

A Proposal for an Assessment Tool of Social Innovation Impact

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Abstract: In response to the urgent need for an inclusive society, the demand for metrics to evaluate the impact of different types and scales of organizations has grown significantly in recent years. The challenge of how to evaluate the impact coming from social innovation (SI) has emerged as an important question posed by various actors, such as academic researchers, students, project managers, leaders of organizations, and policymakers. To find an answer to this question, this research seeks to contribute to bridging the gap between SI initiatives and the evaluation of their impacts. Despite the interest and popularity of the topic of SI, this gap can be justified due to the lack of tools and frameworks to help organizations approach SI impact assessment. Although indicators have been widely used by researchers in different fields of study, the current literature has failed to develop indicators, frameworks or methodologies to assess the impact of SI initiatives. The research includes an investigation of the state of the art in terms of measuring the impact of SI, based on both scientific literature and practitioners' reports. Based on this analysis, a set of thirty-eight indicators was identified to assess the impact of SI. From the literature consulted, it can be seen that the results highlight the gap in the literature regarding the lack of instruments and frameworks. Regarding the set of thirty-eight indicators identified, if applied as a complement to a measurement tool, the indicators can be used as a first attempt to help organizations address the evaluation and effectiveness of the SI impact on their actions. The proposal may contribute to bring to light new evidence in the SI domain for policymakers, researchers and governments, then contributing to a better understanding of the impact of SI.

Keywords: social innovation, impact assessment, indicators, metrics, assessment tool

1. Introduction

The last decade has been contributing to increasing awareness about the social problems faced by society, as well as the society's change process. These changes involve aspects such as social exclusion problems, lack of community access to markets and public sector services, like health, education, and transport (Benneworth & Cunha, 2015). Aiming to overcome these challenges, the development of initiatives to help governments and organizations to solve social problems has become imperative (Stypińska, Franke & Myrczik, 2019, OECD, 2011). To accomplish this aim, Social Innovation (SI) approaches have appeared as an alternative to respond to the challenges related to social problems and needs (Benneworth, Cunha & Cinar, 2020).

Addressing a largely and still unexplored research field, the increasing interest for SI has been supporting a growing list of scientific researches on this subject, as well as addressing global issues to deal with social problems (Dainienė & Dagilienė, 2016; Krlev et al., 2014). Yet, despite SI can be seen as an emergent approach to overcoming barriers to social problems, one of the main challenges faced by researchers and practitioners working in this area remains: how to apply this approach by different organizations, but, at the same time, how to assess the impact of SI on community and stakeholders? According to Antadze & Westley (2012), current measurement tools and approaches tend to focus on the evaluation of the impact of new products and services, mainly evaluating their economic performance. However, SI has a broader impact which implies that other kinds of impact dimensions have to be taken into account. But this poses a particular challenge when it comes to the development of metrics for these other dimensions, beyond the economic ones.

This quest for the development of metrics for SI is precisely the focus of this research. Thus, we aim to answer the following research question: How can the impact of SI be measured?

SI has emerged as an innovative approach with the potential to solve social problems, but at the same time, the development of metrics for this purpose has not yet been fully researched, debated and understood by both organizations and academia. This research attempts to contribute to bridging the gap between SI initiatives and the assessment of their impacts. To this end, this research brings together a set of indicators that can be used by different organizations to assess the impact of their SI initiatives or projects. It should be noted that, as the impact of SI can be measured at the micro, meso and macro-scale (Cunha & Benneworth,

2020), the indicators gathered in this paper fall within a meso perspective, as it focuses on measuring the impact of SI developed by organizations (e.g. NGOs, civil society organizations, universities, companies).

2. Literature review on social innovation impact assessment

The dissatisfaction with the difficulty of technological innovation to capture and fully solve the real needs of society has contributed to the fast development experienced by academia and researchers in the field of SI (Cunha & Benneworth, 2013; Edwards-Schachter & Wallace, 2017). It has led to consider SI as a recent phenomenon that can create roots to respond to the real needs of the society as well as to deliver social benefits and produce important improvements in society with relatively low costs (Reeder et al., 2012).

SI can be seen as new ideas, institutions, or ways of working to support society to meet its social needs (Dainienė & Dagilienė, 2016). Cunha and Benneworth (2015: 512) define SI as *“a socially innovative practice that delivers socially just outcomes by developing novel solutions in border spanning learning communities thereby creating social value by promoting community development, hence forming wider collaborative networks and challenging existing social institutions through this collaborative action”*.

From the several SI definitions presented in the literature, it is clear that all of them are concerned with the social needs of contemporary society. Yet, according to Unceta et al. (2016), there are no clear limits defining the impacts of SI on society. The authors claim that defining metrics that allow for assessing the causal relations between SI and its benefits has become a complex task.

From this point of view, the development of indicators, metrics, and tools to assess the impact of SI poses the scientific community a new challenge, not only related to that development but also regarding the complexity of selecting criteria for gathering indicators of different types, forms and sources (Bund et al., 2015). Yet, despite the complexity of this task, there is a strong demand from policy-making and organizations regarding the development of indicators to measure the impact of SI initiatives, which configures, clearly, a gap in the current literature around SI (Spila et al., 2016). The identified gap can be justified for different aspects, such as lack of consensus on what SI is about, difficulties to address the appropriate methodologies to select indicators and their metrics, and which organizations should be assessed, among others (see, for example, Antadze & Westley, 2012a; Bund et al., 2015; Spila et al., 2016; Vilarinho et al., 2018). In this context, the identification of indicators and the development of metrics for SI impact assessment must be capable to collect and make available data at various dimensions where SI may occur, for instance, social, geographical, cultural, political, economic, educational and environmental. According to Krlev et al. (2014), these aspects reflect traits that may support researchers in building measures and indicators tailored to SI.

2.1 Social innovation impact assessment through indicators

To guide organizations to measure the impacts of their performance, different strategies have been suggested in the literature, each has its own purpose for the use, which means that choosing one of them, claims the necessity for designing a plan which best fits the proposed objective (Dzialis & Blind, 2019).

Regarding social development, there are several metrics available devoted to this aim. For instance, measures developed by the Global Report Initiative (GRI), Organisation for Economic Co-operation and Development (OECD) and World Bank have been widely used for measuring economic and social development in different contexts (Dainienė & Dagilienė, 2015).

Regarding which methodologies have been adopted for impact assessment, scenario tool, participatory tool, Multicriteria Analysis, Cost-benefit Analysis, accounting tools and indicators sets are examples of the main tools available and used for impact assessment presented in the current literature. Aiming for a better understanding of the impact of SI, it calls on researchers, governments and practitioners to develop metrics for this particular aim. The current literature has shown that the use of indicators and metrics to assess the impact of different sectors of the economy has been increasing over the years (Alves et al., 2016). According to Puig et al. (2014), the use of indicators to assess the performance of organizations or projects is toughly recommended twofold, firstly because it can be able to screen progress and provide trends and changes over time, secondly, as metrics and indicators can clearly show not only how individual organizations and projects are performing, but can also assess national and regional benchmarking performance. Although indicators have been largely used by researchers in different fields of study, the current literature has failed regarding the

development of indicators, frameworks or methodologies for SI impact assessment (Cunha & Benneworth, 2020). Several scholars have been discussing the need to and highlighting the importance of measuring the impact of SI. For instance, Antadze & Westley (2012b) have discussed the barriers to developing impact metrics for SI. Bund et al. (2013) present a set of challenges and opportunities for SI measurement. Dainienė & Dagilienė (2016) show a review of the theoretical background for SI and also propose a conceptual model for measuring the value of SI at an organisational level. Finally, Schmitz et al. (2013) present an attempt to measure SI at the national level using an indicator system. However, what has been missing in the literature is how this should be done in practice, that is what kind of specific indicators should be used and how those indicators can be measured (i.e. metrics to use) for SI impact assessment. This screening collaborates with the idea that most researchers mentioning SI impact assessment focus on conceptual models, frameworks or methodologies. Few of them present quantitative indicators or metrics for measuring the impact of SI. According to Jacobi & Chiappero-Martinetti (2017), the development of quantitative or qualitative metrics to measure the impact of SI should consider two key aspects, namely: (i) the benefits which will be generated at both social and individual levels and (ii) the importance to provide a broader account of the potential impact generated by SI, focusing tangible and intangible effects. The regional context and attitudes of the population regarding SI initiatives are also aspects highlighted by Kleverbeck et al. (2019), which need to be considered when developing indicators for SI. Based on these characteristics, Figure 1 summarizes a set of criteria established by Alonso et al. (2015) and the work developed by the Ministry of Social Development (2016), which lists a set of criteria that should be considered when selecting indicators for SI impact assessment. When considering the criteria presented in Figure 1, different perspectives should be assessed, for instance, the innovation performance of projects and the innovativeness of the organizations (Bund et al., 2015). Furthermore, the innovativeness of spatial units, such as the societies as a whole, should be accounted for, which can be analysed at national (macro), regional (meso) or municipal (micro) levels.

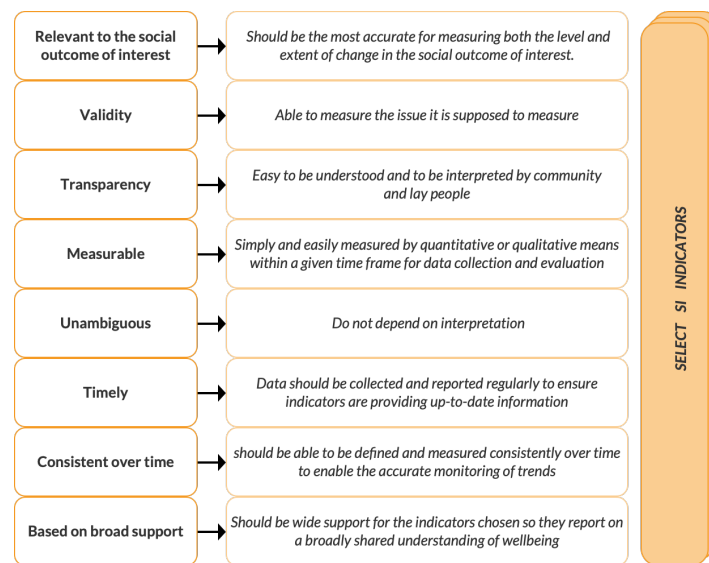


Figure 1: Criteria for selection of indicators. Source: Adapted from Alonso et al. (2015) and Ministry of Social Development (2016)

Nonetheless, as mentioned before, it is also important to highlight that while indicators have been presented in the current literature as useful measures to reduce the complexity when tackling relevant data, one should bear in mind that every process of selection or aggregation is not considered as an easy task (Alves et al., 2016). In this sense, Falck & Spangenberg (2014) emphasize the importance of the selection of indicators that balance the needs for reducing complexity, being relevant to the social outcome of interest, easily understandable, consistent over time, resonating with clearly target audience and being limited in number.

3. Research design

According to Mulgan et al. (2014), traditionally the literature on SI impact assessment falls short of developing indicators to assess the real impact of this approach. To address this gap, the methodology proposed in this paper aims to result in the construction of a model for SI impact assessment, comprising a set of indicators classified according to different dimensions. To achieve this objective, despite being scarce, the relevant

literature related to SI impact assessment was reviewed in the previous section, and an understanding of the indicators to be used to assess the impact of SI was attempted.

For the easiness of understanding, Figure 2 summarizes the methodological approach adopted for this research, which can be summarized in five main stages.

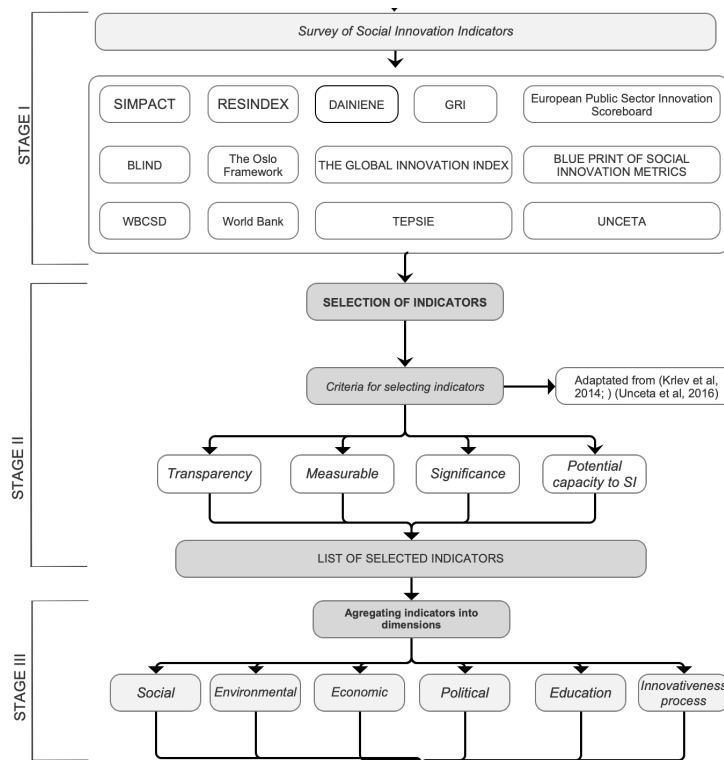


Figure 2: Methodological approach of the research

Stage I – a survey of SI indicators based on a literature review that provides the fundamentals of the research. The main sources of data were scientific articles, research projects and governmental reports. In particular, reports from different organizations (e.g. European Public Sector Innovation Scoreboard, Global Innovation Index, Blueprint of Social Innovation Metrics, Global Report Initiative, World Bank) were used to analyse which indicators have been adopted and applied in the field of SI.

Stage II – in this stage, due to the large number of indicators identified in the previous stage, it was necessary to select a set of usable indicators. For that purpose, the criteria identified in Figure 1 were used, namely, relevance to the social outcome of interest, validity, transparency, measurability, unambiguity, timely, consistency over time, and base for broad support (Alonso et al., 2015, Ministry of Social Development, 2016).

Stage III – this stage focused on the aggregation of the list of selected indicators, based on the dimensions suggested by Cunha and Benneworth (2020), namely social, environmental, economic, political, education, and innovativeness.

In summary, this research brings together a set of indicators, based on the literature reviewed, aiming to propose a SI impact assessment model based on six distinct dimensions, namely social, political, economic, educational, environmental and innovative processes. The ultimate goal of this model would be that target users can better assess the impact of their SI initiatives or projects, enabling SI development. In addition, it can be seen as a reference tool for other potential social innovators.

4. Measuring social innovation

Based on the results from the literature review, Tables 1-6 present the selected indicators for each of the six dimensions previously identified, namely social, environmental, economic, political, educational and innovative processes dimensions. For each dimension (table), the name of the indicator, how it can be measured (i.e. the metric), and the source base are provided. For the social dimension (Table 1), the indicators

selected address concerns related to SI initiatives focused on social responsibility, professionalization of the workforce in the social field, the existence of social networks, local workers working in the SI field, and employment. The SI indicators related to the environmental dimension (Table 2), show that SI initiatives go beyond economic and social actions. The indicators selected for the environmental dimension developed within SI are the following: environmental management for SI, environmental actions, sustainable actions, and eco-innovation. The innovative process dimension presents the greatest number of indicators (Table 3). The selected indicators address different aspects, such as the capacity to develop knowledge for SI, the impact of SI projects, SI services and available SI resources, among others. The indicators selected for the political dimension (Table 4) focus on SI initiatives supported by public organizations and seek to analyse the awareness of public organizations on developing or supporting initiatives in the field of SI. The indicators included are: social innovation relevant networks, legislative background for social organisations, legislative reforms in favour of SI, policy awareness about SI, stakeholders' assessment, and SI public investment. For the case of the educational dimension (Table 5), the indicators were mainly related to the development of initiatives to professionalise the workforce for SI. The specific indicators included in this dimension are: academic resources used in social innovation, professionalization/creative workforce in social fields, and professional qualification in social innovation.

Finally, for the economic dimension (Table 6), the selected indicators address several aspects, ranging from investments in SI initiatives to actions undertaken. In particular, the indicators are: investment in SI initiatives by the organisation, research and development, investment in innovation by the public sector, monetary variables of social economy, investment in collaboration, innovative organizations collaborating with others, and economic inclusion for vulnerable groups.

Table 1: Social indicators selected for SI assessment

SOCIAL INDICATORS		HOW TO MEASURE	REFERENCES
S1	S1Social Responsibility (%)	Percentage of organizations' turnover (PT) invested in socio-responsibility actions, including both compulsory and voluntarily actions (S1.1 + S1.2)	(GRI, 2016), (Boratto, 2012) (Azapagic, 2012)
		S 1.1 -Percentage of organizations' turnover (PT) invested compulsory (Yearly - last five years)	
		S1.2- Percentage of organizations' turnover (PT) invested on voluntary actions (Yearly - last five years)	
S2	Professionalization / creative workforce in social fields (Ordinal)	Initiatives to assess the workforce who report wanting to act 'socially entrepreneurially'	(TEPSIE, 2013)
S3	Social networks (Ordinal)	Existence of social network support by the organization	(TEPSIE, 2013) (The European Innovation Scoreboard, 2019)
S4	Local workers working in SI field	Ratio between number of workers from local community and total number of workers of organization	(Resindex, 2016) (TEPSIE, 2013)
S6	Employment	S7.1 - Number of direct jobs	(GRI, 2016), (WBCSD, 2008), (World Bank, 2008)
	(%)	S7.2 - Number of temporary jobs	
		S7.3 - Ratio between created jobs (CJ) by company and total city population	
S7	Employees involvement in SI (%)	Share of employees involved in groups that meet regularly to develop SI initiatives	(European Public Sector Innovation Scoreboard, 2013) (Blind, 2019)

Table 2: Environmental indicators selected for SI assessment

ENVIRONMENTAL INDICATORS (EN)		HOW TO MEASURE	REFERENCES
EN1	Environmental management for SI (Ordinal)	Existence of SI initiatives contemplating environmental management systems	(GRI, 2016)
EN2	Environmental Actions (%)	Percentage turnover of organizations investing in environmental actions	GRI, 2016), (World Bank, 2008)
EN3	SI and sustainable Actions (%)	Percentage turnover of organization investing in operational sustainability; spending on SI projects	(The Oslo Framework,)
EN5	Eco-innovation (Ordinal)	Development of SI initiatives to assess awareness of Sustainability	Blueprint (2015)

Table 3: Innovative process indicators for SI assessment

INNOVATIVE PROCESS INDICATORS (IP)		HOW TO MEASURE	REFERENCES
IP1	Knowledge Capacity	Percentage of contracted personnel dedicated to research activities on SI	(RESINDEX, 2013)
IP2	Capacity for Socialisation (Ordinal)	Level of implantation of regular mechanisms for the exchange of ideas, knowledge and relevant information of SI for the organisation's activities	(RESINDEX, 2013)
IP3	Capacity for Association (Ordinal)	Level of association with external agents for the exchange of information and knowledge	(RESINDEX, 2013)
IP4	Access to knowledge for social projects (%)	Existence of individuals or units intended to identify needs / social demands.	(RESINDEX, 2013) (The European Innovation Scoreboard, 2019)
IP5	Partners cooperation (Ordinal)	Actions in cooperating with partners for the development of SI projects	(RESINDEX, 2013) (Unceta, 2019) (The Oslo Framework,)
IP6	Impact of projects of SI (Ordinal)	Development of actions to assess the improvement within organisations as a result of carrying out social projects	(RESINDEX, 2013)
IP7	SI services (Ordinal)	Share of service innovators that contributes to innovate in-house	(European Public Sector Innovation Scoreboard, 2013)
IP8	Impact of SI in public services (Ordinal)	Development of actions to provide services to local community	(European Public Sector Innovation Scoreboard, 2013)
IP9	Organization's SI orientation (%)	Amount of time that managers spent with innovations compared to normal tasks	(Blind, 2019)

		HOW TO MEASURE	REFERENCES
IP10	Willingness to invest in SI	Share of research budget from total organization budget SI	(Blind, 2019)
IP11	SI Resources (Ordinal)	Diversity of technological resources available in the organization to develop social innovation	(Unceta, 2019)
IP12	Efficiency to meet SI objectives (Ordinal)	Initiatives to measure the efficiency achieved in the implementation of SI actions	(Unceta, 2019)
IP12	Regional impact (Ordinal)	Analysis of the diversity of geographical areas in which SI has been scaled	(Unceta, 2019)

Table 4: Political indicators selected for SI assessment

		HOW TO MEASURE	REFERENCES
POLITICAL INDICATORS			
P1	Social innovation relevant networks (%)	Number of Foundation of SI per region S 1.1 Number and size of other social innovation networks, called 'hubs' or 'labs' (Yearly - last five years) S1.2- Number of Social Innovation Exchange members (Yearly - last five years)	(TEPSIE, 2013) (Blueprint (2015))
P2	Legislative background for social organisations (Ordinal)	Legislative background for starting a social organisation (national analysis)	(TEPSIE, 2013)
P3	Legislative reforms in favour of social innovation (Ordinal)	Number of new laws and regulations enhancing social innovation or social economy	(TEPSIE, 2013)
P4	Policy awareness about social innovation (Ordinal)	Development of programs (national sources and analytics) to ident social need of the community	(TEPSIE, 2013)
P5	Stakeholders assessment (Ordinal)	Number of actions to assess external/internal barriers to develop SI innovation	(TEPSIE, 2013)
P6	SI public investment (Ordinal)	Development of national innovation strategies to social innovation projects funded by government	(TEPSIE, 2013) (Blueprint (2015))

Table 5: Educational indicators for SI assessment

SOCIAL INDICATORS		HOW TO MEASURE	REFERENCES
ED1	Academic resources deployed	Number of articles/reports/projects with the	(TEPSIE, 2013) (THE

	on social innovation	keyword “social innovation” per	GLOBAL INNOVATION INDEX, 2018)
ED2	Professionalization/ creative workforce in social fields (Ordinal)	Facilities offering educational programs for staff in social economy organisations	(TEPSIE, 2013) (Dainiene, 2015)
ED3	Professional qualification on social innovation (%)	Percentage turnover of organization invested in professional qualification in SI	(GRI, 2016), (WBCSD, 2008), (World Bank, 2008)

Table 6: Economic indicators selected for SI assessment

ECONOMIC INDICATORS		HOW TO MEASURE	REFERENCES
E1	Investment in SI initiatives by organisations	Expenditure in social innovation initiatives by organization size (Community Innovation Survey)	(TEPSIE, 2013)
			(GRI, 2016)
E2	Research and development (%)	Percentage turnover (PT) of companies invested in research and development (R&D), including geological and social-environmental one. (Yearly - last five years)	(THE GLOBAL INNOVATION INDEX, 2018) (GRI, 2016) (The European Innovation Scoreboard, 2019)
E3	Investment in innovation by public sector	Expenditure in innovation by public sector	(TEPSIE, 2013)
E5	Monetary variables of social economy (Ordinal)	Private/ Public social expenditure of the organization	(TEPSIE, 2013)
E6	Investment collaboration (Ordinal)	Expenditure in innovation by social economy /stat-ups to social purpose	Blueprint (2015)
E7	Innovative organizations collaborating with others (%)	Percentage of organizations collaborating with others (%)	(The European Innovation Scoreboard, 2019)
E8	Economic inclusion of vulnerable groups (Ordinal)	Implementation of actions in the objective of inclusion and economic empowerment of the target population (reduction of the economic vulnerability)	(Unceta, 2019)

The results presented in Tables 1 to 6 describe in detail the proposed indicators and their metrics to evaluate the impact of SI initiatives in the target groups. The results were based on the steps described in Figure 2. As summarised in these tables, the set of meaningful indicators presented can be considered relevant and should contribute significantly to their acceptance and recognition among researchers, organizations and policymakers working in the SI field.

As such, the final result presented in this section is a list aggregating thirty-eight indicators, which can be useful as a first attempt to measure the impact of SI. If applicable by the targeted groups, it should lead to significant results for SI impact assessment.

5. Concluding remarks and future research

This section presents a summary of the main findings of the research conducted and some reflections on measuring the impact of SI. The evaluation of the impact of SI was discussed along six indicators’ dimensions, namely social, political, economic, educational, environmental, and innovative processes while taking into account the importance of these dimensions to measure the impact of SI. In this research, an explorative scoping research strategy was used, to outline pathways for a simple but effective SI impact measurement. The research was based on a review of the limited available literature concerning metrics for SI. This research has sought to answer the following research question: how can the impact of SI be measured. Analysis of the current literature has revealed that organizations have failed on measuring the impact of their SI initiatives.

Despite the interest and popularity of the topic of SI, this can be justified due to a lack of tools and frameworks to assist organizations in addressing SI impact assessment. Future research envisages building an assessment model (or tool) based on the identified set of indicators for SI impact assessment and then demonstrating and testing this model using a real case study. This would contribute to the learning process of SI impact assessment.

Acknowledgements

This work has been supported by FCT – Fundação para a Ciência e Tecnologia within the Project Scope: PTDC/EGE-OGE/31635/2017.

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