



**DR. IR. PETER WIJNGAARD CSPM IS
A PRINCIPAL CONSULTANT AND
PROGRAM MANAGER AT ATOS CONSULTING**

THE GAP BETWEEN THE PROJECT MANAGER AND EXECUTIVES: DOES IT AFFECT YOUR PROJECT RESULTS?¹

1. INTRODUCTION

In today's organizations the role of projects is evident. Many organizations implement important parts of their company strategy through projects. This not only concerns projects that are directly related to organizational changes (such as innovations or reorganizations), but also the projects in the production core of the company contribute as well – of course – to the development of the company. In that sense, projects are considered to be in the development core of an organization's strategic goal and, therefore, fulfill an important role in the development of this company. The responsibility for this company development primarily lies with the executives of the company. This implies that the responsibility of the justification for and the choice of the projects (the "why" of the projects) in the company's project portfolio also lies with the executives. The responsibility for the execution of the projects (the "what" and the "how" of the projects) is delegated to the project manager. This "Separation of Powers" is characteristic and well-known for project management².

In practice, however, this model might not work so well: both executives and project managers contribute to developing the strategy of the organization but their approach may differ. On the one hand, this is related to the different roles that executives and the project manager (are supposed to) play. The justification of a project and the day-to-day execution ask for different approaches, per definition; executives have an overall view of the projects and make decisions based on high-level information of all the projects in the portfolio, but project managers focus on the performance of their own project. On the other hand, this delegation goes hand in hand with common transfer problems, like infrequent communication, miscommunication, lack of information etc. The different roles of executives and project managers can lead to different perceptions about the management of projects, and this can lead to a gap between project managers and executives if both of them do not fully understand the other's perception. In this article we discuss this gap.

To identify and to bridge the gap between project managers and executives, it is

¹ The author thanks Victor Scholten and Herman Mooi (both working for Technical University of Delft, The Netherlands) for their contribution to this article.

² Kerzner, 2006; Office of Government Commerce, 2009; Turner, 2008.

necessary to give a clear definition for this gap. A difference in thinking and acting between the project managers and executives may always be present. Also, the gap can affect project results both in positive and negative ways. An example of a positive effect on results is that tension between a project manager asking for more resources and a company director only prepared to make minor contributions might help to increase effectiveness of the realization. A negative example might be when a project manager delivers a project on time and within the budget, but without having realized the underlying strategic aim, or paying attention to its relevance as directed by the executive.

A large portion of this difference is most probably due to their different positions in the organization and their different roles in the organization and in projects. But when this difference has a negative impact on results, we talk about a gap³:

A gap in project management is the distance between the project manager and the executive in the work process – as a result of the difference in perspective caused by their different roles – with a negative impact on project results and with that on the organization goals.

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Research on project management has extensively investigated the relationships between project managers and their team, the project sponsors or the steering committee. Relatively few studies have focused on the relationship between project managers and executives. However, there are some studies⁴ which will be discussed later in this article.

In order to get a better understanding on the presence and perceptions of a gap between project managers and executives we have to look at the following:

- > How does the (perception of the) gap influence the result of a project?
- > What are the perceived causes for this gap according to project managers?
- > Are these causes also directly influencing the project results?

When we have a better understanding of this gap, and possible answers on the questions above, we can use that to improve the relationship between project managers and executives. They can improve their understanding of the views

³ Wijnjaard, Mooi & Scholten, 2009, 2010.

⁴ Müller & Turner, 2005; Cooke-Davies, 2005; Hacker & Doolen, 2007; Artto, Kujala, Dietrich & Martinsuo, 2008; Wijnjaard, Mooi & Scholten 2009, 2010.

and perceptions they both have regarding project management. Recognizing the different perceptions toward the gap may help to prevent the gap from occurring.

2. MODELING THE GAP

To get a better understanding on the presence and effects of the gap, we have built a model that can be tested. A literature search was performed to get the basic factors for this model; these factors are the relation between the gap and project results as well as factors related to the existence of a gap that could influence these project results. We limit the model to factors that – according to literature – are related to the gap and to the alignment of project management and strategy of a company, which is related to the gap. These factors are “strategic alignment” and “collaboration”⁵. Besides that, a factor “use of the business case” is added, because the business case can be seen as an implementation tool for strategy⁶. Finally the factor “alignment of project promises” is added because this is hypothesized to be closely related to a gap between project managers and executives. The factors and the reason why this influences the gap are discussed in detail in the section below. In the proposed model (see figure 1) the perceived gap acts as a mediating variable between the independent variables strategic alignment, collaboration, the use of a business case and the alignment of project promises on the dependent variable, which is project results. We propose this model because we expect that the independent variables are not only affecting the project results but also the level of gap perceived by project managers.

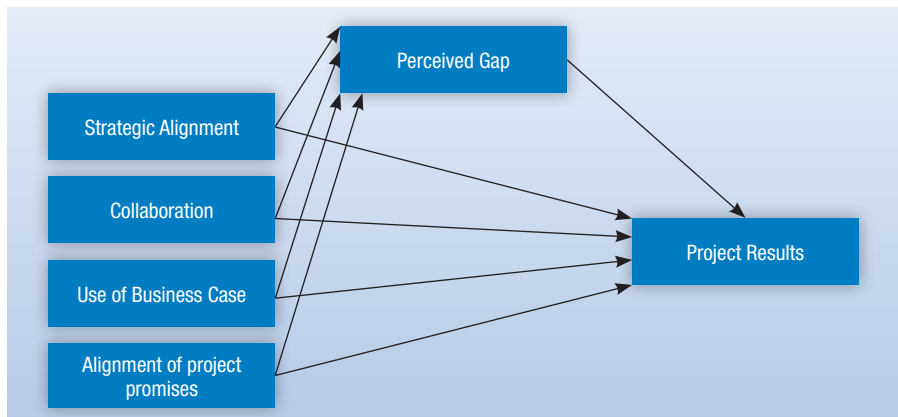


Figure 1: The conceptual model

5 Hacken & Doolen, 2007; Müller & Turner, 2005; Cooke-Davies, 2005.

6 Srivannaboon, 2006.

2.1 Project Success

Historically, there are many success criteria to judge the results of projects. Shenhar and Dvir⁷ possibly gave the widest definition of success, in the sense that they distinguish four major distinct success dimensions: (1) project efficiency, (2) impact on the customer, (3) direct business and organizational success, and (4) preparing for the future⁸. Efficiency can be further broken down into effectiveness (achieving goals) and the efficiency itself (achieving goals on time and within the budget)⁹. We will use efficiency as a measure for project results.

2.2 The influence of the Gap on Project Results

The first gap between a project manager and higher management is the relationship that the project manager has with the project board or steering committee of a project. The project board has the final responsibility for the project and represents the interests of the organization, the users, and the supplier. The project board makes the go/no-go decisions, gives the project (strategic) direction, and is the group to which the project manager must report. In general, the project board consists of parties with an interest in the project. If there is a project sponsor, he or she will also have a seat on the project board. The function of project sponsor is becoming increasingly more accepted within a project organization.

There are many studies that demonstrate a positive link between the competency of the project sponsor and the project results. In an older large-scale study numerous driving and inhibiting forces of project sponsorship were found that can affect the success of a project¹⁰. Cooke-Davies¹¹ researched the role of the project sponsor and showed that this role can be seen as the hinge upon which organizational project management maturity turns. His study contends that the variance in success can largely be explained by differences in the competency of the project sponsor. It shows that the effectiveness of a project strongly relies on activities frequently undertaken by the project sponsor, such as considering the strategic options, providing sufficient resources and assigning the necessary powers of authority to the project manager. Another study supports the project board as a critical success factor in a project context¹². These views are formulated into the first hypothesis:

Hypothesis 1: The larger the perceived gap the lower the project results.

2.3 Strategic Alignment

It is generally assumed that if a company implements its strategy properly, this will have a positive effect on company results. This is called strategic alignment.

7 Shenhar, Dvir, Levy & Maltz, 2001.

8 Shenhar, Dvir, Levy & Maltz, 2001.

9 Cooke-Davies, 2005.

10 Dugan, Thamhain & Wilemon, 1977.

11 Cooke-Davies, 2005.

12 Jonker, Meijer & Heemstra, 2008.

Projects are often the best way of implementing strategy as they form the perfect opportunity to introduce changes in or new products for the organization¹³. . This is what makes it so important to carry out the right projects, and to carry them out in the right way¹⁴.

The first part of achieving strategic alignment is portfolio management that works as a linking pin between strategy and projects. Using strategy as a guiding principle, the most promising projects and programs are selected from the pool of possibilities and assigned resources. However, this is not always realized in practice¹⁵. In many cases, only a subset of all projects actually come under portfolio management. These projects often revolve around product development. The consequences are twofold. Firstly, in the case of larger companies, many projects seem to fall outside the scope of the company director's radar thereby increasing the gap between him or her and the project managers. Secondly, this method makes it difficult to manage the pool of project resources, which increases the chance of having to transfer resources unexpectedly and can lead to delays and misunderstanding on both sides, again increasing the gap.

The second part of strategic alignment consists of carrying out the set of projects in the right way i.e., in a way that ensures a maximum contribution to the strategy. This aspect is supported by program management, which involves managing a set of interrelated projects in a way that will ensure maximum strategic gain¹⁶. The contact with program management gives the project manager more insight into the company strategy and a better idea of interdependence with other projects. Alongside this, program management gives the company director a better overall view of the total set of projects within the company, and a better understanding of the project manager's situation.

Srivannaboon and Milosevic¹⁷ gave an overview of literature on alignment between company strategy and project management and took strategic alignment one step further than portfolio and program management. They stated that traditional literature on aligning project management with the business strategy is too much related to the project selection process only, whereas it should focus more on the actual interaction between project management and the business process. They related project management to the well-known strategy theory of Porter¹⁸ and found that business strategy realizes its influence on project management through the competitive attributes of the business strategy (time-to-market, quality, and

13 Artto & Wikström, 2005; Chenhall, 2005; Cleland, 1994; Cooke-Davies, 2005; Englund & Graham, 1999; Hacker & Doolen, 2007; Johns, 1998; Müller & Turner, 2005; Merwe, 2002; Turner, 2008.

14 Cooke-Davies, 2005.

15 Blichfeldt & Eskerod, 2008.

16 Dinsmore, 1999; Partington, 2000.

17 Srivannaboon and Milosevic 2006.

18 Porter, 1980.

cost). Vice versa, they expected that project management execution would impact the adaptation of business strategy.

Also, research demonstrated that strategic alignment in production has a significant effect on the strategic aims of low costs, flexibility and good delivery and service¹⁹. And companies with strong strategic alignment perform better than companies undergoing strategic conflict²⁰. Given the fact that strategic alignment occupies a prominent position in much project management literature, one could reasonably expect that strategic alignment would have the same effect on project results as it has on company results. This leads us to the second hypothesis.

Hypothesis 2: Better strategic alignment between the project manager and executives will positively affect project results.

2.4 Collaboration

Communication between the owner of the project (often the company director) and the project manager is generally recognized to be a critical success factor for the outcome of a project. A lack of communication in this area can be a significant cause of poor project results. This is a recurring theme in the literature²¹.

It is well-known that different parties have their own specific roles in a project, which might vary during the different phases of the project²². In practice, the involvement of certain and different parties depends on the (strategic) importance of the project for the company. For obvious reasons, the board of a company will not be heavily involved in all smaller projects. On the other hand, for example, for projects that result in new products and skills, that will strengthen the company's competitive position and for projects in which the company is working with (new) external partners generally the executives of a company will be involved, and sometimes mainly only in those²³. The company director, who is sometimes part of the project organization but clearly also of the organization as a whole, is also responsible for creating an environment that allows projects to be carried out as good as possible. Important aspects in this respect are the company culture, the organizational structure and the rewards systems for project managers²⁴. Successful collaboration is an intrinsic part of the company culture.

Müller and Turner²⁵ reported on a world-wide study of 200 projects, in which communication was divided into the dimensions "collaboration" and level of (bureaucratic) "structure" imposed on the project manager. The research showed that successful projects were characterized by a high level of collaboration and an average

19 Chenhall, 2005.

20 Bergeron, Raymond & Rivard, 2004.

21 Kerzner, 2006; Müller & Turner, 2005; Turner, 2008.

22 Kerzner, 2006; Turner, 2008.

23 Cleland, 1994.

24 Johns, 1998.

25 Müller and Turner 2005.

amount of structure. Projects that did less showed a random distribution within the two dimensions. Collaboration was shown to be a necessary, but not sufficient condition for good performance in projects. Another finding from this research relates to the manner of communicating. In general, it can be said that written reports have a negative effect on project results, while regular personal contact has a positive effect.

Hacker and Doolen²⁶ summarized many success criteria for projects from literature. Other than strategic alignment, as discussed earlier, they showed that “team characteristics” are key success factors for project success. Under the umbrella of team characteristics, they placed various elements like Skills, Commitment, Planning, Communications, Conflict Resolution, Feedback Mechanisms, Team Culture, and Authority Clarity. These are all collaboration items. In this study it was also shown that a huge discrepancy can exist in how the collaboration is perceived. Clearly, collaboration cannot only be more or less successful but also generally will also be experienced in a different way.

Although a culture of openness and cooperation represents the ideal project management environment and is the basic assumption in many discussions about the subject, it is not always the way in practice. This is related to the principal agent theory²⁷. The theory applies to situations in which the so-called principal (in this case the project sponsor or the company director) hires an agent (in this case the project manager) to perform a task on his or her behalf. The principal also delegates part of the decision-making to this agent.

A project generates an asymmetrical information situation: the project manager knows considerably more about the details of the project than the company director. The fact that the interests of the project manager do not necessarily correspond with those of the company director can be unsettling for the company director, by which the company director might be inclined to build in control mechanisms to reduce the project manager’s decision-making powers. This might lead to a misunderstanding if the project manager interprets these control mechanisms as a vote of no confidence, and if they also lead to large amounts of unnecessary paperwork. However, this may also boost the need for communication, thus ensuring that the two parties understand each other better and that the company director is in a better position to manage. Moreover, they can offer opportunities for better use of the authority of the company director and the expertise of the project manager²⁸. Summarizing, it can be said that collaboration is seen as a key contributor to project success by many authors. Therefore we posit the third hypothesis:

Hypothesis 3: Better collaboration between the project manager and executives will positively affect project results.

²⁶ Hacker and Doolen 2007.

²⁷ see, for example, Eisenhardt, 1989.

²⁸ Müller & Turner, 2005.

2.5 The Use of the Business Case

As written under “Strategic alignment”, it is crucial to carry out the right projects, and to carry them out in the right way²⁹. One important instrument for determining whether the project is a right project in the project portfolio, and thus for strategic alignment, is the business case³⁰. In general, the business case can be seen as the justification for doing a certain project. In that sense, the business case can be seen as a way of realizing strategic alignment.

The business case as a document demonstrates how a project fits in the (company) strategy. Depending on the project, the phase of the project, and the organization carrying out the project, this document can vary from a short motivation to a whole book containing a detailed cost-benefit analysis, implementation planning, and an in-depth risk register. Basically, the business is responsible for the business case, but sometimes the writing of the business case is also delegated to the project manager. In case the project manager is not involved in writing the business case, the gap between executives and the project manager might be increased, because the business case might be too optimistic and the project manager might be blamed for that in the run of the project³¹.

The process of creating, updating and using the business case comprises various important decision and consultation moments between the project manager and the executives, and provides the opportunity to get them all aligned³². If the company director or project sponsor is involved, this will reduce the mutual distance. This again relates back to the collaboration, as described earlier. Also, the business case should be used for making important trade-off decisions in the project: for example, time-to-market or costs prevail in a certain project³³. Therefore, we formulated the fourth hypothesis:

Hypothesis 4: The proper use of a business case will positively affect project results.

2.6 Alignment of Project Promises

A specific and important contributor to the project result is the fact of whether the project manager is faced with realistic promises for his or her project toward the board of the project. Basically, these promises reflect the major functions of project management as given by Turner³⁴: cost, time, quality and scope, but there are of course many more i.e. Safety and Environment. As such, these promises are obviously part of the business case and they are closely related to collaboration.

29 Cooke-Davies, 2005.

30 Office of Government Commerce, 2009; Improvement and Development Agency, 2007; Kerzner, 2006; Srivannaboon & Milosevic, 2006.

31 Kerzner, 2006.

32 Improvement and Development Agency, 2007.

33 Srivannaboon, 2006.

34 Turner 2008.

This brings us to a fifth hypothesis:

Hypothesis 5: Better alignment of project promises will positively affect project results.

2.7 The Conceptual Model completed

The five hypotheses will be used to complete our conceptual model as displayed in figure 2.

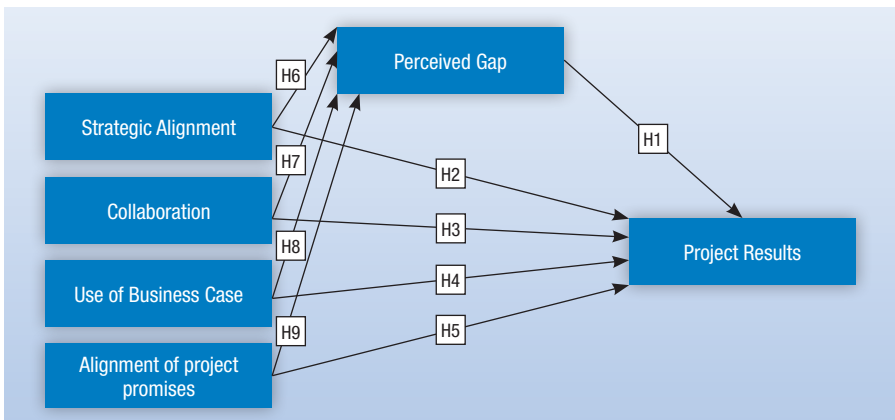


Figure 2: The conceptual model, with hypotheses

2.8 The Mediating effect of Perceived Gap

The main aim of our questions is directed toward the gap between project managers and executives. This difference is reflected by the gap that the project managers perceive. Other than the project results, the independent variables may influence the perceived gap as well. As such the perceived gap acts as a mediating variable between the independent variables and the dependent variable. Therefore, the influence of the mediating effect of the perceived gap between the independent variables and the project results was also investigated. For each of the independent variables we pose that the perceived gap may act as a mediator. This leads to four further hypotheses (see figure 2):

Hypothesis 6: Perceived gap plays a mediating role between strategic alignment and project results.

Hypothesis 7: Perceived gap plays a mediating role between collaboration and project results.

Hypothesis 8: Perceived gap plays a mediating role between the use of the business case and project results.

Hypothesis 9: Perceived gap plays a mediating role between alignment of project promises and project results.

3. RESEARCH

3.1 Survey and Questionnaire

To investigate the role of the perceived gap on project results we collected data using a survey study. The content validity of the questionnaire was tested by information obtained from literature and a few semi-structured interviews with project managers. The interviews helped us refine the questions and the structure of the questionnaire. After reviewing the instruments with colleagues we sent out the questionnaire to, and collected data from project managers.

The survey was sent to project managers that are members of the Dutch Chapter of the IPMA network (IPMA NL). The project managers in this network are heterogeneous and assumed to be dealing with a variety of projects, hence, providing an interesting sample for the project management community. In total about 3,000 IPMA NL members were reached. The survey was web-based and anonymous. In total 314 project managers started the survey of which 208 finished it entirely (an acceptable response rate of 6.8%). The unit under investigation was the interviewee's most recently completed project. Some general questions about personal and company data were also included for future analysis purposes. The survey was designed to verify the hypotheses, as well as investigate some general project characteristics (table 1).

| | |
|--------------------------------|---|
| 1. General part | Common questions on experience in project management, size and branch of the organization. |
| 2. Organization | Concerning the project organization, size of projects |
| 3. The gap | How do parties experience the gap, and are there incentives to bridge the gap? |
| 4. Project execution | The way executives are involved (too little, too much or even not) in the projects. |
| 5. Hierarchical differences | Differences in culture between project managers and executives, cooperation between parties. |
| 6. Communication and alignment | Knowledge about strategy, skills and knowledge about project management (like Prince2, IPMA). |
| 7. Business case specificity | Business case: explicitness of project requirements. |
| 8. Project results | How are project managers doing? |

Table 1. Questionnaire items

3.2 Data Analysis

The data obtained by the survey was analyzed using both descriptive and multivariate methods. Descriptive techniques were used to review the data

concerning the separate variables of the research, while the relationships between them were tested using multivariate techniques. The research variables were:

- > Dependent variable: Project Results
- > Mediating variable: The gap perceived by the project manager
- > Independent variables:
 - > Strategic alignment
 - > Collaboration
 - > The use of the business case
 - > The alignment of project promises
- > Control variables

Control Variables

There were a number of project-level variables included that in addition to the mediating and independent variable may influence project results as well. We controlled influences at the individual level, the project level as well as organization level. At the individual level we measured the respondents experience with project management. We assumed that more experienced project managers may have a different view or may recognize a perceived gap between them and executives sooner. At the project level we measured the executive's involvement in the project by asking for the extent the executive was responsible for giving the assignment for the project. Also, we asked for the size of the organization and the number of projects that were performed at the organizations level. We could assume that larger organizations and organizations that have more projects are more experienced in running projects and therefore may affect the perceived gap between project managers and executives.

3.3 Test of our Hypothesis

A full statistical analysis was conducted on the full data set. The analysis is described in detail in Scholten et al and Kolck³⁵. To test the hypothesis and the conceptual model, several statistical models were built. The first model assesses the effect of the independent and the control variables on the project results. As a result, the model shows that the strategic alignment between project managers and executives is statistically significant and positively related with project results and therefore confirms Hypothesis 2 (see page xx). Also we found support for Hypothesis 3, which stated that more collaboration between project managers and executives has a positive effect on project results. Hypothesis 4 investigated the use of the business case on project results, and we found a statistically significant and positive effect on project results, thereby confirming Hypothesis 4. For the effect of alignment of project promises we did not find a significant effect and could not confirm Hypothesis 5 (see page xx). In addition, for the control variables we found that the effect of larger organizations was negatively affecting the project results.

35 Scholten et al (2010) and Kolck (2008).

In the second model, we estimated the influence of all independent variables on the mediating variable, the perceived gap. The findings show that the use of a business case is statistically significant and negatively related with the perceived gap. Similarly, we found that also collaboration and alignment of the project promises are statistically significant and negatively related to the perceived gap. Strategic alignment is not related to the gap, according to our results. For the control variable that captured the amount of experience in project management we found a small significant and positive effect on the perceived gap. This may indicate that more experienced managers are better in recognizing a gap with executives or are more likely to have a different view on how projects should be executed.

The third model estimated the influence of the mediating variable on the dependent variable. The model shows a significant and negative effect of the perceived gap on project results and confirms Hypothesis 1.

The mediating role of perceived gap (Hypothesis 6 to 9, page xx) was also analyzed. This is described in Scholten et al and Kolck³⁶. For the alignment of project promises and for the strategic alignment we did not find a mediating effect of the perceived gap. There is only a direct effect of strategic alignment on project results and therefore Hypothesis 6 could not be confirmed. For the collaboration we found that collaboration has a significant direct effect on project results and an indirect effect through the perceived gap. Hypothesis 7, which predicted this mediating effect, is confirmed. Similarly we found partial mediation for the use of the business case (Hypothesis 8 confirmed).

Finally, we found no direct effect of alignment of project promises on project results but we did find a direct significant effect of the perceived gap. Hypothesis 9 that posited the mediating effect of the perceived gap is therefore supported as well. We can conclude from these findings that with respect to collaboration and the use of the business case we found partial mediation through perceived gap and we found full mediation of the perceived gap for the alignment in project promises.

Together with the direct influences, the validated model is given in figure 3. In this illustration, '+' means increasing effect, '-/-' means decreasing effect, and dotted lines indicate partial mediation.

³⁶ Scholten et al (2010) and Kolck (2008).

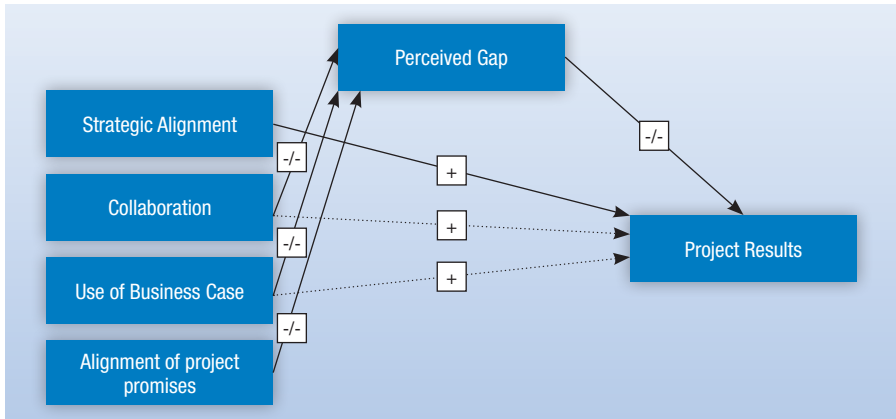


Figure 3: The validated model ('+' means increasing effect, '-/-' means decreasing effect, and dotted lines indicate partial mediation)

4. IT DOES AFFECT THE PROJECT RESULTS!

Our findings broaden the knowledge of the role of the perceived gap between project managers and executives on the project results. Also, the findings give us further validation of four important success factors for projects:

- > strategic alignment
- > collaboration
- > the use of the business case
- > the alignment of project promises.

One of the major results is that there is evidence of a clear and strong effect of the use of the business case with project results both direct and through the gap. As far as we know, this clear effect is not shown as such in recent literature. Our results validate the claim that is often made in practice and by modern project management streams like Prince2 or PMBoK®, that the business case is or should be an important guiding document to make trade-offs in projects. Also, the results give a direction for developing more knowledge on project strategy research. The strong effect of strategic alignment clearly shows the relevance of aiming for common understanding between project managers and executives of the strategic intend of projects.

Secondly, the results show a significant effect of the gap on project results. As shown in figure 3, there is a decreasing effect of the perceived gap on the project results. Meaning the project results are negatively affected by the gap.

Thirdly, the findings provide strong support for the direct effect of strategic alignment on project results. It is however remarkable that the strategic alignment is only

directly related to the project results; not through the mediation of the gap. This is due to the fact that strategic alignment and the gap are not related (according to our results). Strategic alignment was considered as the alignment of the project managers only with the strategy, whereas the gap is related to both parties (executives and project managers).

Fourthly, the results do not show a direct relation of the alignment of project promises with the project results. This is an unexpected result. On the other hand, our results show that the alignment of project promises does contribute to the perceived gap and it was shown that the perceived gap plays a mediating role between alignment of project promises and project results. It seems that the alignment of project promises between executives and project managers is an important explanatory part of the influence of the gap on project results (alongside the relationships of collaboration and the use of the business case, that have partially mediated relationships with the project results). In practice, this might mean that alignment of project promises, and communicating these clearly without ambiguity, is an effective way of decreasing the gap with a view on better project results.

5. IMPLICATIONS FOR PROJECT MANAGEMENT

The results as described above have direct implications for project management in practice and therefore the project manager himself. It clearly shows the negative influence of the gap between executives and project managers and the importance of strategic alignment, collaboration, the use of a business case, and alignment of project promises for project success.

The gap certainly has impact; and the existence and size of the gap is based on strategic alignment, collaboration, the business case, and the project promises. Therefore, both project managers and executives should have a clear understanding of these factors and how these subsequently negatively influence project results. We are then able to mitigate these factors and improve project results. The effect of using a business case – not found in literature, as far as known to the author – is obvious. The findings also contribute to the importance of having common understanding of how projects should be organized. If project managers and executives have a strong consensus on the operational and strategic issues in project management it positively contributes to the overall performance of the project. This can immediately be used in practice, by devoting project meetings between executives and project managers (including the kick-off) to the above topics.

REFERENCES

- Artto, Karlos A. & Wikström, Kim (2005). What is project business? *International Journal of Project Management*, 23(5): 343-353
- Artto, Karlos & Kujala, Jaakko & Dietrich, Perttu & Martinsuo, Mii. (2008). What is project strategy? *International Journal of Project Management*, 26(1):4-12
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social-psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Bergeron, Francois, Raymond, Louis & Rivard, Suzanne (2004). Ideal patterns of strategic alignment and business performance. *Information & Management*. 41(8): 1003-1020.
- Blichfeldt, Bodil Stilling & Eskerod, Pernille (2008). Project portfolio management – there's more to it than what management enacts. *International Journal of Project Management*, 26: 357-365.
- Chenhall, Robert H. (2005). Integrative strategic performance measurement systems, strategic alignment of manufacturing, learning and strategic outcomes: An exploratory study. *Accounting, Organizations and Society*, 30(5): 395-422.
- Cleland, David I. (1994) *Project management: strategic design and implementation*, 2nd ed. McGraw-Hill, UK.
- Cooke-Davies, Terence J. (2005). The executive sponsor – The hinge upon which organizational project maturity turns. In: *PMI Global Congress Proceedings*, Edinburgh, Scotland.
- Dinsmore, Paul C. (1999) *Winning in business with enterprise project management*. New York: Amacom.
- Dugan, H. S., Thamhain, H.J. & Wilemon, D.L. (1977). Managing change in project management. In: *Proceedings of the Ninth Annual International Seminar/Symposium on Project Management*, Washington, USA.
- Eisenhardt, K. (1989). Agency theory: An assessment and review, *Academy of Management Review*, 14 (1): 57-74.
- Englund, Randall L. & Graham, Robert J. (1999). From experience: linking projects to strategy. *Journal of Product Innovation Management*, 16(1): 52-64.

Hacker, Marla & Doolen, Toni (2007). Alignment at the top: A case study investigating this critical factor in project implementation. *Engineering Management Journal*, 19(1): 38-42 .

Improvement and Development Agency (IDeA) (2007). Impact the adaptation of business strategy, version 4, London, UK.

Johns, Thomas G. (1998). On creating organizational support for the project management method. *International Journal of Project Management* 17 (1): 47-53.

Jonker, Arjan, Meijer, Gerard & Heemstra, Fred (2008) Van kritieke succesfactoren naar kritieke succesactoren. *Tiem*, 23: 17-21.

Kerzner, H. (2006). *Project management – A System Approach to Planning, Scheduling and Controlling* Hoboken, NJ: John Wiley & Sons.

Kolck, Antal van (2008). Bridging the gap – Statistisch onderzoek. Technical University of Delft.

Merwe, A.P. Van Der (2002). Project management and business development: integrating strategy, structure, processes and projects *International Journal of Project Management*, 20(5): 401-411

Müller, Ralf & Turner, J Rodney (2005). The impact of principal-agent relationship and contract type on communication between project owner and manager. *International Journal of Project Management*, 23(6): 398-403.

Office of Government Commerce (2009). *Managing Successful Projects with PRINCE2*. London: the Stationery Office.

Partington D. (2000). Implementing strategy through programmes of projects. In: J.R. Turner & S.J. Simister (Eds.), *Gower handbook of project management*. (pp. 33–46) Hampshire, UK: Gower Publishing Ltd..

Porter M.E. (1980). *Competitive strategy*. New York: Free Press; 1980.

Project Management Institute (PMI) (2004). *A guide to the project management body of knowledge (PMBOK guide)*, 3rd edition. Newtown Square, PA: Project Management Institute.

Scholten, V.E., Mooi, H.G. & Wijngaard, P.J.M. (2010). The influence of the gap between project manager and executives on project results. In: *Proceedings of PMI Research and Education Conference 2010*, Washington, USA.

Shenhar, A., Dvir, D., Levy, O., & Maltz, A. (2001). Project success: A multidimensional strategic concept. *Long Range Planning*, 34: 699-725.

Srivannaboon, Sabin & Milosevic Dragan Z. (2006). A two-way influence between business strategy and project management *International Journal of Project Management*, 24(6): 493-505.

Turner, J. R. 2008. *The Handbook of Project-based Management*. London: MacGraw and Hill.

Wijngaard, P.J.M., Mooi, H.G. & Scholten, V.E., (2010). *The gap - Research into the gap between project manager and executives*, Delft: Technical University of Delft.

Wijngaard, P.J.M., Mooi, H.G. & Scholten, V.E., (2009). The gap between project managers and executives, in: K. Kähkönen & A.S. Kazi & M. Rekola (Eds.) *The Human Side of Projects in Modern Business*, pp. 3-16. Helsinki: Project Management Association Finland (PMAF).