# Building a Project Portfolio in a Social Enterprise. Analysis and Implementation of Project Selection Methods

#### Mariusz Andreasik

Warsaw School of Economics, Poland

#### Abstract

The research which is described in the article aimed to help the social enterprise—SIFE Salford in creating a portfolio of projects. The paper focuses on a selection method that the organization may use while choosing among the projects submitted by external enterprises. This process is very complex and it is often difficult to make sound decisions, therefore introducing the methods and the process is essential and beneficial for every organization. The author examines two methods: the scoring and Analytical Hierarchy Process (AHP). An analysis of those methods is made to decide which one is more suitable and useful for the organization under study. Furthermore, the methods are analysed and studied as to how they can be applied and used in social enterprises. The survey and interviews with experts from the field aim to create guidelines for SIFE Salford, how to use the techniques and benefit from them. Consequently, the President and Directors of the enterprise are trained during the interview process to use the studied methods so that they can be easily implemented in the upcoming academic year. This condenses the aim of the research, which is to experiment among the selection methods that could be a practical tool for a social enterprise to ease the process of selection. It also introduces the concept of project portfolio management within this sector.

### Introduction

#### Background of the research

Social enterprises are independent businesses that provide services, goods and trade for a social purpose and are non-profit distributing. In social enterprises profits are used to create more jobs and businesses and to generate wealth for the benefit of the community. Therefore, the role of social enterprises is growing and it has been pursued by UK governmental and entrepreneurial agencies to boost trade within the businesses (Ridley-Duff 2008). According to Ridley-Duff social enterprises are a key element of strategy for business, government and associations. In addition, they help society, communities and families develop. This is achieved through the services and goods they provide, but mainly through the projects which they work on. Those are funded by those organizations as part of their Corporate Social Responsibility strategy or as a result of negotiations with Councils, who ask for help in a given area.

#### Significance and importance of the research

According to the Cabinet Office there are at least 55 000<sup>1</sup> social enterprises operating in the United Kingdom. The UK government prepared the *Social Enterprise action plan*,<sup>2</sup> which aims to increase this number and provide help, advice and support for those who want to start this type

<sup>1. [</sup>In the journal (in both Polish and English texts) European practice of number notation is followed—for example,  $36\ 333,33$  (European style) =  $36\ 333.33$  (Canadian style) =  $36\ 333.33$  (US and British style). Furthermore in the International System of Units (SI units), fixed spaces rather than commas are used to mark off groups of three digits, both to the left and to the right of the decimal point.—Ed.]

<sup>2.</sup> Published in 2008 at http://www.cabinetoffice.gov.uk/.

of business. Many social enterprises focus on winning grants to carry out the projects that make change in the local community and individual lives. Those are funded by various bodies who want to help achieve that aim. However, established social enterprises do not have to apply for grants and financing. They are approached by organizations who ask for help to carry out given projects. Therefore, they face the problem of having many project proposals, which cannot all be completed due to limited resources. There is a need for prioritizing and categorizing projects in order to accept them within the project portfolio of a given organization. Many project applications are unclear and the benefits are not visible from the beginning, making it harder to assess. Accordingly, the social enterprises struggle to choose the appropriate projects to carry out, which will benefit them and the community they serve.

#### Aim of the research

To solve this problem, Multi-Criteria Decision Analysis (MCDA) needs to be implemented. The aim of MCDA methods is to support decision-makers with identifying problems, system values, and their objectives as well as those of the parties involved. This is made through exploration of the above in the context of the problem of guiding them in identifying a preferred course of action (Al-Subhi Al-Harbi 2001, Andreasik 2009b). In this case, it means allowing them to choose the most suitable and achievable project. This means that resources available will allow to them complete the project successfully, and that it will be within the aim and mission of the organization. One of the MCDA methods is the Analytical Hierarchy Process (AHP) method, which has been chosen as the main method in the research, as it proved to be an effective tool in many industries. The aim is to build a framework for a methodological approach in building a balanced project portfolio, which is a challenge for social enterprises. These organizations, as any project-based entities, find a constant lack of resources and decisions in choosing new projects for the portfolio are difficult. Experts participating in this process require not only the process, methods and tools which are showcased in this paper, but also the analysis of the project portfolio. In order to create a sustainable, balanced project portfolio, they investigate current project status and resources allocation, then from the strategic point of view decide what kind of project is the most important at a given point of time for the organization. Therefore, the framework for social enterprise managers is being introduced to point out the key aspects of the project selection process.

#### Case study

The implementation of the AHP method will be studied on the case of a social enterprise called SIFE (Students in Free Enterprise) Salford. This is a student organization which has a very ambitious mission statement: "To create sustainable value by successfully empowering and educating the local community and students with the necessary financial end entrepreneurial skills needed to improve their standard of living and inspire them to take on real life opportunities." The organization is working currently on five projects and receives many applications from local associations, community centres and groups to help on the projects. Due to a lack of tools that help with making choices about which projects should be done and will benefit the organization and community, the SIFE Salford takes projects randomly and denies those that could be more beneficial. Therefore, a system and method for prioritizing and choosing what goes into the project portfolio needs to be implemented. The case study will show the process of using selected methods, chosen through literature review. Furthermore, the research aims to build guidance for social enterprises in their challenge of creating effective and sustainable project portfolios, as they lack support and methodology in this important decision making phase as researched revealed.

#### 1 Literature review

Issues and problems have been researched in the light of relevant literature.

<sup>3.</sup> Excerpt from About SIFE Salford, text published in 2009 at http://sifesalford.org/.

# 1.1 Project

Firstly, the understanding of the project is very important. Wysocki defines: "A project is a sequence of unique, complex, and connected activities having one goal or purpose that must be completed by a specific time, within budget, and according to specification" (Wysocki and McGary 2003). On the other hand the Project Management Institute states that "a project is a temporary endeavour undertaken to create a unique product, service, or result" (A Guide to... 2001). While according to PRINCE2 a "project is a management environment that is created for the purpose of delivering one or more business products according to a specified Business Case" (Managing Successful... 2002). Those main definitions presented by leading organizations in project management agree that a project should have a purpose and is limited by time, budget, resources and specifications.

#### 1.2 Project Portfolio

Consequently, the project portfolio can be defined. Before that, it is important to clarify what kind of projects should be taken into consideration when creating the project portfolio. Wysocki deliberates over whether a simple task done by one person could be a complex project for others. For example buying a laptop, for those who do not have computer knowledge will be a difficult task and becomes a project. Therefore, it is important that an organization distinguish operational tasks from projects (Wysocki and McGary 2003). Once that is set, the simple definition can be introduced stating that "a project portfolio is a collection of projects that share some common link to one another." The statement of common link means for example that all the projects aim to help the local community develop or aim to develop a new product. On the other hand, Miguel (2008) find that the concept evaluated from project selection to prioritization of product development (Baker 1974) and to the current understanding as multiple project management (Dooley, Lupton, and O'Sullivan 2005). Additionally Cooper argues that in a project portfolio a new project can be introduced, while an existing one can be withdrawn, cancelled or suspended (Cooper, Edgett, and Kleinschmidt 1997a, 1997b). This statement shows that a project portfolio is not set for a given period of time, but changes constantly, adjusting to the current situation and objectives of the company, representing great flexibility if properly managed.

#### 1.3 Project Portfolio Management

This statement leads to another concept, which is project portfolio management. According to Bridges (2003) there is an art of project portfolio management (PPM), which involves "scrutinizing each potential project, selecting the right mix of projects, and adjusting as time passes and circumstances unfold." Additionally Cooper argues that "portfolio management is a process in which projects for the development of products or services are continually evaluated, selected and prioritized; new projects may be introduced and existing projects might be suspended, cancelled, or de-prioritized" (Cooper, Edgett, and Kleinschmidt 1997a, 1997b). Hunt adds that "project portfolio management is a decision process that oversees the resource allocation and ongoing decisions related to a strategically oriented portfolio of projects" (Hunt and Killen 2008). Overall, the definition that collects the best parts of the above-mentioned definitions and thoughts on project portfolios has been developed by Wysocki and McGary (2003) and states that "project portfolio management includes establishing the investment strategy of the portfolio, determining what types of projects can be incorporated in the portfolio, evaluating and prioritizing proposed projects, constructing a balanced portfolio that will achieve the investment objectives, monitoring the performance of the portfolio, and adjusting the contents of the portfolio in order to achieve the desired results." Consequently, when speaking about project portfolio in further stages of this study the reference to this final definition will be made.

The decisions made regarding a project portfolio must take into consideration the strategic approach, as well as the operational. This means that a project that does not correspond to the mission and objectives of the organization should not be included in the portfolio. According to Miguel (2008) if the projects do not correspond with the business strategy and capabilities, there is a risk that projects will be delivered with poor quality. On the other hand, there might be increase of

resources to focus on a project that is not consistent with others, resulting in decreasing the quality of the remaining projects. Hence, according to Cooper the project portfolio management should lead to acquisition of only those projects which will maximize the value, balance and strategic position of the company (Cooper, Edgett, and Kleinschmidt 1997a, 1997b).

#### 1.4 Balanced Portfolio

Cooper declared that an organization should aim to maximize the balance of the projects within the portfolio, as it will help to manage them effectively (Cooper, Edgett, and Kleinschmidt 1997a, 1997b). Miguel (2008) agrees in stating that a balanced portfolio should be a strategic objective as it is important to have different types of projects.

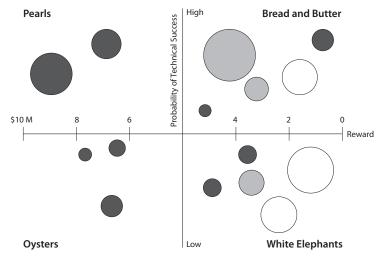


Fig. 1. Bubble diagram of a portfolio of new-product projects Source: Cooper, Edgett, and Kleinschmidt. (1997a, 24)

The above graph introduced by Cooper shows projects within the portfolio in any company. There are projects that guarantee high rewards with high probability of success, at the same time there are more risky projects. This is the great example of a balanced portfolio, where there are certain projects that guarantee success, and those can back up those which are riskier.

McGary argues that it is neither an easy task to build the balanced project portfolio nor is there a successful approach (Wysocki and McGary 2003). Kendall argues that there must be a correct mix of projects balancing the supply side of the organization with its market side (Kendall and Rollins 2003). Such a balance ensures that the company does not have any decline in revenues. Additionally, Bridges (2003) believes that if a portfolio is balanced effectively, this will ensure optimum use of resources and people. Consequently, it is important to create the project portfolio that is balanced. Also, the projects undertaken should follow the strategy and objectives of the organization, exploiting its resources efficiently and effectively.

#### 1.5 Operating a Project Portfolio

The project portfolio does not exist when an organization has few projects and manages them at the same time. There is a procedure, a sequence when building a project portfolio. McGary is convincing in stating that there are five phases of project portfolio management (Wysocki and McGary 2003). Those include (1) Establishment, (2) Evaluation, (3) Prioritization, (4) Selection, and (5) Management. At the same time Bridges (2003) speaks about three steps (1) Focus, Strategic Planning, (2) Selection, Portfolio Management, and (3) Management, Project Management. The most detailed approach regarding development of project portfolio has been evaluated by Wysocki and McGary (2003), which comprises those of the other authors:

- 1. Establishing Portfolio Strategy
- 2. Evaluating Project Alignment to the Portfolio Strategy

- 3. Prioritizing and Selecting Projects
- 4. Selecting Balanced Portfolio Using the Prioritized Projects
- 5. Managing the Active Projects

# 1.6 Benefits of a project portfolio management

There are many benefits for the organization that decides to introduce project portfolio management. Bridges (2003) states that benefits are tremendous, for example the value of the Smith-KleineBeecham portfolio increased by 30 percent after introduction of this approach. These benefits presented by Bridges (2003), Rad (Rad and Levin 2006) include:

- having a structure in place to select the right projects and immediately remove the wrong projects
- placing resources where they're needed and reducing wasteful spending, better utilization of resources
- linking portfolio decisions to strategic direction and business goals; tighter alignment with organizational objectives
- establishing logic, reasoning, and a sense of fairness to portfolio decisions
- establishing ownership among the staff by involvement at the right levels
- providing avenues for individuals to identify opportunities and obtain support
- helping project teams understand the value of their contributions

### 1.7 Problems

Although there are many benefits of having project portfolio management in the organization, there are problems that might occur. Those problems are challenges for portfolio managers and include, according to Kendall (Kendall and Rollins 2003):

- too many active projects (often double what an organization should have)
- wrong projects (projects that will not provide value to the organization)
- projects not linked to strategic goals
- unbalanced portfolio (e.g., too much on the supply side, not enough on the market side; or too much short term and not enough long term, etc.)

Accordingly, the research focused on finding the best practices to avoid those problems when implementing a project portfolio and while managing it.

# 2 Research Methodology

The research has been undertaken to find the most important and crucial criteria used in assessing projects. This was accomplished by surveying the experts in the field of project management and social enterprises. Further, they participated in interviews assessing three example projects based on the created project description according to five top criteria (derived in the survey) as to whether they should be accepted within the project portfolio. This then explains the procedures and process SIFE Salford needs to undertake in the future when creating its portfolio. The Experts used the AHP method implemented and administrated through the use of Expert Choice software to assess the example projects.

The issue is whether the introduction of a Multi-Decision Criteria system will benefit the organization and ease the process by making it more efficient and at the same time, allowing members to work on the projects that are relevant to the organization objectives. On the other hand, experts will be able to choose among the projects by looking only at the descriptions provided by the submitting organization. Those two methods were used by the experts to make their judgments during interviews.

### 2.1 Research objectives

- Analysis of the project criteria to outline the most important and adequate for the process of selection for the project portfolio.
- Analysis of the prioritization and selection methods of projects in project portfolio management.

• Research on the usefulness and appropriateness of the analysed methods in selecting and prioritizing projects in project portfolio management.

• Implementation of the Multi-Criteria Decision method—Analytical Hierarchy Process (AHP) in social enterprise, on the case of SIFE Salford for project portfolio management.

# 3 Research Findings and Results

#### 3.1 Survey

Twelve experts representing four target groups (Project Managers, Volunteering & Community Organizations Managers, Management Committee of SIFE Salford (the student society upon which the case based), experienced employees who work on projects) responded to an online survey. The aim was to identify the most significant criteria when selecting projects for the project portfolio. The criteria has been arranged by score presented in table 1.

Tab. 1. Significant criteria and their scores by experts

Position	Criteria	Rating Average
1	Financial stability (of an external organization)	4,50
2	Payback (time needed to recover the investment)	4,25
3	Social Return on Investment (value in GBP)	4,20
4	Risks Analysis (number of risks and their probability/impact)	4,00
5	Budget (the size of the total project budget)	3,75
6	Volunteers (number required)	3,67
7	Profit (generated for the organization)	3,20
8	Sustainability of the impact	3,00
9	Impact (the number of people impacted and scope)	2,88
10	Feasibility of implementation	2,75
11	Learning benefits (for the organization and volunteers)	2,50
12	Time (duration of the project and hours required)	2,20
13	Cost (obtained by the organization)	2,00
14	Security of the project	2,00
15	Training and Support (available to volunteers from external organization)	1,50
16	Prospect to hand down the project	1,00
17	Partners (number of partners involved)	0,00
18	Net Present Value (NPV)	0,00

## 3.2 Interviews after assessing projects

Experts learnt the mechanism of the scoring method and judged it as very easy to use and implement. The straightforwardness of the method has been the main advantage of it. However, experts learnt after using the second method—AHP that the scoring method is not very demanding and did not make them analyse or consider options in greater detail. Each expert was asked to score projects against the criteria; the summary of their scores is presented in a table 2.

Each expert has learnt how to use Expert Choice which is software that manages the AHP method to provide judgments and scoring in a user friendly environment. Experts valued the method because of the comparison aspect of criteria and projects which made them judge and analyse in greater detail. Also, they believed that AHP presented a more accurate score because of the cross judging and more thoughts were put into judging them than during the scoring method assessment. Moreover, the software allowed for an easy combination of the score of the projects but also put into consideration the combination weight given to criteria, which has been skipped in the scoring method. The combined results of the assessment are presented at figure 1. The graph

Expert	Project A	Project B	Project C
Expert 1: President of SIFE Salford (PoSS)	43	71	72
Expert 2: Project Manager (IPM1)	55	60	64
Expert 3: Community & Volunteering Manager (CVM)	34	60	57
Expert 4: Project Member/Associate (IPA)	52	73	82
Total score	184	264	275

**Tab. 2.** Results of scoring method assessment

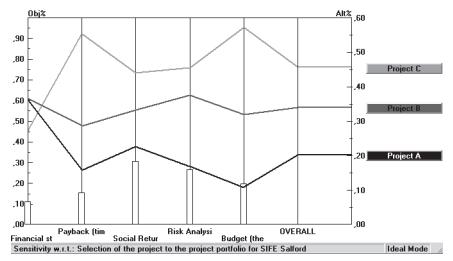


Fig. 1. Combined results of AHP assessment

above shows the combined score for the project made by four experts. It also indicates the weight of the criteria used in the pillar graph on the bottom.

#### 4 Analysis and Discussions

# 4.1 The analysis of the project criteria to outline the most important and adequate for the process of selection for the project portfolio

#### Conclusions and recommendations

Every project is very complex and consists of many elements, which have to be analysed when selecting projects for a project portfolio. Wysocki admits that there are many criteria outlined by various authors that are significant and need to be taken into consideration (Wysocki and McGary 2003). However, the social enterprise is often a small or medium business which has not enough resources to provide deep analysis of each of them, according to an interviewed project manager (IPM1). Therefore, the ranking created using the survey outlined top five criteria, which should be analysed in detail by social enterprises, these include: financial stability (of an external organization), payback, social return on investment, risk analysis, and budget. This ranking has been created after receiving responses from twelve independent experts. However, Cooper argues that the project should have a strategic alignment with the mission of the business and those that do not fit should not be taken into consideration (Cooper and Edgett 2001). Martino (2003), Andreasik (2009a) add analysis of the competition as important criteria; however for the social enterprise it is insignificant as the projects in most cases are submitted to the organization not by the business. However, it is interesting if the enterprise is applying for the grant, then analysis of the microenvironment would be helpful. On the other hand, Cleland mentioned duration of the project as important criteria, which has been outlined in the project description, but not analysed as a criteria (Cleland and Ireland 2007). However, Community & Volunteering Manager (CVM)

and President of SIFE Salford (PoSS) commented that duration should be also analysed as criteria, agreeing with Cleland, because there is a big turnover of volunteers and average time worked is one year. Furthermore, Levine (2005) and Westerveld (2002) outlined payback as very significant criteria; however CVM, interviewed project associate (IPA) and PoSS argued that payback is not significant as it is difficult to estimate and measure, therefore it is inaccurate. PoSS suggested that payback could be changed to impact analysis, which is more important for a social enterprise.

Stewart and Mohamed (2002) outlined that many authors focus on economic criteria such as return on investment, cost-benefit analysis, and net present value. However, these have to be applied to the social enterprise case. All interviewees agreed on the significance of Social Return on Investment (SRI) criteria in project selection. While, regarding the financial stability criteria, the PoSS and IPM1 recognize the need of analysis of this area, they mention that it is important to analyse how the project will be treated by that organization. If the project is independent and has its own budget, then the financial situation of the 'employer' does not matter to the social enterprise, unless it is paid in instalments.

Rad mentioned that the size of the budget is an important criterion, however it should not be a key criterion (Rad and Levin 2006). This is very true in social enterprise projects. PoSS mentioned that most of the projects they do have limited or no money and they run fundraising activities to make them happen. Accordingly, if a project has some sort of budget then it is very helpful, but if the project addresses the social need, then this constraint can be easily overcome with the help of sponsors and partners. On the other hand, IPA stated that budgets ease and speed up the progress of the project, and if there is a need to complete many projects by the organization in a short time (i.e., competition coming up), then it is important to choose one with solid financial backup.

Finally, all the experts agree that risk analysis is crucial criteria, which helps with creating a balanced portfolio, where the organization should have some risky but rewarding projects and those certain with less rewards.

In summary, the five project criteria concluded through the survey and commented upon in interviews are the most appropriate for the social enterprise, with one exception of payback, which according to PoSS and CVM should be exchanged with impact analysis (placed 9th in the ranking). Levine (2005) emphasize that each project should be firstly analysed to see if it fits the organization's strategy, mission and objectives before going through the selection process and interviewees agreed with that. Projects that do not fit the portfolio or similar to those which already exist should not be taken into consideration.

# 4.2 Analysis of the prioritization and selection methods of projects in project portfolio management

#### 4.2.1 Scoring method

The scoring method was presented to the experts because, according to Meredith, it includes multiple objectives and criteria, which are crucial in the decision making process (Meredith and Mantel 2006). Additionally, Rad outlined that the models built on this method are easy to use and follow (Rad and Levin 2006). This has been valued by the Interviewed Project Member (IPA), who said that it was very straightforward and easy to implement in any organization. It has been followed by the President of SIFE Salford (PoSS) who praised the simplicity and speed ofthe selection process while using this method. Project Manager (IPM1) noted that it does not require extra resources and makes it cheap to use. Accordingly, Wysocki (Wysocki and McGary 2003) and Heldman (Heldman, Baca, and Jansen 2007) presented the scoring method as the one commonly used in various sectors because it is easy, fast and cheap.

However, it has also many disadvantages noted by authors in the literature and by the interviewed experts. Rad argued that the scores are not precise, which has been brought up by the PoSS who said that the scores can be inaccurate due to lack of analysis while scoring (Rad and Levin 2006). Following this, IPM1 noted that there is no guidance or advice in the case of the same score for two or more projects. Meredith added that experts are forced to make difficult decision based on limited information, which was also criticised by the IPA who wished to receive more

background information on projects (Meredith and Mantel 2006). PoSS declared that scoring using numbers is not the best method for everyone; therefore the process could be adjusted to the expert. This was picked up also by the U.S. Government Office (GAO), which highlighted the importance of defining what each score represents in greater detail. There might be difficulties with expressing judgments based only on numerical scale. PoSS declared the same view arguing that numbers are not precise and final score may be different if the scale was structured differently. Finally, IPM1 valued the method for its simplicity, however if the organization faces a difficult and complex decision, then the scoring method would be inaccurate due to lack of correlations between factors.

#### 4.2.2 AHP/Expert Choice method

According to Al-Harbi (2001), Harker and Vargas (1987), the AHP method is viable and widely used by governmental agencies, corporations and consulting firms. The method has many different applications such as contractor selection, product project screening or semantic-based facial expression recognition (tab. 2). In this dissertation research the AHP was used as the method to select the project for a project portfolio of a social enterprise. However, IPA recognised that there might be different applications for the organization as well, such as choosing the speaker or location for a conference.

According to Al-Harbi (2001, 20) the aim of AHP and MCDA methods "is to help decisionmakers learn about the problems they face, to learn about their own and other parties' personal value systems, to learn about organizational values and objectives, and through exploring these in the context of the problem to guide them in identifying a preferred course of action." PoSS agreed with such a statement saying that the scoring using AHP put the process into broader perspective allowing deeper analysis and thinking than was done while using the scoring method. CVM express a similar opinion saying that there was more analysis and focus while making decisions. IMP1 valued AHP because it confronts the projects as well as criteria. PoSS stated that comparing projects against each other made the whole process more accurate and reliable. According to Saaty (2001) AHP provides the scale for measuring intangibles and a method for establishing priorities. The scales used in Expert Choice were praised by the IMP1 who stated that the method is very illustrative, as the results are presented in a comprehensive way on graphs. On the other hand PoSS valued the available scales: numerical, expressed in words and colours (apple graph), which was a significant disadvantage in the scoring method, according to that expert. Saaty (2001) notes that AHP tracks the logical consistency of judgments used in determining priorities and that Expert Choice checks that by displaying inconsistency rates in each judgment screen. However, IPM1 noted that Expert Choice software has a disadvantage, as it uses a scale of 1–9, the judgments made on the apple graph are calculated on 1–99 scale, which if not fixed may create inaccurate scores.

Although, the method made experts analyse and focus more deeply while scoring, which according to them, gives more accurate scores, the IPA argued that AHP created more difficulties for him to judge than the scoring method. Moreover, IPM1 valued the method as it might be used in complex projects; however Cheng argues that AHP is rigid and inflexible, making it hard to use in fast moving projects (Cheng et al. 2007). Furthermore, Watson and Freeling (1982) criticised the AHP method as questions asked in the selection process are not constructive (i.e., which criterion is more valuable to the goal). According to these authors, that does not give precise score or weight.

# 4.3 Research on the usefulness and appropriateness of the analysed methods in selecting and prioritizing projects in project portfolio management

According to Schuyler (1996) many managers are lacking skills that allow sound decisions, therefore there is a need to implement the decision making approach. In the case of the studied social enterprise, the management structure and responsibilities have been established, however, as outlined by the President of SIFE Salford (PoSS) and Directors, the decision process regarding selecting projects is unstructured and most of the time very random. Therefore, implementing a selection method, according to management of the studied organization, is crucial to guarantee future successes and sustainability. According to Hwang an Yoon (1981) the multi-criteria decision

methods (including AHP) have been designed to help decision makers with solving and evaluating problems, such as selecting the appropriate project for the project portfolio. According to Al-Harbi (2001) the methods like AHP help in making sound decisions. PoSS agreed with that saying, that AHP method inspired them to critically analyse each aspect of the projects and because the approach (comparing in pairs) produced reliable results.

Worrall stated that experts might be afraid to express their actual judgments due to certain circumstances (i.e., presence of senior management) (Worrall and Frattali 2000). Therefore, it is important to build a functional atmosphere for applying the method. PoSS finds that many pointless discussions can be avoided when scores are made individually and then automatically combined as it is done in Expert Choice. Such an approach to decision making would speed up the process producing a compromise among the team according to Community & Volunteering Manager (CVM).

Project Member (IPA) stated that both presented methods would be beneficial to implement by the social enterprise. According to Saaty (2001) the AHP method enables people to refine their definition of a problem and to improve their judgment and understanding through repetition. IPA finds this application very useful, when judgments and scores could be checked and changed at any stage of the project, which would be very useful.

Although all experts found selection methods very beneficial and appropriate to implement within social enterprises, the issue of cost came up. According to Project Manager (IPM1) the software used in the assessment might be too expensive for organizations; therefore, they will be limited to using the scoring method, which was criticized by three experts out of four. However, if there was free software available the AHP method would be suitable for any social enterprise to implement. PoSS valued the software which makes the process very easy. Expert Choice states that the software hides its complicated mathematical algorithms, allowing experts to make decisions in a user friendly environment.<sup>4</sup>

Finally, IPA and CVM found that applying the scoring or AHP method could help social enterprises not only with selecting projects for their portfolio but also with choosing suppliers, partners or venues. The wide application opportunities were outlined by Al-Harbi (2001), Harker and Vargas (1987), who mentioned that governments use AHP method to decide where to build the bridge and which supplier to choose. Because of the complexity of such decisions the structural approach of AHP is used.

# 4.4 Implementation of the Multi-Criteria Decision method— Analytical Hierarchy Process (AHP) in a social enterprise, in the case of SIFE Salford for project portfolio management

According to the President of SIFE Salford (PoSS), the organization did not build the portfolio of projects as a methodology of portfolio project management. According to Bridges (2003) any enterprise can have the best ideas or methods, but if they are not structured or implemented correctly, problems may occur. PoSS stated that SIFE Salford contributed to the projects which were not aligned with their mission and strategy, which led to lost time and volunteers. According to Wysocki the organization needs to establish the strategy of its portfolio and then select projects which suit that (Wysocki and McGary 2003). Interviewed Project Manager (IMP1) shared his experiences while working in different organizations, that most of the time projects are chosen based on assumptions and experience, no method is used. Both PoSS and IMP1 agreed that they would recommend implementing the AHP method for project selection in a project portfolio for social enterprises. Moreover, Community and Volunteering Manager (CVM) after using the AHP discovered also other potential applications of the approach, such as choosing the right supplier for the event. Saaty the creator of AHP, did not limit the use of the method, the case studied by him shows how Brandywine River Region in Pennsylvania (USA) solves an issue of possible urbanization and its environmental effects (Saaty 2001, 15).

<sup>4.</sup> According to the text About Software, published in 2009 at http://expertchoice.com/.

All the experts agreed that implementing a selection method in a social enterprise would be beneficial, especially for project selection, but also for other selections (CVM). The process of implementing the method has been discussed with the experts, as this dissertation aims to help and provide guidelines for SIFE Salford regarding the use and application of selection methods.

Firstly, PoSS would develop the project descriptions, by adjusting criteria to relevant cases. Project Member (IPA) follows that asking for more background information and expanded explanation of what exactly would be required from the team on any given project. CVM would ask the external organization for more detail to avoid confusion or misunderstanding. Saaty (2001) advises an analysis of every problem or issue, in order to apply relevant criteria, which can be judged later.

According to PoSS, in SIFE Salford the decision makers would be president, vice-president and directors. Therefore, IPA suggests training them on the method and purpose. IPM1 adds that preparation for the assessment is very important, as everyone needs to understand the purpose and goal. An unstructured approach may lead to errors and problems, which could result in choosing unsuitable projects. PoSS suggested asking individuals to score projects and then, thanks to Expert Choice software, the results would be combined, giving a final score. Al-Harbi (2001) valued AHP because it allows group decision making and makes the process easy, PoSS adds that many pointless discussions may be avoided.

Experts agreed that project descriptions with criteria need to be adjusted to the special case of choosing the project. Then education and training for the experts need to be provided, before any assessment takes place. Further, the results need to be analyzed to give the final answer to the problem studied. Interviewed experts were concerned that Expert Choice software may be too expensive to implement, but the Expert Choice Inc. allows discussion for implementation and the terms and conditions of use for the special case of SIFE Salford could be agreed upon.

#### 5 Conclusions and recommendations

More and more organizations around the world are project-based, especially social enterprises. This became a case due to growing external funding, grants and awards for projects which have defined time, cost and quality expectations. Project management grew as a discipline with many methods, techniques and processes which help organization with delivery of successful projects.

Despite this development, the knowledge has not been transferred and implemented by social enterprises, which struggle not only with the project management but with project portfolio management. Their challenge is that they want to do a lot of good (by the means of projects) with limited resources, which leads to management and sustainability issues. Consequently, the aim is to increase the awareness of the existing methodologies for selecting projects for a portfolio, which help in making decisions based on criteria aligned with the strategic mission of the social enterprise. Methods analysed by the author in the research showcase the approach to using the analysed methods in a way so that they simplify and contribute to the difficult project selection process in any social enterprise, taking into consideration a broader spectrum of portfolio analysis. One of the main challenges of social enterprises is to run a balanced portfolio of projects. That is why project selection needs to be analysed through strategic alignment but also through project portfolio development and management perspectives.

Therefore, the researcher recognized the need for implementing one of the wide ranges of selection methods. Two of which were presented to the experts, who agreed that the Analytical Hierarchy Process (AHP) method would be most suitable and useful to handle such a process, because it makes decision makers consider all possible options, as well as analyse projects and compare them against each other. Consequently, experts valued the AHP method as one presenting more valuable and accurate scores than the other one, scoring or criteria weighting, which is faster and clearer but not challenging to the experts.

According to experts and authors in the literature, the AHP methods could be very beneficial for every organization, not only for selecting projects but could have many different applications from choosing the right supplier, venue or speaker for a conference. The group assessment using

this method may speed up the process of decision making allowing detailed analysis and review of the options.

The author of the AHP method, Thomas L. Saaty and authors who researched the applications of the method, recommend the use of it for any problem solving or decision making. Consequently, the method is very easy to implement and use if supported by the Expert Choice software. The program allows experts to make judgements in a user friendly environment and then combines individual scores into one final score, which has been valued by the President of SIFE Salford, as many pointless discussions could be skipped.

The undertaken research aims to showcase to the social enterprise managers the methodology of developing a balanced project portfolio by implementing project selection methods, which are successfully used in different sectors. This in a process, therefore it's not a one-off step, but an approach to managing a project-based organization. There is one constant attribute of projects, which is change. Therefore, they require systematic analysis not only through the project triangle (time, cost, quality) but also in respect to the social enterprise strategy and their position in the project portfolio. It is important to know the position and status of each project, in order to effectively choose new projects for the portfolio that will not affect management of existing projects by using their resources. Consequently, the main role of experts is to choose criteria that projects are examined against, as their importance can change in respect to other project requirements. Then, these can be scored in order to choose not the best project, but the project that is most suitable to proceed with at the given time, with respect to strategy, resource allocation and project portfolio status. The outlined methodological approach aims to give tools and guidance to social enterprise managers in order to achieve sustainable growth and development of their organizations.

#### References

- AL-Subhi Al-Harbi, K.M. 2001. "Application of the AHP in project management." *International Journal of Project Management* no. 19 (1): 19–27.
- Andreasik, J. 2009a. "Enterprise Ontology for Knowledge Based System." In *Human-Computer Systems Interaction*. *Backgrounds and Applications*, edited by Z.S. Hippe and J.L. Kulikowski, 443-458. Berlin Heidelberg: Springer-Verlag.
- Andreasik, J. 2009b. "The Knowledge Generation about an Enterprise in the KBS-AE (Knowledge-Based System—Acts of Explanation)." New Challenges in Computational Collective Intelligence no. 244:85-94.
- Baker, N.R. 1974. "R and D Project Selection Models—Assessment." *Ieee Transactions on Engineering Management* no. Em21 (4): 165–171.
- BRIDGES, D.N. 2003. "Project Portfolio Management. Ideas and Practices." In *Project Portfolio Management. Selecting and Prioritizing Projects for Competitive Advantage*, edited by L.D. Dye and J.S. Pennypacker, 45–54. West Chester, PA: Ctr for Business Practices.
- CHENG, S.C., M.Y. CHEN, H.Y. CHANG, and T.C. CHOU. 2007. "Semantic-Based Facial Expression Recognition Using Analytical Hierarchy Process." *Expert Systems with Applications* no. 33 (1): 86–95. doi: 10.1016/j.eswa.2006.04.019.
- CLELAND, D.I., and L.R. IRELAND. 2007. Project Management. Strategic Design and Implementation. 5th ed. New York: McGraw-Hill.
- COOPER, R.G., and S.J. EDGETT. 2001. Portfolio Management for New Products. "Picking the Winners", Working Paper. Cambridge, MA: Product Development Institute.
- COOPER, R.G., S.J. EDGETT, and E.J. KLEINSCHMIDT. 1997a. "Portfolio Management in New Product Development. Lessons from the Leaders. 1." Research-Technology Management no. 40 (5): 16–28.
- ——. 1997b. "Portfolio Management in New Product Development. Lessons from the Leaders. 2." Research-Technology Management no. 40 (6): 43–52.
- DOOLEY, L., G. LUPTON, and D. O'SULLIVAN. 2005. "Multiple Project Management. A Modern Competitive Necessity." *Journal of Manufacturing Technology Management* no. 16 (5): 466–482.
- A Guide to the Project Management Body of Knowledge (PMBOK Guide). 2001. 2nd ed. Newtown Square, Penn.: Project Management Institute.

- HARKER, P.T., and L.G. VARGAS. 1987. "The Theory of Ratio Scale Estimation—Saaty Analytic Hierarchy Process." *Management Science* no. 33 (11): 1383–1403. doi: 10.1287/mnsc..33.11.1383.
- HELDMAN, K., C.M. BACA, and P.M. JANSEN. 2007. PMP. Project Management Professional Exam. Study Guide. 2nd ed. Indianapolis, IN: Wiley Publishing Inc.
- HUNT, R.A., and C.P. KILLEN. 2008. Best Practice Project Portfolio Management. *International Journal of Quality & Reliability Management* 25 (1), http://www.emeraldinsight.com/journals.htm? issn=0265-671X&volume=25&issue=1&articleid=1642153&show=html.
- HWANG, C.L., and K. Yoon. 1981. Multiple Attribute Decision Making. Methods and Applications. A State-of-the-Art Survey, Lecture notes in economics and mathematical systems. Berlin; New York: Springer-Verlag.
- Kendall, G.I., and S.C. Rollins. 2003. Advanced Project Portfolio Management and the PMO. Multiplying ROI at Warp Speed. Conyers, GA: J. Ross.
- LEVINE, H.A. 2005. Project Portfolio Management. A Practical Guide to Selecting Projects, Managing Portfolios, and Maximizing Benefits. 1st ed, The Jossey-Bass business & management series. San Francisco: Jossey-Bass.
- Managing Successful Projects with PRINCE2. 2002. 3rd ed. London: The Stationery Office.
- Martino, J.P. 2003. "Project Selection." In *Project Management Toolbox. Tools and Techniques for the Practicing Project Manager*, edited by D. Milošević. Hoboken, N.J.: J. Wiley & Sons.
- MEREDITH, J.R., and S.J. MANTEL. 2006. Project Management. A Managerial Approach. 6th ed. Hoboken, NJ: John Wiley.
- MIGUEL, P.A.C. 2008. "Portfolio Management and New Product Development Implementation. A Case Study in a Manufacturing Firm." *International Journal of Quality & Reliability Management* no. 25 (1): 10–23.
- RAD, P.F., and G. LEVIN. 2006. Project Portfolio Management Tools and Techniques. New York, NY: IIL Pub.
- RIDLEY-DUFF, R. 2008. "Social Enterprise as a Socially Rational Business." *International Journal of Entrepreneurial Behaviour & Research* no. 14 (5): 291–312.
- SAATY, T.L. 1980. The Analytic Hierarchy Process: Planning, Priority Setting, Resource Allocation. New York-London: McGraw-Hill International Book Co.
- ——. 1994. Fundamentals of Decision Making and Prority Theory with the Analytic Hierarchy Process. 1st ed, Analytic hierarchy process series. Pittsburgh, PA: RWS Publications.
- ——. 2001. Decision Making for Leaders. The Analytic Hierarchy Process for Decisions in a Complex World. New ed, The analytic hierarchy process series. Pittsburgh, Pa.: RWS Publ.
- Schuyler, J.R. 1996. Decision Analysis in Projects. Upper Darby, Pa., USA: Project Management Institute.
- STEWART, R., and S. MOHAMED. 2002. "IT/IS Projects Selection Using Multi-Criteria Utility Theory." Logistics Information Management no. 15 (4): 254–270.
- Watson, S.R., and A.N.S. Freeling. 1982. "Assessing Attribute Weights." Omega-International Journal of Management Science no. 10 (6): 582–583. doi: 10.1016/0305–0483 (82) 90061–5.
- Westerveld, E. 2002. "The Project Excellence Model 1. Linking Success Criteria and Critical Success Factors." *International Journal Project Management* no. 21 (6): 411–418.
- WORRALL, L., and C. Frattali. 2000. Neurogenic Communication Disorders. A Functional Approach. New York: Thieme.
- Wysocki, R.K., and R. McGary. 2003. Effective Project Management: Traditional, Adaptive, Extreme. 3rd ed. Indianapolis, Ind.: Wiley Pub.