum capital requirement (equal to 50.000 euros). The choice of the s.r.l. is more frequent, because it allows entrepreneurs to establish a small/medium-sized entrepreneurial activity with limited liability for the obligations contracted, while benefiting from a simpler governance structure and investing lower initial capital (equal to or less than 10.000 euros) (Cossu, 2014). As an instrument to promote entrepreneurship and innovation, start-ups have been recognized as one of the most important and innovative actions of the regulatory policy, during and after the economic crisis. Indeed, from the legislator point of view, this regime pursues the goal of promoting an active recovery of growth (Gualandri et al., 2016; Reina et al., 2018). This goal is also embedded in the structure that innovative start-ups must equip themselves with, and in some of the requirements that they must comply with. In fact, in addition to the full compliance with all the mandatory requirements, start-ups must present at least one of the alternative requirements listed in letter h) paragraph 2 of art. 25: shares equal to 15% of the higher value between revenues and annual costs, to be dedicated to research and development activities; a total workforce consisting of at least 1/3 of PhD students, research doctors, researchers, or of at least 2/3 of partners and collaborators in any capacity with a master's degree; being the owner, depositary or licensee of a registered patent (industrial property) or the owner of new and registered computer software; annual revenues attested as less than 5 million euros; registered (and operational) offices based in Italy; proprietary and innovative business ideas that do not derive from M&A (Cossu, 2014; Gualandri et al., 2016; Reina et al., 2018).

3. Materials and methods

To investigate how the innovative start-up regime has been adopted by entrepreneurs in the Apulian area (Southern Italy) and, in particular, in the area of Taranto (province of Taranto), as a tool to sustain entrepreneurship, we conducted an exploratory study on a sample of companies. As clarified above, the choice of the area to investigate as a case study (Yin, 2009) is emblematic: Considering both its strategic geographical position in Southern Italy and the Mediterranean, and its history, the Apulian area presents a positive differential and relevant opportunities of economic development. Furthermore, the focus on the Taranto area allows us to have a new perspective of a territory traditionally known for its strong industrial connotation, characterized by the heavy industry – steel, cement, and transport via the cargo port (Lai et al., 2019; Sestino, 2017). Recurring to a database of companies benefiting from government subsidies is an effective way of identifying the sample of interest (Heirman and Clarysse, 2004). For the scope of the current analysis, we thus decided to implement data-mining techniques on the online database of the Business Register dedicated to innovative start-ups (accessible at: www.start-up.registroimprese.it). According to the provisions of the Decreto Crescita 2.0 that introduced the new organizational model, innovative start-ups must be registered in a special section of the Business Register. To collect our sample, we considered a period of four years, from the 1st January 2015 to 31st December 2019. We decided to leave out the 2020, because of the COVID-19 pandemic and the related decrease on investments and new business activities (Sukharev, 2020). The sample survey consists of the extraction and study of a sample of units of the population, to obtain information concerning some parameters about the analysed sample (Lind et al., 2008). Then, we filtered the sample according to different parameters, such as birth rate, georeferencing, business sector, and revenues to study the statistical units, providing a census since, as anticipated, investigating such a database for these parameters is considered an effective approach to decide whether to use it (Heirman and Clarysse, 2004). In March 2019, we collected the data from the databases dedicated to innovative start-ups accessible on the Business Register's website, (<https://www.start-up.registroimprese.it>). They were then filtered and analysed with the data-visualization software Tableau (Murray, 2013). More specifically, in order to investigate the number of innovative start-ups established in the period between the 1st January 2015 and the 31st December 2019, we mined the online database, submitting a search query from the advanced search section according to the standard: Region = "Puglia" and "Constitution date" > "01/01/2015" and Constitution date < "31/12/2019". Then, following the proposed methodology, the results were filtered by sector of activity, territorial georeferencing (considered the start-ups' registered office), and revenues.

4. Results and discussion

4.1 Birth rate of innovative start-ups

The search query produced a total number of 404 companies, born in the legal form of innovative start-ups (Tab. 1, and Fig. 1).

Tab. 1. Number of innovative start-ups established in the Apulian area from 2015 to 2019 and its growth trend

Year	Born start-up	Annual Growth Rate*	Growth Rate†
2015	32	-	-
2016	60	88%	88%
2017	91	52%	98%
2018	101	11%	76%
2019	120	19%	87%
N=	404		

Notes: N=404; Growth Rate*= considering the previous year; Growth Rate†=considering the base year (2015)

As shown in Tab. 1 and Fig. 1, the investment in start-ups experienced a steady growth in the reference period. The number of companies set up within the innovative start-up legal framework increased by three times in these years, from 32 new start-ups founded in 2015 to the 120 in 2019, for a total of 404 new business activities throughout the sample-period. The 2019 growth-rate reached 87% throughout the Apulian territory. These results are particularly important when read systematically together with further concessions and active policies established and implemented at the national and regional levels.

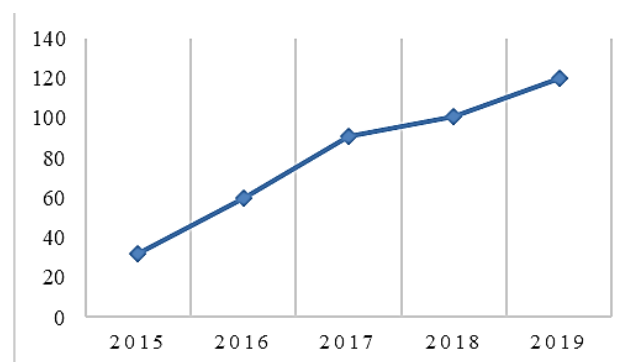


Fig. 1. Representation of the growth-trend of the number of start-ups established in the Apulian area from 2015 to 2019.

Already in 2013, a second decree, the so-called “Decreto del Fare”, (Law 98/2013) had, in fact, initiated a policy in support of innovative companies by providing substantial economic support (Oliveri and Uderzo, 2013). In this law, a set of regulations underlying the Investment Compact, established a set of tax breaks for start-ups, while the Budget Law for the period 2017-2019 extends and strengthens the incentives for investments and tenders’ refinancing for self-employment and innovative companies, thus granting access to third-part equity in addition to the investments deriving by proper capital.

4.2 Territorial georeferencing

The data highlight the spread of younger generations’ confidence in the innovative economic initiatives undertaken in the Apulian territory and, more generally, toward regional and national policies. By filtering the extracted data by province, a greater concentration of entrepreneurial forces appears in the provinces of Bari (47%) and Taranto (27%) (Tab. 2, and Fig. 2).

Tab. 2. Number of innovative start-ups established in the Apulian area from 2015 to 2019, grouped by province.

<i>Provinces</i>	<i>n</i>	<i>%</i>
Foggia	24	6%
Brindisi	33	8%
Lecce	46	11%
Taranto	111	27%
Bari	190	47%
<i>N=404</i>		

Notes: *N=404*; *n=*single province

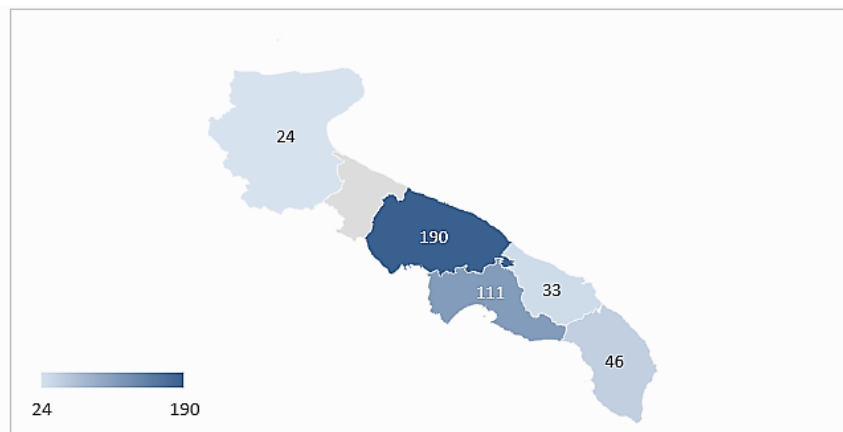


Fig. 2. Georeferencing of innovative start-ups established in the Apulian area, from 2015 to 2019.

The second part of the current study focuses on the Ionian area where the province of Taranto ranks second for its investment in innovative ideas, with 111 innovative start-ups launched during the reference period (27% of the sample). This is particularly interesting as it is symptomatic of a greater propensity to invest in innovative business activities, rather than into those company considered traditional by in the collective perception (i.e., in steel industry, refinery). These data are particularly encouraging in the light of the industrial and environmental history of the territorial reality in question. They represent an alternative to the traditional business idea, innovative businesses, in a territory that has always been oriented towards the metallurgical industry. Furthermore, it is interesting to combine these data with those collected by ARTI, the regional agency for technology and innovation. While our data feature only the number of start-ups that were established between the years 2015 and 2019, ARTI gathers information not only on the total number of start-ups inscribed in the Chamber register from 2016 to 2019 (with a minimum of 230 firms on 2nd August 2016 and a maximum of 431 on 31st December 2019) but observes also that the innovative start-ups from Apulia out of the total Italian are 4% in 2019 (www.arti.puglia.it/apulian-innovation-overview/dimensione.php?id_ac=3&id_ad=15). These data are promising since the southern region is the ninth region for the total number of start-ups, followed by the other southern regions of Campania and Sicily. Therefore, Apulian remains a case study of interest, because of investments on the start-ups’ ecosystem. If any doubt could still arise about the continuity of these trends in the growth of innovative Apulian entrepreneurship, the latest data updated to the first quarter of 2020 count a total number of established start-ups equal to 459, granting to the region the eighth place in the national start-up ranking (Confindustria Firenze, <https://www.confindustriafirenze.it/in-crescita-il-numero-delle-start-up-innovative-nel-primo-trimestre-2020>).

4.3. Business sectors

Filtering the database and analysing the sectors of activity by aggregate macro-categories (ATECO codes) in line with national and international trends, innovative start-ups are most relevant in the service industry (80.45%). To clarify, the ATECO code – an equivalent of NACE code – is an alphanumeric combination that identifies a business sector: the letters indicate the economic macro-sector while the numbers, from two to six digits, represent with different degrees of detail, the specific articulations, and sub-categories of the sectors themselves.

Tab. 3. Number of start-ups established in the Apulian area, from 2015 to 2019, grouped by business sector (ATECO macro-areas).

Business Sector	2015	2016	2017	2018	2019	N	%
Tertiary sector (IT, Technology)	26	48	70	83	98	325	80.45%
Industry and Craft	4	9	15	12	20	60	14.85%
Tourism	1	0	0	0	0	1	0.25%
Trade	1	2	4	3	3	13	3.22%
Agriculture and Fishing	0	1	1	2	1	5	1.24%

Notes: N=404

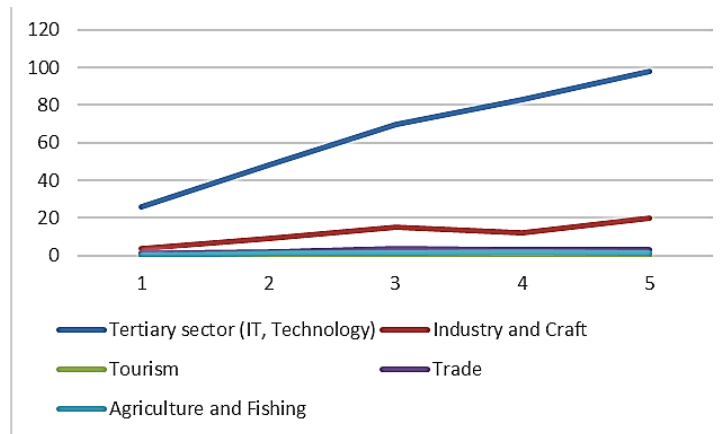


Fig. 3. Trend of the number of start-ups established in the Apulian area by sector.

Tab. 3 shows an evident growth in the number of the start-ups in the service sector, a sector in which innovative ideas in the fields of ICT and social media play a relevant role, as most of the services created and offered for e-commerce, computer systems, multimedia, websites and analytics purposes. This confirms the trend towards the outsourcing of the markets and greater trust in innovation (Antonioli and Montresor, 2019), new start-ups are more and more inclined to offer services rather than material and consumable goods. The goods market, in the face of innovation, appears to be highly unattractive, as it can also be deduced from Fig. III, which is extremely interesting when analysing the factors that influence the birth of start-ups and the type of markets. This is consistent with the notion according to which, in the context of innovative companies' market access, the more mature a market, the more difficult it is to set up cutting-edge business projects (Blank, 2020): this is due to the existence of a dominant design, an indicator of the maturity of the market. Innovative companies are strongly discouraged by the costs and, to a large extent, by the difficulty of finding or creating an idea to innovate a product or a production process that are already dominant in the reference sector. Therefore, it is in a setting such as the services sector, highly dynamic, capable of adjusting to the continuous market evolution and the variability of demand, always in search of new, faster and cheaper systems, that innovative companies thrive, being their innovation highly requested.

This notion has been confirmed also considering the lack of entrepreneurial innovation in sectors like agriculture and fishing (1.24%). These sectors, currently in severe crisis and in need of new resources – jobs and entrepreneurial ideas (Carini and Carpita, 2014; Chiapparino and Morettini, 2018) – have not found a suitable regime for promoting innovation through innovative start-ups. Indeed, the data tell us that, in the agriculture and fisheries sector, the number of established start-ups increased on average by one per year from 2015 to 2019, and not always (in 2018 there were two start-ups while in 2019 only one was still in the market). In a region that bases its national and international success on agricultural and livestock products, greater innovative intervention is hoped for by the companies operating there or by potential new companies. For what concerns the industrial and craft sector, we register strong growth in the number of established start-ups, a positive signal for the Apulian economy. To understand this trend, it is helpful to consider the goods and services as a *continuum* which requires a rethinking of the mass economy, usually considered separately from the service economy. In other words, it should be considered that, nowadays, services are often an integral part of the industrial or artisanal offer, to respond in a more agile way to the needs of market flexibility. It is, therefore, possible that the increase in investments in the industrial and artisan sector could be ascribed not only to innovative product ideas or innovation in the industrial process – of which we have already pointed out the significant, even if not insurmountable, difficulties – but also to innovative ideas which, even if not strictly pertinent to the industrial sector as a whole (from the raw materials to the Fordist production on the assembly line), make it more attractive and desirable on the market when accompanied by an assistance service, information that can characterize and differentiate the proposed products. One of the first examples of success in the province of Taranto, symptomatic of the regional trend, is the case of the start-up “Birrificio Magnagrecia”, in the food sector (code ATECO 1105). This start-up not only offers a craft beer, treated with an innovative processing method from the recipe to the preparation but also a QR code, printed on the label of each bottle, that through a freely downloadable application, produces different culinary recipes to combine with each type of beer (www.birrificiomagnagrecia.it). This is a good example that concretely makes the idea of what said before on the service-good continuum; in the Birrificio Magnagrecia's case, the production of beer using the peel of the “clementine” (a local variety of oranges) is certainly innovative, but the service combined with it is even more, together with the available app. Another case, this time in the field of services (ATECO 6201), is that of the consulting company “Eurisko” that equipped itself with a b.i. platform for

managers’ analytics, in labour-intensive sectors, that proposes an alternative method for industrial accounting based on innovative algorithms aimed at analysing data from the service-providing process, cross checked with the payslips of those who have provided the service (www.myeurisko.com). Analysing sectors of innovative start-ups that developed the most in Taranto, it is possible to derive the following table (Tab. 4) that offers a complete picture of the sectors in which investment in start-ups has been greater.

Tab. 4. Number of start-ups established in the province of Taranto, from 2015 to 2019, grouped by business sector (ATECO macro-areas)

Business Sector	2015	2016	2017	2018	2019	N	%
Tertiary sector (IT, Technology)	5	9	21	24	28	87	78.38%
Industry and Craft	1	4	3	4	2	14	12.61%
Agriculture and Fishing	2	2	2	3	1	10	9.01%

Notes: N=111

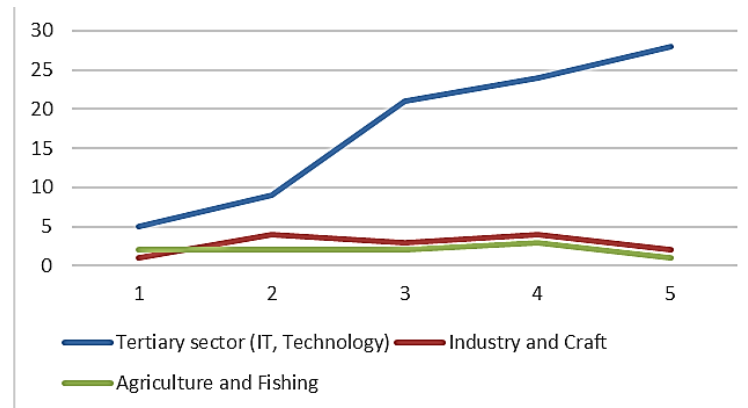


Fig. 4. Trend of the number of start-ups established in the province of Taranto, grouped by sector.

As highlighted by the data, in the Ionian territory (area of Taranto), the service sector and the artisanal/industrial sector are the most affected by innovation (78.38% and 12.61% respectively), while the modest trend presented by the primary sector persists (9.01%), with a single company set up in 2019. The Taranto area is characterized by a differentiated range of innovative entrepreneurial realities. This variety is revealed by the analysis of the individual ATECO codes assigned at the time of registration to each established company, whose function is precisely to identify the field of operational activity of the company in question, between services, industry/craft and agriculture/fishing. The analysis in question has highlighted a multidirectional innovation implemented through innovative projects, whose ATECO codes trace them back to different activities. For instance, in 2016 and afterwards, in 2018 and 2019, five start-ups were established with the ATECO code 721909 referring to those research and development activities in the fields of natural sciences, engineering (excluding biotechnologies) and technology, medical sciences, agricultural sciences applicable to the fields of natural sciences and engineering. From a purely scientific level to a humanistic one, start-ups engage in experimental research and development activities in the field of social sciences and humanities (ATECO code 722), non-residential social assistance for the elderly people (ATECO code 881), and, finally, services with particular reference to technology, software production (ATECO code 6201) and submission of techno-resources to telecommunication activities (ATECO code 61909). Furthermore, some start-ups engage in the provision of Internet access services (ATECO code 61901) or carry out consultancy activities in the information technology sector (ATECO code 6202). Within the industrial sector, the high variety of operational fields is quite evident if we consider that the start-ups, in this sector, engage in manufacturing activities ranging from sporting goods (code ATECO 323), chemical products (code ATECO 20599), electronic components (code ATECO 261109), machinery for agriculture, forestry and zootechnics (ATECO code 28309), installation of electric motors, generators and transformers, equipment for the distribution and control of electricity (ATECO code 332001), shipyards for metallic and non-metallic construction (ATECO code 301102) and beer production (ATECO code 1105, such as the “Birrificio Magna Grecia”). Finally, for what concerns the start-ups engaged in the agricultural sector, cattle and buffalo breeding activities and raw milk production (another Apulian typicality, as in Nardone, 2001), they are registered with ATECO code 0141. The case studies presented in this paper are certainly successful in delineating the picture of a territory that, although tortured by the toxic fumes of large industry, manages to be aware and far-sighted in returning to innovate in other industrial sectors that also characterize - in part - the considered area. The launch of these new start-ups and sustainable business activities suggests a desire for redeeming the territory back to those typical features that distinguish it.

4.4 Revenues

Ultimately, we investigated the revenue of the start-ups established from the 1st January 2015 to the 31st December 2019. The Registry website reports the revenue declared and deposited by the companies, necessarily updated to the reference period in which the analysis has been carried out. We considered as upper bound annual revenues for euro 5,000,000, which is also the maximum amount allowed for a firm to maintain the start-ups status.

Tab. 5. Analysis of the revenue ranges of the start-ups established in the Apulian area, from 2015 to 2019.

Revenue*	N	%
0 – 100,000	205	50.74%
100,000 – 500,000	131	32.43%
500,000 – 1,000,000	56	13.86%
1,000,000 – 2,000,000	11	2.72%
2,000,000 – 5,000,000	1	0.25%

Notes: N=111; *=expressed in euros

As shown in the table (Tab. 5), the Apulian start-ups mostly present substantial revenues within the range 0-100,000 euro (50.74%), and to a lesser extent from 100,000 to 1,000,000 euros (46.29%). Only 11 of start-ups reported average revenues between 1,000,000 and 2,000,000 euros (2.72%), of which only one was in the even higher range of 2,000,000 - 5,000,000 euros. This is the case of “Yocabè s.r.l.”, a start-up established in 2016 in the Lecce area, which is presented made in Italy digital platform that helps companies reach millions of customers that regularly buy on marketplaces around the world. The “Yocabè s.r.l.” assumes the role of intermediary in the sales of different brands, and its task is to take care of price and sales policies, the entire company logistics, and to identify the marketplaces most suited to the brand, the type of product, and the fluctuations of market demand; the latter activity being available online (www.yocabe.com). More specifically, the consultancy is offered in various sectors (from aesthetics, furniture, technology, toys, and food), and their services are also offered on large players’ e-commerce platforms such as Zalando, Amazon and Ebay. For what concerns the Ionian province, in line with the goal of our study, the aggregated data are presented in the following table (Tab. 6).

Tab. 6. Frequencies of revenue ranges among the start-ups established in the province of Taranto, from 2015 to 2019.

Revenue*	N	%
0 – 100,000	54	49%
100,000 – 500,000	35	32%
500,000 – 1,000,000	17	15%
1,000,000 – 2,000,000	5	5%
2,000,000 – 5,000,000	0	0%

Notes: N=111; *=expressed in euros

One of the business ideas that was greeted with great success and mediatic impact locally, nationally, and in Europe, is the idea of the “Nice technology” start-up, with revenue between 500,000 and 1 million euros. This start-up was created to operate in the renewable energy sector and offshore wind, hence the use of wind farms built on the surface of bodies of water, generally in the middle of seas or oceans within the continental shelf, to exploit wind energy to generate electricity (www.nicetechnology.eu). The start-up was founded in the name of the conception of an innovative system for correcting the verticality of wind towers, for which a patent application was also submitted. To date, “Nice technology” cooperates in the design and implementation of the first offshore wind farm in the Mediterranean basin with the installation of 4 wind turbines in the portion of the sea that laps the Taranto area (homonymous, Gulf of Taranto).

5. Conclusion

The analysis we carried out had the main objective of observing the phenomenon of start-ups in the Apulian territory as it is strategically relevant for the Italian national economy, then, taking as an example a cross-section of the Taranto area as symptomatic of a possible alternative direction of investment in a territory traditionally oriented to the heavy industry (Lai et al., 2019). The study was conducted through an exploratory research design based on the analysis of data extracted from the Business Register database and downloadable from its website, to investigate the adoption of government aids and funding (Heirman and Clarysse, 2004). We then proceeded to a detailed description of the sample (Lind et al., 2008) from different angles: birth rate, georeferencing, sector of activity and revenue. In this way, we tried to provide a cross-section of the Italian entrepreneurial fabric, and more specifically of the Apulian region, historically characterized by SMEs (Fusco, 2010), which witnessed, in recent years, the emergence of a new form of entrepreneurship based on technological innovation and incentivised by the discipline of innovative start-ups (Gualandri et al., 2016; Reina et al., 2018). In light of the considerations made, and of the methodology implemented, the conclusions are, despite a certain negative mass-media attitude, particularly surprising up to the point of acquiring a certain level of trust toward this entrepreneurial opportunity in the Apulian region and, specifically, in the Ionian province. In this regard, the results of the research show a positive and constant trend in values: the number of start-ups established is growing, the sectors in which they operate are mostly the service and industrial ones, thus reflecting the modern economic trend of market outsourcing (Antonioli and Montresor, 2019). Concrete examples were provided together with pills of information on start-ups such as “Birrificio Magna Grecia”, “Eurisko”, “Nice Technology”, and “Yocabè”. Based on the current study, it is safe to conclude that what happened and keeps happening in the Apulian region is a fundamental step towards the innovative development and progress of its economy. The same can be said for the Taranto area, traditionally characterized by an economy based on heavy industry. Certainly much more can be done and the critical sense projects us towards a broader reading of the reality not limited to economics; for example, it would be desirable that the same worthy efforts put in place to encourage start-ups could be extended to the university system and to the research sector, in which the passion and skills that drive the most

relevant innovative ideas – ideas that one day may be structured into companies leaders in their operational sector – must be nurtured and adequately equipped with solid resources that aim at fostering a stronger network of skills, as it occurs in the case of technological clusters, open and inclusive networks formed by the main public and private entities operating on the national territory in industrial research, training and technology transfer (Breznitz and Taylor, 2014). Economic, synergic and collaborative growth has a territorial structure: the idea that development is localized and organized in territorial clusters is now widely accepted (Camuffo and Grandinetti, 2011). Thus, some strategies discovered in success cases – as in the case of the Silicon Valley (Marwick, 2017, Koepf, 2003) – could be strategically replicated in similar clusters, as it already happens in part in the technological district of the Valle d’Itria in the Apulian hinterland (www.apulianlifestyle.thcs.it).

A final consideration inspired by a broader vision of the critical issues concerns what happens in the examined area. The Apulian territory has a history traditionally inspired by tourism and industry and, in some areas such as Taranto, the paradoxical duality and the consequent need of choosing between health and work coexists to this day (Lai et al., 2019; Sestino et al., 2017). Incentive systems of innovative business ideas and alternative productive activities could upset the current Apulian economic fabric permeated by the large and old industry, penetrating all the sectors that traditionally distinguish it (i.e., tourism and heavy industry) and bringing new vitality also to other sectors, such as those partially highlighted in this work (renewable energy, IT consulting, food and beverage). Innovative start-ups certainly represent just a part of the current investment possibilities, but they appear to be the most incentivizing for innovative business ideas, and the ones that stand a better chance of redeeming the territory through progress and innovation, elements very much desired and pursued in vain in the past years. The Apulian area has proved to be one of the most attentive Italian regions to the world of start-ups and youth entrepreneurship with an innovative character. The many calls for proposals and public tenders, funding, incubators, events, and resources dedicated to this ecosystem proliferate, thanks to a solid relationship built on stable foundations. The activity of the Italian government of providing support to the world of start-ups and innovative entrepreneurship has not stopped in recent times: the Relaunch Decree (Law no. 77, 17th July 2020) has introduced new provisions aimed to support the ecosystem of start-ups and SMEs, also considering the recent state of emergency due to the Covid-19. Among the others, these interventions include allocations for about 200 million euros aimed to finance innovative start-ups and SMEs throughout the country (<https://www.gazzettaufficiale.it/eli/id/2020/07/18/20G00095/sg>). Consistently, for the relaunch of productivity in Southern Italy, and to stimulate the creation of new start-ups, further concessions have been provided within the “Resto al Sud” program (that stands for *Stay in the South*) encouraging entrepreneurs to propose new business ideas in southern Italy, appropriately rewarding them with tax benefits and funds (<https://www.gazzettaufficiale.it/eli/id/2019/11/23/19G00143/sg>). Institutions and the national and local government, thanks to the Ministry of Economic Development, are promoting, as a part of the PON Enterprises and Competitiveness 2014-2020, some programs such as the SPIN roadshow (Scaleup Program Invitalia Network), for the entrepreneurial development of university spin-offs, SMEs and innovative start-ups from the South (www.invitalia.it). The program is managed by Invitalia in partnership with ELITE, a company of the London Stock Exchange Initiatives Group, and is aimed at encouraging connections between small innovative companies in the South of Italy and the large and medium-sized national and international companies. This is to facilitate open innovation processes and to provide better chances to attract new capital, to support the foundation and, above all, the growth of these new young entrepreneurial ideas. Indeed, once the start-up, strong in its business idea, has been recognized and launched, the next challenge is to overcome the “Pillars of Hercules” of territoriality, to enter the market of large Italian and international companies, with the ultimate objective of growing and developing.

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Tourism Industry and Competitive Advantage: Needs and Strategies in the Covid-19 Era

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Abstract: The paper aims to review emerging tourism strategies and customers' need to better understand, manage and valorise both the tourism impacts and transformational affordance of Covid-19. The Covid-19 pandemic, in fact, caused travellers' priorities to change and made safety the first of them. Health concerns are going, nowadays, to be the top priority when it comes to embarking on their first journeys in a Covid-19 world, whether it is for business or leisure, especially after months of worldwide closures and limitations.

Fully vaccinated tourists are less likely to get and spread the virus, however, travelling poses additional risks. Even fully vaccinated travellers might, in fact, be at increased risk for getting and possibly spreading some variants, differing from country to country.

Thus, "paying close attention" is the new "must" for all tourists that search for safety in their trips.

Therefore, now the key consideration for travellers is that hotels, airplanes, trains, restaurants and pubs within their travel itinerary or area of visit, follow a strict hygiene protocol. Similarly, it comes to business travellers, indicating that safety has a significant impact.

Tourism industry is a highly competitive sector, where there are many consumers, as there are many operators.

Thus, it becomes fundamental then to create a competitive advantage, which can be obtained when the tourism product meets the customer's desire and satisfies their expectations.

While it is clear therefore which the objective of companies operating in the tourism sector is, it is interesting to understand how customer needs have changed as a result of the pandemic storm and what strategies companies are adopting to meet them.

This research therefore followed two paths.

On the one hand, by conducting a survey with a sample of potential travellers, both leisure and business, of different ages and with different instructions, it sought to better investigate their needs, requirements and demands.

Then, on the other hand, this research wanted to analyse the tourism offer, through empirical cases, in order to understand how the strategies have been implemented or are being developed.

Keywords: Tourism management, Covid-19 strategies, Impacts, Recovery, Resilience, Crisis.

Introduction

Few businesses have as many variables and challenges as tourism and aviation. In both industries, in fact, economic elasticity, i.e., a change in the behaviour of buyers and sellers in response to a change in the variables, is emphasized.

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