

9 July 2011

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ISBN: [978-1-86435-644-1]; Full paper

Recommended Citation

Natovich, Joseph; Natovich, Rachel; and Derzy, Zeev, "Withholding Bad News In Information Technonlogy Projects: The Effect Of Positive Psychology" (2011). *PACIS 2011 Proceedings*. 139.
<http://aisel.aisnet.org/pacis2011/139>

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WITHHOLDING BAD NEWS IN INFORMATION TECHNOLOGY PROJECTS: THE EFFECT OF POSITIVE PSYCHOLOGY

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Abstract

Managers of IT projects (PMs) tend to "gloss over" the reality in their external reports including withholding bad news ("mum effect"). Reasons that have been suggested for this bias can be classified as personal-oriented and project-oriented.

This paper is an initial study on the impact of positive psychology on IT project management. Prior studies have found that High Psychological Positive Capital (PsyCap) of individuals is positively correlated with their work satisfaction and higher performance. PsyCap comprises individual's positive capacities of optimism, hope, resilience and efficacy. Drawing from Beck's cognitive theory, we hypothesized that High PsyCap PMs, when required to report bad news to a client, are inclined to consider the project-oriented reasons rather than the personal-oriented ones. As a result, they are more willing to report bad news compared to Low PsyCap PMs.

A questionnaire consisting of four cases of bad news in IT projects, together with PsyCap tests, was distributed to professional communities on the internet. Data was collected from 42 respondents. The results of the statistical analysis have shown some support for our hypotheses. The research encourages more research on PsyCap contribution to various aspects of project performance and success. Such research may also have practical implications for PM recruiting and training.

Keywords: Project Manager, Mum Effect, Positive Psychology, PsyCap

1 Introduction

Communicating accurate and fair status assessments to the customer is crucial to IT project success (Tan et al., 2003). However the "Mum Effect", that is, the reluctance to report bad news about a troubled project, may disrupt this communication (Smith et al., 2001). The reasons for optimistic and biased reporting by Project Managers (hereafter "PM"), and the "mum effect", have been explored by Snow et al. (2007). In addition, it has been suggested that various factors affect the willingness to report bad news (e.g. Keil et al., 2004; Park et al., 2008). However, these were factors related to the project and the nature of the report, while the role of the PM's personality has hardly been studied.

In the last decade the positive psychology movement has emerged. This term refers to studying the positive psychological traits of human beings and nurturing them in order to make life more fulfilling (Seligman, 2002). Positive psychology has been found to correlate with success in various aspects of personal life, including educational and athletic achievements, as well as improvement in health (Snyder, 2000, 2002). Organizational research has accumulated evidence of positive psychology's correlation with better leadership and productivity in the workplace (e.g. Luthans et al. 2007b, Avey et al. 2010). It has been suggested that the level of confidence, optimism, hope, and resilience of employees, be viewed as organizational Psychological Positive Capital (PsyCap), that can be measured and developed to achieve a competitive advantage (Luthans, 2002).

Motivated by PsyCap's research results, the purpose of this research was to extend the study of positive psychology to the context of project management. More specifically, this article intends to empirically examine whether a PM's PsyCap level affects his or hers willingness to report bad news and the PM's motivation for withholding bad news.

2 Background

2.1 Reporting Bad News

The code of ethics of the Project Management Institute, forbids the project manager from misleading, erroneous, or partial reporting (PMI, 2005). However, empirical studies provide ample evidence that PMs tend to "gloss over" the reality in their reports. This may include exaggerated estimation of completion rates – the "ninety percent" syndrome (Abdel-Hamid, T.K., 1988), the reluctance to report bad news about a troubled project - the "Mum Effect" (Smith et al., 2001), and biased, generally optimistic, status reporting in more than 60% of the reports examined (Snow et al., 2007). The traditional view sees such behavior as a moral hazard (Tuttle et al. 1997). Furthermore, it has been recognized as a key contributor to software project failure (Tan et al., 2003).

To date, bad news reporting has received only limited attention from IS researchers (Park et al., 2008). One of the questions that are raised in the studies is what are the factors that may affect the PM in his willingness to report bad news? So far a relatively small number of factors have been investigated. Empirical studies have focused on the impact of organizational factors such as organizational climate and information asymmetry (Keil et al. 2004), or project aspects such as level of risk (Snow et al., 2007), time urgency, fault responsibility (Park et al. 2008), the level of impact associated with the outcome of no reporting, and the level of observed behavioral wrongdoing associated with the project (Smith

et al 2001). Nevertheless, little attention has been given in these studies to the question of PMs behavioral factors.

2.2 The Project Manager's Personality

The traditional view that PM success depends solely on the correct use of tools and techniques, disregarding personality, was common until the last decade. However drawing from organizational leadership theory, it has been found that the success of a project is significantly correlated with specific leadership styles (e.g. Prabhakar, 2005, Thamhain, 2004), and leadership competences (Dainty et al., 2004). Furthermore, recent studies of Malach-Pines et al., (2009) and Muller and Turner (2007) have both shown that in order to ensure success there must be a fit between the PM's leadership profile and the type of project. Since there are no agreed upon leadership personality constructs, Malach-Pines et al. selected "functional-oriented" personality traits, such as intuition, perceiving, openness to experience, risk taking etc. Whereas, and Muller and Turner, adopted Dulewicz and Higgs (2005) classification of 15 competences into three dimensions, that is IQ (intellectual), EQ (Emotional), and MQ (Managerial). However, "positive psychology" capacities have hardly been considered in the leadership research.

2.3 Positive Psychology

Positive Psychology is a term which was coined by Martin Seligman who challenged the psychology profession to shift the focus away from problems and failures in human functioning into what is normal and positive human behavior. In other words, focus on people's strengths rather than their weaknesses. Although Positive Psychology is sometimes attributed to the populist and intuitive "spiritual" ideals, research has found empirical evidence that it has an impact on educational and athletic achievements as well as improvement in health. (Snyder, 2000; Snyder, 2002). It is not surprising that Positive Psychology has recently begun to receive attention in organizational literature. Luthans (2002) emphasizes the need to identify state-like psychological capacities that can not only be validly measured, but also be open to development and performance management. Luthans and Youssef (2004) define the notion of PsyCap (Positive Psychology Capital), as an additional organization asset, which today's leaders and their associates can develop for both individual and organizational performance and gain competitive advantage. PsyCap is "an individual's positive psychological state of development that is characterized by: (1) having confidence (self efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success" (Luthans et al., 2007a, p. 3).

Ample evidence has been accumulated that PsyCap can indeed affect business performance. Seligman and Schulman (1986) in their seminal work on Metropolitan Insurance found that insurance agents with an optimistic style outperformed their counterparts in sales by 8% in the first year and 31% in the second year. These agents also stayed in the company for a longer period. Peterson and Luthans (2003) have found better organizational performance among leaders with high hope capacity. Avey et al. (2008) found a correlation between employees PsyCap and their feelings when they undergo an organizational change. More recent studies found that leader rated performance and employee work satisfaction are positively correlated to their PsyCap (e.g. Luthans et al., 2007b, Avey et al., 2010).

Note that the study of positive psychology differs from leadership theory. While traditional leadership theory is based on "practical" competences for PMs which need to "fit" the project types, positive psychology emphasizes PMs positive attitude capacities.

2.4 The Theory

The "whistle blower" theory (Dozier and Miceli, 1985), regarding the decision process made by a by-stander whether to report on a problem or not, has been adopted as the main framework for bad-news reporting in IT projects (Smith et al., 2001, Smith and Keil, 2003; Keil et al., 2004; Park et al. 2008). However, it is somewhat misleading to compare the situation of a PM, who is the primary individual responsible for a project, to that of an accidental by-stander. We suggest an alternative theory, drawn from the Cognitive Psychology framework to behavior (Alford and Beck, 1997).

When facing a stressful event, an individual has alternative coping styles. One alternative is task oriented, which focuses the individual's efforts on solving the problem. The other alternative is the avoidance-oriented coping style, which seeks to avoid the stressful event (Endler & Parker, 1990). Since confronting the client with bad news may be considered a stressful event, some PMs may cope with it by avoidance, i.e. not reporting the bad news.

However, positive thinking in terms of confidence, optimism and hope, may influence the level of stress involved and hence the consequences of avoidance. According to Positive Psychology (Seligman, 2002), positive thinking individuals tend to explain good events to themselves in terms of permanent causes, while bad events are explained in terms of temporary causes and external circumstances but not attributed to the self. Once they succeed they will try even harder the next time. In contrast, negative thinking people are characterized with high anxiety and danger oriented beliefs (Alford and Beck, 1997). They tend to make catastrophic interpretations of events, attribute failure to themselves and give temporary reasons for good events.

Cognitive theory, which positive psychology consists of, argues that the processing of external events is always biased by the internal subjective perception of the individual called "schema" and therefore distorts the construction of his or her experience (Alford and Beck, 1997). Thus, positive thinking individuals, using their positive schema, will experience events less stressfully than a negative thinking counterpart, and hence their use of avoidance coping style would be lower.

According to this theory, we expect that since the positive thinking PMs are predisposed to attribute bad news to temporary external events and not to their own failure, it is expected that compared to the low positive thinking PMs, their considerations regarding withholding bad news are more project oriented and less personal oriented. This may help them to subjectively experience a project's bad news reporting as less stressful and as a result positive thinking PMs do not feel the need to cope with this event or to use avoidance. Therefore they have less of a tendency to withhold bad news.

Accordingly, our Hypothesis can be summarized as following:

Hypothesis 1: While High PsyCap PMs focus on project-oriented considerations for withhold bad news to clients, Low PsyCap PMs focus on personal-oriented considerations.

Hypothesis 2: High PsyCap PMs are less inclined to withhold bad news from customers than Low PsyCap PMs.

3 Data Collection

3.1 Methodology

A set of four cases was developed. Each case presents a situation in which a PM is confronted with a specific external problem ("bad news") during the project life-cycle, but he decides to withhold the report on the problem to the client.

Case 1: In the beginning of the project, while assuming responsibility, the PM discovers that the time set for the completion of the project is not realistic and a substantial extension will be required.

Case 2: The PM discovers that, due to unexpected technological constraints, the implementation of a major system requirement will be consuming a lot more resources or may be even impossible to implement.

Case 3: The PM discovers a major technological issue, which may postpone the completion of the current stage of the project, and possibly may postpone the entire project's completion.

Case 4: During the project, the PM discovers that due to the client's organizational change the developed system will be unusable by the client.

We developed a questionnaire in which we asked the subjects to assess for each case, what is the likelihood the PM would withhold the bad news, using a Likert scale from 1 – very unlikely to 5- very likely.

In addition, we have listed possible motivations for PM reluctance to report bad news, which were adopted from Snow et al., (2007). We asked the subjects to select the five most relevant reasons on their questionnaire.

We asked five "judges" to classify the reasons for failing to report bad news to two groups:

Project Oriented Reasons – reasons that focus on promoting the project success, such as “I wanted to keep the high morale of the project members”.

Personally Oriented Reasons - reasons that focus on the wellbeing of the PM. For example: "I do not want to be considered a bad person".

Table 1 below presents the classification of the reasons as decided by the judges.

In addition, we included the short PsyCap self-test (Luthans et al., 2007a) which scores the respondents' PsyCap based on the four capacities it contains: self efficacy, hope, optimism, and resilience.

Empirical studies of when to expect a PM to report on possible unethical behaviors, show the response can be affected by the "social desirability bias" (Sudman and Bradburn, 1974), which is the tendency of a subject to avoid reporting on behavior that is socially perceived as "bad". To eliminate social desirability bias, we have applied the indirect questioning method to our cases (Fisher, 1993, Snow et al., 2007), and rephrased the questions so that they referred to the general behavior of PMs rather than the respondent's own behavior.

3.2 Subjects

The questionnaire was published on the on-line survey web site "Zoomerang". The subjects were recruited by a request for participation that we electronically distributed to two relevant professional communities: (1) Members of the Project Management Institute (PMI) - the Israeli chapter (2) Subscribers to an electronic IT professional newsletter. Due to the delicate subject of the research, we intentionally refrained from recruiting subjects through the workplace.

Overall, the number of respondents was 42, 36 males (85%) and 6 females (15%). The average age of the respondents was 43 and their average professional experience as PM was 8 years.

4 Results

4.1 Reasons for withholding bad news

The results of the study regarding the motivation of PMs for withholding bad news, based on the accumulated response of all four cases, show there are four major reasons, which received similar selection rates by percentage: (1) the need to assess the effect on the contract, (2) the belief that things will work out, (3) the power to fix the problem, and (4) succumbing to management pressure. Table 1 presents the full rank of reasons by their selection rate.

It is interesting to note that this ranking is somewhat different than found by Snow et al. (2007), which found the number one reason to be fear that management will "shoot the messenger". This reason only ranked fifth in our results.

#	Reason	Orientation	%
1	Project manager does not want to cause breach of contract	Project	15%
2	Project manager believes that things will work out	Personal	15%
3	Project manager thinks s/he can fix whatever is wrong or that it will all work out in the end	Project	15%
4	Project manager succumbs to management pressure	Personal	15%
5	Project manager believes the client's managers "shoots the messenger" of the bad news	Personal	10%
6	Project manager wants to make him or herself look good	Personal	9%
7	Project manager does not want to let the client down	Project	8%
8	Project Management wants to avoid hearing criticism and Reproof	Personal	6%
9	Project manager wants to keep up the project team's morale	Project	5%
10	Project manager does not want to look bad	Personal	2%

Table 1. Reasons for withholding bad news: frequency results

The reasons were classified by personal-oriented reasons and project-oriented reasons (Table 1). We conducted a test that compared the High PsyCap group against the Low PsyCap group regarding the distribution of the reasons they selected. The results confirm there is a significant difference between the High PsyCap group and the Low PsyCap group. While the first group preferred more project oriented reasons than the latter (61.1% vs. 52.5%) the Low PsyCap group selected more personal oriented reasons (47.5% vs. 38.9%). Similar differences between the high score and the low score group were consistently found in each of the factors that comprise PsyCap (Table 2).

Factor	Personal Oriented Reasons					Professional Oriented Reasons				
	Low		High		Sig	Low		High		Sig
	Mean	Std. Dev.	Mean	Std. Dev.		Mean	Std. Dev.	Mean	Std. Dev.	
PsyCap	61.1%	0.23	52.5%	0.21	.004***	38.9%	0.21	47.5%	0.21	.005***
Efficacy	58.2%	0.24	54.5%	0.21	.069*	41.8%	0.21	45.5%	0.21	0.183
Hope	58.2%	0.24	55.0%	0.22	0.259	41.8%	0.22	45.0%	0.20	0.111
Resiliency	59.3%	0.24	53.7%	0.21	.097*	40.7%	0.21	46.3%	0.21	.019**
Optimism	58.5%	0.23	50.9%	0.21	.022**	41.5%	0.21	49.1%	0.22	.029**
* p < 0.1 ** p < 0.05 *** p < 0.01										

Table 2. Reasons for withholding bad news - High PsyCap vs. Low PsyCap

The findings confirm our first hypothesis; that High PsyCap PMs focus more on the project professional considerations of bad news reporting, while Low PsyCap PMs are more likely to consider the consequences to them. It should be noted that this pattern of being able to be more work focused and less self concerned is the pattern that was found to help High PsyCap people achieve better job performance.

4.2 The Frequency of Withholding Bad News

The analysis of the results found that withholding bad news occurs very frequently. On a scale from 1- very unlikely to 5- very likely, the average score was 3.13 (St. Dev = 1.1). These results confirm once again, following Snow et al. (2007), that the "mum effect" in IT projects is a common phenomenon.

We then divided the respondents by their PsyCap test scores into equal size groups of high score and low score, for each of the positive factors. We conducted a t-test to compare the two groups' perceived frequency of withholding bad news. Table 2 presents the results of the comparison. In two of the factors we have found significant differences between the high score and the low score groups. We found that in the Hope factor the perceived frequency of bad news withholding of the high score group is significantly lower than its low score counterpart (3.01 vs. 3.24, $p < 0.1$). The High Optimism group also demonstrated a lower perceived frequency of bad news withholding (2.88 vs. 3.01, $p < 0.05$). Similar results, although not statistically significant, have been found at overall PsyCap. With the other factors no significant differences were found.

Factor	Low Score		High Score		Sig
	Mean	Std. Dev	Mean	Std. Dev.	
PsyCap	3.19	1.0	3.08	1.2	.264
Efficacy	3.06	1.1	3.25	1.1	.137
Hope	3.24	1.0	3.01	1.2	.096*
Resiliency	3.13	1.1	3.14	1.1	.468
Optimism	3.21	1.1	2.88	1.1	.048**
* $p < 0.1$					
** $p < 0.05$					

Table 3. Perceived Frequency of Bad News Withholding - High PsyCap vs. Low PsyCap

As discussed above in the methodology, the perceived frequency can be interpreted as the respondents own willingness to report bad news. Thus, results may indicate that PMs with high optimism and high hope are more likely to report bad news. These results do not entirely confirm our hypothesis, since the overall PsyCap score was not found as a significant factor. Nevertheless, the significance found with the Optimism and Hope factors provides some support to our hypothesis. We will further discuss the meaning of these results in the discussion section below.

4.3 Case Type and Withholding of Bad News

Our study also revealed the type of case affected by the frequency of the withholding of bad news. The highest level of withholding by the respondents was found in case 1 (3.52) while the lowest was case 4 (2.59). The research cases differed from each other in two dimensions. The first dimension was the source of problem. While in cases 1 and 3 the source problem is project dependent (unrealistic time estimation, technological failure), in cases 2 and 4 the source of the problem is client dependent (client requirements and client organizational

change). The second dimension was the project stage. While in cases 1 and 2 the problem may occur in the early stages of the projects (initialization and design), in cases 3 and 4 the problem occurred during more advanced stages (development and implementation).

We performed an Anova analysis of the observed withholding of bad news. The results of the analysis suggest that PMs are more likely to withhold project oriented and early stage problems, rather than client oriented and late stage problems (Table 4). One possible explanation for these results may be the effect of fault responsibility and time urgency on the "mum effect" that was explored by Park et. al. (2008). The source of the problem and the project stages in our study can be interpreted in terms of fault responsibility and time urgency respectively. Since we used different case settings, these results support and expand the findings in Park et. al. (2008). In this paper we focused on positive psychology, therefore further discussion of these findings is beyond our scope.

		Project Stage			
		Early		Late	
Problem Source	Project	Case1: 3.52		Case3 3.29	
	Client	Case2: 3.14		Case 4 2.57	
Source		Sum of Squares		F	Sig.
Problem Source (1)		12.595		11.077	.001
Project Stage (2)		6.881		6.052	.015
Interaction (1)*(2)		1.167		1.026	.313

Table 4. Bad news withholding- by case

5 Discussion

5.1 Summary

Good project management requires not only high technical skills, but also appropriate personal leadership qualities. This paper suggests that, in addition, the ability to think positively may be a desired personality trait. We have demonstrated the effect of positive thinking in the context of bad news reporting, an issue which proved to have a substantial impact on the success or failure of IT projects. One interesting finding was that in a situation of bad news, High PsyCap PMs are more concerned with project and professional issues rather than personal consequences such as "getting the heat" from the client. This finding matches the pattern of other studies in positive psychology, and it is part of the explanation of its affect on personal success. For example Avey et al. (2008) noted that; "PsyCap can create positive expectancies, trigger the creation of goals with an approach orientation (rather than avoidance or complacency), and motivate self-regulatory mechanisms that increase the probability of perseverance and success in a particular situation".

However, the hypothesis that a higher PsyCap increases a PM's tendency to report bad news, received support with respect to the personality traits of optimism and hope. Nevertheless, the effect of the traits of efficacy and resilience has not been found to be significant. One possible explanation is that a High PsyCap might also have a counter effect. High self confidence leads a PM to believe that he or she will successfully get the project back on track without the customer discovering the problem, thus, increasing a tendency to withhold bad news. Overall, the findings show partial support for this conclusion.

5.2 Limitations

We are aware there are some limitations to our research. First, as a pioneering work in Positive Psychology in the context of work projects, the results should be viewed with some caution. Second, the results did not fully support our hypothesis. Third, since the questionnaire we used contained an indirect questioning format in order to overcome "social desirability bias" there was no assurance that the PMs responses matched their own wisdom. Fourth, although the respondents were drawn from a professional community, the use of the internet questionnaire and the relative small number of respondents (42) may pose some external validity issues.

5.3 Contribution and Implications

The main contribution to Project Management research of our research is an initial attempt to empirically explore Positive Psychology effects in IT project leadership. This work also contributes to the research of the "mum effect", by considering a new dimension of psychological factors on this phenomenon. Also, we have suggested a theory that is grounded in Alford and Beck's (1997) psychological cognitive research, which may encompass psychological aspects other than the social Whistle-Blower theory (Dozier and Miceli, 1985). Finally, our study follows up the prior research in (Park et.al, 2008), which was based on an experiment using student subjects, with regard to the effect of fault responsibility and time urgency factors. We provided some confirmation to this research based on a field study in which the respondents were PMs with at least eight years of experience.

Our research added to the growing and promising evidence of the general organizational Positive Psychology research, and may encourage an avenue of Positive Psychology studies on projects' leadership and teams that considers the effect on a range of issues including performance, productivity, and risk.

One practical implication of this research is the recognition that the withholding of bad news by PMs is a coping strategy to a stressful situation. Management can reduce the stress involved in reporting bad news by creating an atmosphere of better organizational openness: including refraining from harsh reactions to bad news ("shoot the messenger" syndrome), building partnership work relations between the client and the project manager, and creating an employee performance evaluation system with a balanced and fair perspective etc. By reducing the stress of reporting, PMs communication will be more open and accurate.

Another possible practical future implication of the findings can be on the recruiting and training of project leaders. This paper has suggested that a High PsyCap may be a desired character trait for a project leader in a specific context. If, as has been the case in various other fields, PsyCap will be found to have a positive effect on project outcomes then when recruiting PMs the desired candidate profile should be defined accordingly. Furthermore, PsyCap skills can be developed. The PsyCap comprises state-like personal capacities, which are context specific and malleable rather than fixed trait characteristics which represent habitual or programmed responses. PsyCap also cannot be considered as temporary moods and emotions (Avey et al. 2010). Since they are not fixed nor fluctuate, PsyCap capacities may be taught and utilized. There is evidence that relatively short training interventions have also been successfully implemented to develop PsyCap (Luthans et al., 2006; Luthans et al. 2008). As a result, with a broader knowledge of PsyCap's contribution to project success, organizations may recognize the need to develop PsyCap qualities in their PMs and it may become part of their education and training.

6 Conclusion

Two major related conclusions can be drawn from our research: First when a troubling situation arises on a project, the PsyCap capacities of optimism, hope, efficacy, and resilience drives the PM to be less concerned about his or her personal consequences and be more focused on the project when they consider whether to report or withhold the bad news. Second high hope and optimism PMs are less inclined to withhold bad news from client management.

Unfortunately the "mum effect" has been found to be widespread in IT projects. The substantial risk that it poses to project success is well documented. Clearly studying and devising ways to decrease its occurrence are needed.

Our research is an initial work on positive psychology in a project context. Its results have added to a growing body of research that demonstrates the advantage of positive psychology in various areas of life in general, and at work specifically, where it becomes Psychological Capital (PsyCap). We hope that these encouraging results will ignite new studies on the effect on projects of leadership and possibly enable the development of PsyCap within PMs and teams to reduce risks, such as the "mum effect", and to increase productivity and success.

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