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Fablabs as New Innovation Infrastructure for the Italian Industry

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Abstract: *The number of entrepreneurs in Italy using Fablabs services is exploding. However, while entrepreneurs in the main centers of innovation, such as Silicon Valley, have crucial social, cultural, economic, and material resources to build high-impact companies, these resources are often not present in moderate innovators countries. Those resources are defined as innovation infrastructures, stable and dependable resources necessary to systematically conduct technology innovation activities. Entrepreneurs in moderate innovators countries have a double challenge of excelling at their company, and using innovation infrastructures such as Fablabs. This paper analyzes how Fablabs can facilitate the innovation activities of the Italian industries, reviewing the different definitions and frameworks of three key concepts, innovation infrastructures, Fablabs and Italian industry.*

Keywords - *Digital fabrication, Fablab, Innovation Infrastructure, Italian industry.*

I. Introduction

According to Innovation Union Scoreboard 2014, Italy is a moderate innovator. Its innovation performance has been increasing steadily until 2012 and experienced a small decline in 2013. I selected the Italian case because it is representative of all southern European countries and it shows how people are building innovation-based industries without direct access to Silicon Valley's resources, and in the midst of profound global transformation of innovation activities. Thus, it is evident that entrepreneurs in southern European countries face a double challenge in realizing their aspirations: they must design and market innovative products, and they must create and utilize "innovation infrastructures" that support their practice. Innovation infrastructures are defined as a set of stable and dependable social, cultural, technical, informational, economic, and material resources that afford systematic, effective, and efficient innovation. Italian entrepreneurs are looking to fill their innovation and competitive gap. They seek to develop innovation infrastructures that assist their companies to create the business connections they need for growth, and empower aspiring entrepreneurs to learn new innovation practices. Fablabs are digital fabrication laboratories , set up to inspire people and entrepreneurs to turn their ideas into new products and prototypes by giving them access to a range of advanced digital manufacturing technology. Yet, to create an Italian industry with a global impact, necessary is the engagement of many more entrepreneurs and investors, and connect more deeply with global networks of innovation. In this view, Fablabs play a critical role for the possible development of the Italian industry. All Fablabs are part of a larger, global network, that is, "you can't isolate yourself." This is about being part of a global, knowledge-sharing community. The emergence of the Fablab community indicates that the process to bootstrap innovation in Italy is underway. This community is building and offering new infrastructures that will accelerate the innovation process and productivity of the Italian Industry. Therefore, the objective of this paper is to review the literature of three key concepts, innovation infrastructures, Fablabs and Italian industry in order to clarify how digital fabrication technologies can help Italian companies to be more competitive.

II. Building Innovation Infrastructures To Bootstrap An Innovation

One of the main objective of this paper is to understand how the Italian Industrial sector has been collaborating and approaching the Italian Fablabs community. For bootstrap an innovation culture, entrepreneurs need to use existing innovation infrastructures. Fablabs become an innovation infrastructure when technical, social, and conceptual resources all converge to create a stable place where entrepreneurs can routinely get useful feedback and create their products. Building and sustaining this vision of Fablabs that support innovation activities is a long process requiring strong collaboration and commitment. To transform the Italian Industry, entrepreneurs need to commit in the long term to build, use and maintain the concept of Fablab as tool of innovation infrastructure.

We need research to design policies, institutions, and technologies that can catalyze the positive social and economic outcomes of Fablabs in Italy, and minimize the potential negative consequences. Having a greater diversity and number of people involved in technology innovation would yield more, and better, solutions for many of the problems of humanity (Tuomi, 2006). Startup communities are now rapidly emerging all over the world. The Startup Genome project recently issued the results of a global survey of internet entrepreneurs

(Herrmann et al., 2012) to determine the maturity of startup communities across the world. The report showed an explosion of startup communities in many middle-income countries including Latin America, the Middle East, South East and South Asia, and some African countries including South Africa, Kenya, and Ghana. The report found consolidated startup communities in only three middle-income countries: Bangalore in India, Santiago in Chile, and Sao Paulo in Brazil. Those three centers are special cases: Sao Paulo and Santiago have had unique governmental support for decades (Lacy, 2011), and Bangalore has strong ongoing connections with Silicon Valley (Saxenian, 2006). The greatest challenge for entrepreneurs to consolidate the technology innovation in Italy is to transform their business culture and practices to allow greater innovation. The means of production in innovation-based industries are fundamentally different from those of the industrial era (Engeström, 2008). Industrial-era companies use efficient, but often rigid, mass production methods supported by assembly lines, mechanization and automation, mass distribution, and a steady supply of low-cost labour. Innovation-based companies, by contrast, must collaborate with partners and consumers to create value, using flexible production processes and new organizational patterns (Engeström, 2008). The internet and software industries are the foremost example of innovation-based companies. They create products that are highly malleable to user needs, and do not require intensive capital investment, especially when compared to manufacturing industries. Innovation-based companies often design their offerings as platforms that can be directly consumed or customized to create new products that cater to the needs of specific niche markets (Gawer, 2009). Designing platforms allows multiple parties to collaborate in a process of continuous innovation, creating greater value for all. For instance, internet product companies release an early version of their platform to get customer feedback. The user feedback is quickly integrated into new versions of the platform. Frequent updates constantly evolve the platform. Independent developers and startups create extensions of the platform or combine multiple platforms to create new products. The production process that brings together companies, partners, and customers has been studied under the rubrics of "user innovations" (Von Hippel, 2005), "open innovation" (Chesbrough, 2006), and "co-configuration work" (Victor & Boynton, 1998). Information and communication technologies (ICTs) are crucial for this new production practice as they enable multiple parties to coordinate and exchange information efficiently and at low cost (Hagel et al., 2010).

Entrepreneurs around the globe are hosting new kinds of events and social spaces to create stronger business connections and promote the adoption of new innovation practices (Lacy, 2011; Saxenian, 2006). Fablabs and coworking locations serve as meeting points for companies, promoting formal and informal collaborations among entrepreneurs. Formal events such as Fablab workshops give companies a greater global visibility and help individual entrepreneurs to make key connections. Formal organizations that promote entrepreneurship and business growth are fundamental for creating stronger innovation networks (Lacy, 2011; Saxenian, 2006). Such organizations, which include non-profits, formal networks, Fablabs, Makerspaces, Hackerspaces, business accelerators, seed-stage funds, venture capital, and investor clubs, allow entrepreneurs to access key resources including capital, connections, and mentorship. The past ten years have been about discovering new ways to create, invent, and work together on the Web. The next ten years will be about applying those lessons to the real world (Anderson, 2012). Recognizing the power of this movement, in early 2012 the Obama administration launched a program to bring Makerspaces into one thousand American schools over the next four years, complete with digital fabrication tools such as 3-D printers and laser cutters. To study innovation infrastructures it is crucial to understand the context in which they are created. Innovation is fundamentally a social achievement (Tuomi, 2006). While the personal effort and talent is necessary, it is the social context that provides the necessary resources for innovation. No invention or scientific discovery appears before the material and psychological conditions that are necessary for its emergence are created (Vygostky, 1930; cited in Van der Veer & Valsiner, 1993). Innovations become useful only when they address the needs of social practices in a specific context. Innovators' work is supported by technologies, methodologies, and material means that were created by others before them, and their creativity is nourished by the experiences they have had in the environment they live in. Star and Ruhleder (1996) study infrastructures as relational entities, embedded in a social context. Two important analytical distinctions stem from the fact that infrastructures are relational and embedded in a social context. First, infrastructures are inseparably related to the history of the communities they support (Bowker & Star, 2000; Engeström & Ahonen, 2002; Star & Ruhleder, 1996). Engeström and Ahonen (2002) explained that "communities need infrastructures to exist," because infrastructures give communities the material basis on which they can act together. The evolution of the community is reflected in the development of infrastructures.

In the 1990s and early 2000s migration back from Silicon Valley was a major factor in the growth of technology companies in India and China. Such was not the case for Italy and many other countries without skilled migrants. Now Fablabs and other formal organization are accelerating the entry to networks of innovation of people in countries that previously had little access to these networks. These new resources are fundamentally transforming how technology innovation happens. The revolutionary possibilities that Fablabs and cloud technologies are creating for entrepreneurs to engage in technology innovation, echo the profound

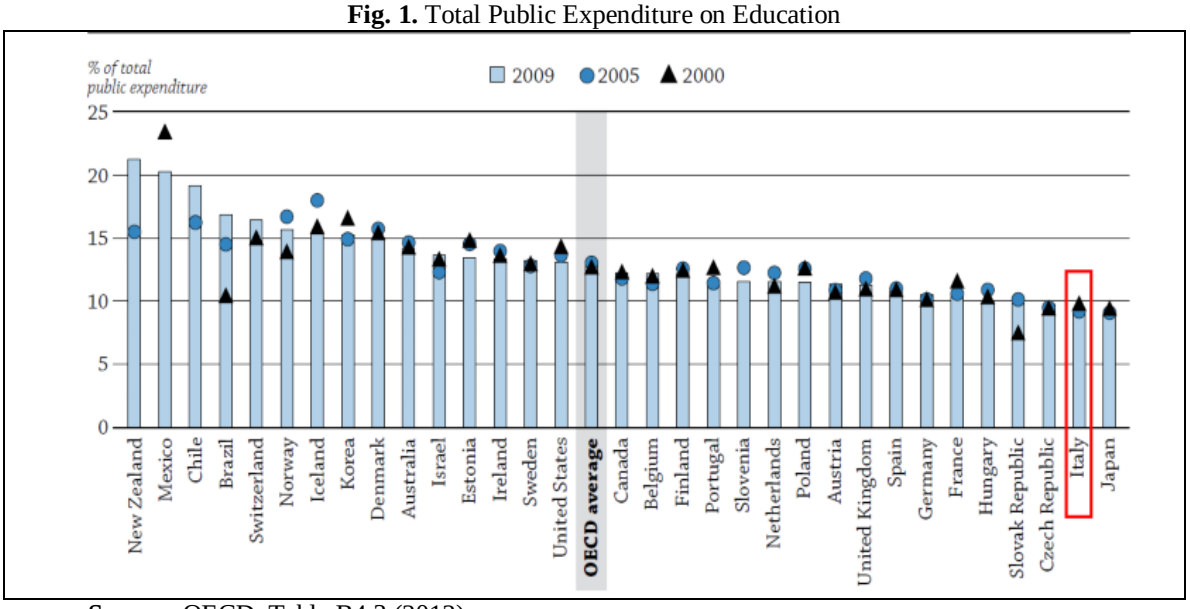
social and economic transformations facilitated by the adoption of personal computers at home and in small businesses in the last two decades of the twentieth century (Venkatesh, 1996). Yet, when personal computers arrived at the home and the office, people required magazines, online publications, user groups and local experts to harness the full potential of these devices to transform their work activities (Nardi & O'Day, 2000; Venkatesh, 1996). Similarly, entrepreneurs must work to create the appropriate social context to take advantage of these new resources, building innovation infrastructures they need to facilitate the emergence of innovation-based industries. Bolstering the growth of innovation-based infrastructures can leverage the development of the entire nation.

III. Challenges To Technology Innovation In Italy

Historically, the Italian Industry had overcame many challenges to bootstrap innovation. Italy has been an economy with few incentives for technology innovation, due also to the social, cultural, and economic consequences of a society that is based on privilege rather than merit. Many scholars assess the emergence of the Italian "Fablab movement" as an asset for the transformation of the culture and practices of the entire country and fundamental tool for the Italian Industry. The weakness of the state is a major reason to explain the relatively high level of inequality observed in contemporary Italy. The weakness of the state indirectly increases social inequality, as it is complemented by individualistic, market-based mobilization (Pizzorno 1993) and by the strength of particular social groups. Among the latter, the most important is surely the family: the classic concept of "amoral familism", developed by Banfield (1956) on the basis of his fieldwork in Southern Italy, is still useful to express how Italian families act for their own particular interests, without taking into account the welfare of society at large. The lag in innovation in Italy vis-à-vis the other main industrial countries is one of the effects of the fragmentation of the production system into many small firms that have trouble bearing the high cost of R&D and taking the related risks. The systemic weakness of Italy is linked to the modest amount of private research conducted even in very large firms, the insufficient capacity to institute relationship mechanisms between the latter and SMEs, the limited aptitude of SMEs to dialogue with the research supply system, the inadequate level of training of entrepreneurs and the poor involvement of workers in the innovation process both in businesses and in the public administration (Coletti, 2007). Indicators of innovative output such as patents filed at the European Patent Office (EPO) confirm the Italian delay in innovation (Lotti & Schivardi, 2005). Of the total number of patents filed at the EPO in 2001 Italy had a share (7.8 percent) is significantly lower than all the main European countries. Privileged and interest groups such as de-facto monopolies and oligopolies, corrupt political cliques, and dishonest sectors of workers' unions have been a constant burden for Italy´s development. The most notable interest group in Italy are the Italian political parties. It is precisely because Italian parties collude to protect/promote their collective interests that the Italian party system should be viewed as a cartel party system rather than as an instance of consociationalism (Bogaards, 2005). Historically privileged and lobby groups have made Italy a very conservative society. In fact, counter-intuitive findings about cooperation, that theoretically is a tool to overcome internal barriers to innovation, can be explained taking into account the less propensity to cooperate by Italian firms that means a too low experience of Italian firms in cooperative agreements and consequently the ineffectiveness of cooperation and the inability to access to partners "resources or to exploit the synergies among partners" human resources (Galia et al., 2012).

In times of economic crisis, higher education often becomes a central part of the political discussions. In 2009, public expenditure on education in Italy represented an amount equal to 4.7% of GDP, well below the OECD average of 5.8%. As a percentage of total public expenditure, public expenditure on education in Italy (9.0%) was the second lowest after that in Japan (Figure 1). Between 2000 and 2009, public expenditure on education as a percentage of total public expenditure decreased from 9.8% to 9.0% and increased by only 4% in real terms (the OECD average increase in real terms was 33%). Between 2000 and 2009, funding for educational institutions from private sources increased in real terms by 77%. In particular, funding for higher education shifted more markedly from public to private sources than on average in OECD countries. Whereas public sources accounted for 82.9% of funding in 1995 (above the OECD average of 78.9% that year), they accounted for 68.6% in 2009 (below the OECD average of 70.0%). The increase in public spending on tertiary educational institutions, equaling 4% in real terms between 2000 and 2009, is the lowest among OECD countries.

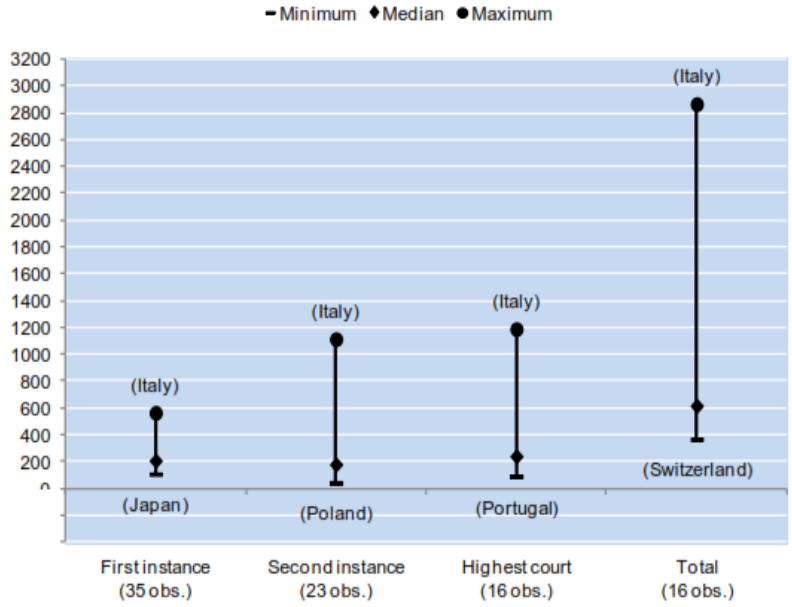
Fig. 1. Total Public Expenditure on Education



Source: OECD. Table B4.3 (2012)

Some Italians perceive that the lack of technical innovation can be explained by an inefficient justice system. Well-functioning judiciaries guarantee security of property rights and enforcement of contracts. Security of property rights strengthens incentives to save and invest, by protecting returns from these activities. A good enforcement of contracts stimulates agents to enter into economic relationships, by dissuading opportunistic behavior and reducing transaction costs. As further, improving the efficiency of the judicial system can help improve the business climate, foster innovation, attract FDI, secure tax revenues and support economic growth (IMF, 2013). The performance of the Italian justice system is well below European and OECD averages. Of note, it takes an average of 1,200 days to enforce a contract in Italy, more than twice the OECD high-income country average (OECD, 2013, and Council of Europe's European Commission for the Efficiency of Justice (CEPEJ), 2012).

Fig. 2. Distribution of trial lenghts (in days) across countries by type of instance



Source: OECD and CEPEJ (2012).

Further, very important for companies is the enforcement of contracts. According to Doing Business, in Seoul resolving a standard contract enforcement dispute takes 230 days, while in Italy 1185 days (Doing Business, 2014). In fact, small and medium-size enterprises (SMEs) usually try to avoid going to trial, effective

contract enforcement systems matter for them. Efficient courts and enforcement reduce informality, improve access to credit and increase trade. Dabla-Norris and Inchauste Comboni (2008); Safavian and Sharma (2007), in a study on Eastern Europe, found that in economies with slower courts, firms tend to have less bank financing for new investments. Yann and Utoktham (2009) found that simplifying contract enforcement procedures increases bilateral trade. High recruiting costs associated to scarcity of skilled labour weakens the incentive to innovate, on the other and, lower innovation and less productive technology reduce the economic return to human capital (Colonna, 2014). In Italy, the amount of social contributions amounts to 32.2% of the average wage level, compared to 31.0% for the average of the 15 EU countries. Income tax is 14.2%, compared to 14.1% for the EU average (Dell'Arringa, 2003). The World Economic Forum ranks Italy 123rd out of 142 countries in the efficiency of its labour market. Employers are robbed of their ability to innovate, from experimenting with hours of operations to introducing new forms of wage structures. Italy's unit labour costs grew by nearly 28 percent cumulatively during 1995-2007, compared to a European average of just over 20 percent during the same time period (Schindler, 2009). The high cost of labour is the reason why Italian companies have a specialization toward unskilled labour intensive sectors. Lack of skilled labour might reduce firms' incentive to innovate; on the other hand, low technological growth can curb economic returns to human capital. Colonna (2013) finds that multiple equilibria and "low skill-low innovation" traps can arise when the matching process between labour demand and supply is very. Thus labour cost and high recruitment cost play a pivotal role in shaping firms' innovation activity.

IV. The Fablab Revolution

A new digital revolution is coming, this time in fabrication. Digital fabrication will allow individuals to design and produce tangible objects on demand, wherever and whenever they need them. Widespread access to these technologies will challenge traditional models of business, foreign aid, and education (Gershenfeld, 2005). All started in 2001, when Prof. Neil Gershenfeld taught a class called "**How to Make (almost) Anything**" at MIT's Center for Bits and Atoms (CBA) Boston. The class was designed to teach a small group of research students how to use CBA's tools but were overwhelmed by the demand from students who just wanted to make things. Thus, following this request, in 2003 CBA began an outreach project with support from the National Science Foundation. They assembled a kit of about $50,000 worth of equipment (including a computer-controlled laser, a 3-d printer, and large and small computer-controlled milling machines) and about $20,000 worth of materials (including components for molding and casting parts and producing electronics). All the tools were connected by custom software. These became known as "Fablabs" (for "fabrication labs" or "fabulous labs"). Thus, a Fablab (fabrication laboratory) is a fully kitted fabrication workshop which gives everyone in the community, from small children through to entrepreneurs and businesses, the capability to turn their ideas and concepts into reality. Gershenfeld calls it the "**third digital revolution**." The first was communication, the second was computation and the third is fabrication, making things. Since then, the Fablab concept quickly became popular among users outside the research domain, and an international network of similar Fablabs came into being that were all active in the areas of research, education and application of personal digital fabrication. The development and rapid dissemination of digital fabrication technologies is comparable with that of personal computers in the 1970s (Stelzer & Jafarmadar, 2012). At the beginning of 2015, the international FabLab network consisted of over 400 Fablabs in 71 countries, made possible by hundreds of staff members (paid and volunteers). This phenomenon is caused by the continued cost reduction of the machines, the growth of open source software and hardware (Troxler & Wolf, 2010; Troxler, 2013), and because the cost of a part or component "is based on the machine's time, not shape or variety of parts, so there is no surcharge for complexity or difference" (SHoP, 2012, 251). Fablabs use the same tools and processes and an international infrastructure for co-operation in digital design and fabrication. Thanks to digital fabrication today are all potentially designers and manufacturers and this technological revolution, which some call the third industrial revolution, rewards a historical characteristics of an Italian creativity. The Italian Industry should bet on the value of the network and digital culture, to revive all its main sectors, especially the manufacturing, the most important sector of the **Made in Italy**. To strengthen this movement a network was formed amongst the Italian Fablab and Makers Foundation. The foundation starts from a new Made in Italy, namely the Italian talent, combining know-how with the wonders of digital fabrication. Helping those who have no means to express their talent, to support the dreams and needs of innovators best, and most work on digital skills of the Italians, from children to seniors, because only then, only with a large investment in training Italian Industry can really have a future . Personalized design and manufacturing machines will be an emancipating technology, creating freedom for people to work and play independently in ways that were previously restricted to an elite few (Burns, 1995). An industrial technology becomes "personalized" when it becomes cheap, small, and easy enough for mainstream consumers to use without extensive training. A virtuous cycle ensues as an industrial technology creeps into homes and offices, catalyzing new markets for companies that create applications, thereby attracting yet more consumers, and an even bigger market for applications. When enough applications exist that the formerly

industrial technology becomes an affordable and essential tool for everyday use, the technology has become personalized. Around the world, diverse groups of people are making things together in community-based workshops and their networks. Equipped with versatile digital design and manufacturing technologies, global networks of workshops, like Hackerspaces, Fablabs and Makerspaces, provide facilities for exploring commons-based, peer-production. The raise of commons-based peer production, individuals collaborating in producing cultural content, knowledge, and other information and indeed physical goods, is commonly attributed to "**digital revolutions",** the broad availability of new information technologies (Benkler, 2006). There are other initiatives of commons-based peer production other than Fablabs that could be summarized under the heading of "shared machine shops" (Hess, 1979). Fablabs' commitment to some kind of commons is more explicit. Economic growth requires continued entrepreneurial innovation and expansion (Kauffman Foundation, 2013; Schwab, 2012). Knowledge, research, innovation, learning and entrepreneurial spirit are crucial to long-term economic growth (Eaton & Kortum, 1996; Romer 1986). These commons-based peer production places that foster innovation and creativity can adapt faster to the new economy and sustain economic growth. Personal manufacturing technologies will profoundly impact how we design, make, transport, and consume physical products. As manufacturing technologies follow the path from factory to home use, like personal computers, "personalized" manufacturing tools will enable consumers, schools and businesses to work and play in new ways. "The digital culture's dynamics have led to a general acknowledgment of data production as the most important future option. However, the production of things seems to be outdated: Factories are not sexy!" (Boeing, 2010). At the same time, there are developments and hints suggesting the digital future "lies outside the box, in making the box" (Gershenfeld, 2005). These machines "are the pint-sized, low-cost descendants of factory-scale, mass manufacturing machines" (Lipson & Kurman, 2010), for example 3D printers, laser cutters or CNC machines that produce objects on the basis of rapid prototyping, tooling and manufacturing (Chua et al., 2010). Such production machines are able to print, cut or mill objects from data files without any human intervention. Fablabs are open for interested individuals, such as artists, hobbyists and students, but also for entrepreneurs who want to "move more quickly from an idea or concept to a physical object or prototype, or […] want to experiment with and enhance their practical knowledge of electronics, CADCAM , design, 21st century DIY" (Eychenne, 2012). A major research study at 3M Corporation indicates that consumer-designed product improvements were more novel than the incremental product improvements dreamed up by in-house design teams and market researchers. In the same study, researchers predicted that new products created by passionate leading-edge consumers would end up with higher market share, and be more likely to evolve into an entirely new product lines that would earn an estimated five times as much as products dreamed up using traditional methods. (Lilien et al., 2002).

Bringing digital manufacturing capacity to the level of the individual is regarded by some as potentially disruptive (Lipson & Kurman, 2010). Disruptive technologies combined with practices and values aligned with empowerment and peer learning means the Fablab model could well be a stepping stone to more widespread implementations of distributed production – as an alternative to, or alternate form of, mass production. The Fablab community workspace removes barriers such as access to equipment and access to expertise. Fablabs serve as "social engineering" agents that encourage systemic change in education and entrepreneurial environments (Gershenfeld, 2007). Many authors have invoked the next or Third Industrial Revolution, not only Neil Gershenfeld (2005) wrote about "Fab The Coming Revolution on Your Desktop", Chris Anderson (2012) claimed that "In the Next Industrial Revolution, Atoms Are the New Bits" and added that Makers are "The New Industrial Revolution". For Anderson, "the Third Industrial Revolution is best seen as the combination of digital manufacturing and personal manufacturing: the industrialization of the Maker Movement" (Anderson, 2012). This evidently has two aspects to it. First, digital tools and equipment are becoming widely used by makers both for designing and for manufacturing products, which makes sharing of and collaborating on designs over time and distances easier. Second, as files can be directly sent to machines for production (direct digital manufacturing), makers are able to use pooled manufacturing resources that are larger in scale than what any single maker possibly could afford. The cost and complexity of digital fabrication are coming down very quickly, bringing the tools and capabilities for invention and innovation within the reach of almost anyone, almost anywhere in the world.

Similar to Open Source software, this emerging ecosystem of Open Source hardware can be seen as a peer-produced commons, "thousands of volunteers collaborating on a complex economic project" (Benkler, 2002). Open Source hardware as a peer-produced commons might at least initially take different shapes in different economic contexts: "The killer app for personal fabrication in the developed world is technology for a market of one, personal expression in technology and the killer app for the rest of the planet is to overcome the instrumentation and the fabrication divide, people locally developing solutions to local problems" (Gershenfeld, 2007). According to Katzmair (2008), who analyzed the Austrian network of centers for technology, ideal networks follow a "center-periphery model" (Katzmair,2008). This model is a combination of the "single peaked network" (Katzmair,2008) that relies on one strong actor in the center, which attracts further actors, and

the "multi peaked network" (Katzmair, 2008) that consists of many connected, equally strong actors. Referring to Schumpeter (1912), Katzmair argues that these centers are important "hubs" that stabilize an innovation landscape. We argue that Fablabs have a strong potential to serve as hubs in these networks of innovation (following the center-periphery model), and to support local embedded economies. Being accessible for everyone, Fablabs can open a real avenue for insights into how post-modern production works. They are environments for "Building" in the sense that individuals cannot only develop their personality but also their relation to the world and to society. In combining a very practical approach with complex theoretical insights, Fablabs incarnate accesses to understand the today's world. This is what Ann and Mike Eisenberg called "tangible expressions of important ideas" (Eisenberg & Eisenberg, 1999). In Fablabs, learners meet communities of creative people with very different backgrounds and knowledge who help and inspire each other, and where learners can integrate. Fablabs also connect to network communities, where Jenkins locates the dawn of a new "participatory culture" (Jenkins, 2006) that characterizes, in his point of view, the young generation. "Play, Performance, Simulation, Appropriation, Multitasking, Distributed Cognition, Collective Intelligence, Judgment, Transmedia Navigation, Networking, Negotiation" (Jenkins, 2006) are characteristics that Fablabs connect to the interests and needs of youth in a digital culture.

V. Conclusion

Italy is still at a crossroads in building an innovation-based industry. The new local and global resources can help the country overcome the challenges from old institutions and practices. The economic crisis and the awareness that political reforms are needed society can create a culture emphasizing education and merit. While the Italian Industry is having initial experiences that are foundational towards creating an entire industry based on innovation, there is a long road to create a full transformation. Italian entrepreneurs must create collective aspirations to build strong innovation-based industry that benefits all, beyond the mistrust of cooperation amongst companies. Globally, a phenomenon called Fablabs is emerging. Fablabs drive the rapid expansion of the digital manufacturing and bring new benefits for companies. This paper shows that Fablabs have many positive effects on innovation, companies, civil society and individuals. The various contributions of Fablabs apparently show that Fablabs can help the Italian Industry achieve comprehensive innovation and economic development and growth. Therefore, this paper attempts to integrate the theories of Fablabs and innovation infrastructure to find an effective approach to achieve comprehensive development for the Italian Industry. To conclude, this paper is limited to the sole Italian Industry and Italian technology Innovation. This imply that it can be extended to other countries that present similar parameters to Italy and obtaining more depth considerations.

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