

Identification and classification of the key competencies for social project managers in Agadir, Morocco

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ABSTRACT

The question of project manager competencies and especially in social projects is very important to study to minimize the project fail. The researchers' work shows the relationship that may exist between project manager competencies and project success. It is well understood that technical competencies have a significant effect on project success, but there are also behavioral competencies which are more important. The present study tries to show that combine behavioral (soft) skills and technical (hard) skills are important to be a good social project manager. The purpose of this paper is to show, on the basis of a quantitative study carried out among 120 managers of social projects in cooperatives located in the city of Agadir (Morocco), that project manager competency are categorized in behavioral skills and technical skills. The result of this study shows that the category of behavioral competencies is more important to achieve success. Consequently, the six-first key competencies identified are commitment and trust, discipline, patience, transparency, good communication, good coordination and work involvement.

Keywords: Project managers' competencies; Social project; Project manager success.

INTRODUCTION

Project managers' competencies have been at the center of interest of researchers and professional managers since the 1960s. Most research studied the relationship between the skills of project managers and the success of projects. These researches attempt to prove that the project managers' skills have long been a key project success factor (Turner, R. & Müller, R., 2006, Zhang, F. & al., 2013). In the same research framework, many efforts are provided by international institutions such as the Project Management Institute (PMI). The latter has launched several versions of the Project Management Body of knowledge (PMBOK guide) to help improve the chances of project success. Its main objective was to develop the knowledge and skills of project managers. Similarly, the International Competences Baseline (ICB) launched by IPMA (International Project Management Association) has developed 46 skills needed for a good project manager. Afitep (Francophone Project Management Association) as well has developed the question on the skills of the project manager by launching management practices and techniques inspired by the French-speaking context. The efforts of the

international institutions were a response to a number of project failures related to the lack of project managers' skills. While international institutions have contributed to the institutionalization of project management and the development of knowledge, it is nevertheless necessary to mention the role of authors and researchers who worked on the project managers competencies and their impact on success (Slevin, DP & JK Pinto (1987, 2007), Briner, W., Geddes, M. and Hastings, C. (1993), Courtot, H. (1997), Boudès, T., Charue-Duboc, F. and Midler, C. (1997); Kerzner, H.(2013); Abou-hafs, H. and Bellihi, H. (2013), Bellihi, H. and Abou-hafs, H. (2014), Liikamaa, K. (2015), Dziekoński, K. (2017), Charbaji, S. (2018), Abu-hafs, H., & Fadila, B. (2018); Francisco de Oliveira G. & Rabechini Jr R. (2019). The efforts of these authors resulted in a main conclusion about the skills of project managers; it is important to combine behavioral skills and technical skills to succeed projects. Slevin, D-P. and Pinto, JK (1987) called them "soft skills" and "hard skills". With regard to social projects, the same practices, methods and techniques initiated by the institutions can be applied with a slight adaptation to the social context of the project. The success of the latter requires the acquisition of all skills to mobilize resources and techniques to achieve social objectives in terms of cost, time and quality (Atkinson R., 1999). It also manifests itself in the ability to mobilize, integrate and transfer knowledge, skills and resources to achieve social goals (Takey, SM., Carvalho, M.M., 2015). Despite the growing body of scientific literature on the skills of project managers and the success of projects, very few studies have focused on the issue of skills in the case of social projects. Therefore, it seems necessary to study the different categories of project managers' competencies. In other words, it is necessary to answer the following question:

What are the most important categories of social project manager competencies in Agadir?

The assumptions of this research are:

- Social project manager competencies in Agadir (Morocco) are behavioral in nature.
- Social project manager competencies in Agadir (Morocco) are technical and technological in nature.

The objective of this article is to show, on the basis of a quantitative study conducted with 120 social project managers in cooperatives located in the city of Agadir (Morocco), that the skills of a good project manager combine behavioral skills and technical and technological skills; and that the most important skills are behavioral.

PROJECT MANAGERS' COMPETENCIES

The project as a specific organization characterized by a limited time frame and a high level of uncertainty calls for an adapted management. According to Udo, N. & Koppensteiner, S. (2004), the complex nature of project management makes appear several stakeholders. In these circumstances, if all activities and all stakeholders are not well coordinated and managed effectively, the project may fail. Project management approaches have largely addressed how projects should be managed successfully (Slevin D.P. & Pinto J.K.,1987, 2007). The managerial literature of the projects makes it possible to distinguish two main approaches: the behavioral approach and the technical and technological approach. The behavioral approach is interesting in that it is concerned with the behaviors and values of project managers in the exercise of their roles and their missions. This approach is largely supported by the work of the authors defending the French-speaking paradigm (AFITEP; Boudès, T., Charue-Duboc F. and Midler, C. (1997); H. courot (1997); Garel G., Giard V. and Midler, C. (2001); Turner R. & Müller, R. (2006); Abou-hafs, H. & Bellihi, H.(2013); Bellihi, H. & Abou-hafs, H.(2014); Charbaji S., 2018). The technical and technological approach is supported by the Anglo-Saxon literature as the case of the project management knowledge base of PMI-PMBOK (2008). The latter includes the

processes, standards, techniques and methods as well as corresponding knowledge areas that are necessary for successful projects. According to the Anglosaxon paradigm, the project manager must be an expert in project management. However, the uncertainty and irreversibility that characterize the context of the project encourage the project manager to be an expert and develop multiple skills. As stated by Afitep-AFNOR (1991), having a good project pilot is very important before applying a good methodology. Since the 1960s, many successful project practices have been launched by international institutions such as the PMI or AFITEP and also by IPMA, but if these practices do not find a good pilot, the project fails. As stated by Baril R. (la Cible119, 2012), project management practices became multiple until they limited the coaching of men. The author adds that the control of intellectual, managerial, functional and technical skills is not sufficient to avoid multiple fails in project management. For him, it should also develop human skills. Several authors have focused on the skills of project actors. They each tried to provide their own typology of skills needed for a good project manager (Abou-hafs, 2015). For example, Boudès, T., Charue-Duboc, F. and Midler C. (1997) identify three categories of skills: Piloting techniques; social competence; specific professional knowledge; the authors add an entrepreneurial dimension of competence and a collective dimension. Garel G., Giard V. and Midler C. (2001) develop four types of skills according to the typology of the projects and their clients, in particular the control of the instrumental dimension of project management; mastery of the technical fields involved in the project understanding the specificities of the project; adherence to its objectives and social competence of the entrepreneur. Of these four components of the competency, there are two main categories: Behavioral Competencies and Technical Skills. Other types of project manager skills are cited by Courtot, H. (1997): managerial skills; technical skills; methodological skills and behavioral skills. The PMI also recognizes the effectiveness of the project manager according to what he knows, what he does and how he behaves (Abou-hafs, 2015). The PMI refers to this aspect of skills: attitudes, characteristics and leadership, and the ability to unite team members toward goals. In addition to the managerial and technical skills indicated by the PMI in its different versions of PMBOK guide, authors Turner R. and Muller R. (2006) propose two other components of leadership skills necessary for the success of the project manager: emotional intelligence and intellectual skills. The competency framework developed by IPMA (ICB) contains 46 skills that a project management professional must possess to succeed in his project, divided into three categories: technical skills; Behavioral skills and contextual skills. By way of comparison, the ICB repository develops the technical competencies that bring together PMBOK processes and knowledge domains and the contextual skills that were explained in the introduction of the PMBOK guide. As for behavioral skills, the ICB repository is the only one that explains in detail and insists on the role of manager behaviors in achieving success. The PMBOK guide only mentioned the processes needed to manage the team (Abou-hafs, 2015). The project manager plays a very important role in the completion of the project; it must be a chameleon to manage all situations. To face the major constraints of the project, the manager must have personal qualities and multiple skills in order to federate team members and allow better integration of all components of projects. Based on the cited literature review, we can formulate the following research question:

RESEARCH METHODOLOGY

Our research focuses on the analysis of the categories of social project managers' competencies within cooperatives in Agadir (Morocco). The questionnaire was distributed by face-to-face to 120 social project managers working with cooperatives and chosen by using non-probability sampling with reasoned choice. The collected data were analyzed under SPSS 17 using the questionnaire includes variables related to the skills of the project managers. The variables were selected from the literature review (Table 1).

Table1 Project manager competencies	
(1)Social equity	(18)Patience
(2)Sharing social values	(19)Discipline
(3)Integration of new recruits	(20) Work involvement
(4)Sens of belonging	(21) Well-being and blossoming
(5)Motivation	(22)Self-learning
(6)Risk management	(23)Good communication skills
(7)Quality management	(24)Good organization
(8) Good working conditions	(25) creativity
(9) Social climate	(26)Recognition
(10)Good goal setting	(27)Commitment
(11)Good coordination	(28)Solidarity
(12)Good communication	(29)Reactivity
(13)Managerial skills	(30)Self- responsibility
(14)Effective team	(31)Transparency
(15)Availability of funds	(32)Organizational Innovation
(16)Good economic and financial management	
(17)Trust	

The questionnaire

The questionnaire was developed from the literature review on the project management competencies. We identify a list of 32 project managers' competencies. Then, key project manager competencies as perceived by managers of social projects in the city of Agadir were classified using averages and Standard deviation (Table3).

The questionnaire includes questions on the profile of the respondents, namely gender, age, family situation, education degree, number of years of experience in the management of social projects, number of hours / day of continuous presence in the social organization. Then, questions about the perception of skills of social project managers were asked. Respondents are asked to measure the degree of agreement by responding on a likert scale of 1 to 5 ranging from "Strongly disagree" to "Strongly agree". The data are analyzed using the statistical data analysis software "Spss17".The questionnaire was tested with 7 social project managers working in social organizations. Following their remarks and suggestions slight modifications were adopted to improve the quality of the questionnaire before its formal distribution.

RESULTS

In the present study, 120 questionnaires were administered by face to face to project managers within social organizations for two months in the city of Agadir. 105 questionnaires are valid for data analysis; it's a rate of 87.5%. Recall that the objective of our research is to categorize the social project managers' competencies to reach this objective, a factor analysis was used to detect the structure of the relationships between key project managers' competencies.

Demographic characteristics

Table 2 summarizes the information given by the respondents. It shows that the project managers surveyed are mostly married, young and educated. They are generally moderately experienced. The majority of respondent is men. They spend more than 6 hours of work at social organization.

Table 2
Demographic characteristics.

Gender	(%)	Age (years)	(%)	Family status	(%)	Education degree	(%)
1. Woman	25	a.18-25	12	1.Single	41.7	1.Illiterate	1.9
		b.25-35	41.7	2.Married	54.6	2. Primary level	4.6
2. Man	75	c.35-45	32.4	3.Divorced	7.9	3.Middle level	9.3
		d. More than 45	13.9	4.Widowed	5	4.Secondary level	21.3
						5.high degree of Study (at university)	63
Experience (years)		Number of hours / day of continuous presence in the social organization					
a)1-15	73.1	a)less than 4h					26.8%
b)15-30	20.4	b) between 4 and 6h					38%
c)30-45	3.7	c) More than 6 h					35.2%
d)More than 45	1.8						

Data processing

To assess the degree of importance attached to 32 social project manager competencies. A t-test analysis was used. The reliability of the questionnaire was assessed using Cronbach's alpha coefficient. Then a factor analysis was conducted, using the principal Component Analysis (PCA) in order to propose a structure of the variables which is reduced, reliable and rich in information. The analysis in principal components must satisfy the tests with adequacy (Kaiser-Meyer Olkin) (KMO) to ensure if the variables of the study measure a concept. The values suggested by Kaiser are unacceptable below 0.5, poor between 0.5 and 0.6, means between 0.6 and 0.7, well between 0.7 and 0.8, very well between 0.8 and 0.9 and excellent beyond 0.9 (Baillargeon, 2003. P: 6), this analysis must also satisfy the test of (Sphericity of Bartlett) to be ensured if the matrix of correlation obtained it's not an identity matrix. For a better interpretation of the principal components of our study, we will carry out a Varimax rotation, which consists a providing a simple and reduced structure with new indicators easy to interpret.

ANALYSIS, FINDINGS AND DISCUSSION

Results will be analyzed in two parts: (1) analysis arithmetic means and rank orders to identify the key social project manager competencies and their ranking, (2) the Principal Component analysis to unveiling the structures which define the fundamental relationship between the key competencies.

Ranking and means of social Project manager competencies

This part consists to prioritize social project manager competencies. The arithmetic means and rank orders are used. The 32 social project manager competencies must have a mean that is different from 0. A t-test was conducted at the 5% level of significance with a test value of zero in order to evaluate the significant level of each variable.

Table3 shows the average arithmetic and rank of 32 variables. If the factors have the same score, we compare the standard deviation. Only the level of significance on sample t-test equal to zero (table3) indicates that all the statistics are significant.

Factors by means exceeding or equal to 4 are recognized as the key success factors. According to table 3 we can see that all the 31 competencies of social project manager receive a mean score superior to 4 this means that all of these factors are validated, and we can observe that

the top Six competencies are: **Commitment and trust (mean =4,6852), Discipline(mean=4,6667), Patience(mean=4,6389), Transparency(mean=4,6296), and Good communication (mean =4,6019), Good coordination(mean=4,4907); Work involvement(mean=4,4860).**

Table3
Ranking of project manager competencies

Success factors	sig.(2-tailed)	Rank	Mean	Std. Deviation
(1)Social equity (SE)	0	18	4,3084	,78201
(2)Sharing social values(SV)	0	20	4,2222	,84647
(3)Integration of new recruits(IR)	0	27	3,8889	,96027
(4)Sens of belonging(SB)	0	19	4,2963	,65936
(5)Motivation(Mtv)	0	8	4,4815	,64824
(6)Risk management(RM)	0	27	4,0093	1,12849
(7)Quality management(QM)	0	26	4,1111	,96027
(8) Good working conditions(GWC)	0	21	4,2056	,89799
(9) Social climate(SC)	0	10	4,4352	,60020
(10)Good goal setting(GGS)	0	11	4,4259	,59912
(11)Good coordination(GCor)	0	6	4,4907	,55527
(12)Good communication(GCom)	0	5	4,6019	,51045
(13)Managerial skills(MS)	0	13	4,3981	,65481
(14)Effective team(ET)	0	12	4,4167	,64308
(15)Availability of funds(AF)	0	23	4,1481	,88407
(16)Good economic and financial management(EFM)	0	22	4,1667	1,03671
(17)Trust(Trst)	0	1	4,6852	,54082
(18)Patience(Pat)	0	3	4,6389	,48256
(19)Discipline(Dspl)	0	2	4,6667	,49294
(20) Work involvement(WI)	0	7	4,4860	,64959
(21) Well-being and blossoming(WBB)	0	17	4,3241	,62396
(22)Self-learning(SL)	0	25	4,1574	,84458
(23)Good communication skills(GCS)	0	9	4,4722	,60308
(24)Good organization(GO)	0	8	4,4815	,66250
(25) creativity(Crt)	0	15	4,3611	,88407
(26)Recognition(Rec)	0	16	4,3519	,70133
(27)Commitment(Cmt)	0	1	4,6852	,50508
(28)Solidarity(Sol)	0	3	4,6389	,53753
(29)Reactivity(Reac)	0	16	4,3519	,61621
(30)Self- responsibility(SR)	0	14	4,3645	,81718
(31) Transparency(Trans)	0	4	4,6296	,57344
(32) Organizational Innovation(OI)	0	24	4,1308	,75341

Notes: sig. = significance obtained from one sample t-test.

Internal consistency reliability

The internal consistency of items was measured by Cronbach's alpha, which called reliability coefficient (Carricano and poujol, 2008). The internal consistency ranges between zero and one. Cronbach's alpha was calculated at 0.900, what means, that internal consistency reliability is very good.

Results of factor analysis

A factor analysis was used to detect the structure of the relationships between the social project manager competencies (Ng and Tang, 2009). The Bartlett's test of sphericity is equal to 1484.223 with a threshold of significance equal to 0.000 indicates that the correlation matrix is not an identity matrix (table 4).

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.766
Bartlett's Test of Sphericity	Approx. Chi-Square df	1484.223 528
	Sig.	0.000

The table shows that the value of the Kaiser-Meyer-Olkin (KMO) measure of sampling accuracy was 0.766, and was considered good.

The results of the tests carried out indicate that the data of our empirical study are valid to carry out a principal components analysis. The extraction of the principal components requires the identification of three criteria: (1) the eigenvalue (represents the amount information with a factor can record). Its value is higher than 1 according to the rule of Kaiser-Guttman. (2) The scree test of Cattell (1996) (it indicates to which components, we could stop the extraction of the principal components while basing on the accumulation of the variance). (3) The percentage of the variance (this criterion is based on the cumulated variance reaching a significant percentage). A percentage higher than 60% must be retained (Hair and al., 2006 cited in Carricano and poujol, 2008).

Based on the analysis of the table 5, we note the extraction of nine main components whose eigenvalue is greater than 1 representing 65.753% of the total variance dispersed as follows: component 1 represents 25.257% of the total variance and communicate 8.335 of inertia; component 2 represents 7.554% of the total variance and communicate 2.493 of inertia; component 3 is 6.242% of the total variance and communicate 2.060 of inertia; component 4 represents 5.524% of the total variance and communicate 1.823of inertia; component 5 represents 5.438% of the total variance and communicate 1.794 of inertia; component 6 represents 4.808% of the total variance and communicate 1.587 of inertia; component 7 is 4.054% of the total variance and communicate 1.338 of inertia; component 8 represents 3.667% of the total variance and communicate 1.210 of inertia. component 9 represents 3.209 % of the total variance and communicate 1.059 of inertia.

Component	eigenvalue	% of Variance	Cumulative %
1	8,335	25,257	25,257
2	2,493	7,554	32,811
3	2,060	6,242	39,053
4	1,823	5,524	44,577
5	1,794	5,438	50,015
6	1,587	4,808	54,823
7	1,338	4,054	58,877
8	1,210	3,667	62,544
9	1,059	3,209	65,753

For a better interpretation of the four main components of our study, a varimax rotation was conducted. The objective is to provide a simple structure and reduced with new indicators, easy to interpret (see table 6 below).

Table 6
Rotated component matrix²

	Component								
	1	2	3	4	5	6	7	8	9
Risk management (RM)									.869
Organizational innovation(OI)								.741	
Quality management(QM)					.853				
Availability of funds(AF)		.819							
Good goal setting(GGS)		.505							
Good coordination(GCor)	.613								
Managerial skills(MS)		.568							
Good economic and financial management(EFM)		.759							
Patience(Pat)	.508								
Discipline(Dspl)	.735								
Work involvement(WI)	.648								
Self-learning(SL)			.785						
Recognition(Rec)			.609						
Self- responsibility(SR)			.772						
Integration of new recruits(IR)						.912			
Social equity (SE)				.766					
Sharing social values(SV)					.692				
Good communication skills(GCS)	.53								
Good working conditions(GWC)	3						.787		

Extraction method: Principal Component Analysis.

Rotation method: Varimax with Kaiser Normalization.

²Rotation converged in 11 iterations

The guideline to follow to appreciate the significance low, moderate or heavy for each variable with the component is as indicated by Hair et al. (2005)(Al-Tmeemy et al., 2010). This guideline states that if the component loading of ± 0.3 meant the item was of minimal significant, ± 0.4 , there will be a more important item, ± 0.5 , there will be significant items. According to Larose (2006), the communalities less than 0.5 are considered too low for being significant variable, so variables must be deleted.

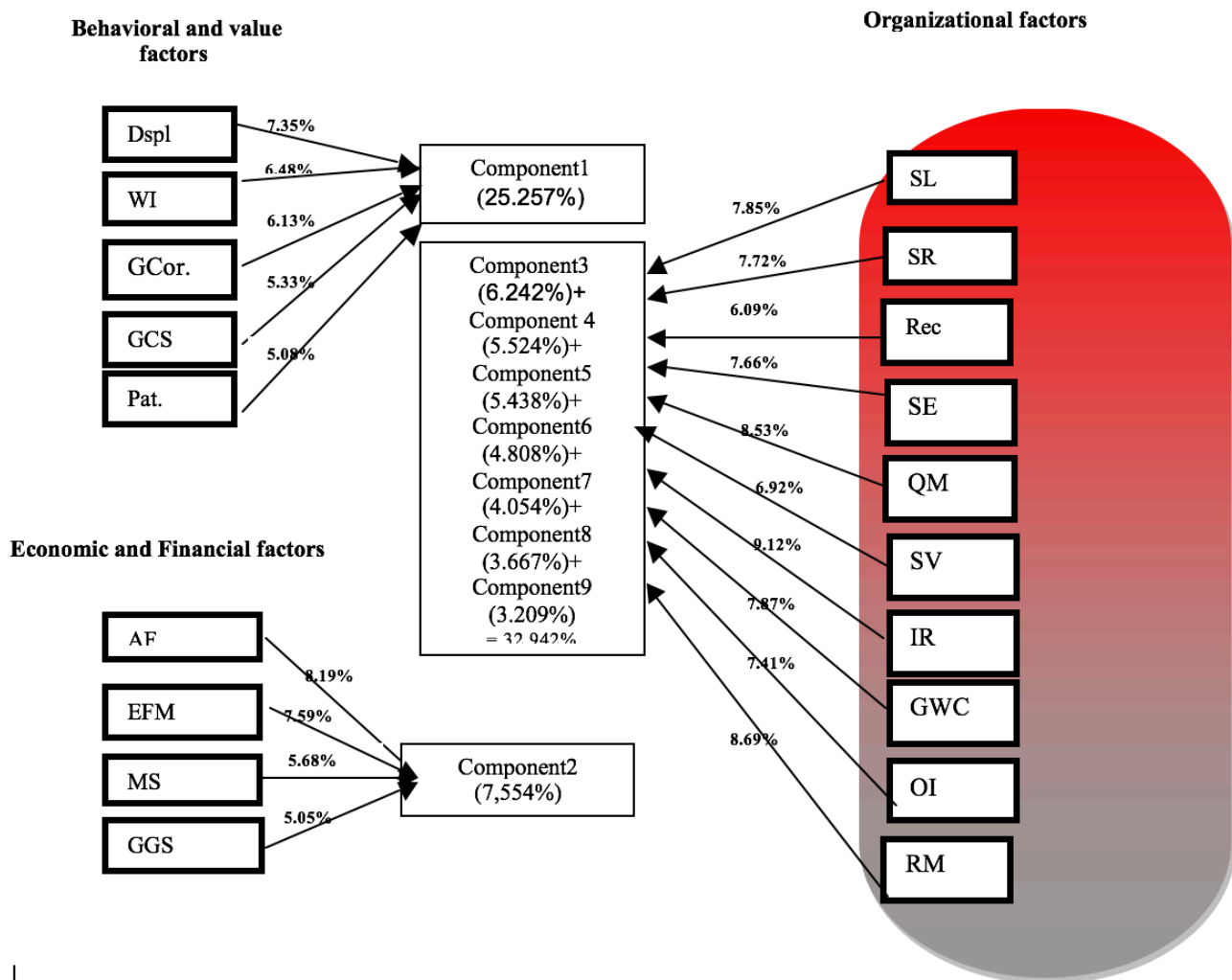


Fig.1. Loadings of social project management competencies.

DISCUSSION

Based on the work of Belassi and Tukel (1996) on the principle of categorization, Chow and Cao (2007) for the types of categories, we name the key components: The Behavioral and value factors, the Economic and Financial factors and the organizational factors. The three components are interpreted in the following sections.

Component 1: The Behavioral and value factors

Component 1 expressing 25.257% of the total variance is significantly and positively correlated with five social project manager competencies: the variable Dspl (0.735), the variable WI (0.648), the variable GCor. (0.613), the variable GCS (0.533) and the variable Pat.(0.508). We note that the correlation between these variables represents the values and behavioral skills needed to be a good project managers especially in social project. For making a successful social project, the project manager must possess certain values to be respectable and inspiring person for project team. For this, he must be disciplined and communicates correctly to win good relationship with is indicated in this study by 'GCS'. These last variables are considered among the top six key project manager competencies. To achieve the objectives set at the outset of the project, the project leader must be patient, because the project is complex and involves a very high risk.

Component 2: The Economic and Financial factors

Component 2 expressing 7.554% of the total variance is significantly and positively correlated with four skills: AF (0.819), EFM (0.759), MS (0.568), GGS (0.505). The project management success starts with people and their performance (Garel (2003); Minyem (2007)) Several recent studies confirm the existence of a significant positive relationship between human factors and project success but it's important to say that economic and financial factors are also important to insure success. So project managers must have qualification to manage with efficacy time, cost and quality. As it said by Atkinson 1999, gold triangle is one of the most important factor to success if project manager control technical aspect of project.

Component 3 plus other component: The organizational factors

Component 3 regroup seven other component expressing 32.942% of the total variance: Component3 expressing 6.242%; Component4 expressing 5.524%; Component5 expressing 5.438%; Component6 expressing 4.808%; Component7 expressing 4.054%; Component8 expressing 3.667% and Component9 expressing 3.209%. These grouped components are significantly and positively correlated with ten project manager competencies: SL(0.785); SR(0.772); Rec(0.609); SE (0.766) ; QM(0.853) ; SV (0.692) ; IR (0.912) ; GWC(0.787) ; OI(0.741) and RM(0.869). Mastering organizational project management techniques is very important to be a good manager (PMI-PMBOK, 2012). Good communication and risk management as well as human resources management are very important as are other variables in project management performance. A competent project manager must be good at all the organizational management techniques.

CONCLUSION

Based on quantitative study realized among 120 social project managers and review of literature, this research has identified 32 social project manager competencies needed to be a good manager and realize success of social Project (table1). Through a series of analytical processes, this research identified and classified six key competencies for social project manager in Agadir (Morocco). These competencies are: Commitment and trust (mean =4.6852); Discipline (mean=4.6667), Patience (mean=4.6389), Transparency (mean=4.6296); Good communication (mean =4.6019); Good coordination (mean=4.4907) and Work involvement (mean=4.4860). The questionnaire survey analysis recognizes that all the 32 project manager competencies are important to insure the success of project managers, but only the first key competencies identified by analyzing mean and rank order are more important. Knowing the key competencies is very important to help the managers of social projects in Agadir to make better their management especially in the cooperative. Through the factor analysis, all competencies identified in this study have been grouped into three components, namely **(1) The Behavioral and value factors; (2) The Economic and Financial factors; (3) The organizational factors**. These three main components will allow social project managers to have a clear vision how to make better theirs projects. By combining behavioral approach of project manager competencies and technical approach which contain organizational factors and economic and financial factors, the project manager can be good in conducting a social project and make it successful. We should be remembered that the key categories of competencies identified in this study are related to the context of social project in cooperatives in Agadir- Morocco. The key success factors cannot then be applied to another part of morocco without considering the context variable.

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