Working Paper

ICT and Ethical Finance: Fostering Social Innovation and Financial Inclusion

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ICT and Ethical Finance:
Fostering Social Innovation and Financial Inclusion

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Abstract

This paper describes the links between ethical and responsible finance and social innovation. The two have long been in a close relationship. Ethical and responsible finance has traditionally supported projects that face difficulties in the mainstream banking sector, fostering experimental approaches (to give but an example) to market failures of traditional welfare. Moreover, ethical and responsible finance is interested not only on the economic viability of a project to fund, but also its social and/or environmental impact.

The additional dimension brought about by the impact of the activities of ethical and responsible finance is social innovation. This potentially encompass several disciplines, phenomena and social constructs, which makes it difficult to analyse. However, interest in social innovation is increasing, especially concerning digital social innovation.

After the theoretical analysis, the focus shifts to the PROFIT platform, presented as a practical example of ICT response to the need for improving the financial knowledge and literacy of the citizens for better decision-making and social resilience. During the creation of the platform, its creators have taken the diversity of the potential beneficiaries into account, in order to be useful for as many social groups as possible. The paper concludes with an analysis of the digital social innovation potential of the PROFIT platform.

Keywords: ethical finance; responsible finance; social innovation; social impact; PROFIT, online platform; financial literacy

JEL Codes: A13, A20, I22, O32, O35

Introduction

This paper illustrates how the promotion of financial awareness and literacy by ethical and responsible financial institutions can be a driver of social innovation. It is divided into a theoretical part, where we define key concepts, and an empirical part, where a real world scenario puts those concepts to the test.

The paper begins by highlighting the links between ethical and responsible finance, impact analysis and social innovation. Ethical banks have the objective of achieving a positive impact on the collection and use of money. They offer financial services in an accountable, transparent and ethical manner.

Impact analysis and measurement is a common feature in ethical and responsible finance, as this type of financial organisations need not only an accurate analysis of their financial performance, but also the wider consequences on the environment and society of their actions.

The effects of the impacts of responsible finance in the longer term encourage new forms of social structures, the inclusion of marginalised people and the re-evaluation of resources that the "mainstream" economy no longer deem profitable (e.g. waste management). This process is what is called social innovation, and, as we will see in the paper, is not limited to tangible assets, but can also come from the internet and new technologies (as long as it involves the beneficiaries in the process) – what is called digital social innovation.

Ethical and responsible finance is interested not only on the economic viability of a project to fund, but also its social and/or environmental impact. Not only that, but ethical and responsible finance actively encourages its clients to ask questions about such impacts, resulting in more social and financial awareness. Another characteristic of ethical and responsible finance applied to social innovation is the bottom-up emergence of solutions to social challenges, where the identification of a potential answer comes from a dialogue with the beneficiaries – indeed, many social entrepreneurs often come from the very same group of potential beneficiaries.

After the theoretical analysis, the focus shifts to the PROFIT platform, presented as a practical example of ICT response to the need for improving the financial awareness and literacy of the citizens for better decision-making and social resilience. Part of the CAPS initiative, the PROFIT project is conceived as a solution to the need of greater financial awareness and capability that has been identified as a major target for improved social performance, client protection and, ultimately, greater societal well-being.

Key definitions

Ethical and responsible finance

Ethical and responsible finance (we will also use ethical finance and responsible finance interchangeably throughout the paper) can be considered a niche in the overall financial sector and a concept that to the casual reader may seem ludicrous. Especially in the aftermath of the global financial crisis, the traditional financial sector found itself under the spotlight for its predatory practices, due to speculative practices that ultimately led to the collapse of the financial markets in 2008.

Though this may seem the norm, it has not always been the case (see Benedikter, 2011 and Milano, 2011). Traditionally, a large part of the banking activities and sustainability has been linked to the cycle of collecting savings from customers, lending them back to customers and getting a margin from the repayment interest. Starting from the 1980s, the progressive liberalisation of the financial sector allowed banks to tilt the balance of their operations from lending to investing in the financial markets, where short-term profits are larger and, accordingly, the risks higher. In parallel, the boom of liquidity allowed for experimentation and the creation of more and more complex financial instruments and products.

Ethical finance, on the other hand, eschews the logic of short-term profits in order to achieve a set of different goals. According to (Yamini and Bhat, 2012), responsible finance has four main characteristics that sets it apart from traditional finance, to which we add a fifth one, outlined below.

Firstly, the relationship with the client is closer, often developing in the long term. Indeed, the customer tend to be an investor and involved in the decision-making process as well, often via a cooperative model. Moreover, the client can be highly active in the life of the institution, either as a volunteer or as a participant in meetings and conferences. Given that ethical financial institutions tend to be smaller than traditional ones, they are more rooted in the territory. This way, they are better suited to provide bespoke solutions, meeting the financial needs of their clients.

Related to the previous point, among the clientele of ethical financiers figure market segments that are vulnerable and excluded from the traditional financial sector, such as migrants, the elderly and people without a long-term occupation. These clients are often part of the mission of a responsible financial institution, as they fall victim of the poverty trap (see Aghion, Durlauf, 2005). The poverty trap is a vicious cycle that causes vulnerable people to be completely cut off from the financial system, which in turn causes their position to further deteriorate and, in the long term, to become inescapable. Moreover, this target includes also people but also organisations that cater for vulnerable social strata and deal with issues not tackled by the government nor the market. This is what is called the social economy and is composed of social enterprises and other associations (both for-profit and not-for-profit).

A third pillar of responsible finance is to improve the financial literacy of its clientele. This way, the client is empowered to understand the products and services offered and make informed decisions. According to the Organisation for Economic Co-operation and Development (OECD/INFE, 2012), financial literacy is "a combination of financial awareness, knowledge, skills, attitude and behaviours necessary to make sound financial decisions and ultimately achieve financial well-being". This is a win-win situation, as the financial institution has a more reliable partner and a lower chance of default, and the beneficiary is able to better manage his/her money, also outside the financial transaction. Moreover, for certain parts of society, such as the vulnerable category mentioned above, financial literacy is an important part of the process of financial autonomy. Financial literacy is an important skill for any consumer, and society as a whole benefits from a high level of financial education. However, financial education experts (Lusardi and Mitchell, 2014) have highlighted the low level of financial literacy also among developed economies, with many people overestimating their knowledge.

The fourth characteristic that distinguishes ethical finance is what is called triple bottom line (TBL) approach. That is, a way to understand the results of an ethical financial institutions not only in terms of financial performance, but also their social and environmental impacts (Slaper and Hall, 2011). Interest in triple bottom line accounting has been growing not only in the financial but also across the for-profit, not-for-profit and government sectors. However, the most important and difficult part of the TBL approach is not its definition but its application in real world contexts. This specific feature will be presented in the definition of impact analysis.

The fifth main characteristic of ethical and responsible finance is transparency. This concept not only relates to the transparency between the financial organisation and its clients, but also on the money. In this sense, the clients are informed on the origin and destination of the funds collected and channelled via the organisation's activities. Transparency is useful to promote positive behaviours of both depositors and borrowers driven by symmetric information and research of non-financial benefits. In turn, this system of "checks and balances" ensures that the other foundational principles of responsible finance are respected, such as making sure that money does not come from illegal activities, polluting industries and so on, nor that it is invested in projects that do not respect those same principles (see the FEBEA charter[3]).

Via its activities in the social economy, ethical and responsible finance has traditionally (and implicitly) supported social innovation. Some civil society organisations (for example, cooperatives, NGOs and associations) are engines of social innovation, pioneering new approaches when dealing with social needs. Oftentimes, ethical financial institutions have indeed emerged from this type of fertile ground.

Access to finance is a fundamental factor in the emergence of any business, and research has demonstrated that mainstream finance is ill suited to social economy projects and tends not to cater to vulnerable and marginalised social strata (Nicholls, 2010).

In this context ethical and responsible finance has provided solutions that can provide to vulnerable people, for example via microfinance. This process continues to evolve, as both the financial system and society face crises and change, and new instruments and approaches continue to emerge, such as impact investing.

As Moore et al. (2012) argue, finance for social innovation is fundamental because it is open to accommodate the requests from the potential beneficiaries, with less fear of challenging the conventional norms of investors. Furthermore, this type of finance "can support social entrepreneurship and innovation directly throughout its development, adoption, and implementation stages".

As we will see in the following section, one way to make sure that the activities of an ethical and responsible financial institution not only respect but also enforce the principles of ethical finance is the use of an impact analysis system.

[3] http://febea.org/sites/default/files/page-files/febea_charter_eng_1.pdf

Impact analysis and measurement

The idea behind impact analysis and measuring stems from the fact that financial organisations (we keep this as the relevant sector of analysis, but this discourse obviously extends to individuals and any type of entity) conduct operations and actions, and those actions have consequences. Some may be strictly linked to the action in question – for example, if an organisation lends money to an individual in order to open a small business, the consequence of the action will be the disbursement of funds to a third entity and the opening of a business.

However, this approach is quite limited. In economic theory, the concept of externalities addresses this limited view, by taking into account the unintended or indirect consequences of the consumption or production of goods or services. Externalities tend to be negative (for example, pollution), but they can also be positive (such as an increase of recycled waste).

Therefore, impact measurement from a responsible financier's point of view is a way to gather crucial information about the effects of its financial activities with respect to society and the environment (Hornsby, 2012). It is important to stress that this includes the direct effects of the action on the beneficiary, not just the externalities. Indeed, impact measurement wants to provide an overview that is as comprehensive as possible, while acknowledging the fact that certain benefits will be lost.

Therefore, impact measuring involves a multi-stakeholder, multi-dimensional approach that centres on three key perspectives, as Hornsby (2012: 56) explains:

(1) the organisation generating the impact, especially with regards of its own mission and the coherence of the actions and financing;

(2) the beneficiaries of the action, in terms of change of their situation as a result of the financing;

(3) the wider world, regarding the consequence of the financial intervention in society and/or the environment.

In the framework of ethical and responsible finance, reporting on the impact of the operations is an important element for building trust between the clients and the organisation and figures alongside the more traditional financial reporting. Moreover, an impact report is also an important component in the communication of an organisation outside its own stakeholders.

A common feature of impact reporting is the fact that many organisations devise their own methodologies and indicators. In order to provide a brief overview of some of the more popular methodologies, we briefly present four selected examples from Pedrini et al. (2015):

(1) Social Return On Investment (SROI): this approach focuses on the outcomes of the actions taken, linking financial and non-financial values and providing a way to quantify the impacts (Nicholls et al., 2009);

(2) B Impact Assessment (BIA): this methodology focuses on the impact achieved by individual companies, "as well as the aggregated impact of investment funds through the impact ratings of their underlying portfolio companies" (Pedrini et al., 2015: 17);

(3) Impact Reporting and Investment Standards (IRIS): this methodology focuses on the provision of a standardised list of the main metrics that organisation can use in order to evaluate the impact, allowing for consistency and comparability across the users.

(4) Storytelling: this approach relies on narrative as a way to involve stakeholders and shows the impact on a more emotional level rather than on a set of indicators.

In case a financial organisation prefers to devise an ad-hoc impact measurement system, we present an example of methodology developed by the European Venture Philanthropy Association (Hehenberger et al., 2015: 16), featuring five steps:

(1) Setting objectives: the first step defines the scope of the impact measurement to be developed;

(2) Analysing stakeholders: after the definition of the objectives, this phase selects the relevant stakeholders to be involved in the impact measurement;

(3) Measuring results: the assessment of the outputs (products and services), the outcomes (the short- and long-term effects) and the impacts (broader, social and environmental outcomes) of the organisation's activities;

(4) Verifying and validating impact: the analysis of the results and their coherence with the objectives, alongside the cost/benefit of the results for the stakeholders;

(5) Monitoring and reporting: an iterative process that tracks the progress of and communicates of the impacts.

(Digital) Social Innovation

Whereas the concept of social innovation is now facing a resurgence in popularity and interest, its origins date back to the nineteenth century with the birth of sociology. Starting from the 1990s, the ICT revolution – which paved the way for the spread of the Internet through the population – the fall of Communism and its alternative approach, as well as the renaissance of the environmentalist and ethically responsible movements created a fertile ground for a revival of social innovation. More recently, the Global Financial Crisis of the late-2000s, due to its impact on public finances and welfare, gave another impulse to the elaboration of different ways of doing business, creating jobs and investing (Landabaso et al., 2007).

In its simplest terms (BEPA, 2011: 33), "'Innovation' refers to the capacity to create and implement novel ideas which are proven to deliver value. 'Social' refers to the kind of value that innovation is expected to deliver: a value that is less concerned with profit and more with issues such as quality of life, solidarity and well-being".

Indeed, social innovation can potentially encompass several disciplines, phenomena and social constructs, such as communities, cooperation, marginalisation, identity and knowledge, which makes it difficult to analyse and pinpoint. However, thanks to this renewed interest, as well as the rise in importance of impact assessment among (but not limited to) financial institutions, its analysis is getting more and more studied and formalised.

In the context of this paper, we limit our approach to an operational definition of social innovation. For our purposes, social innovation is defined as "a novel solution to a social problem that is more effective, efficient, sustainable, or just than existing solutions and for which the value created accrues primarily to society as a whole rather than private individuals. A social innovation can be a product, production process, or technology (much like innovation in general), but it can also be a principle, an idea, a piece of legislation, a social movement, an intervention, or some combination of them. Indeed, many of the best recognized social innovations, such as microfinance, are combinations of a number of these elements" (Phills et al., 2008: 39).

Social innovation and its measurement is important to evaluate, as the results need to be communicated to policymakers and to the public, in order to assess the benefits of an actions and justify expenditures. Social innovation measurement best intended as a process that is non-linear multi-faceted and long-term. Research on social innovation has identified six stages (BEPA, 2011: 53):

First the idea emerges, the problem is diagnosed and the question is framed in such a way that not only symptoms (e.g. battered women) but root causes (e.g. gender inequalities) are tackled. The second stage is to generate ideas on ways to deal with the identified problem (e.g. brainstorming with stakeholders, examples from other regions or sectors). The third stage involves trialling the ideas through pilot projects with feedback from users and experts (e.g. test integrated programmes for schooling assistance in a small number of schools with high rates of early school-leavers and for violence in classrooms in deprived neighbourhoods). The fourth stage is about moving from the pilot to a securely established social innovation by identifying a legal and fiscal form and income streams to ensure the long-term sustainability of the social enterprise, NGO, charity or community that will carry the innovation forward. The fifth stage concerns the spreading of the social innovation with documented results to a larger group or to other communities or countries. The sixth and last stage is when entirely new ways of thinking and doing are put in place. It usually involves many elements (social movements, business models, laws and regulations, data, research and infrastructures) and actors from all sectors (public, private, profit and non-profit, informal).

As already mentioned at the beginning of this section, ICT is an engine for innovation. This means that digital social innovation is also emerging as a concept, which quite simply means a social innovation that is enabled by digital technologies (Bellini et al., 2016). Social media, connected to the Internet of Things, big and open data, and crowdsourcing platforms, are seen as new instruments for fostering social innovation both in its institutional and community-driven understanding. While social innovation proposes new face-to-face solutions to social issues, for example engaging a specific local community in the renewal of a neighbourhood, digital social innovations are expected to create new online instruments (new ICT services) that enable social innovation and take advantage of the network effect typical of the Internet.

Another important aspect is related to the transparency and openness of the ICT solutions proposed. In fact, every social innovation initiative can make use of ICT tools such as management software, social networks, websites etc., but the added value of digital social innovation is on instruments that also foster a new use of ICT which is more aware and respectful of users' rights in terms of access, privacy, possibility to use and re-use the solutions generated, and so forth (Bellini et al., 2016).

The value of digital social innovation is useful not only in the case of new social challenges, but also for challenges that transcend a specific sector or even the state, and ensure economic performance in case of systemic economic transformations. “Social innovations in organisations, policies, rules and regulations as well as in collective norms, values and cognitive frames are needed to complement the more traditional technological and economic innovations, in order to reach systemic synergies, productivity growth, increasing returns and steadily growing incomes” (Hämäläinen and Heiskala, 2007).

At this point, a legitimate question is whether the simple introduction of a disruptive technology is enough to create social innovation. In simple terms, the response is negative, for what is important is the positive, transformative effect on as many social actors as possible. That is, digital social innovation can be considered as such if society at large is not just the beneficiary of but is also empowered by a technological innovation (Vale, 2009).

Social innovation in practice: the PROFIT platform

Part of the CAPS initiative, the PROFIT project[4] is conceived as a solution to the need of greater financial awareness and capability that has been identified as a major target for improved social performance, client protection and, ultimately, greater societal well-being.

More specifically, the PROFIT project will create a user-centred financial awareness platform that will empower its users to better understand financial data and trends and inform them in their daily decision-making and financial capability according to their profile and needs. The PROFIT platform will enable citizens to receive economic information and news, communicate and connect with other users and get financial education materials and economic forecasts.

As an innovative financial awareness platform, the project will lead to new collective financial knowledge, forecast market trends extracting the market sentiment from users’ opinions throughout the EU, and improve the financial literacy of EU citizens.

The vision to promote financial awareness and stability requires a multidisciplinary approach that casts new light on the capabilities, functionality and potential uses of ICTs. It also means that in problem articulation we need to involve a variety of stakeholders and expertise that exists beyond the ICT

[4] See PROFIT Project. http://projectprofit.eu/

domain, engaging economics, social economics and finance, business and education studies.

The project closes in December 2018 with its last testing phase and the last features added to the platform prototype. The initial set of PROFIT services and applications was introduced to the customers of FEBEA[5] member organizations. More specifically, the evaluation phase aims to:

- test and evaluate the predefined set of services;
- identify requirements for modification on the basis of the evaluation results;
- demonstrate the feasibility and the viability of the PROFIT concept;
- define social innovation indicators and/or scoreboards;
- provide some preliminary indications on the social impact of the platform.

The evaluation of the platform consists of an evaluation strategy that has been drafted through the collaboration of all the project partners[6] and including:

- the collection of direct feedback from the testers via an online questionnaire embedded in the platform.
- usability testing analysis
- technical evaluation by IT specialists
- feedback provided by ethical finance professionals in free text form.

The creation of this ad hoc impact measurement has followed the steps outlined in the previous section (Impact analysis and measurement).

This approach has the twofold objective of assessing the acceptance of the platform by the users and the expected impact at the societal level. A detailed analysis of the two levels of assessment will be provided in the following sections.

The first aspect of the financial platform to assess is its accessibility to the larger European public, therefore it must be useful and easy to use. A paper

[5] Founded in Brussels in 2001, FEBEA is the European Federation of Ethical and Alternative Banks and Financiers. It brings together financial institutions from 14 European countries with the aim of developing ethical and social finance in Europe. Together, these innovative and pioneering institutions work, each in its own country, to disseminate the importance and urgency of the development of ethical and solidarity-based financial models in the European economic and political area.

[6] The PROFIT Consortium is composed of EEA, CERTH, FEBEA, SWC, UoGlasgow and DUTH.

that analysed the needs of the potential users of the PROFIT platform (Panos et al., 2016), starting from the User Groups and finishing at the Use Cases, has provided an overview of what the platform prototype should include and the likely needs that future platform users may have. The quantitative questionnaire suggests that there is an interest from the “bottom up” to have a trusted, reliable platform that can provide certain services. In fact, an issue that emerged is that many people do not know where to look when searching for financial information on the Internet.

Taking into account the results of the investigative phase, the project partners elaborated a two-step evaluation strategy for the platform. The first evaluates the technology acceptance of the platform by the final users (Davis et al., 1989). This was required in order to understand the basic principles needed for citizens to adopt such a platform, regardless of the fact that they expressed interest in the concept of the PROFIT platform.

Part of this step was also the Usability testing (Black, 2015), a methodology used in software testing. It works with the help of a selected number of participants not familiar with the product to test. An interviewer asks them to perform certain tasks, recording their feedback and their navigation through the interface of the software. Afterwards the reports are analysed and a set of recommendations drafted.

The second step focused on the consequences of the users spending time on the platform in terms of impact. This includes feedback gathered via an evaluation questionnaire and information extrapolated from the use of the platform.

Going into detail, the impact assessment framework for the CAPS projects (Bellini et al., 2016) represented a starting point in order to develop a coherent and valid digital social innovation methodology. This framework considers six sub-categories in total, four of which are relevant to the PROFIT project in particular and are described below:

(1) Impact on community building and empowerment: it gathers data about the users of the PROFIT platform and how they use it; investigates how PROFIT projects can support the empowerment of online and local communities; investigates the PROFIT community itself, the internal level of collaboration and the relationship with other stakeholders. This social impact sub-category corresponds to a synthetic index which is composed of 3 dimensions:

- Online community building;
- Online community empowerment;
- Impact on Social Innovation and PROFIT communities.

(2) Impact on information: under this subcategory, the focus is on the capability of projects to provide access to high-quality information, provide users with the necessary tools for navigating information, and positively influence information asymmetries. This subcategory investigates an aspect that has strong influence on other aspects, such as “Impact on ways of thinking, values and behaviours”, “Impact on community building and empowerment”, and political impact as a whole. In fact, having access to information and being supported in sharing information is a condition sine qua non for changing opinions, habits and being civically and politically engaged. The impact on information index comprises three dimensions:

- Access to information and sharing of information;
- Quality of information;
- Data management policies.

(3) Impact on ways of thinking, values and behaviours: this area of impact tackles the changes introduced in citizens’ way of thinking and behaviours, especially as related to more sustainable individual and collective behaviours and lifestyles. It is not easy to monitor changes in opinions, ethical orientations and behaviours since, even when observing a shift, it is very difficult to associate that change to a defined input. The issue is complicated by the fact that changes in opinions and behaviours are influenced by the number of people that decide to assume certain behaviours: the more people assume a new behaviour the easier it becomes to see this change spreading across the population (network effect). The dimensions investigated within this index are:

- Changes in opinions/ways of thinking;
- Changes in behaviours.

(4) Impact on education and human capital: this subcategory investigates if, and to what extent, projects are working on the transfer of their research results and, more generally, the knowledge made available by the projects to users. With reference to human capital, this term refers to the competencies, skills and abilities that workers have or acquire

through formal and informal education and on the job training and that constitute an important productive factor of any organisation (profit or not-for-profit). The aim is to understand if the PROFIT project will improve the human capital of its users and/or of the professionals working in the project. Special attention is dedicated to e-Skills, as a lack of such skills may result in the impossibility to benefit from Digital Social Innovation.

- Training provided by the project;
- Impact on human capital;
- Change in training curricula, educational policies, and personal investments in education.

It should be noted that such factors represent the starting point and general framework that the platform evaluation followed throughout the evaluation cycles. The project partners incorporated specific questions based on these factors in the evaluation questionnaire, according to the feedback received and the available features on the platform. To give a straightforward example, an indicator that assesses the level of interaction between users cannot be evaluated if the application that allows users to chat between them is not present on the platform.

Keeping into account the approach of ethical and responsible finance and its focus on social and environmental impact and social innovation, as well as the multidisciplinary team behind the PROFIT project, the PROFIT team elaborated a Social Innovation Matrix. It is presented on Table 1.

After three testing cycle, some lessons were learnt about the assessment of a (digital) social innovation tool, with a focus on financial awareness:

- Ease of use is fundamental: all functionalities of a social innovation tool should be accessible by users with different financial literacy level – appropriate explanations should therefore be provided also on the functioning of complex tools;
- Comparison of results over time is extremely useful, as it allows to assess the progress for the social innovation tool. It is the case that often social innovation cannot be measured in the short term;
- it is necessary to work on the smaller (but important) details, fundamental in ensuring a smooth user experience.
- to be truly innovative, the contents offered via the social innovation tool should reflect not only the traditional aspects of finance and

economics which are important for everyone to understand – but also offer a critical view on certain aspects of the mainstream economic system.

Conclusion

In this paper we have explored the importance of social innovation assessment, starting from the historical experience of ethical and responsible financial institutions and the different methodologies they adopt. We have then examined the assessment towards social innovation of the PROFIT platform: as the platform includes elements of both financial awareness and digital innovation, the design of an appropriate evaluation tool presented numerous challenges.

The PROFIT project has indeed the objective of providing citizens with a tool to improve their financial knowledge, positively influence their decision-making process regarding financial issues and lead to more stability. This ambitious is necessarily long-term and this social impact cannot be measured thoroughly within the lifecycle of one project. However, the results from the third and last test session will provide some early indications on the direction of the platform in the future.

Whereas the first and second test cycle were more concerned with the ease of use and usability of the platform, alongside the overall acceptance of the technology, the last focuses on the social impact of the platform, using an evaluation questionnaire and other indicators extrapolated from the platform backend, a usability testing analysis and the direct feedback provided by ethical finance professionals. This information will be instrumental in understanding the impact of the platform with respect to its final users.

As general results, the importance of ease of use, accessibility and the adoption of a critical approach towards financial literacy was underlined by the first test cycles. Comparisons over time and long term monitoring of results are considered fundamental for an exhaustive assessment.

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Table 1. Social Innovation Matrix

AREA	Sub-area	Questions in evaluation questionnaire	Additional indicators	How to measure it	Partner in charge
Impact on community building and empowerment	Online community building:	Please rate on a scale from 1 to 5 the quality of the following benefits the PROFIT platform seeks to provide: **Articles, Polls, Discussions and other posts**	N. of users Recurring participation during the testing period	Back end data of the platform	IT partners
		Did you have a positive experience on the use of the chat feature?	n. of polls, n. of discussions, n. of chats		
		Did you find it interesting to receive recommendations about other users with similar interests?	User followed recommended users (yes/no): indicates that users find recommendations relevant		
	Online community empowerment;	Incentives to participate in the PROFIT platform: **I think that contributing to the platform is useful as it helps other users**	Number of comments and answers to articles and discussions	Back end data of the platform	IT partners

AREA	Sub-area	Questions in evaluation questionnaire	Additional indicators	How to measure it	Partner in charge
	Impact on Social Innovation and PROFIT communities	Which of the following motivated you to contribute more to the platform: **Seeing through the impact graph that my contributions have a certain impact on raising financial awareness/The number of people that decided to follow my updates on the platform/ People that acknowledge my contributions positively**		Questionnaire answer	IT partners
Impact on information	Access to information and sharing of information;		N. of articles published by users	Back end data of the platform	IT partners
			N. of comments to articles		
			N. of ratings to articles and comments		
		Please rate on a scale from 1 to 5	% of articles taken from		IT partners

AREA	Sub-area	Questions in evaluation questionnaire	Additional indicators	How to measure it	Partner in charge
	Quality of information	the quality of the following benefits the PROFIT platform seeks to provide	widespread newspapers (APIs) on total articles	Back end data of the platform	
			% of articles uploaded by users indicating the source on total articles		
			% of articles with ratings >3 on total articles		IT partners
	Data management policies	Did you understand platform data management policy?			
Impact on ways of thinking, values and behaviours	Changes in opinions/ ways of thinking;				
	Changes in behaviours.	The platform helped me to take informed financial decisions		Questionnaire answer	Social partners
Impact on education and human capital	Training provided by the project;	Are the recommendations you get for educational material useful?	Topics covered by educational material	List of topics	Academic partners

AREA	Sub-area	Questions in evaluation questionnaire	Additional indicators	How to measure it	Partner in charge
		Please rate on a scale from 1 to 5 the quality of the following benefits the PROFIT platform seeks to provide: **Financial education material/Financial literacy test**	External organisations having certified the financial literacy material		
	Impact on human capital;	The platform helped me to improve my financial knowledge and awareness	n. of people having consulted the educational material	Back end data on the platform	IT partners
			n. people having performed the financial literacy test	Back end data on the platform	
			Average improvement in test's results		
	Change in training curricula, educational policies, and personal investments in education		N. or % users having obtained the PROFIT Financial literacy certificate	Back end data of the platform	IT partners

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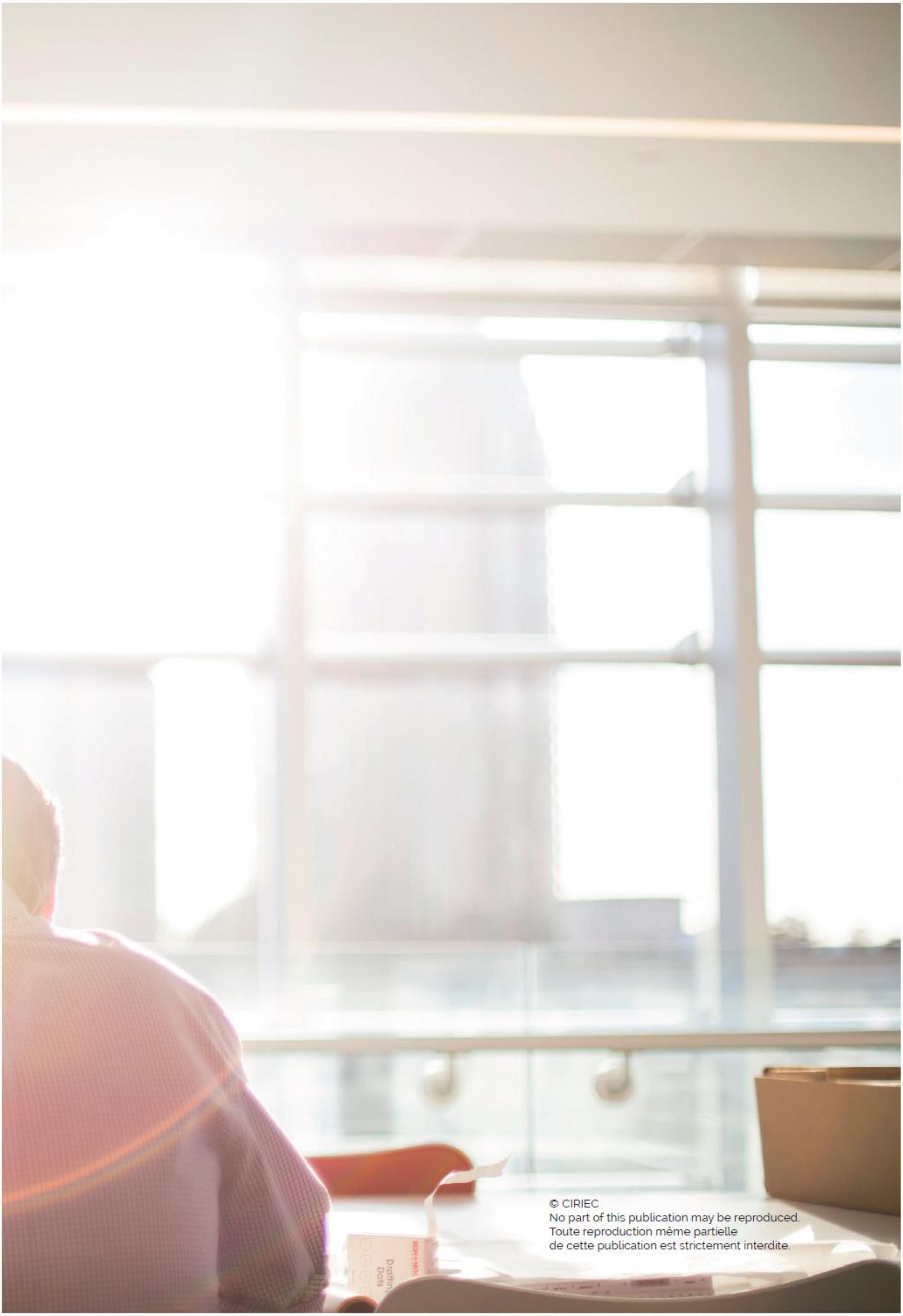

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