

**Public Private Partnerships
in Development Cooperation
– An Empirical Analysis of Key Success Factors
Based on Case Studies and a Survey**

Dissertation

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Christian Patzschke
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Erstgutachter: **Prof. Dr. Ansgar Belke**

Zweitgutachter: **Prof. Dr. Tobias Debiel**

ABSTRACT

Research subject of this thesis are Public Private Partnerships (PPPs) in development cooperation. First, the framework is set by positioning PPPs within the existing range of development cooperation tools. Second, success mechanisms in partnerships are identified based on theoretical considerations. Outcomes of both steps are taken into account in the twofold empirical part. The first part comprises a study of three PPP cases conducted in the framework of the PPP facility (“develoPPP”), the leading PPP programme funded by the German Federal Ministry for Economic Cooperation and Development (BMZ). The second empirical part comprises a survey amongst partners with direct PPP project experience.

Key findings are summarised along three a priori formulated research questions. These questions build on each other. They broaden the understanding of the subject step by step – from a positioning in the relevant framework to understanding functional mechanisms to finally approaching general conclusions concerning the overall performance of PPPs in development cooperation.

To sum up, PPPs in development cooperation seem a highly valuable complement to the existing range of development cooperation tools. The potential of PPPs in development cooperation has been realised in particular by European development policy makers as shown by the growing range of offered programmes. It is not the triggering of additional financial resources from the private sector only which determines PPP projects’ success – defined as the efficient delivery of project outcomes with the potential of mid to long term, sustainable positive impact – but rather a more complex set of factors. Typical PPP projects of the type analysed in the empirical parts deal with complex content in a rather challenging local environment. What might make PPP projects more likely to succeed on the levels of output and potentially impact is the existing commercial interest of the participating companies, be it direct (i.e. deriving from the project output) or indirect (e.g. deriving from reputational gains). The commercial interest represents a “filter” concerning the feasibility of projects. It applies since it can be assumed that companies following commercial interests would not get involved in projects that seem unlikely to generate the desired outputs, even if the commercial risk is reduced by cost sharing with a public partner. At the same time, the final impact of PPP projects is not per se higher, more sustainable or more congruent with development policy objectives, compared to non-PPP development cooperation projects.

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1 BACKGROUND, CONTEXT AND STRUCTURE OF THE DISSERTATION

“The main results of cooperation theory are encouraging. They show that cooperation can get started by even a small cluster of individuals who are prepared to reciprocate cooperation, even in a world where no one else will cooperate” (Axelrod 1984: 173).

1.1 BACKGROUND AND CONTEXT

This dissertation analyses the integration of the private sector into development cooperation measures by means of so-called “Public Private Partnerships” (PPPs).

Development theory represents the overall framework of this dissertation. Various fields of research have addressed the question of whether the efforts in the field of development cooperation have been successful both in terms of their (internal) process efficiency and in terms of their impact, i.e. the achievement of objectives.

A cooperative approach of integrating private actors in development cooperation projects is relatively new. At the same time, as Callan and Davis (2013) summarised: “engaging business in development has become a central plank of many countries’ aid policies” (Callan and Davis 2013: Abstract). This approach is gaining momentum in terms of volume and popularity in the development cooperation community. This can be regarded as a shift of paradigm. Recognising the PPP approach as an appropriate and legitimate tool stands for a shift towards a higher degree of goal orientation in development cooperation. This has to be viewed against the background of a decades-long scientific, political as well as public debate about the overall effectiveness of development cooperation. A consensus in the debate on whether development cooperation on the whole is serving to fulfil its basic objectives of fostering or of potentially hindering development has not yet been reached.¹ However, strong evidence weighs in favour a critical view of the performance, efficiency and effectiveness of “traditional” means of development cooperation. This evidence gives rise to a growing importance in alternative, innovative approaches in development cooperation. A cooperation between private and public actors in the form of PPPs stands among them.

Generally, a PPP is an instrument that is applied in various fields of industry. The term is used to describe organisational constructs which range from formal co-financing arrangements (e.g. in infrastructure projects) to rather loose, informal agreements between public and private partners (e.g. concerning behavioural standards in business).

The definition and in-depth clarification of the term PPP will be primarily conducted in chapter 3. In a first step, a definition is assigned regardless of the specific fields of application of PPPs. First of all, it can be stated that the term is often popularly used in print and mass media to describe all variants of cooperative arrangements between the public and the private sphere. The result is a blurring of the

¹ For a review of literature on the topic from an (macro-) economic perspective see e.g. Doucouliagos and Paldam 2007.

term (Budäus, Grüning and Steenbock 1997: 14). Hence, a careful differentiation of the term is of particular importance in this context.

The nature of partnerships – in particular Public Private Partnerships – is generally undergoing change due to shifting patterns in global economic structures. In recent decades, government functions are being increasingly fulfilled by alternative institutions. The objective behind this shift is usually to increase focus, accountability and effectiveness (McQuaid 2000: 10).

This trend has resulted in a growing focus on PPPs in various fields of research. The result is the parallel existence of various types of literature on the topic. Osborne (2000) identified the following literature types which all approach the topic from a different angle: theoretical literature, public management literature, public-governance literature, community development literature, empirical literature. Further, PPPs have to be regarded as divergent phenomena in terms of

- the types of theoretical models that contribute to analysis and evaluation of different PPPs
- the different types of partners (government, business, non-profit sector, local community)
- the varying relevance of PPPs in different parts of the world.

As a result, the consideration of this diverse conceptualisation is regarded as crucial to the understanding of a PPP (Osborne 2000: 2-3).

In this thesis, the analysis focuses on the application of PPPs in development cooperation. The overall objective is to analyse PPPs in development cooperation both from a theoretical as well as from an empirical point of view. The intention of this analysis is to generate practically relevant outcomes. The outcome will hopefully prove to be useful to decision-makers involved on the private as well as the public end of PPPs, as well as to other interested individuals and institutions.

Before the actual analysis of PPPs in development cooperation is conducted, a framework will be developed. This framework will illustrate the role of public-private arrangements in development cooperation. In that pursuit, some insights into economic development theory will be given with a particular focus on the role of foreign capital for development processes.

An empirical analysis of PPPs in development cooperation follows. First, a case study analysis of 3 real life PPPs is conducted. Second, results of a questionnaire to private companies with PPP experience complement the empirical analysis. The thesis thus aims at enlarging the research literature in the field of PPPs in development cooperation both with theoretical as well as empirical aspects.

1.2 RESEARCH SUBJECT AND OBJECTIVES

1.2.1 DESCRIPTION OF RESEARCH SUBJECTS

1.2.1.1 PUBLIC PRIVATE PARTNERSHIP

The subject PPP has gained broad attention in science as well as among institutional decision-makers. The frequency of usage of the term among scientists, institutional decision-makers as well as by the mass media has increased. Wettenhall (2003) stated that the terms “partnership” in general and

“PPP” in particular, have become a dominant slogan in the discourse about government and governance (Wettenhall 2003: 80).

At the same time, evidence suggests that the term PPP has often been used in a conflated or even false manner. Langford (2002) described “partnership” as “undoubtedly one of the most misused [...]. in the contemporary administrative lexicon” (Langford 2002: 69).

In this context, a thorough distinction from other forms of cooperation among public and private actors is crucial. Furthermore, literature lacks a generally accepted sharp definition of a PPP (OECD 2008a: 16). An approximation of a definition of the term can nevertheless deliver a sufficiently clear picture in pursuit of defining the scope of the research project.

The approximation to a definition by Klijn and Teisman (2000) can deliver a first clarification of the term. The authors proceeded with the assumption that the pure dichotomy between the provision of goods and services by either government or market is no longer valid. The strict separation of either public or private sources for financing goods and services in particular during the 1970s and 1980s had the effect of rising costs and even economic crisis. To make amends, governments are increasingly focusing on alternative institutional arrangements to meet the needs and interests of the public. This alternative between purely public and purely private is often referred to as “the third way”. The third way promises to satisfy social needs while keeping public budgets under control at the same time. To sum up, the third way can be defined positively, as formulated by Klijn and Teisman (2000), “as an attempt to combine the added value of governmental interference with the qualities of market-oriented parties. Public Private Partnerships can be seen as the organisational manifestation of these ideas” (Klijn and Teisman 2000: 84).

It has to be conceded here that the term “PPP” is an umbrella term for various organisational arrangements for the exchange of services between the public and the private sphere. In any case, the objectives of the public and the private partner have to match. Indeed, usually they are complementary. What follows is a bundling of public and private resources in a complex setting of exchange relationships (Budäus 2004: 12-13).

Kouwenhoven (1993) summarised the main characteristics of a PPP. He described a PPP in a narrow sense as an interaction between public and private actors that follows complementary goals, develops synergy potential, conserves the identity and responsibility of the partners, and comprises a cooperation that is formalised by contract. In addition to this first type of a partnership in a narrow sense, a partnership in a broad sense can be classified as well. This second type of PPP is characterised by the same definition as the first type, with the difference that the cooperation takes place in an informal way (Kouwenhoven 1993: 120).

In any case, particularly during the 1990s, the establishment of PPPs served as a „key tool to public policy” (Osborne 2000: 1).

1.2.1.2 DEVELOPMENT COOPERATION

The term “development cooperation” is based on multiple existing definitions. Terms such as “development aid,” “development aid politics,” “foreign aid” or “development cooperation” are often used as synonyms. They comprise financial resource transfers to developing countries provided by national or international development institutions as well as other forms of aid by non-governmental actors. Private Foreign Direct Investment (FDI) or foreign trade measures are occasionally summarised under these terms as well (Lachmann 1999: 2).

Regardless of the concrete definition, they all have one purpose in common: putting development-policies into practice (Stockmann 1997: 15). In the most general terms, development cooperation consists of providing recipient countries with resources which these countries can obtain independently either domestically or by international transactions (Nohlen 2002: 264).

In that process, development cooperation measures have to be regarded at all times within their respective framework of development policy. Development policy is the sum of all measures and means applied by developed and developing countries to foster social and economic development in developing countries. Moreover, development policy is based on theoretical views of development processes as well as political objectives of the national and international institutions involved (Nohlen 2002: 235). Elevating poverty or enhancing living conditions either directly or indirectly by creating stable framework conditions are only a few central objectives of development cooperation. In that vein, all efforts to stimulate growth and thereby enhance living conditions in a country are taking place in a constantly changing global environment. Stallings (1995) identified five key developments which third world countries faced during the 1990s: the end of the cold war, changing relations among capitalist actors, accelerating globalisation of trade and production, changing patterns of international finance and generally new ideological currents (Stallings 1995: 2).

This constitutes by far no exhausting list of developments, and illustrates the challenging conditions under which national and international public and private institutions are following their own specific development objectives.

The target of development cooperation efforts are developing countries. A variety of classification systems and definitions exists for separating developing nations from more developed nations as well as distinguishing between different groups of developing countries within the developing world (Nuscheler 2004: 98). Their definition will be addressed more in detail in chapter 2.2.1.

For a basic definition, the following characteristics of developing countries can be summarised:

- Low levels of living (low incomes, inequality, poor health, inadequate education)
- Low levels of productivity
- High rates of population growth and dependency burdens
- Dependence on agricultural production and primary product exports
- Existence of imperfect markets and limited information
- Dominance, dependence and vulnerability in international relations

(Todaro and Smith 2006: 49-50)

1.2.1.3 PPPS IN DEVELOPMENT COOPERATION

The integration of the private sector into measures for enhancing development – directly or indirectly – in developing countries, has increasingly been addressed by several international and national institutions involved in such processes. The growing focus on this issue led not only to a broadening of studies on the subject, but also to a broad range of concrete measures and initiatives aimed at making use of the potential of the private sector in development cooperation. In those pursuits, measures and initiatives range from a public-private dialogue process to establishing better governance structures at the state level² to so-called strategic partnerships on a multi stakeholder basis³ as well as to PPPs between individual institutions and companies at a project level.

As for those public-private arrangements in pursuit of development objectives at the project level, a range of initiatives has been implemented in particular by bilateral development agencies in several Organisation for Economic Co-operation and Development (OECD) countries.⁴ To date, the funding volumes of these programmes remain however at a relatively low level. Thus, PPP initiatives and programmes in development cooperation remain complementary to “traditional” publicly conducted measures.

At the same time, experience with PPPs in development cooperation is limited due to the relatively small time period of their existence – indeed a notable number of programmes were established from the middle to late 1990s or even later on – and due to the already mentioned small financial volume.

Thus, the sharing thus of experience and knowledge about this type of programmes is of particular importance and has led to an increasing number of surveys, studies and other research on the subject.

Critical voices in particular among decision-makers in development agencies together with policymakers have accompanied the initial phase of many of these programmes. Today, the positive view on the potential of PPP programmes stands as dominant.

The German German Federal Ministry for Economic Cooperation and Development (BMZ), for example, regards the establishment of sound economic structures as a central element in the drive for poverty reduction in development cooperation. Public Private Partnerships are mentioned as one way of establishing a more viable economic sector. PPPs are believed to increase private sector investment, to develop technological know-how, to develop vocational training systems and generally foster economic and social infrastructure (BMZ 2001: II-III).

The BMZ (2001) summarised that “by using its financial and technical resources, the private sector makes an important contribution to sustainable poverty reduction. [...] The aim of this form of cooperation is, firstly, to increase the effectiveness of development policy efforts and, secondly, to foster the flow of private capital and know-how to developing countries” (BMZ 2001: 32). This view of PPPs neatly summarises the expectation of politicians, policymakers and policy implementers of

² For further information on this type of private integration see OECD 2007a.

³ For further information on this type of private integration see Demtschück 2004.

⁴ For a comprehensive international review of public-private arrangements on the project level see Binder, Palenberg and Witte 2007.

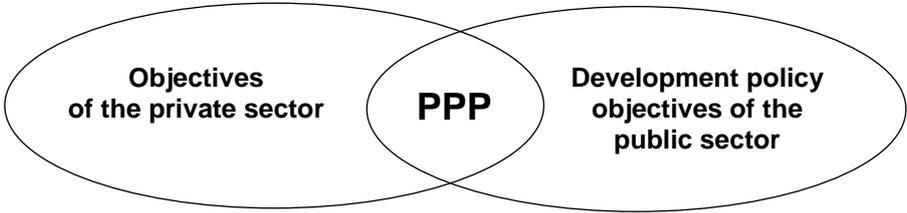
PPPs. This is valid in the case of Germany just as well as in other industrialised countries and international bodies involved in development cooperation.

The attractiveness of PPPs in development cooperation is generally rooted in the anticipated advantages of the approach. From the point of view of public development agencies or institutions, this comprises e.g. the enhanced effectiveness in utilizing public development cooperation (financial) resources and thereby enhanced effectiveness in reaching public development cooperation objectives. From the private partners' perspective, motivation to participate in development cooperation PPPs can derive from operational goals, i.e. profit generation. However, a PPP can also be expected to generate other revenues than financial ones, e.g. reputational gains.

In short, by following the PPP approach, public development agencies can make use of the expertise and the efficiency of the private partner while raising additional capital for development purposes at the same time (Demtschück 2004: 14).

In any case, a successful implementation of the PPP approach requires a basic alignment of objectives between the public and the private sector partners – as illustrated in figure 1.1.

Figure 1.1 PPPs as the intersection of public and private objectives



Source: based on Rupp and Seidel 2002: 9

However, the identification of common objectives is only the first step towards a successful partnership. The diversity of the specific objectives followed by each initiative furthermore implies individual, specific organisational designs. A heterogeneous character of a whole range of partnership arrangements in the field of development cooperation is the result.

1.2.2 RESEARCH OBJECTIVES

Some general background considerations concerning development cooperation and Public Private Partnerships have to be outlined. The objectives of this thesis stem from these general considerations and ideas. This thesis is a contribution to a systematical positioning of Public Private Partnerships in the development cooperation framework as well as a contribution to empirical literature in the field.

Existing research concerning PPPs can roughly be divided into practical and empirical approaches on the one hand, as well as positive and normative theoretical reflections on the other hand (Budäus et al. 1997: 27-28).

The objective of this thesis is to deliver a contribution to research in the field of development cooperation and PPPs as well as to deliver practically relevant information for real life decision-makers in particular in the private sector and involved public institutions. This target group might consider a PPP as an appropriate tool for reaching their operative and strategic objectives. A linkage between relevant theoretical approaches and experience from real life cases seems best suitable for delivering support to this target group.

This comprises first of all, a general outline of development cooperation as the groundwork for further elaboration on PPPs in this context. Second, further background for empirical analysis lies in basic cooperation theory. The empirical analysis will be based on this background. It comprises two parts: First, the explorative analysis of three case studies on PPP projects and second, results from a questionnaire from companies with experience in PPP projects. Both empirical parts focus on PPP projects conducted in the framework of the BMZ PPP facility (promoted under the title “develoPPP”).

When it comes to partnerships in developing countries, there is the need to, as Nelson (2002) summarised, “identify, learn from and share the good practice that already exists” (Nelson 2002: 176). This need serves as a guideline for research conducted in the framework of this thesis.

1.2.3 RESEARCH QUESTIONS

Research questions derive from the objectives of the dissertation project, in particular, the focus on specific target groups. As stated above, these constitute real life decision-makers involved in the practical realisation of a PPP. Furthermore, the scientific community in the field may well likewise benefit from the research results. Thus, the formulation of the research questions has to consider the needs of these target groups.

In addition, the clear formulation of research questions is of particular importance when conducting case study research – a central part of the empirical work within this thesis. Whether a case study research aims at theory testing or theory building, the volume of case data makes it necessary to set up boundaries on the extent of research (Eisenhardt 1989: 536).

The following research questions serve as a guideline for this thesis:

- **Research question 1: positioning of PPPs within development cooperation**

How can cooperative/private sector involving approaches in development cooperation be positioned in the framework of implementation channels in development cooperation?

A broad overview of the characteristics of development cooperation, channels for its implementation as well as its objectives and impact will be delivered. Addressing this question will serve as a framework for a detailed examination of the PPP approach as a means of development cooperation. This part of the thesis will be mainly based on the analysis of secondary data. Since a primarily economic point of view is applied, a particular focus will be set on the role of private foreign capital in this context.

- **Research question 2: mechanisms within PPPs**

What characterises the PPP approach and which success factors are inherent?

Answering this research question will contribute to a better overall understanding of the PPP approach as well as specifically its application in development cooperation, both from a practical as well as a theoretical point of view.

- **Research question 3: practical performance of PPPs in development cooperation**

How does the PPP approach perform as an implementation tool for development cooperation and how do stakeholders profit from this approach?

This research question focuses on the practical implementation as well as outcomes of PPPs. Closely related is the question of whether PPPs are an appropriate tool for reaching the objectives of the partners involved.

1.3 RESEARCH METHODOLOGY

Table 1.1 summarises the research methodology applied throughout the thesis, which consists of qualitative as well as quantitative elements.

Table 1.1 Research methodology

| Research focus: Success mechanisms within PPPs in development cooperation | | | | | |
|--|------------------------------------|------------------------------|--|--|---|
| | Theoretical base | Methodology | Subject of research | Primary research objective | Secondary research objective |
| Case studies | Partnership and development theory | Primarily qualitative | Three PPP case studies | Qualitative validation of success criteria (research items) identified in partnership theory | Explorative character |
| Survey | | Quantitative and qualitative | Participants in PPPs and the PPPs they participated in | Quantitative validation of success criteria identified in partnership theory | Explorative character and testing of statistical linkages between identified research items |

Source: own illustration

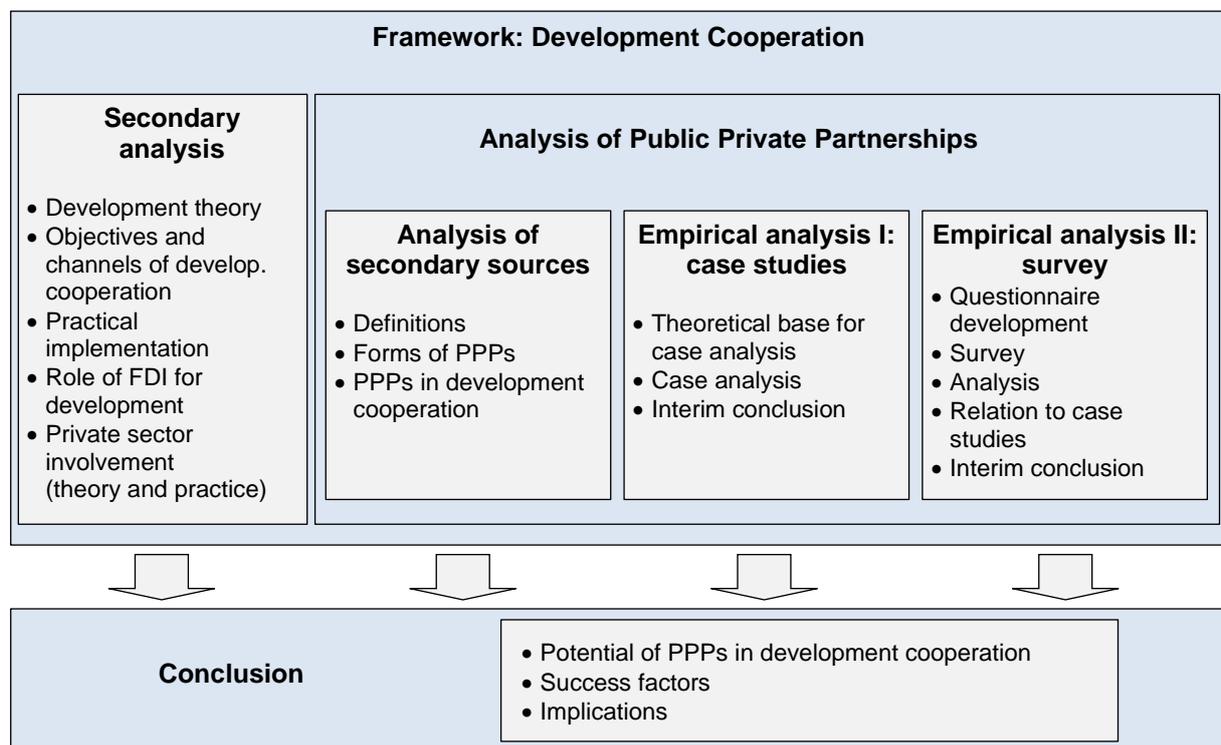
1.3.1 OVERALL FRAMEWORK

Figure 1.2 illustrates the overall framework of the thesis. The economic perspective on development processes in developing countries represents the overall framework for further analysis. The objectives of development cooperation will be outlined against this background. Furthermore, the role of foreign investment for developing countries will be assessed. In a subsequent step, the role of the private sector in development cooperation will be analysed.

Based on this overall framework, the analysis of Public Private Partnerships in development cooperation is conducted. This part consists of the analysis of secondary sources as well as two empirical analyses: first, a case study analysis of three real life PPPs and second, a survey among companies which participated in development cooperation PPPs.

The final part of the thesis consists of a conclusion which summarises the research findings.

Figure 1.2 Framework of the thesis



Source: own illustration

1.3.2 RESEARCH STEPS

The structure of research in this thesis follows empirical research steps as summarised by Atteslander (2006: 16-17). These entail the formulation of research objectives by identifying the respective research problem question, clarifying the research subject by putting it in an overall framework, conducting the empirical research itself, analysing empirical findings, and finally, using the findings for drawing conclusions. The research process follows the following research steps as outlined in figure 1.3.

Figure 1.3 Research steps

| |
|--|
| Step 1: setting research objectives |
| Potential of PPPs in development cooperation; success factors in a PPP |
| Step 2: analysis of framework conditions |
| Analysis 1: development cooperation – analysis of the potential of private contribution to development cooperation |
| Analysis 2: PPPs – general characterisation of the PPP approach and its application in development cooperation |
| Step 3: empirical research on PPPs |
| 1. PPP case studies Objective: exploration of the subject (in particular partnership success factors) |
| 2. Survey Objective 1: exploration of the subject Objective 2: testing of assumed statistical linkages |
| Step 4: analysis of findings |
| Combining the findings from case studies and survey |
| Step 5: drawing conclusions |
| Relating findings from primary and secondary sources to the research questions |

Source: own illustration

Research step 1 is conducted in chapter 1. A brief introduction to the research subject is followed by an outline of the research questions, objectives and methodology.

Step 2 is conducted in chapter 2 and 3. The topics development cooperation and Public Private Partnerships will be addressed. In that pursuit, a positioning of the PPP approach in the overall development cooperation framework should be achieved. Moreover, the framework serves as a foundation for empirical work.

Setting up the framework is necessary since a clear picture of the part of reality which represents the focus of the research is needed in order to conduct qualitative research. By considering relevant theories, existing studies and other sources, the relevant aspects concerning the research subject shall be identified (Mayer 2004: 27). Hence, a general outline of the topics “development cooperation” and “PPPs” is a necessary step in the research process.

Step 3 and 4 – empirical research on the subject and the analysis of empirical findings – is conducted in chapter 4 and 5. Collecting primary data through empirical research for the purpose of answering the research questions is necessary since primary data can show a higher degree of consistency with the research question and objectives (Ghauri and Gronhaug 2005: 102).

Empirical research is conducted using qualitative methods (case study analysis) as well as quantitative methods (survey) on the same subject (PPP projects in the framework of BMZ PPP facility). Both methods are outlined in detail in the following two subchapters.

The final step of using empirical findings for drawing conclusions is carried out in chapter 6.

1.3.3 EMPIRICAL RESEARCH ON PROJECT LEVEL PPPS IN GERMAN DEVELOPMENT COOPERATION

Subject of the empirical research conducted in this thesis are PPPs on project level in German development cooperation – more precisely, PPPs funded by the BMZ PPP facility (see chapter 3.5.3).

Projects from the BMZ PPP facility as a subject of empirical research are chosen on the basis of the following reasons: Binder, Palenberg and Witte (2007) identified the BMZ PPP facility as the longest existing programme in the development cooperation framework in their comprehensive analysis of existing PPP initiatives and programmes in development cooperation (Binder et al. 2007: 40). The BMZ PPP programme is named the “flagship initiative” (Binder et al. 2007: 30) of the German government for the purpose of promoting the participation of private business in development cooperation.⁵ Thus, experience from this longest standing PPP programme seems to be a promising source of primary data.

Project experience in the framework of the BMZ PPP facility is gathered by applying two different research methods. First, a case study research on three PPP cases is conducted. Second, a survey on companies with experience in PPP projects in the framework of the BMZ PPP facility is carried out.

This involves the application of mixed research methods on the same set of research questions and objectives. The application of mixed methods reduces the risk of leaving aspects of the research problem unresolved by only applying one single research method. The overall objective lies in building up a complete, holistic picture of the subject matter. In particular, aspects that might have been missed by applying a single research method only should be covered (Ghuri 2004: 115, Hurmerinta-Peltomäki and Nummella 2004: 164).

The results of the two research methods are combined in the end through the method of triangulation.

Using more than one method of collecting empirical data – that is, approaching the same research problem with more than one method parallel – has taken on increased importance as regarded by scholars from various fields of social science (Kromrey 2006: 535).

Triangulation allows for combining multiple research methods into one multi-method design. The term essentially describes the examination of a research subject from at least two different angles or points of view. This usually refers to the application of two or more research methods to answer each of the specific research questions. Furthermore, it can entail different theoretical approaches towards a research question as well as different types of data. That is, the different theoretical perspectives applied to the different sources of data have to be applied with equal meaning and parallel to one another (Flick 2008: 11).

Hence, it is the basic intention of triangulation to compensate the weaknesses of one research method with the strengths of another research method (Jick 1979: 602).

⁵ In their analysis, the authors did not focus on PPPs in the framework of financial/BOT schemes (projects with private sector participation and similar frameworks common in several industries) but focused exclusively on the application of PPPs in development cooperation (Binder et al. 2007: 8-9).

In the framework of this thesis, several levels of triangulation are applied to the research questions: data triangulation, theory triangulation as well as method triangulation.

First, data triangulation is applied in the framework of the case study analysis in chapter 4. Data from the three cases examined are collected mainly through interviews. In that process, the same interview guideline is used for several interviewees. For each case, a representative of each party in the PPP is interviewed on the same subject. Furthermore, written documentation on the projects (e.g. publications, reports) are used as sources of data. This combination of various sources on the same subject can be entitled data triangulation (Flick 2008: 13).

Second, theory triangulation is applied. This specific form of triangulation involves approaching the data from various theoretical angles, i.e. multiple perspectives. It is particularly suitable for fields of research in which a consensus on a dominating strategy for describing or explaining reality is lacking (Flick 2008: 14).

This situation is given in the case of research on PPPs. A single established theory base for the analysis of PPPs does not exist. For that reason, a selection among several theoretical approaches for the purpose of case analysis is made. Based on the main ideas of these different theories, the same research subject (the PPP cases) is analysed.

Third, apart from the described “within-methods” of triangulation, triangulation is also applied in between methods. Between-method triangulation describes the application of different research methods for the same research subject. It aims at overcoming the limitations of single methods and thereby enhancing the outcomes of findings (Flick 2008: 15-16).

In the empirical part of this thesis, the central research questions are applied to PPPs conducted in the framework of the BMZ PPP facility. PPPs in this framework are analysed by a case study analysis of three projects as well as by a questionnaire as a second method of investigation. In this context, the survey is applied to enhance the validity of outcomes.

Choosing PPPs in the framework of the BMZ PPP facility as a focus of empirical research comes with two main implications. First, a basic classification system of PPPs in development cooperation has to be discussed in order to clearly outline the scope of the empirical study (see chapter 3.4.2). Second, the fact that empirical research in this thesis focuses on a particular type of PPP has to be carefully considered when drawing overall conclusions concerning the research questions. This specifically refers to the validity of findings for other types of PPPs in the development cooperation framework.

To sum up, the starting point for empirical research in this thesis is qualitative research – a case study analysis. Qualitative research is characterised by:

- **Openness:** It is the research subject which determines the research process, not a priori postulated theories and hypotheses. The research process is open and flexible according to the complexity of empirical reality.
- **Process character:** Qualitative research does not simply reflect reality in an objective way. Rather, it focuses on the processes leading to empirical reality.
- **Reflexivity:** Rather than testing a priori postulated hypotheses, the qualitative approach develops, modifies and possibly generalises hypotheses during the research process.

- **Explication of the procedure:** The qualitative approach involves outlining existing theoretical knowledge on the subject. The description of the individual research steps as well as the explanation of conclusions drawn shall serve as quality criteria of the data collected.
- **Communication:** Research is based on communicative processes.
- **Problem orientation:** Qualitative research has practically relevant objectives. The choice of the research subject as well as the formulation of research questions result from the observation of a problem in reality.

(Atteslander 2006: 71)

As a result, the objective of the case study analysis is of an explorative nature and is employed to follow an inductive, theory-developing approach.

The alternative to the explorative, inductive, theory-developing approach would be a deductive, theory-testing approach. The deductive approach aims at deducting testable hypotheses from theory and testing (i.e. confirming or falsifying) these hypotheses with empirical observations.⁶ There is still a lack of an established and accepted theory base for research on PPPs. Thus, the option of applying a deductive approach is limited. It can only be based on comprehensive research of various theoretical concepts which might be relevant for the analysis of PPPs. Theoretical concepts play a twofold role in the research process of this thesis. First, economic development theory is an obvious part of the overall research framework. Second, cooperation theory serves as guidance for data collection by delivering research items which are later on used in the empirical parts. Most importantly, theory plays a crucial role in the conducting of explorative research. Explorative research is iterative in nature, i.e. the processes of theory building and testing alternatives. A preliminary theoretical understanding of reality serves as the basis from which to conceptualise reality. It follows then, that the primary objective is not to validate or falsify a priori existing theory, but rather to change or adapt basic theoretical considerations according to empirical observations. The result should be a theoretical framework, which includes a precise definition of the problem, possible explanations and indications for possible solutions (Tomczak 1992: 84).

1.3.3.1 METHOD 1: CASE STUDIES

The application of case study analyses in this context has an explorative character. The exploratory approach is appropriate if the researcher intends to gain insights on qualitative aspects of the research subject. Generally, this entails, for example, that validations of subjective views on the part of people interrogated or the relationships of people and institutions involved can be taken into account (Atteslander 2006: 45).

Measures such as programmes and projects represent the means for implementing development cooperation. Individual or interconnected measures constitute the appropriate subjects of study for the

⁶ Following the deductive research approach, usually the Hempel-Oppenheim model is applied. This model links two general laws and conditions as two types of explanations to an explanandum in order to explain and/or predict certain phenomena (refer to Hempel and Oppenheim 1948 for the original publication).

evaluation of development cooperation (Stockmann 1997: 32).

The analysis of project level case studies has thus been chosen as the first source of primary, empirical data for elaborating on the research question which this thesis focuses on. A well-designed application of the case study approach appears to be an appropriate means for following the aforementioned objectives of integrating theory with empirical evidence.

The case study approach as a means of research has long undergone critical discussion. It has been particularly criticised for its methodologically “soft” elements. Nevertheless, case studies have proven to be key, or indeed as de Vaus (2001) summarised “fundamental to the substantive and methodological development of the social sciences” (de Vaus 2001: 219). Not least with the contributions by Yin (1995, 2003), this research method has gained acceptance. There is indeed no lack of valuable and broadly accepted literature which offers guidance for case study research pursuits.

The case study approach is an appropriate means for working toward various objectives all at one time. It can be used to achieve an in-depth description of one or more cases. It can likewise be used to test theory that is determined a priori or, it can be used to generate theory (Eisenhardt 1989: 535).

In this thesis, case studies have the latter mentioned character, namely, the generation of theory. The main reason for following the objective of identifying patterns and structures lies in the lack of an appropriate and accepted theory base concerning the analysis of PPPs. A robust theory base would be the precondition for the development of testable hypotheses that could be tried out for their ability to answer the research questions. The identification of a lack of an appropriate theory base is one result of the framework analysis conducted in chapter 2 and 3.

Eisenhardt (1989) described the process of theory building from case studies. One main aspect that separates the approach from other research strategies is its positivist view of research. This positivist view refers to the attempt to develop generalizable theory and testable hypotheses rather than purely a deep and rich description of cases only (Eisenhardt 1989: 546).

Nevertheless, a strong connection to theory will be attempted a priori data collection of cases. In a first step, this does not entail theory testing. Rather, theory plays the role which Yin (1995) suggested doing in case study research: delivering guidance for the data collection process (Yin 1995: 27-28).

The choice of the case study approach towards the given research questions derives foremost from the nature of the research problem. Yin (1995) stated that the case study approach as a research strategy is particularly appropriate if the focus of the researcher is set on contemporary events. Control over behavioural events is not required nor by any means possible. Furthermore, the field of “how” and “why” questions comprise the focus of case study research. These three conditions – a fitting underlying research question, a lack of control by the researcher over events and the focus of the researcher on contemporary events – constitute the conditions that determine the appropriateness of the case study approach as opposed to other major research strategies (e.g. experiments, archival analysis and history) (Yin 1995: 4-9).

Based on the reflections on the subject earlier in this chapter, all three conditions apply to the research objectives of this thesis.

Within this thesis, the case study analyses conducted have been explicitly designed as only one part

of the overall research. The strategy of incorporating a case study within a multi-method study might be based on several rationales.

First, it might be intended to check whether triangulation might even be obtained by means of different research methods. Of course, this implies that the underlying research questions are the same for all applied research methods. The results of the different methods applied are all to be reported on separately. Nevertheless, a comparison of case study results with the results of the larger study is supposed to be part of the overall assessment.

Second, the case study might serve as a detailed illustration of the results of a survey conducted beforehand or quantitative assessment of archival data. Third, the case study might be applied, as formulated by Yin (2003), to “elucidate some underlying process and use another method (such as a survey) to define the prevalence or frequency of such processes” (Yin 2003: 150). Against this background, its basic objective is completion rather than convergence and the research questions underlying the different methods applied are closely related (Yin 2003: 150-151).

Based on these thoughts, a survey is used as a second method for gathering empirical data.

1.3.3.2 METHOD 2: SURVEY

A survey as a second source of primary data is included in this thesis for two reasons. First, the survey has an exploratory character. The survey can generate further insights and data which the case study analysis misses out on. It is a complement and an extension of the case study analysis. Second, a quantitative testing of a priori hypotheses is conducted. Assumed interconnections between independent and dependent variables are outlined and tested with the application of various statistical methods.

Variables and assumed relationships stem from two main sources. First, they are based on the theoretical foundation elaborated in chapter 2 and 3. Second, insights from case study research are considered. Furthermore, findings from the qualitative case study analysis are connected to findings from the survey. The validity and reliability, the central quality criteria of empirical research (Mayer 2004: 44), of the findings from the case study analysis should thereby be enhanced.

Generally, the survey aimed at answering the same research questions as the case study analysis. It is thus part of the multi-method approach applied in this thesis. The target group of the survey were private sector constituents, mostly private companies, with experience from PPP projects in the framework of the BMZ PPP facility. These companies were questioned in the form of an online survey.

1.3.4 THESIS STRUCTURE

As illustrated in figure 1.4, the dissertation begins with an introductory chapter which describes the objectives, structure, principal methodology as well as the underlying research questions of the dissertation. The subsequent chapter 2 gives an introduction to the topic of development cooperation.

It describes the general objectives of development cooperation as well as the channels and methods applied. In particular, the potential contribution of the private sector to development cooperation objectives will be addressed – including the role of FDI for developing countries. The third chapter deals with Public Private Partnerships. The concept is outlined in detail. The application of the PPP approach in development cooperation will be of particular interest for addressing. In chapter 4, empirical research on real life PPP case studies will be conducted. The objective is to contribute findings about success and failure mechanisms as well as the outcome effectiveness of PPP projects in the research field. To do so, the chapter starts with an extensive elaboration on theoretical views on PPPs. This multi theory approach aims at the identification of research items for the case study analysis as well as the survey in chapter 5. Chapter 5 will collect primary data on PPPs of the similar type as analysed in chapter 4. The analysis can thereby be extended to a broader base and its validity can be increased. The final chapter summarises the main findings.

Figure 1.4 Structure of the thesis

| | |
|--|--|
| <p>Chapter 1 Background, context and structure</p> | <ul style="list-style-type: none"> • Background and context • Research subject and objectives • Research concept, structure and methodology |
| <p>Chapter 2 Development cooperation</p> | <ul style="list-style-type: none"> • Development theory • Objectives of development cooperation • Channels of development cooperation • The role of FDI in developing countries • The private sector in development cooperation |
| <p>Chapter 3 Public private partnerships</p> | <ul style="list-style-type: none"> • PPPs in practice • Fields of application • PPPs in development cooperation • Success factors in PPPs: literature review |
| <p>Chapter 4 Empirical part 1: PPP case studies</p> | <ul style="list-style-type: none"> • Theoretical approaches towards PPPs as base for the case study analysis • Case analysis • Cross-case analysis |
| <p>Chapter 5 Empirical part 2: survey</p> | <ul style="list-style-type: none"> • Questionnaire development • Data collection • Survey analysis |
| <p>Chapter 6 Conclusion</p> | <ul style="list-style-type: none"> • Potential of PPPs in development cooperation • Success factors in PPPs • PPP impact |

Source: own illustration

2 DEVELOPMENT ECONOMICS AND COOPERATION

2.1 INTRODUCTION

The following chapter provides an introduction to the field of development economics and development cooperation. A basic insight in the theory of economic development is outlined by means of selected theoretical approaches which explain differences in the development status of economies. In addition, this chapter will outline instruments and objectives of development cooperation. PPPs constitute a part of this range of instruments and are categorised accordingly.

Furthermore, the chapter discusses the effectiveness and efficiency of development cooperation. In this and the subsequent chapter 3, it is outlined that PPPs in development cooperation are a means of attracting foreign investment in developing countries. This objective stems from the perceived positive development impact of foreign investment. The potential benefits of private investment in developing countries are a major motivation for the creation of PPP programmes and projects (Hartmann 2008, Peters 2008, Widman 2008, Sattlegger 2008).

PPPs can therefore be regarded as a vehicle for FDI in developing countries. A discussion of the role of FDI for developing countries is therefore integrated into this chapter. The discussion of the development implications of FDI leads to an overview of attempts to foster the private sector in the respective developing countries by means of integrating the private sector into development cooperation measures.

In discussing the overall importance of the private sector for development processes in a country, the reason for integrating the private sector in development cooperation measures becomes clearer. In a final step, the main findings of this chapter will be summarised.

2.2 DEFINITIONS

2.2.1 DEVELOPING COUNTRY

In order to approach a definition of the term “developing country,” the term “underdevelopment” first needs to be narrowed down.

The term “underdevelopment” can generally be conceived of in two ways, which differ in temporal terms. First, the term can be seen as a marker of development status, i.e. a static development situation at one point in time. Second, development can be regarded as a development process, i.e. an intertemporal, dynamic linkage of several development status markers. The question of how to define and measure development status thus represents the core issue at hand. The manner of defining the development status of a country has undergone a series of changes in the history of this scientific discipline (Hemmer 2002: 3-4).

In order to classify countries, e.g. into developing or industrial countries, two steps are necessary. First, an indicator has to be identified that is suitable for measuring the development status of a

country. Second, suitable boundaries that allow the classification of countries in certain groups have to be defined for this indicator (Hemmer 2002: 8).

A row of classification systems emerged based on various development indicators. There is no internationally binding list of developing countries. However, donor countries tend to seek orientation by considering the rankings of the Development Assistance Committee (DAC), the OECD and the UNDP classification system (Ihne and Wilhem 2006: 4).

These classification systems are briefly outlined and complemented by the system of the World Bank:

International Bank for Reconstruction and Development (IBRD)/World Bank Classification

The classification system of IBRD, respectively the World Bank Group, stands as the best-known system (Todaro and Smith 2006: 38).

It applies the criterion of per capita income. The present classification system distinguishes between “Low-income countries”: per capita gross national income (GNI) < US\$ 905 in 2006, “Middle-income economies”: per capita GNI US\$ 905-11.116 with further separation between “Lower middle-income” and “Upper middle-income” countries at US\$ 3.595, and finally “High-income” economies: per capita GNI > US\$ 11.116. In World Bank publications, the term “developing economies” usually refers to the countries with low and middle income. However, this entitlement implies neither that these countries share a common speed of development nor that they have reached a certain (preferred) stage of development (World Bank 2008b: xxi).

DAC OECD Classification

In practice, the most important classification system is the one of the DAC, the development cooperation committee of the OECD. First developed in 1962, this classification system is the basis for the international recognition of development cooperation contribution to these countries (Hemmer 2002: 39).

After a series of changes over the years, the classification system has become more and more complicated and less and less transparent. To help mitigate this situation, the DAC introduced a single list of Official Development Assistance (ODA) recipients in 2005. The introduction of this list represented a major simplification since it followed a needs-based approach and drew on the income classification of the World Bank. Generally, the DAC uses the term “developing country” for those countries qualifying for ODA on the mentioned list of ODA recipients⁷ (DAC 2008f).

The list applies a classification into “Least Developed Countries,” “Other Low Income Countries”: per capita GNI < US\$ 935 in 2007, “Lower Middle Income Countries and Territories”: per capita GNI US\$ 936-US\$ 3.705 in 2007 and “Upper Middle Income Countries and Territories”: per capita GNI US\$ 3.706-\$11.455 in 2007 (DAC 2008d).

United Nations (UN) Classification/Least Developed Country (LDC)

A further highly relevant classification is the definition of Least Developed Countries (LDCs) by UN institutions. The initial criteria for classifying a country into this category, established in 1971, consisted of a low Gross Domestic Product (GDP) per capita level and “structural impediments to growth” (UN 2008c). The principle of focusing on these two criteria for the classification remains valid

⁷ The current list valid for 2008, 2009 and 2010 flows is available at DAC 2008d

even today. However, criteria have been further developed and from 2006 onwards involve per capita GNI, the so-called “Human Asset Index” and the “Economic Vulnerability Index.” Countries with more than 75 million inhabitants may not however classify. The actual classification of a country is the result of a review process of the UN Committee for Development Policy⁸ (UN 2008c).

Classification systems as the ones mentioned above mainly stem from the need for actors in development cooperation to base the diverse instruments (loans with different conditions etc.) on some systematic classification. It becomes apparent that the coexistence of different classification systems among various institutions can be confusing. Their criteria partly overlap, and partly differ from one other. A further shortcoming of this heterogeneous system is that it summarises countries in the same class or group on a purely statistical basis. This statistical system ignores the cultural, historical or religious factors in development. Even geographical aspects are not taken into full consideration (Nuscheler 2005: 99-100).

On a more general level, Todaro and Smith (2006) summarised the characteristics of developing countries.⁹ In contrast to developed countries, developing countries are characterised by highly imperfect commodity and resource markets. In addition, the society and economy in these countries are in the midst of facing major structural changes. This leads to the potential for multiple equilibria rather than a single equilibrium or the frequent occurrence of disequilibrium situations (supply and demand are not equated by prices). Moreover, policymaking is often dominated by other factors than economic rationality (e.g. priorities such as unifying a nation, resolving various kind of conflicts or cultural or religious tradition) (Todaro and Smith 2006: 9).

These characteristics of developing countries can be grouped into six categories:

- Low levels of living standard (low incomes, inequality, poor health, inadequate education)
- Low levels of productivity
- High rates of population growth and dependency burdens
- Dependence on agricultural production and primary product exports
- Existence of imperfect markets and limited information
- Dominance, dependence and vulnerability in international relations

(Todaro and Smith 2006: 49-50)

For the purpose of this thesis, the definition of a developing country will thus be based on these broad characteristics.

2.2.2 DEVELOPMENT COOPERATION

Development cooperation as such has to be viewed in the context of the decades-long debate about the term development. It can be argued that the origin of development cooperation roots in the

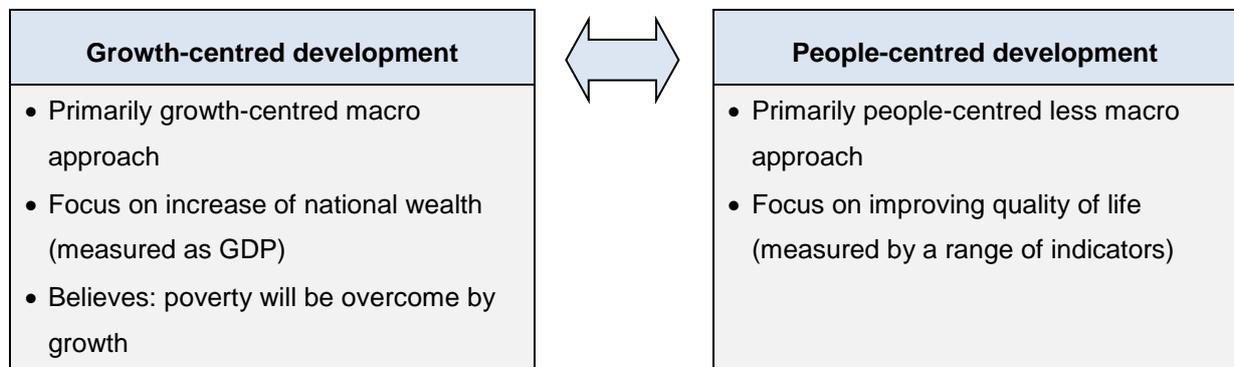
⁸ For further details on the used indices and the review process see UN 2008c.

⁹ In this context, Todaro and Smith use the term “less developed countries” without further definition (Todaro and Smith 2006: 9).

post-World War II period when that of a western picture of economic development (comprising e.g. mass production and consumption) was dominant (Freudenschuß-Reichl and Bayer 2008: 26).

Some dimensions of development and attempts to measure the level of a country's or economy's level of development are outlined further below in this chapter. To start with, a simplified view on the term shall serve to illustrate. Clarke (2002) summarised two main sets of approaches towards the term development, which are illustrated in figure 2.1.

Figure 2.1 Approaches towards development



Source: own illustration based on Clarke 2002: 2-4

The two approaches, a growth-centred view of development and a people-centred view on development, should be understood as two poles of a range of possible views which are not contradictory. In contrast, the views overlap and share common concerns such as sustainability, democracy, political stability or pro-poor growth (Clarke 2002: 2-3).

Another term which needs clarification when elaborating on a definition of development cooperation, is the term “policy”. Clare (2002) summarised that “formulated policy is a declaration of what those who have decision-making powers [...] intend to do with it: a framework for action” (Clare 2002: 5). Behind this policy formulation, a non-static process and formulated policy might or might not lead to some kind of action or activity. Development policy is an outcome of such a policy formulation process. Development policy is thus based on some perception of development. Two poles of a broad range of possible perceptions of development have been outlined above. This perception can be formulated in complete theory on development but can also only be a more general belief (Clarke 2002: 5).

Now the most relevant concepts for defining the term “development cooperation” have been outlined. The term “development cooperation” refers to “that part of development policy primarily devoted to putting development-policy strategies into practice” (Stockmann 1997: 15). In other words, development cooperation describes the operative business, the practical implementation of programmes and projects with development policy background, comprising their planning, implementation and evaluation (Ihne and Wilhelm 2006: 4). This comprises the application of instruments specifically designed and developed for this purpose, e.g. programmes and projects.

According to Hemmer (2002), development policy in general can be distinguished twofold. First, there are those measures that can be applied by a (developing) country itself, i.e. the country's own applied strategies and policies for fostering the development of the country. Second, there is foreign aid in the

narrow sense. Foreign aid in this context can be defined as a transfer of resources from one country (or international institution) to another country. This comprises real resources such as property rights. Foreign aid will then affect the balance of payments of the donor as well as the recipient country. The balance of payments can be divided into balance on current accounts (which covers all trade flows) and the balance of capital account, where it is possible to identify two main modes of foreign aid.

First, there is “aid for trade”, i.e. all measures of foreign aid that directly affect the flow of goods and thus the position in trade. Second, there is “financial aid”, i.e. all measures that enhance the financial position of developing countries. Two variants of financial aid can be identified. Liquidity assistance describes measures that compensate a sudden loss of export revenues. Development assistance describes these parts of financial aid which directly apply to the central determinants of development (e.g. real capital, human capital, technical or organisational know-how (Hemmer 2002: 929-930).

Although this classification is not universally accepted, it can contribute to a better appreciation of the various forms of aid. At this point, it shall serve as an introduction to a better understanding of the various means of development cooperation outlined in further detail in this chapter.

In this thesis, the term “development cooperation” will be applied according to its central characteristics outlined above. The term development cooperation shall comprise the measures in programme and project cooperation described below, such as technical and financial cooperation on bilateral (between developed/industrialised and developing countries) or multilateral level (between international development agencies and developing countries).

Hence, the term “cooperation” has become commonplace and replaces the term “aid” (as in development aid, financial aid, etc.). This shift, which is particularly common in the German development cooperation community, reflects the wish to keep up a relationship characterised by partnership instead of a one-way donor-recipient relation with developing countries (Hemmer 2002: 933-934).

2.3 DEVELOPMENT ECONOMICS

2.3.1 INTRODUCTION

The following subchapters will outline selected aspects of economic development theory. Fields of theory which seem most suitable for the purpose of constructing a framework for working on the research questions of this thesis have been chosen. As for all other parts of the framework, a mainly economic point of view is applied. Development economics is thus at the centre of interest.

Todaro and Smith (2006) contrasted the field of developing economics with the fields of traditional economics as well as the field of political economy. Traditional economics is mainly concerned with questions of effective resource allocation and the optimal growth of these resources in production processes. Political economy adds social and institutional processes by which, for example, political or economic individuals or groups influence the allocation of scarce resources to benefit themselves or others. Thus, the relationship between economics and politics is a matter of particular interest in

political economy. Finally, development economics obtains an even broader scope, which was outlined by Todaro and Smith (2006): “in addition to being concerned with the efficient allocation of existing scarce (or idle) productive resources and with their sustained growth over time, it must also deal with the economic, social, political, and institutional mechanisms, both public and private, necessary to bring about rapid (at least by historical standards) and large-scale improvements in levels of living for the peoples in Africa, Asia, Latin America, and the formerly socialist transition economies.” (Todaro and Smith 2006: 9). Thus, development economics, to a greater extent than the other fields of economics, have to integrate political as well as cultural aspects in striving for implementation of structural change and the fostering of development (Todaro and Smith 2006: 9-10). It follows then that development economics should contribute to economic planning. Economic planning is the attempt of the state or government to reach a desired economic output in the future by taking certain actions (Chowdhury 2002: 32).

A great variety of planning models exists. From an economic point of view, growth models, a specific form of planning models, generally represent an important theoretical base behind the transfer of development aid in the application of development cooperation methods.

Overall, theories of growth and development attempt to model processes of change by applying a formal approach. Of course, as Stern, Dethier and Rogers (2005) reflected in their assessment, by applying a formal approach, “we gain something and lose something” (Stern et al. 2005: 112). On the one hand, development and growth theory succeeded in reaching a better understanding of the connection e.g. between savings and growth or the role of capital accumulation and technical progress. On the other hand, other factors, such as entrepreneurship or institutional development are not sufficiently incorporated (Stern et al. 2005: 112).

The connection between output growth and the underlying input factors leading to economic growth (capital, land, labour, technology etc.) are the focus of analysis of neoclassical growth models. The basic underlying concept of many later models is the work of Solow on the neoclassical economic theory of growth.¹⁰ In a simple Cobb-Douglas function, the Solow model can be expressed as:

$$Y = K^{\alpha}(AL)^{1-\alpha}$$

Output Y is determined by capital K (may comprise human and physical capital) and the amount of labour L . A is a factor determining the state of technology with respect to knowledge. α stands for the elasticity of output to capital and labour (percentage increase in GDP if human and physical capital increase by 1 %).

This simple model highlights several factors behind economic growth. The Solow model highlights the accumulation of factors of production and their quality. Since capital and labour are substitutes for each other in the model, the importance of factor allocation is highlighted, an important aspect for developing countries, which are usually considered to be abundant in labourers. A basic assumption is that the economic actor strives for profit maximisation.

¹⁰ The Solow neoclassical growth model drew on the Harrod-Domar model by adding the factors labour and technology to the growth equation. In contrast to the Harrod-Domar model, the Solow model assumed diminishing returns to labour and capital separately and constant returns to both factors combined (Todaro and Smith 2006: 122).

Furthermore, the Solow model assumes diminishing returns to labour and capital separately and constant returns to both factors combined. That is, diminishing returns apply if one of the factors of labour and capital is increased while the other remains constant. Furthermore, the availability of labour is dependent on population growth and is assumed to be a given. The stock of capital is dependent on domestic savings and the national savings rate is assumed as constant. The model assumes that the productivity of labour A grows at an exogenous rate (the Solow model is therefore sometimes entitled as an exogenous growth model) (Szirmai 2005: 83-84, Todaro and Smith 2006: 122).

It becomes apparent that traditional neoclassical growth theory identified three basic factors behind output growth: increases in labour quantity and quality (as a result of population growth and education), increases in capital (as a result of savings and investment) and improvements in technology (Todaro and Smith 2006: 122). At the same time, the more detailed (social) mechanisms behind capital accumulation and technological change processes have not yet been considered (Szirmai 2005: 83).

The focus of neoclassical classical growth theory has thus been on aggregates (savings and investment) determining the capital stock of an economy. More contemporary growth models have incorporated further aspects such as returns to scale or the role of learning. Then again, further aspects such as changing behaviour and structural changes are still not being taken sufficiently into account when modelling growth processes (Stern et al. 2005: 112).

Generally speaking, development economics has undergone a process of evolution which is still ongoing. A driving force for the evolution of development economics was the increasing number of newly independent developing countries after World War II. After reaching political independence, these countries were seeking advice to reach economic independence. In particular, economists during the 1950s, “the first generation” (Meier 2001: 14), had ambitious goals of giving reasons for extensive action by governments and multilateral institutions to trigger economic growth. The central source of growth in these first generation models was the formation of capital¹¹ (Meier 2001: 13-14).

Another generation of development economics emerged during the 1970s. This generation set its focus on basic neoclassical factors which determine the state of an economy such as price mechanisms, markets or incentives. Agents in markets proceed from an economic rationale. In that vein, the highly aggregated level of the classical growth models was replaced by a focus on the micro level. This focus also led to the conclusion that the question of how to invest capital is of greater importance than the question of the absolute amount of capital as concluded in the classical models. This entailed such factors as: education and training as means of improving the quality of labour, the shifting of capital from low productivity use to high productivity use, economies of scale or new and innovative ways to combine factors of production (Meier 2001: 17-18).

Further changes in the then predominant neoclassical analyses of development emerged during the 1980s and 1990s. By then, new forms of market failures were focused. This involved, for example,

¹¹ Models which focus on the role of capital accumulation comprise e.g. “stages of growth” by Rostow, “balanced growth” by Nurkse, “external economies” and “big push” by Rosenstein Rodan, the “unlimited supply of labour and dual-sector model” by Lewis, the “hypotheses about terms of trade and import substitution” by Prebisch-Myrdal-Singer or the “critical minimum effort” idea by Leibenstein (Meier 2001: 14).

imperfect information, incomplete markets or transaction costs and risks. In addition, the role of government failure was considered (Meier 2001: 21-22).

Generally speaking, the evolution of growth models as an appropriate reflection of reality is still ongoing. It seems reasonable to assume that new generations of models in development economics will also call for new impulses in development policymaking, both for domestic governments and for actors in development cooperation.

In the framework of this thesis, two examples in the evolution of growth models will be outlined more in detail. First, there is the neoclassical Harrod-Domar model in combination with the two-gap model. Second, the Romer model as a basic endogenous growth model is presented.

First, the Harrod-Domar model has been chosen as the basic underlying model for practically all Solow-type neoclassical growth models. Models of this type have long determined policymaking with regards to the objective development. These models point out the central role of capital accumulation for the development process, i.e. the growth of income levels of an economy. In so doing, they delivered a justification of the transfer of aid to developing countries. The two-gap model by Chenery is directly linked to the concept and is also a frequently cited basic model for the justification of development transfers. It is briefly outlined as well.

Second, the Romer model as one of the first endogenous growth models is outlined. Endogenous growth models represent a more recent generation of growth models. They tried to overcome significant shortcomings of neoclassical growth models by taking into consideration endogenous factors, i.e. specific characteristics of an economy, as growth factors. In that process, a central factor is the initial stock and the accumulation of human capital, on the one hand, and the creation of knowledge in an economy on the other.

The two selected models represent major steps in the evolution of development economics. A basic understanding of these models can help to appreciate two major factors considered as sources of growth: physical capital as well as knowledge or human capital. Both factors also play a crucial role in the discussion about the pros and cons of FDI in developing countries discussed later on in the chapter. Moreover, a better understanding of core objectives of development policies can be reached by taking these basic theoretical models into consideration. At the same time, it is not within the scope of this thesis to discuss the question of the appropriateness of development theories in general.

It was during the 1990s that the all-encompassing matters of whether a single development theory proves to be appropriate or not, and whether or not one theory can reflect the complexity of development issues, were discussed on a general level among scholars. Given the heterogeneity of developing countries and the complexity and diversity of economic and political processes in these countries, scholars doubted the ability of theories to reflect these issues (Kuhn 2005: 15-16).

However, development theory in its various stages has always had direct and indirect influence on policymaking in development cooperation. Todaro and Smith (2009) summarised that in recent years, development theory has focused increasingly on an eclectic approach which considers several classical development theories at a time (Todaro and Smith 2006: 103).

In any case, the outlined highly influential theory streams are considered relevant for setting up the framework for the further (empirical) analyses in this thesis.

2.3.2 THE HARROD-DOMAR AND THE TWO-GAP MODEL

Basically all models of planning take into account theories of constrained maximisation. These assume the existence of a social welfare function for an economy. The maximisation of a social welfare function at given resource constraints is the objective. Hence, social welfare is in the most basic approach operationalised as economic growth. The objective of planning models is therefore to maximise the economic growth rate of an economy (Chowdhury 2002: 33).

The purpose of the Harrod-Domar model is the projection of the future requirements of savings and investments in an economy. What's more, the two-gap model builds on the Harrod-Domar model by taking into account the requirements of investment and foreign exchange for growth. The trade gap between exports and imports and the gap between savings and the desired level of investment are in focus. Chowdhury (2002) summed up the situation as follows: "the savings-investment problem becomes a problem of financing trade deficits and highlights the need for foreign exchange. The two-gap model thus provides a rationale for foreign aid" (Chowdhury 2002: 33).

The Harrod-Domar model is frequently quoted as the basic justification for aid transfers to developing countries. It is thus outlined here as a part of a basic theoretical framework of development cooperation.

The Harrod-Domar model can be regarded as further development of the static equilibrium analysis by Keynes, which stated that a closed economy is in equilibrium if plans to invest equal plans to save, ergo, a change in income is followed by a change in investment. The Harrod-Domar model addresses the question of the rate of growth of income necessary to generate a constantly growing economy, i.e. a moving equilibrium (Thirlwall 2006: 130-131).

The following equation is the derivation of a simplified version of the core part of the Harrod-Domar theory:

- Y being total GDP, s being the national savings ratio and k being the national capital-output ratio¹²
- $S = sY$ (i.e. savings S is some proportion s of national income Y)
- $I = \Delta K$ (i.e. net investment I is defined as the change in the capital stock K)
- Since the total capital stock K bears a direct relationship to Y expressed by the capital-output ratio k it follows: $\frac{K}{Y} = k$ or $\frac{\Delta K}{\Delta Y} = k$ or $\Delta K = k\Delta Y$
- Since $S = I$ and $\Delta K = k\Delta Y$ it follows that the savings-investment equality is:

$$S = sY = k\Delta Y = \Delta K = I$$

or $sY = k\Delta Y$

by division of Y and then k , the following final equation follows:

$$\frac{\Delta Y}{Y} = \frac{s}{k}$$

(Todaro and Smith 2006: 105-106)

¹² The "capital-output ratio" describes the economic relation between the size of an economy's total capital stock and its total output (GDP). A certain capital stock will generate a certain output. Capital added to this capital stock will increase the output (Todaro and Smith 2006: 105).

With Y being the total GDP, s being the national savings ratio and k being the national capital-output ratio, the left hand side of the equation represents the rate of growth of GDP. The equation states that the GDP growth rate is determined by the national savings ratio and the national capital-output ratio. Thus, GDP growth is positively related to the share of GDP which an economy is able to save and invest. Plus, GDP growth is negatively related to k .

This implies two central aspects. First, a necessary condition for growth is that an economy saves and invests. Plus, the more an economy saves and invests, the higher the growth of GDP. Second, the rate of GDP (Y) growth which can be obtained by an additional unit of investment can be determined (Todaro and Smith 2006: 106).

The two-gap model¹³ draws on the findings of the Harrod-Domar model. The central argument of the two-gap model is that one of the two situations applies to most developing countries: a savings gap or a foreign exchange gap. A savings gap describes a shortage of domestic capital for matching investment opportunities. A foreign-exchange gap describes a shortage of foreign exchange needed to finance imports of capital and intermediate goods.

Most two-gap models assume that the two gaps are not equal and that they are independent, i.e. there is no substitutability given between savings and foreign exchange.¹⁴ One implication is that one of the two gaps will be dominant for a developing country. It is further assumed that for most developing countries, the foreign-exchange gap is binding. This implies that these countries hold excess productive resources (mainly labour). All available foreign exchange is being used for imports so that no new capital goods for new investments could be purchased externally. Additional resources, e.g. in the form of foreign aid would allow these economies to overcome this dominant foreign exchange gap. These resources could be used to purchase productive resources (i.e. to invest) and thereby lay the groundwork for real economic growth (Todaro and Smith 2006: 724-725).

In a formal way, the two-gap model can be outlined as follows:

Savings gap: $I < F + sY$

F is the amount of capital inflow, i.e. the difference between imports and exports. Added are domestic savings, i.e. the resources which are potentially available for investment. If capital inflow F and domestic savings sY are bigger than domestic investment, it is assumed that a savings gap exists in the economy.

Foreign exchange gap: $(m_1 - m_2)I + m_2Y - E \leq F$

m_1 stands for the marginal import share of a country. m_2 stands for the marginal propensity to import (out of a unit of GNI). E stands for the level of exports given exogenously.

With regards to both inequalities, it becomes apparent that if F , E and Y are given exogenous values, it can be determined that only one of the two inequalities becomes binding to an economy. Investment (i.e. the rate of output growth) will be limited by only one of the two inequalities. The most important implication of this finding is that an increase in capital flows will have a greater impact on those

¹³ Two-gap models are usually referred to H. Chenery. For further information see e.g. Chenery and Strout 1966.

¹⁴ This assumption is applied to facilitate mathematical analysis although it is unrealistic (Todaro and Smith 2006: 724).

countries where the foreign exchange gap applies. Thereby, two-gap models deliver a very rough indication of the amount of foreign transfers, e.g. in the forms of foreign aid that are needed by a developing country (Todaro and Smith 2006: 725-726).

Generally, Solow type neoclassical growth theory is based on the central role of capital accumulation for the growth prospects of an economy. Further, this theory founded the belief of the majority of early development economists (in particular regarding the success in re-developing Europe and Japan after World War II) that it was possible to stimulate growth by adding external financing to domestic savings and investment. Less developed nations were not believed to be limited in growth by their domestic resources. Rather, the overall savings rate $S = S_D + S_F$ is composed of S_D : domestic savings by households, business and government and S_F : loans, aid and foreign direct investment. Foreign aid and other sources of external capital (also FDI) as a complement to domestic financing for investment was believed to be able to help less developed nations to overcome their low development state and to stimulate economic growth (Cypher and Dietz 2009: 239-240).

One main implication of the described models and other neoclassical theories building on the central role of capital was a focus on the role of the state for fostering development, encapsulated in this statement: “the government of a developmental state was to promote capital accumulation, utilise reserves of surplus labour, undertake policies of deliberate industrialisation, relax the foreign exchange constraint through import substitution, and coordinate the allocation of resources through programming and planning” (Meier 2001: 15).

This belief gave rise to the emergence of institutions, advisors and agencies from developed countries that sought to advise developing countries’ governments to promote the “right” policy (Meier 2001: 15). Szirmai (2005) put it succinctly: “two-gap models also provided an important rationale for development aid” (Szirmai 2005).

Limitations to neoclassical growth models can first of all be found in their simple structure. Solow type models such as the Harrod-Domar model are based on an aggregate production function with only one good Y . This assumption is of course highly unrealistic. It prevents the consideration of the different characteristics of different sectors, institutions and governance structures which determine a market (Stern, Dethier, Rogers 2005: 113-114).

More important is the inconsistency of empirical findings with this kind of growth model. Neoclassical predictions about convergence do not correspond to empirical observations. Neoclassical theory predicted a convergence between economies with higher and economies with lower income levels if factors of production are completely mobile between them. The only explanation for non-existing convergence in neoclassical theory lies in differences between economies in savings and population growth rates. In the case of differing savings and population growth rates, countries would converge to the same growth rates. As a result, groups of countries with similar savings and population growth rates should show the same growth rates in per capita income. The convergence within these groups could coexist with overall divergence (“conditional convergence”) (Szirmai 2005: 85).

This anticipated “catching up” process due to diminishing returns to capital (the same tastes and technology assumed among economies) did however not take place in the real world¹⁵ (Thirlwall 2003: 44).

At the same time, often more than 50 % of the growth rates of a country could not be explained by changes in physical capital or labour in an economy.¹⁶ It follows then, that the factors of physical capital stock (K) and labour stock (L) alone could not explain the growth rates of nations alone. Further, the overall technology level was regarded as an exogenous factor. It was thus speculated that there must be other factors such as technology, education, business organisation, research and development, culture, policies etc. that could be incorporated as growth factors (Cypher and Dietz 2009: 247).

A major result of this criticism on neoclassical growth models and their failure with regards to empirical testing was the emergence of endogenous growth models. One of the basic endogenous growth models will be outlined in the next chapter.

In spite of the extensive criticism, neoclassical growth models such as the basic model developed by Solow, feature among the most influential for all subsequent theories on growth processes (Cypher and Dietz 2009: 127).

2.3.3 NEW GROWTH THEORY/ENDOGENOUS GROWTH THEORY: THE ROMER MODEL

Endogenous growth models¹⁷, which appeared in the late 1980s, show the following basic characteristics. In contrast to neoclassical growth models, they do not consider the accumulation of physical capital as the main explanatory factor for the different growth rates of economies. Furthermore, this type of model questions the assumption of the principle of diminishing returns for at least some inputs in the production function. Finally, endogenous growth models consider growth rates per capita as determined by endogenous factors, i.e. factors which are specific to each economy (Cypher and Dietz 2009: 247).

It follows then, that the shortcoming of neoclassical growth models – in particular their inability to properly predict reality – have served as a motivation for embracing endogenous growth models. As mentioned above, the predicted convergence of poorer and richer economies does not necessarily take place in reality. Endogenous growth theory takes this fact into consideration and assumes that the prediction of a decrease in the marginal product of capital during the increase of income in an economy does not take place and therefore no convergence in per capita income exists. Thus, growth must be endogenous (in contrast to the exogenous growth of labour force and labour productivity in the neoclassical models). In endogenous growth models, growth derives from externalities, for

¹⁵ For a study on the income distribution among countries supporting this argument see e.g. Norwegian Institute of International Affairs 2000.

¹⁶ The share of growth which could not be explained by the growth in capital and labour stock is often referred to as “Solow residual” (Cypher and Dietz 2009: 246).

¹⁷ For entitling this theory stream, the terms “endogenous growth theory” as well as “new growth theory” are both used in literature (Thirlwall 2003: 44).

example, from human capital formation, or Research & Development (R&D)-investment (Thirlwall 2003: 44).

The Romer model is one of the earliest endogenous growth models and frequently quoted in development economic literature. It is a seminal model and its implications are of particular importance for developing countries (Todaro and Smith 2006: 143).

A basic outline of a simplified Romer endogenous growth model which still contains the most relevant aspects (in particular the modelling of technology spillovers) serves as an example of one of these types of growth models.¹⁸ Its basic assumptions are as follows:

- Growth processes derive from the level of the firm, respectively, the industry. Within each industry (or sector), perfect competition applies, i.e. there are constant returns to scale.
- The overall economy-wide stock of capital \bar{K} has a positive impact on the output on industry level. Increasing returns to scale at the economy-wide level are the result. This is a significant difference to Solow-type models, e.g. the Harrod-Domar model. Hence, the capital of a firm can be perceived as a public good (analogous to A in the Solow model).

Assuming a Cobb-Douglas production function for simplification, the following expression applies:

$$Y_i = AK_i^\alpha L_i^{1-\alpha} \bar{K}^\beta$$

A further simplifying assumption is symmetry across industries so that each industry uses the same level of capital and labour. The aggregate production function that follows is:

$$Y = AK^{\alpha+\beta} L^{1-\alpha}$$

A is assumed as constant, i.e. there is no technological process for now. In the economy, the resulting growth rate for per capita income would result after some calculation¹⁹:

$$g - n = \beta n / [1 - \alpha - \beta]$$

As a result, the following applies: g is the output growth rate, n is the population growth rate.

In the case of Solow type neoclassical models $\beta = 0$, i.e. constant returns to scale would enter into force. A per capita growth rate of 0 would follow due to the lack of technological progress.

However, in the Romer model it is assumed: $\beta > 0$. Thus, $g - n > 0$ and $\frac{Y}{L}$ is growing. As a result, endogenous growth applies which is not caused exogenously by an increase in productivity. If technological progress is assumed (so that λ in the Solow model is greater than 0), growth would be increased accordingly (Todaro and Smith 2006: 144).

A significant contribution of endogenous growth models lies in their ability to provide an explanation to the question of why investment sustains high growth rates in an economy over time, and even

¹⁸ Central deviations from the original to the simplified version presented here are: The original model assumes two sectors of production (research and manufacturing) that produce different types of goods. Further, it assumes intertemporal allocation decisions for a consumer budget. For the original version, see Romer 1990 or for a more compact presentation Rivera-Batiz and Olivia 2003: 189-191.

¹⁹ For an outline of the intermediate steps of the calculation see Todaro and Smith 2006: 182-183.

sometimes leads to rising rates of growth.²⁰ No fixed target equilibrium level of income figures into the equations. Rather, a “moving equilibrium” applies (Cypher and Dietz 2009: 247-248).

A main reason for examining endogenous growth models in the framework of this thesis is found in the central role which the factors knowledge and human capital play in these models.

Most endogenous growth models view the initial stock of human capital as well as the rate of accumulation of human capital as important underlying factors for income growth. Furthermore, the creation of knowledge, i.e. by research and development, serves as a key driver of development. The development of new technologies or products is an endogenous process in an economy that takes place in the specific institutional environment. Differences in income levels as well as growth rates of income between economies are to a large extent explained by these factors²¹ (Cypher and Dietz 2009: 249).

Furthermore, spillover effects play a central role in the development of technology and knowledge.

In endogenous growth models, the accumulation of knowledge is assumed to be non-rival and only partially excludable. Thus, knowledge is assumed to be a source of externalities. Knowledge is, as formulated by Singh (2007) “[...] expensive to develop but is inexpensive to use [...]” (Singh 2007: 418). The bigger the market in which it is accumulated, the greater the utilisation of knowledge takes place. An important implication of this way of looking at knowledge as a public good is that it gives impetus for government action. Private agents tend to underinvest in public goods, which calls for policymaking designed to curtail this shortcoming (Sing 2007: 418).

Economies with higher technological levels are believed to generate more spillover effects than economies with lower technological levels. The prediction of neoclassical growth models of diminishing returns to factors of production is therein overcome. Endogenous growth models thus deliver an explanation for sustaining divergence among economies. At the same time, however these models fail to explain sufficiently the outbreak of some economies out of this situation of global divergence (Szirmai 2005: 128).

As it will be outlined in the discussion of the subject further below (see chapter 2.7), spillovers represent a core argument in favour of the promotion of FDI for development purposes. This endogenous growth model can be understood as a theoretical link from FDI to growth. Since making use of FDI in developing countries is also a core motivation for the establishment of PPPs in development cooperation, this link is of relevance for the research questions of this thesis.

However, several shortcomings about endogenous growth models remain. Most importantly, endogenous growth theory fails to consider factors such as inadequate institutional structures, imperfect markets or a lack of infrastructure (Todaro and Smith 2006: 145-146).

²⁰ Neoclassical growth models in contrast, could not give an explanation to this question. Neoclassical models predicted a steady level of equilibrium determined by saving rates and population growth. Only changes in saving or a change in the exogenously given level of technology could lead to further economic growth leaving the reached equilibrium level (Cypher and Dietz 2009: 247).

²¹ Endogenous growth models do not predict the convergence of income between economies. In contrast, income convergence is predicted by neoclassical growth models for economies with similar levels of investment, saving rates and population growth (Cypher and Dietz 2009: 248).

As stated before, theories in development economics are constantly evolving. Successor theories have also been drawing on these shortcomings in endogenous growth theory and will bring development economics a step further towards giving a more realistic reflection of real life activities on the ground.²²

What remains relevant in the framework of this thesis is the explanation of the role of human capital or knowledge as well as technology as a source of economic growth. The view on these factors as important bases for development processes has significantly influenced policymaking in development cooperation.

2.3.4 SUMMARY: IMPLICATIONS OF CLASSICAL DEVELOPMENT THEORY

In the following, the core implications of the theoretical approaches just discussed are outlined.

There has been a tendency in the last 50 years of the evolution of development theory that theory in itself, along with the policy strategies deduced from theories, both tend to focus on single key elements of development. When a certain key element failed to promote growth as expected in reality, the focus shifted to a different one (World Bank 2008a: 12).

The theories outlined above (and many other theoretical streams not outlined in detail in the framework of this thesis) specifically point out the role of capital, human capital (i.e. the quality of labour) and technology.

As mentioned above, traditional neoclassical growth theory identified these factors as the basis of output growth (Todaro and Smith 2006: 122). As further outlined, endogenous growth models likewise incorporate the factors of knowledge and technology.

Capital

The role of capital accumulation in the example of the Harrod-Domar model has been described above. Capital accumulation and inefficiencies of resource allocation have been regarded as highly relevant in the early development models, in particular during the 1950s and 1960s. However, empirical analyses of the relation between investment rates and growth rates for individual countries did not speak for investment as the sole factor responsible for growth. For the period 1950 to 1990, these rates vary in the sense that growth is high in some countries with low investment and growth is low in some countries with high investment. Thus, investment cannot be the only factor behind economic growth, but is probably, nevertheless, the factor which is most closely correlated with it (World Bank 2008a: 12). Hence, capital accumulation can still be regarded as a main factor behind growth and development processes.

Human Capital/Knowledge

Roughly from the late 1960s onwards, policymakers increasingly shifted their attention to the factor of human capital. Empirical results for the relation between human capital formation and economic growth are rather positive but remain mixed depending on the respective region. Increased investment

²² For further reading on the recent state and future perspectives of development economics see e.g. Romer 2008.

in primary education has, for example, distinctively shown high rates of return in low income countries on the micro level. On the macro level, however, positive returns on investment in human capital in terms of education are less clear (Psacharopoulos and Patrinos 2002: 5). In the case of Sub-Saharan Africa for example, economic growth rates remain poor over the last decades despite increasing school enrolment (World Bank 2008a: 12-13).

Technology

The role of technology and related spillovers in the example of the Romer model has been outlined above. The existence of an adequate technological level is being regarded as a source of economic growth, e.g. due to generated spillover effects. Empirical figures support this argument. Sagasti (2004), for example, found large prevailing differences between the science, technology, and innovation capabilities of developed and developing countries. The differences in the scientific-technological level ("knowledge gap") for an analysed set of indicators between developed and developing countries were even higher than the income gap (Sagasti 2004: 58).

It has to be stressed that the formation of physical and human capital and/or knowledge as well as technology certainly does not stand alone as the only determinants of economic growth (the most basic and probably most relevant factor in the development process of an economy). Since the 1990s, other factors have been of increasingly heightened focus by donors. Among those, a central factor has been the issue of good governance and institutional change. Theoretical foundations for the role of the government in development particularly stand out in those theories stressing market imperfections as impediments to economic growth. It remains unclear which level of government intervention is most favourable for economic growth. However, it is possible to draw conclusions from individual country experience which the World Bank (2008a) summarised as follows: the positive experience of East Asia's economic success points at a sound macroeconomic policy, which managed to contain inflation. Other factors for the East Asian upswing have been identified as high saving rates and productive reinvestment, heavy investment in education, encouraging knowledge transfer through FDI. Lessons from the Russian economy during the 1990s pointed at the following factors which can at least partly be influenced by governmental policy making: legal frameworks, condemning corruption and encouraging competition (World Bank 2008a: 14-15).

To sum up, in the history of development theory, many models have provided an overly simplistic explanation of growth and development. It has to be stressed that none of the main economists behind these models (e.g. Chenery and Strout with their two-gap model or Rosenstein-Rodan with the idea of the big push²³) denied that in reality, development is a far more complex issue. These early authors have agreed that a differentiated analysis of each developing economy is necessary and that many factors (such as human capital formation and institutional change) must fall in line together to truly foster development (Riddell 2007: 29).

²³ The work of Rosenstein-Rodan (1943) and the successive work of Chenery and Strout (1966) formulated the idea of the "big push." This approach formulated that a very high amount of aid is needed to overcome constraints that limit investment and thereby (economic) development (Riddell 2007: 28).

Nevertheless, based on the theoretical explorations outlined above, the factors of capital, human capital/knowledge and technology (respectively technological knowledge) are considered to be basic factors for development. In the further elaboration of the overall framework on this chapter (in particular in those parts concerning FDI in developing countries) as well as in the empirical parts in chapter 4 and 5, these factors will therefore be examined up-close.

2.4 THE DIMENSIONS AND OBJECTIVES OF DEVELOPMENT

Apart from economic performance (e.g. measured by GNP or GDP), further indicators can be applied for determining a country's state of development, e.g. income distribution, disposable income, sustainability, human rights or democracy. Given the range of options from which to measure development, a wide array of problems becomes apparent. An adequate definition of measures, the appropriateness of quantitative or qualitative measures or possible overlaps between measures are only a few obstacles to mention (Frankel 2005: 17).

It follows then that the term development always has to be rated as normative, i.e. it is dependent on the perceptions of individuals and institutions about the situation on the ground. Furthermore, it obtains a non-static character and is subject to constant change and evolution (Nohlen and Nuscheler 1992: 56).

Generally, there are two lenses from which to view the term development. It can be perceived in a descriptive actual state or a prescriptive target state (Ihne and Wilhelm 2006: 3).

As outlined above, development economics has undergone substantial change over the decades due to the emergence of new disciplines and tools (e.g. econometric insights in the effects of trade liberalisation). Nevertheless, no consensus has been reached on the actual meaning of development. However, several factors are widely agreed on among scholars respectively in the development community, such as the need for accelerated growth, the reduction of hunger, poverty, illiteracy, diseases, the debt burden of LDCs, gender inequality and environmental damage (Nafziger 2007: 59).

When it comes to development objectives, Todaro and Smith (2006) identified three core elements that should be inherent to development in every society. First, this entails the objective of making basic life sustaining goods (such as food, health, protection) available and of ensuring their broad distribution. Second, development should stand for advancement in the level of living standards. This aspect hardly refers only to a higher level of income however, but also includes such factors as the provision of jobs, educational advancement, along with the observance of universal human rights and respect for cultural values. The third element of development lies in the expansion of the range of economic and social choices which individual people as well as nations may enjoy. This involves the alleviation of dependence on other nations, other people as well as other negatively assessed forces, such as human misery (Todaro and Smith 2006: 21-22).

The following subchapter outlines a selection of the most significant and recognised descriptive development indicators. Furthermore, it illustrates growth as a basic development objective and

outlines the Millennium Development Goals (MDGs) as an example of a widely recognised more complex set of development objectives.

2.4.1 DEVELOPMENT INDICATORS

Two of the most relevant formal indicators for human development are outlined. First, measuring development via GDP/GNI and second, measuring a more complex set of indicators combined into the Human Development Index (HDI).

GDP/GNI

Two ways of measuring the economic state or economic growth of an economy are in examining its total output or total income. The two most common measures are *Gross National Income* GNI and *Gross Domestic Product* GDP. GNI stands for “the total value of all income accruing to residents of a country” (Cypher and Dietz 2009: 33). To that end, sources from within the country’s borders or outside its borders are accounted for. GDP stands for “the total value of all income (i.e. value of final output) created within the borders of a country” (Cypher and Dietz 2009: 33). It is irrelevant whether the recipient of that income resides within or outside the given country.

In order to make these measures comparable, i.e. to relate the developmental state of countries to each other, several adjustments have to be figured into the equation.

When measuring the state of development of a nation, the per capita income is usually regarded as the most meaningful indicator (i.e. an adjustment for population size). It is calculated by dividing national income by population. The national income is usually approximated through the gross national product (GNP)²⁴ (Hemmer 2002: 9). The same of course is possible for the GDP.

When calculating the rate of growth of GNI (or GDP), it is of particular importance for the situation of developing countries that the total rate of growth of GNI (or GDP) per capita is the growth of total GNI (or GDP), minus the growth rate of the population. Thus, countries with higher population growth rates need higher growth rates in total GNI (or GDP) in order to achieve the same per capita growth than countries with lower population growth rates (Cypher and Dietz 2009: 37).

A further adjustment can be done for price changes, i.e. converting total GNI (or GDP) into real GNP (or GDP). That is, the nominal value of GDP is the sum of all newly produced final goods and services at current prices in the country’s own currency: $Total\ GDP = \sum_{i=1}^n P_i Q_i$

The following applies: P_i : price of goods and services in domestic currency, Q_i : quantity of goods and services produced, n : number of goods produced (Cypher and Dietz 2009: 38).

In order to compare the change of physical output Q over time, the price level is fixed to the values of a certain base year (in practice done via a specific price index, the GDP deflator). The result is the real GDP for that given base year (Cypher and Dietz 2009: 38).

Of particular importance for the international comparability of income levels is the adjustment according to the level of purchasing power. A simple calculation of GNP (or GDP) given in domestic

²⁴ For details on the issue of determining the national income see e.g. Hemmer 2002: 9-11.

currency into a unified currency, for example, USD, says little about the differences in living standards in the different countries. Official exchange rates are to a large extent based on the value of the goods and assets traded. They do not take into account the differences in price levels of non-traded goods (which are e.g. due to differences in labour costs). Thus, in order to be able to compare international levels of living standards, a real exchange rate, instead of a nominal exchange rate must be taken into account (Thirlwall 2006: 32-33).

Achieving a comparable value of income in real terms is based on the theory of purchasing power parity. This theory connects exchange rates to the relative price level for a basket of goods in different countries. Absolute purchasing power parity applies when the price level in two countries that should be compared with each other is equal when expressed in the same currency. The real exchange rate describes the price of the baskets of goods relative to each other. In addition, relative purchasing power parity refers to the implications of purchasing power to inflation, i.e. a change in price levels. It says that the difference in the inflation rates of two countries equals the rate of depreciation of the nominal exchange rate (Feenstra and Taylor 2008: 505-507).

In practice, purchasing power comparisons between countries usually are made based on calculations by the World Bank, published in the so-called "Penn World Tables" (Hemmer 2002: 19). Particularly in developing countries, the calculation of these measures is connected to a series of problems, of which only a few shall be mentioned here.²⁵ First, there is the overall problem of measuring transactions in (often rural) areas characterised by poor infrastructure, communication channels, or illiteracy. Second, the national income levels in developing countries might be calculated too low since a share of good produced in particular in rural areas never reaches formal markets. As a result, growth statistics for developing countries might show an upwards bias since they account for, for example, domestic product in the growing financial or money sector (which is easier to survey and measure), yet cannot properly account for production in the informal, subsistence sectors. Third, an array of problems (which not exclusively apply to developing countries but also to developed nations) occurs when calculating real incomes, e.g. the calculation of index numbers or when taking into account quality changes of products (Thirlwall 2006: 31).

Human Development Index (HDI)

The HDI is an established development indicator. Instead of focusing exclusively on income levels, it applies a broader picture of human development. It focuses on people's needs and capabilities instead of on their economic productivity only (Hemmer 2002: 33).

Technically, the HDI combines the factors of life expectancy, knowledge (composed by the factors adult literacy and gross school enrolment ratio, structured into primary, secondary and tertiary education) and living standards (defined as GDP per capita in purchasing power parity). These indicators are weighted and the country scoring relative to the rest of the world is then calculated. Each country then receives an overall score of between 0 and 1. The higher a country's score, the higher is the gap between the country's development state and the top rated countries in the single categories, i.e. the lower is the state of development in the given country. In a next step, this score is subtracted from 1, so that the final result is an indicator value which assigns the most developed

²⁵ For details on potential problems see e.g. Hemmer 2002: 11-21.

country a number closest to one and the least developed country a number closest to 0 (UNDP 2007: 355-356).

Several adjustments to the HDI index have been developed. The Gender-related Development Index (GDI), for example, takes into account gender differences e.g. in life expectancy, education or income. Beyond that, the Human Poverty Index (HPI) represents a tool which combines an indicator set concerned with the characteristics of the poor. The HPI does this insofar as it does not directly build on the HDI, but instead uses percentage numbers, wherein lower values represent a higher score in the respective category (it e.g. measures, illiteracy as opposed to literary etc.) (Cypher and Dietz 2009: 55).

Although the HDI represents a more comprehensive view of development, it can – as all indicators – not capture all aspects of the term. A particular shortcoming lies, for example, in the lack of coverage of environmental and sustainability aspects in the index. Other sensible aspects not included are, for example, measures of democratisation (Cypher and Dietz 2009: 56).

Nevertheless, the established role of the HDI illustrates that human development cannot be strictly perceived as reaching a certain level of income only. Rather, economic growth is more of a means to other objectives, the most relevant of which are integrated in the HDI (Hemmer 2002: 35).

2.4.2 THE OBJECTIVE GROWTH

Economic growth is usually measured in the growth in GNP or GNI as defined above.

As outlined further above in this chapter, the main focus of development theory has been and remains on economic growth and its underlying factors.

It is monetary income which allows the individual to purchase the necessary goods and services of the individual's choice that allow him/her to reach a targeted level of well-being. The freedom of choice can be regarded as central to the objective of development and monetary resources are a means of arriving at this level of freedom of choice (Thorbecke 2007: 4).

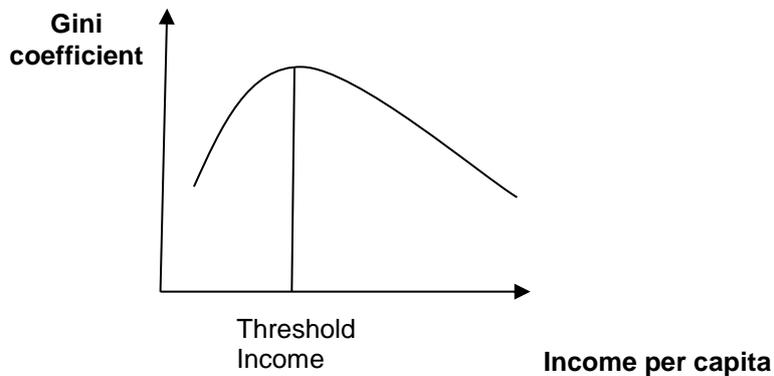
However, economic growth as the sole objective of development brings with it a whole host of shortcomings.

First, for a number of goods and services (e.g. public goods), no market genuinely exists. For other goods and services (e.g. consumer goods), a market does genuinely exist. However, these markets might not exist or be accessible everywhere. This limitation particularly applies to developing countries. Second, there is a strong empirical connection between personal well-being and the quality of life, rather than income. In turn, the quality of life is dependent on factors which income does not reflect. Central factors such as life expectancy or literacy are, for example, not covered by this measure. Third, a particular per capita income level alone says nothing about the *allocation* of income. Even if an individual or a household receives a certain monetary income, no guarantee is in place that this income is spent on satisfying basic needs (or e.g. rather on other non-essential goods) (Thorbecke 2007: 4).

When discussing economic growth as a development objective, the issue of income distribution thus has to be discussed.

A highly influential theory in this regard is the inverted-U hypothesis developed by Simon Kuznet. The hypothesis states that at low absolute income levels, an increase in income levels will lead to a less equal distribution of income (McKay 2002: 107). Kuznet's theory stood for decades as the dominant economic theory about the relationship between growth and distribution (Freudenschuß-Reichl and Bayer 2008: 34). Figure 2.2 illustrates the hypothesis.

Figure 2.2 Kuznet's inverted-U hypothesis



Source: Cypher and Dietz 2009: 58

The Gini coefficient measures income inequality. The higher the coefficient, the higher is the inequality in income distribution. As can be seen, only from a certain threshold level of per capita income onwards, does the inequality (i.e. the Gini coefficient) begin to decrease. Below this level, i.e. at relatively low income levels, inequality in income distribution rises.

In other words, the hypothesis suggests that before the critical level of income is reached, levels of income rise at the expense of an equal income distribution. This relationship can be interpreted in such way that there is no contradiction between economic development and a desirable income distribution. Negative distribution effects of growth in the short run are supposed to be followed by positive distribution effects in the long run (Cypher and Dietz 2009: 57-58).

The study can be rated as having a great influence on development economics. However, the result of an extensive range of follow-up research was that the suggestion of Kuznet does not hold up. There is no universal causality between growth and income distribution in the way described. Kuznet's finding rather has to be regarded as valid for the sample researched in the study at one single point of time (World Bank 2008: 12, Cypher and Dietz 2009: 59-60).

What remains valid is that the issue of the relationship between economic growth and income distribution is of crucial importance. There is no automatism of an appropriate distribution of income when income levels are rising. For that reason, many development policies and strategies foster growth *and* income distribution, i.e. equality alongside the economic growth (World Bank 2008a: 12).

To sum up, income is only one means of improving the multiple dimensions of development. It is not a sufficient variable for arriving at broad improvement of the various aspects of development.

It nevertheless plays an important role in achieving broader development objectives, in particular, for targeting the poor. Hence, distributional patterns are crucial and have to be considered by development policymakers and implementers (McKay 2002: 104).

One result of this fact is the emergence of development strategies specifically in favour of uplifting the impoverished.

The challenge herein lies in identifying those factors which are crucial for raising the income level of the poor. At this point, once again, a universal strategy can hardly be pinpointed. More promising is a country by country-by-country analysis of this issue (McKay 2002: 109).

In this pursuit, the term “pro poor growth” is used to describe economic growth which benefits the reduction of poverty, i.e. enhances the situation of the impoverished sectors in society (Lopez 2004a: 3-4).

Generally, economic growth is regarded as the most relevant factor for the reduction of poverty (Lopez 2004b: 2, Klasen 2001). The relationship between economic growth and the income of the poor is the subject of a broad range of literature. In a cross-country analysis of a large sample of developed and developing countries over the previous 40 years, Dollar and Kraay (2004) found, for example, that the income of the poor (those in the bottom fifth of the income distribution) was not systematically at odds with average income. This relation remained valid for various regions and income levels as well as in times of normalcy and in times of crises. In other words, on average, overall income growth did also benefit the poor. Furthermore, the study showed that pro-growth macroeconomic policies (e.g. low inflation, moderate size of government, focus on a proper financial development, fostering the rule of law, openness to trade) had a positive effect on income levels but no systematic effect on the distribution of income. This implies that a growth-oriented macro policy benefited the poor to the same extent as the rest of people in the economic setting. The authors further stressed that these findings do not support the idea of “trickle down effects” where an increase in income on the part of the wealthier segment of a society filters down to the poor and therein increases their income as well. The authors concluded that a standard growth-oriented policy will benefit the poor as all other parts of society, but stressed that growth of course is not the only factor necessary to improve living conditions of the poverty-stricken (Dollar and Kraay 2004: 56-57).

In a broader literature review on the relation between growth and poverty, Fields (2001) supported the view that countries with higher level of per capita income are characterised by less poverty (Fields 2001: 97). It can thus be summarised that overall economic growth stands as the main factor in elevating poverty. At the same time, economic growth is not the only factor which determines the reduction of poverty. Various other underlying factors figure into the equation, in particular, the initial level of inequality and the overall level of development of a country (Heltberg 2004: 81).

From this point of view, general economic growth is widely distribution-neutral. Hence, it will not shift the already existing distributional pattern in an economy (Dagdeviren, van der Hoeven and Weeks 2004: 148). Thus, pro poor targeting policy measures, i.e. those measures focusing on the distribution of income remain necessary. This holds particular true in development cooperation strategies. Consequently, the discussion about income distribution is a fundamental question in the development

community. The rising importance of this question is founded in the growing global income inequalities, particularly notable in the last two decades (Freudenschuß-Reichl and Bayer 2008: 34).

2.4.3 MULTIPLE OBJECTIVES: THE MILLENNIUM DEVELOPMENT GOALS

Commonly addressing the Millennium Development has been a declared target of the BMZ PPP facility/developPPP programme funded by the German BMZ (BMZ 2014: 3).

The MDGs are outlined as an example of a set of multiple objectives which are now regarded as the most pressing issues in development cooperation. As opposed to general macro-level growth, the MDGs summarised a set of objectives mainly on the micro level.

The MDGs were based on the Millennium Declaration (UN 2000) which was presented at the UN Millennium summit in September 2000 and further specified in the “Roadmap towards the implementation of the United Nations Millennium Declaration” (UN 2001). This set of goals was, according to the BMZ (2005b) “obliged the international community to fight worldwide poverty, to secure peace and to make globalisation inclusive, equitable and sustainable” (BMZ 2005b: 10).

They have been broadly accepted by the development community. That is, the UN system, international financial institutions and the OECD community (including the DAC), amongst others, have all committed themselves to complying with these goals. Several developing countries furthermore explicitly referred to the MDGs in their poverty reduction strategies (UN 2005: 42, Freudenschuß-Reichl and Bayer 2008: 162).

Against this background, the MDGs represented a broadly accepted set of objectives. In this pursuit, information flows about efforts towards these goals are designed to be increased, redundant efforts avoided, and the attention of many actors rather to be focused on these set of central objectives (Teegen 2006: 268). Of particular importance regarding the research questions addressed in this thesis is MDG No. 8 (Global Partnership) Its content was originally formulated by the General Assembly of the UN as a commitment to “develop strong partnerships with the private sector and with civil society organisations in pursuit of development and poverty eradication” (UN 2000: 5).

Hence, the interpretation of the term “partnerships” is interpreted liberally. It can refer to partnerships between public institutions (e.g. states or development agencies) or between public institutions and the private sector.

As for all MDGs, a set of official quantitative indicators was developed to monitor the progress towards the achievement of MDG No 8. For goal No. 8, indicators comprise e.g. a row of measures of the volume of ODA (e.g. as a proportion of GNP), proportions of the share of developing countries’ products in trade, measures of tariff rates on developing countries’ products, the proportion of population with access to affordable drugs or the share of population with access to information and telecommunication technologies (UN 2008a).

Based on these indicators, the UN identified a large gap between the required and actual progress of indicators in particular with regards to the overall volumes of ODA (UN 2008b: vii). Furthermore, an array of problems connected to monitoring progress of goal No. 8 has been identified. These problems

include a fragmentation of global information sources due to the large number of agencies and national and international institutions involved. Furthermore, for some areas of MDG No. 8, the general lack of quantitative targets has been the subject of criticism. In that vein, it was mentioned in the UN context that “the ultimate objective [...] is to identify how global partnerships translate into actual benefits for recipient countries, in particular their contribution to achieving MDGs 1 to 7 (UN 2008b: 2). Improvement in monitoring methodology is moreover necessary for achieving this objective (UN 2008b: 2).

These findings have two particular implications on the framework of this thesis. First, the lack of ODA volumes identified which would be necessary to follow the achievement of the MDGs properly is another illustration of the need to raise alternative funding – e.g. from private sector sources – for development cooperation purposes. Second, the lack of information identified on MDG No. 8 illustrates the need for further work on the subject of development partnerships in general.

The establishment and implementation of the MDGs – a globally accepted and shared set of development objectives – is complex and involves a high number of stakeholders in the whole process. Although the MDGs reached a high degree of global acceptance, critical aspects remain the subject of ongoing discussion. Criticism about the MDGs entails, for example, that the MDGs were not concerned with such issues as good governance or human rights. What’s more, they did not entail explicit recommendations for growth strategies for developing countries, in particular growth strategies targeting the poor (Freudenschuß-Reichl and Bayer 2008: 163).

From 1 January 2016 the set of 17 Sustainable Development Goals linked to the “2030 Agenda for Sustainable Development” shall provide guidance to efforts in development cooperation. As the UN formulated it, the goals “build on the success of the Millennium Development Goals (MDGs) and aim to go further to end all forms of poverty” (UN 2016).

In a comprehensive backward looking progress report on MDG No.8 recognised the increasing importance of other finance source besides ODA, which are used to foster (sustainable) development in developing countries. Public Private Partnership entities were mentioned as a stakeholder group to be taken into account when developing a related indicator (“total official support for sustainable development” – TOSSD). The need for the indicator arose since ODA statistics today do not take into account these other source of finance (UN 2015b: 18). In the last official report on the progress of the MDGs, the UN stated specifically outlined the potential of ODA to attract non-ODA financial flows to developing countries, e.g. by leveraging private finance. The UN (2015a) summarised that “such market-like instruments may play an important role in financing the post-2015 development agenda” (UN 2015a: 68).

2.5 CHANNELS OF DEVELOPMENT COOPERATION

2.5.1 INTRODUCTION AND DEFINITIONS

Development policy as a whole requires a set of instruments and channels for following their politically determined objectives. These instruments require institutions to implement them in developing and

developed countries (Nohlen 2002: 235). The following subchapter gives an overview of the existing range of instruments in developing cooperation. The purpose of this overview is to be able to place PPPs, as a relatively new development cooperation instrument, in the right framework.

Development cooperation can be implemented directly or indirectly, can involve financial or technical assistance, the transfer of assets, knowledge or other resources. Financial cooperation can occur as lending, grants, investment, equity participation, acquisition or further forms of transfer (Frankel 2005: 18). More than one categorisation of development cooperation channels is possible to that end. It is particularly worth mentioning that the borderlines between the single categories of the instruments of development cooperation are rather blurred instead of fixed (Hemmer 2002: 933).

In spite of the broad range of allocation mechanisms of resources in development cooperation, four general alternatives can be identified: conditional vs. unconditional assistance, project vs. programme assistance, financial vs. technical assistance and finally bilateral vs. multilateral assistance (Hemmer 2002: 941).

Contributions in this framework can be allocated in the form of grants (i.e. no repayment is required) and loans (i.e. repayment is required). The repayment period can vary from short-term to long term. In addition, the interest rates can range from the usual rate in the respective market to interest-free and can be fixed or variable. The repayment of loans from developing countries can be conducted in “hard currencies” such as USD or in local currency. According to these criteria, the terms *soft loans* (long-term loans at low interest rates, eventually combined with some repayment-free years) and *hard loans* (conditions close to the financial market) have become common (Hemmer 2002: 941-942).

Generally, foreign aid can be a major source of developing countries’ foreign exchange. It includes public (official) aid flows as well as private (unofficial) aid flows. Private (capital) flows in the sense of common commercial transactions (following profit and rate of return objectives) are not usually regarded as forms of foreign aid. Rather, a broad consensus holds that foreign aid is defined as transfers to developing countries that meet the following criteria:

- From the donor’s point of view, the objective of the transfer should be non-commercial.
- The transfer is granted by concessional terms. This means that e.g. repayment conditions or interest rates of capital loans are less stringent than commercial terms.
- Usually, transfers in the field of military are not counted in foreign aid flows.

(Todaro and Smith 2006: 718)

In short, development aid can be defined as the transfer of resources from a government or international organisation to another nation to conditions that differ from the conditions of the respective resource market in favour of the recipient country (Hemmer 2002: 930).

With regards to foreign aid, a whole range of conceptual and operational measurement problems exist. A few exemplary points shall be mentioned here:

- The simplest starting point for measuring foreign aid would be to include all governmental resource transfers from one (developed) country to another (developing) country in the form of foreign aid. However, the identification of transfers is not always clear due to the range of forms which a transfer can take. Preferential tariffs, for example, are usually not included in foreign aid statistics.

- The volume of a loan is not of equal significance to the donor as it is to the recipient. A loan has to be repaid and therefore costs the donor less and benefits the recipient less than its nominal value. Deflating or discounting loans would be a conceptual solution to this problem.
- Loans and grants can be tied “by project” (i.e. a grant is tied to a specific usage) or a “by source” (the transfer can only be spent on donor-country goods or services). In both cases, there is a good chance that the real value of the loan could be reduced due to the fact that the supplier does not offer the best price, and/or the project to which the loan is tied does not constitute high priority. Furthermore, the connection of loans to capital-intensive goods might lead to losses in the form of unemployment in the recipient country.
- In particular, in the situation of high inflation rates, the nominal value of aid flows differs from its real value. Since aid flows are typically calculated on a nominal level, statistics do not always reflect the actual real value of transfers.

(Todaro and Smith 2006: 718-719)

The dominant statistical record on development assistance involves OECD or DAC statistics respectively, which only record those transfers classified as ODA. ODA records constitute the basis from which to calculate the share of national income that developed countries spend on aid. This value is the base for calculating the UN-proclaimed goal of 0.7 % share of GNP as development aid (Hemmer 2002: 937).

The DAC entitles resource transfers to countries on the DAC country list No. 1²⁶ (directly or via multilateral organisations) as ODA which fulfil the following criteria: the flows are provided by official agencies (incl. local or state governments) or by their executive agencies. Plus, the main objective of the transfer must be the promotion of economic development or welfare in a developing country. Finally, the transfer must be concessional in nature, and must convey a grand element of at least 25 %.²⁷ In this context, flows comprise resources either in the form of cash or commodities. Since the establishment of this definition of ODA, several elements that are not a direct transfer, i.e. recorded in the balance of payments statistics, have likewise become part of the ODA statistics. These entail development measures designed to foster such things as education and training costs, administrative costs of ODA programmes, subsidies to NGOs and measures for raising development awareness in donor countries. Expenses for military equipment are explicitly excluded from ODA records (DAC 2001: 1-3).

²⁶ See DAC 2008d for the full list.

²⁷ In the case of aid tying, the obligatory grant element can rise to 35 % or even 50 % in the case of tied aid to LDCs. For further details on the grand element and its calculation see e.g Hemmer 2002: 935-937.

2.5.2 CATEGORIES

In order to outline the most common implementation channels of development cooperation, these alternative channels will be briefly outlined. This overview should be regarded as an illustration rather than a complete set of definitions.

Conditional and unconditional cooperation

The so-called “tied aid” describes those transfers that are connected to the condition of spending the funds on donor-country exports (Todaro and Smith 2006: 727).

The DAC guidelines consist of clear rules on tied aid. The guidelines hold that a tying of aid is only permissible if the donated element stands above 35 %, or, in the case of least developed countries, above 50 %, while certain other criteria also apply. Hence, different donor countries show broad differences in the share of tied aid. While bigger donor countries (e.g. the USA, Germany, France, UK) tend to tie a higher share of their aid, other countries (e.g. Scandinavian countries, Japan) tie only a small share of their aid volumes (Hemmer 2002: 956-957).

The economic self-interest of donor countries in the case of tied aid becomes immediately apparent. This type of aid has been criticised to have the character of an investment from the point of view of a developed donor country (Todaro and Smith 2006: 727). One objective of donor governments to tie aid is, for example, to require recipient countries to purchase donor countries’ exports with the aid received, so that the balance of payments of their aid is reduced. What’s more, donors often believe in fostering public or parliamentary support for their aid programmes if the money spent in turn benefits donor country’s exporters (Hjertholm and White 2000: 94).

The potential disadvantages of tied aid for recipient countries are significant. Most importantly, there is the risk that recipient countries overpay for the goods purchased since global competition among potential suppliers is eliminated by aid tying. As a result, the recipient country has to use more capital for the purchase of certain goods than in the case of untied aid. Regarding the vital role of capital for the development process of a country, this means that the actual development process of a country is in fact stalled by tied aid. Thus, tied aid can only be rated as unfavourable to recipient countries. The only exception is in the case that the alternative to receiving tied aid is, instead, receiving no aid at all (Hemmer 2002: 958-959).

Project and programme cooperation

A further distinction with regards to development cooperation channels can be made between project and programme cooperation. Project cooperation describes a resource transfer with mandatory application in a single project (e.g. the construction of a road or a power plant). An alternative allocation of the resources received by the recipient country is practically impossible. In contrast, programme cooperation allows the recipient country to allocate resources transferred of their own volition. This means that only the overall development objective (e.g. the reduction of poverty) determines the usage of resources. The most extreme case for programme cooperation would be pure budget or balance of payment aid (Hemmer 2002: 945-946).

In short, programme cooperation or aid “is all aid that is not project aid” (Riddell 2007: 195). However, apart from the kind of programme aid that can be allocated (mostly) by the recipient country alone, programme aid can also be tied to a certain type of usage e.g. in the framework of specifically determined packages of measures (Hemmer 2002: 945-946).

Hence, two kinds of programme cooperation have become particularly important. First, there is the sector-wide approach, wherein a group of donors transfers resources to a government expenditure programme. In that process, a particular sector (e.g. education, health) is supposed to benefit, and the objectives of the government expenditure programme are supposed to be fostered. Second, there is budget support. This kind of programme aid intends to enhance the aggregate revenue of the receiving government and increases its overall spending. To that end, sector budget support is provided for certain sectors, while general budget support is not however focused on a certain sector (Riddell 2007: 195).

The advantages of project cooperation compared to programme cooperation from the point of view of the donor entail that the effect of the resource transfer is immediately visible in the form of project outcomes. This might increase public and political support for the involvement in development cooperation. Furthermore, by tying resources to certain projects, donors can directly influence policies in recipient countries e.g. by giving priority to certain sectors. From the point of view of the recipient country, project cooperation bears several potential disadvantages. In case donor and recipient have divergent views on the best way of implementing a project, it is usually the donors who have the option of enforcing their will. Further, oftentimes donors only cover the foreign exchange costs connected to a project. Meanwhile additional (local) costs incurred frequently have to be covered by the recipient. This might lead, for example, to a prioritisation of capital intensive projects by recipient countries (in order to maximise the received resources). This kind of prioritisation might not however prove to be economically optimal (Hemmer 2002: 949-950).

The volume of programme cooperation (in absolute terms and as a share of total aid provided) is likely to increase in the future. Several donor countries (e.g. Canada, Finland, Netherlands, Norway, Sweden, UK) expressed their intention of increasingly making use of such programme-based approaches (Riddell 2007: 195-196).

Bilateral and multilateral cooperation

Cooperation can be considered bilateral if a direct relationship between donor and recipient country is underlying. Multilateral cooperation applies if an international organisation transfers resources (its own or those previously collected from various countries) to the recipient country (Lachmann 1999: 60).

The larger share of development cooperation resources is transferred via bilateral cooperation. In 2007, for example, the DAC member countries transferred about 70 % of all ODA bilaterally (DAC 2008a). From the point of view of donor countries, bilateral cooperation bears several potential advantages. It might help to illustrate the usage of aid on behalf of the domestic public or politicians and might contribute to an intensification of the direct economic relations with recipient countries. In addition, bilateral aid can be transferred in the form of tied aid (see further above), an option which does not exist in the case of multilateral aid. On the other hand, bilateral cooperation requires the establishment of proper institutional structures for managing the cooperation process. Thus,

particularly in the case of smaller overall aid volume, multilateral cooperation might go hand in hand with lower administration costs.

From the point of view of recipient countries, bilateral aid may seem to be less favourable for several reasons. Donor countries may try to combine their bilateral aid with political or economic influence in the recipient country. What's more, bilateral aid is usually connected with an obligation of employing experts and technicians from the donor countries. This may prevent the employment of the best qualified experts regardless of their origin, which is more likely in the case of multilateral cooperation. Yet this is mainly a potential disadvantage in the case of smaller donor countries, since bigger donor countries are usually equipped to provide qualified experts.

Another advantage of multilateral cooperation is its continuity. In contrast to bilateral cooperation, it is mostly independent of political changes and the associated changes of priorities in development cooperation. Furthermore, multilateral development institutions are more likely to be able to fund bigger development projects by pooling several donors' resources together. Smaller donor countries are thus enabled to participate in projects which could not have been initiated exclusively on their own (Hemmer 2002: 960-961).

Financial and technical cooperation

The classification of development cooperation in financial and technical cooperation (or "assistance") is applied in this form primarily in German development cooperation. In many countries, this classification system does not however exist (Lachmann 1999: 20).

The primary goal of financial assistance is the construction of capable structural capacities and the financing of real and financial assets. In developing countries, financial assistance is primarily transferred through loans at reduced rates of interest or financial transfers without the obligation of repayment (BMZ 2006a: 54).

Technical cooperation mainly aims at providing advancement opportunities in terms of skills, knowledge, know-how and advice. Fostering these objectives was one major reason for initiating development cooperation more than 50 years ago. It still counts as a major share of ODA and "for many agencies, especially key UN agencies, technical assistance constitutes their *raison d'être*" (Riddell 2007: 202). Technical cooperation can be regarded as a supplement to financial assistance. It entails, for example, the transfer of highly skilled workers in order to enable and/or ensure the efficient employment of funding aid in order to generate economic growth (Todaro and Smith 2006: 726).

The German BMZ distinguishes between technical assistance in the narrow sense and technical assistance in the broader sense. The narrow sense of the term describes a focus on the development of the capacity and performance of people and organisations in developing countries. In addition, the broad sense of the term refers to the qualification of the labour force and the fostering of the professional development of these individuals. Furthermore, the placement of a specialised workforce as well as the continuing education offerings to workers in developing countries both fall under the term technical assistance in the broader sense (BMZ 2006a: 54).

Moreover, technical assistance, which involves the transfer of a highly skilled workforce, can ensure that aid funds are used in an efficient way for the purpose of fostering economic growth. In this sense, technical assistance can be regarded as means of filling the gap in skilled labour (Todaro and Smith

2006: 726). Overall, the central objective of technical assistance is to increase the performance and capacity of people and institutions in developing countries (Lachmann 1999: 20). The DAC (2008e) defined technical development cooperation as “a) grants to nationals of aid recipient countries receiving education or training at home or abroad, and b) payments to consultants, advisers and similar personnel as well as teachers and administrators serving in recipient countries, (including the cost of associated equipment)” (DAC 2008e). Hence, the accompanying and/or assisting measures applied in the course of a capital projects are included in the respective project volumes and are not specifically separated and entitled as technical cooperation in aggregate aid flow statistics (DAC 2008e).

The following aspects cover the most relevant criticism on technical development cooperation:

- **Supply driven character:** It is donors who usually decide over content, design and implementation of technical development projects. As a result, there usually is little or no ownership of the project by recipient countries. Plus, projects might not target the real needs on the ground in the recipient country.
- **Excessive focus on tangible outputs:** Technical cooperation projects are expected to produce concrete measurable output. Incentives for technical cooperation personnel are designed accordingly. This focus may lead to a disregard of intangible outcomes such as the building up of local institutions.
- **Weak recipient country management:** Often, numerous donors are present in developing countries with their own project agendas, priorities and timetables. Local institutions – if existent at all – are often unable to contribute to the completion of project objectives and/or to guarantee the sustainability of project outcomes.
- **Lack of focus on training:** The training of local workforce in order to ensure the sustainability of outcomes is often not implemented in a sufficiently thorough manner.
- **Reliance of foreign/expatriate experts:** The installation of foreign advisors involves a number of negative implications and conflict potential with local elements (e.g. due to the combination of high level payment on the part of the donor, ambiguous placement in the local administration structure and cultural factors). In addition, the so-called “expert-counterpart model” often failed to function properly e.g. due to the lack of training of local counterparts.
- **Market distortions:** Recipients usually perceive technical cooperation projects as free goods since they usually are financed by means of grants (as opposed to loans). The result is the perception of non-existing opportunity costs by recipients. Misallocation can be the result.

(Arndt 2000: 164-166)

In spite of these criticisms, the volume of technical cooperation ranged from around 36 % to 40 % of bilateral ODA in the past 25 years, according to OECD statistics. Hence, the technical support transferred for the purpose of fostering capital projects is excluded in these figures and would however further increase the share of technical cooperation of ODA (Riddell 2007: 202).

2.6 BASIC ASPECTS OF DEVELOPMENT COOPERATION IMPACT AND EFFECTIVENESS

In this subchapter, the question of the impact and efficiency of development cooperation is addressed. PPPs in development cooperation represent a complement to existing channels of development cooperation. Most importantly, PPPs are perceived to perform “positively” with regards to the impact generated on development as well as with regards to efficiency. In that pursuit, some basic issues of measuring impact and efficiency in development cooperation are a necessary part of this framework.

There is a continuous and increasing debate about the overall effectiveness of development cooperation. Some developing countries show no significant improvement of their social or economic conditions in spite of substantial transfers by the means of development cooperation (Frankel 2005: 18). A significant amount of literature on the effectiveness of development cooperation exists and the issue of aid effectiveness has been approached in different ways. First, there are analyses on the micro and the macro level. Second, there are single country and cross-country case studies and third, there are broader surveys of a qualitative, quantitative and interdisciplinary nature (Hansen and Tarp 2000: 103).

For the framework of this thesis, two questions seem to be primarily relevant. First, how does development cooperation perform at the macro level? A brief look at this issue is relevant since the general effectiveness of development cooperation constitutes part of the underlying research questions. Second, how does development cooperation perform at the micro level? This question is relevant since the empirical analyses of PPPs in the framework of this thesis focuses on the micro, i.e. project level. This is completed by a brief outlining of key characteristics of impact assessment in development cooperation.

2.6.1 IMPACT ASSESSMENT

In the practical implementation of impact measurement, different approaches exist, following more quantitative as well as more qualitative methodology, which make reference to different definitions of impact existing in parallel (Office of the Special Evaluator 2013: 21-22).

“Qualitative methods give a reasoned judgment on the achievement of an intervention's impact, understood as a project's effect at a general level. [...] Qualitative analyses are based on information collected through documentary analysis, individual or group interviews and direct field observations” (Office of the Special Evaluator 2013: 23).

As summarised in a comprehensive meta-study by IOB (2013), the evaluation of development cooperation measures should take into account an analysis of the following:

- **Outputs:** refers to immediate results, such as goods or services produced
- **Outcomes:** refers to “intermediate”, rather short term effects of the PPPs
- **Impact:** refers to the final goal and the causal/net effect of the PPP

- **Intervention logic:** refers to activities and expected effects and underlying assumptions

(IOB 2013: 19).

At the same time, the study identified, amongst other things, the following shortcomings in existing PPP evaluation studies. While studies often analyse the resource sharing in PPPs, evidence on risk and revenue-sharing is limited. Furthermore, the motive of leveraging resources seems to be more in focus than an interest in effectiveness. Goal formulation often takes place in a rather qualitative sense. Particularly relevant seems to be the fact that most studies fail to draw a connection between the specific characteristics and their implications on ultimate output. In addition, the analysis of development outcomes (in combination with outcome effectiveness) remains rather weak. The IOB (2013) pointed out that this means that an “attribution of effects to particular PPP features is not possible” (IOB 2013: 13).

Generally, as outlined by the BMZ (2011), “[...] efficiency analysis has great power as a criterion for informed decision making.” (BMZ 2011: 22). This means that a cost-benefit perspective allows for selecting an alternative intervention measure which produces the highest net (welfare) benefit. While other criteria (e.g. sustainability) might deliver information about how the probability of a measure in delivering positive outcomes, a solid efficiency analysis (at least in theory) shows indisputable facts (BMZ 2011: 22-23).

An efficiency analysis must, at minimum, provide first of all, information concerning the most relevant costs and benefits associated with an intervention. Second, it must consider alternatives in the sense of alternative distribution of resources. Furthermore, a particular focus on (potential) efficiency improvements might well be sufficient for the purpose of honing in on specific elements. This more narrow analysis, or “level 1 analysis” (BMZ 2011: 28) has to deliver an assessment of parts of the intervention, i.e. highlight certain aspects of a cause and effect chain. Additionally, it should focus on one or few aspects of an invention which might be improved upon, and, subsequently, demonstrate that this aspect can actually be improved, all other things remaining equal (BMZ 2011: 28, 29).

Relating to the research questions addressed in this thesis, it becomes apparent that the empirical analyses conducted in chapter 4 and 5, in particular, should consider the most relevant aspect that distinguish PPPs from other development cooperation tools: the inclusion of a private partner as a fundamental part of a project design. This implies that the alternative scenario, though hypothetical, wherein a PPP should be compared to is a situation without private sector involvement and a purely publicly delivered intervention, i.e. project.

The Donor Committee for Enterprise Development (DCED) provides comprehensive guidance for measuring results of private sector development programmes. It is designed to be a pragmatic approach which is “complex enough to be credible, yet simple enough to be practical” (DED 2015: 3).

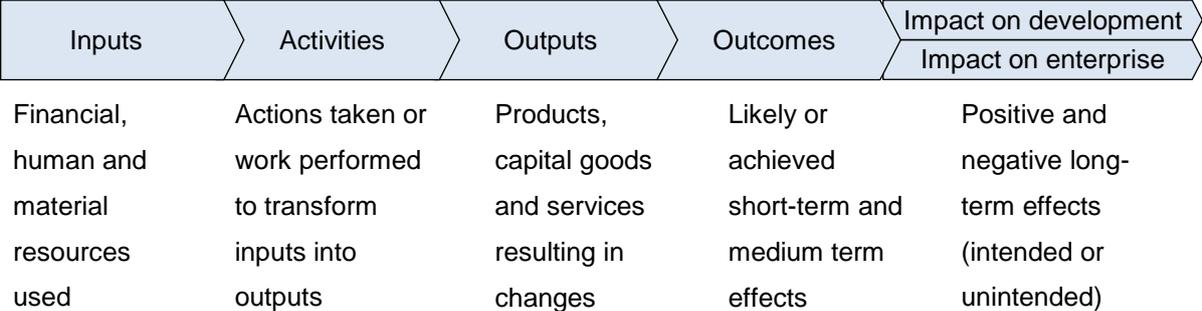
To that end, the DCED approach has been selected as an example for outlining the general logic of result and impact measurement. This approach takes into account the existence of multiple frameworks which Tewes-Grادل (2014) even perceived as a “confusing array of guidelines and information on results measurement [which] can also absorb considerable time [...]” (Tewes-Grادل et al. 2014: 13).

The DCED suggests 8 steps: 1. Articulating the results chain, 2. Defining indicators of change, 3. Measuring changes in indicators, 4. Estimating attributable changes, 5. Capturing wider changes in the system or market, 6. Tracking programme costs, 7. Reporting results and finally 8. Managing the system for results measurement (DCED 2015: 2).

Moreover, the DCED recommends outlining a result chain (also entitled as causal models, causal chains, impact models or impact logics) as a visual tool to illustrate how activities, outputs, outcomes and finally impact are linked, or in the words of Kessler (2015), in what way they “[...] articulate how their activities will trigger different levels of changes leading ultimately to development impact [...]” (Kessler 2015: 2).

Figure 2.3 illustrates the different levels of a result chain.

Figure 2.3 Result chain



Source: own illustration based on OECD 2013b: 3 and Kessler 2015: 8, 13

With regards to PPP evaluation, limitations apply. In one of the most comprehensive studies on development partnerships, Tewes-Gradl et al. (2014) noted the absence of a clear set of guidelines and standards specifically for reporting about development partnerships. A similar conclusion was drawn by Heinrich (2013), who concluded that an established and valid framework or tool specifically for measuring partnership outcomes have so far not been broadly applied (Heinrich 2013: 24).

In German development cooperation, Bormann and Stockmann (2009) identified a general lack of integration of partners by German development cooperation agencies. Instead, evaluations by agencies rather serve their own needs or interests. As a result, partner institutions tend to be less interested in and less skilled in evaluation measures (Bormann and Stockmann 2009: 22).

Pragmatic good practices for measuring impact can nevertheless be applied in the analysis of partnership arrangements: To avoid extensive cost, only a few manageable indicators should be selected. Since the measurement of ultimate outcomes is complex, intermediate outcomes should be tracked instead. The use of standard indicators is recommended regarding the overwhelming number of available indicators. Finally, a reflection on the partnership itself should take place, since the measurement of the partnership itself is unclear (Tewes-Gradl et al. 2014: 34-35).

Monitoring in the sense of a “[...] continuous process of collecting and analysing data to compare how well a project, programme or policy is being implemented against expected results” (OECD 2013b: 4) stands as a limitation in the framework of this thesis.

A structured outline of those parts of the impact chain where indicators are available should support the identification of patterns and ultimately contribute to “lessons learned” used to improve development programmes and policy, a primary assignment associated with gathering information about results.

Generating lessons learned also represents the dominant motivation for the evaluation of development cooperation measures, in particular amongst German development agencies (Bormann and Stockmann 2009: 19).

To sum up, the impact measurement approach taken in this thesis is in line with pragmatic best practices recommend, by the DCED, amongst others. A transparent outline of input and output factors, both in the case studies in chapter 4 as well as the survey in chapter 5 is conducted. Furthermore, a basic outline of the result chain is drafted to illustrate the case studies in chapter 4.

Finally, the reflection on mechanisms, in particular success and failure mechanisms, make up a clear focus of both empirical parts: The case studies analyses in chapter 4 are structured according to research items developed in theoretical considerations deriving in the literature.

The empirical survey in chapter 5 includes these research items and covers a range of output and input factors aimed at appreciating the direct effects of partnerships.

Some items collected can be characterised as indicators of organisational effectiveness. Organisational effectiveness indicators exist in different donor agencies’ results frameworks. They cover areas such as human resources, financial commitments and budget efficiency, business processes and transparency per se (Holzapfel 2013: 101-102).

Generally, results data can either be used as a management tools or for accountability.²⁸ These two fields of application involve conflict potential since result measurement might be set up and results presented in a biased way. For example, donors might want to stress the connection between results and intervention. However, a clear picture both of the positive and negative aspects in the cause and effect chain is an important precondition to ultimately generating valuable learning from the experience (OECD 2014a: 32).

Any source of “neutral” raw data about Public Private Partnerships can thus help to generate a non-biased view of the cause and effect chains and therein foster the further development of PPP as a development cooperation instrument.

2.6.2 EVALUATION ON MACRO AND MICRO LEVEL

For the purpose of evaluating PPPs, it seems relevant to be aware of general challenges concerning the evaluation of development cooperation measures. Generally, a paradox between the macro and micro level sometimes applies. This means that a large share of evaluation literature about the micro level (i.e. covering single projects or programmes) come to a positive view of the intervention measures evaluated. At the same time, statistical evaluation of development cooperation aid flows between countries (e.g. for 1970-2005) could not confirm a positive impact of aid flows and the welfare

²⁸ See e.g. OECD 2013a: 2 for an outline of further purposes of gathering result information.

level of beneficiary countries. This paradox could be founded both on the macro as well as on the micro level processes. At the macro level, the increasing overall dependency of beneficiary countries on aid flows might have negative effects which are compensated by positive effects at the micro level. Moreover, the generally positive outcomes of evaluations at the micro level raise concerns about the validity of evaluation methods (Faust 2010).

Since this thesis contributes to the evaluation of PPPs at the micro level, the latter mentioned point stresses the importance of the application of valid criteria when evaluating PPPs as a specific development cooperation intervention measure.

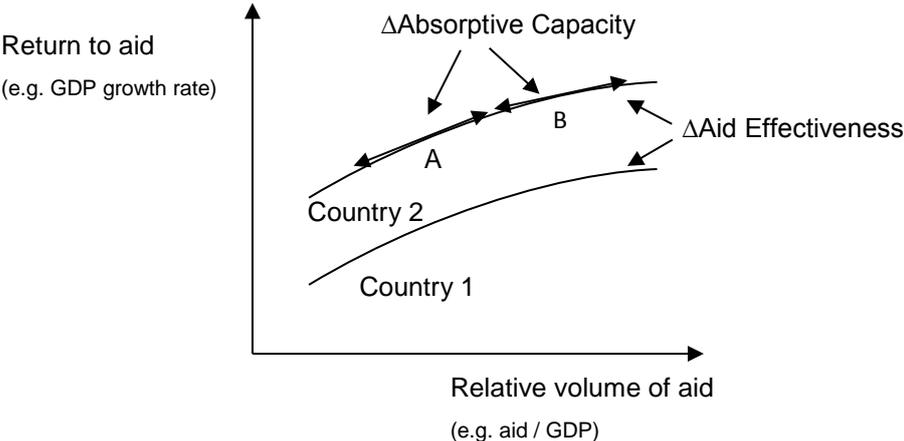
The question arises as to whether (financial) resources can be transferred purposefully, i.e. whether they can actually be used to foster development. Closely related to this question is the concept of “absorptive capacity.”

The basic definition of the term, according to Bourguignon and Sundberg (2007), implies “that a country has reached its absorptive capacity limit for foreign aid when the rate of return on further increments of aid falls to some minimum acceptable level” (Bourguignon and Sundberg 2007: 641).

It is therefore important to observe that the rate of return does not refer to GDP growth only but can also refer to other dimension such as individual indicators (e.g. poverty) or combined indicator sets to measure welfare effects (Bourguignon and Sundberg 2007: 642).

Figure 2.4 illustrates the concept.

Figure 2.4 The concept Absorptive Capacity



Source: Bourguignon and Sundberg 2007: 642

Figure 2.4 illustrates the distinction between “absorptive capacity” on the one hand, and “aid effectiveness” on the other. To illustrate this, the rate of GDP growth is chosen in this graph. The return to aid is a function which increases with the amount of aid received by a country. The location, i.e. the height of this curve then determines the aid effectiveness applying to the respective country. In this graph, country 2 uses aid less effectively than country 1 at any given level of aid (relative to the size of the economy). Its location is dependent on the situation in the country (e.g. the institutional framework conditions, policies, physical settings). Absorptive capacity is the marginal rate of return to aid. As the volume of aid increases, the marginal rate of return to aid declines at some point. In other

words, the productive potential of aid is limited by the absorptive capacity of a country (e.g. excessive aid flow in an infrastructure project will from some point on lead to relatively low productivity levels and will lead to domestic economic distortions due to an increase in aggregate demand). At some point, the marginal return to aid is below a minimum acceptable level and therein the absorptive capacity of the country is reached (Bourguignon and Sundberg 2007: 642-643).

These concepts have to be considered when discussing the degree of target achievement of specific development targets. Targets such as the MDGs were set for all developing countries. However, these countries show significantly different characteristics which lead to significantly different levels of aid effectiveness, as well as absorptive capacity in the different countries. Implications on development strategies follow. The question can be raised whether it would be more promising to focus on those countries with higher levels of aid effectiveness by allocating more aid to these countries (Bourguignon and Sundberg 2007: 643).

2.6.2.1 MACRO IMPACT

As outlined above, the most fundamental variable targeted by development cooperation is economic growth. The majority of representatives of the development community regard the extent of support of economic development and welfare as the main objective of development cooperation (Hemmer 2002: 967).

Since a rise of per capita GDP is frequently correlated with the increase of other development indicators, analysing per capita GDP in developing countries is a convenient approach when elaborating on aid impact and effectiveness (World Bank 2008a: 10).

Drawing a direct line between development cooperation (i.e. aid) and growth has been the subject of a wide range of economic literature over the last decades.

In any case, the analysis of the macro impact of development cooperation requires focused research questions and specified empirical hypotheses. This is, for example, due to the broad variety of existing motives for conducting development cooperation along with the broad range of existing cooperation channels. This holds particularly true when analysing the impact of development cooperation on macro variables such as economic growth (Hansen and Tarp 2000: 103).

Radelet, Clemens and Bhavnani (2008) summarised three views on the subject, which can be found in the literature.

The first view is that development aid has no effect on growth and even might undermine growth. Underlying factors might be the de facto encouragement of corruption or the negative influence on incentives for private sector development. This view, which was repeatedly published between the 1970s and 1990s, is partly due to methodological weaknesses, e.g. an exclusive focus on a simple linear relationship between aid and growth without taking into account the possibility of diminishing returns or not considering the possibility of endogenous growth factors.

The second view is that there is an overall positive correlation between aid and growth on average, but not in every country and with diminishing returns. Examples of this point of view emerged from the

mid 1990s onwards, in particular, when the literature on the relationship between aid and growth increasingly focused on diminishing returns instead of on a linear relationship between the two variables.

The third view is that there is a conditional relationship between aid and growth, i.e. growth is influenced positively by aid only under certain circumstances. Underlying factors can be recipient country characteristics. The most influential view for development cooperation practice is that aid works best in those developing countries where “good” policies and institutions prevail. Furthermore, donor practices might influence the relationship between aid and growth. Although a limited range of research on the subject is available, evidence exists which supports the belief that a broader participation of the recipient country in the design of programmes or priority setting can lead to better results (“country ownership” and “participation”) (Radelet et al. 2008: 496-497).

Hansen and Tarp (2000) concluded a positive view on the correlation between aid and growth from an extensive survey of three generations of cross-country studies (1. Work on the relation between aid and savings/investment and resulting growth, founded e.g. on the Harrod-Domar model 2. Studies on the direct relationship between aid and growth 3. Studies e.g. incorporating policymaking). The authors found a robust aid-growth link between aid and growth for all generations of studies. What's more, the authors state that in each generation of studies, there are single studies concluding a negative view on the relationship between aid and growth. However, the authors determined that even in the simpler first generation models, the positive view of a correlation between aid and growth is clearly dominant. However, they support the view of the most influential third generation models (e.g. the influential study of Burnside and Dollar (1997), that the conditions under which aid is being transferred is a crucial factor determining the macro impact of aid. They concluded thus that it is not a question of whether aid works at all (in the sense of fostering economic growth), but rather whether and how the various aid instruments can be implemented efficiently in the various specific country circumstances. In addition to that, the authors did not see a micro-macro paradox, i.e. a non-consistency between the performance of development cooperation at the micro level and macro effects (Hansen and Tarp 2000: 123-124).

To sum up, the academic interest in whether development cooperation delivers a contribution to economic growth at all, along with which preconditions have to apply for a positive growth impact (e.g. good policies) represent ongoing open questions (Klingebiel 2013: 58). The importance attached to measurements of development cooperation at the micro level thus becomes apparent.

2.6.2.2 MICRO IMPACT

In the following, the basic principles of evaluation and monitoring of development cooperation at the micro level are outlined. Addressing this topic is relevant to obtaining a preliminary picture of the prevailing practice in this field.

The impact of development cooperation at the micro level can generally be analysed by applying an appropriate method of evaluation or monitoring. This usually is done by conducting a target and/or performance comparison of a development cooperation programme or project. In that process, the

evaluation allows for determining the efficiency of a programme or project. Furthermore, it aims at identifying the actual outcomes and effects of a programme or project. This also includes unintended effects arising from the scope of the programme or project.

Monitoring and evaluation are closely related but show different characteristics. Monitoring aims at optimising projects but above all it aims at the control of projects. The evaluation primarily focuses on the outcomes of projects and programmes and therein contributes to their legitimisation. While monitoring is usually conducted on a regular basis during the progress of the project or programme, evaluation is usually conducted at a single point in time (Nohlen 2002: 272-275).

The process of evaluation and monitoring requires the following: basic planning (what to examine, outlining participants in the project, etc.), considering local structures (making use of existing monitoring and evaluation structures instead of applying parallel structures), determining information needs (development of indicators, formulation of milestones, etc.), collecting data, extracting relevant information from collected data. However, in recent years, a trend has been to broaden the concept of monitoring. Rather than strict focus on individual project content, monitoring can be perceived as a constructive dialogue on development measures between government, civil society and donor community. This change in perception stems, for example, from a heightened focus on the implications of development cooperation measures on governance issues (Tekülve 2004: 13-15).

In any case, the final objective of monitoring and evaluation is to determine the efficiency of development cooperation measures.

In this context, efficiency is defined as the sum of all positive and negative effects of the measure (e.g. a project or programme) on the objectives which are supposed to be achieved with the measures. Thus, the effectiveness of development cooperation measures is higher, the higher the degree of target achievement (Hemmer 2002: 966).

In the evaluation of development cooperation projects, practically all major institutions involved in global development cooperation tend to follow the guidelines of the DAC in the design of their own evaluation instruments (Hemmer 2002: 969).

The DAC (2008b) defined the overall purpose of evaluation as the improvement of future policy, programmes and projects as well a means of providing a basis for accountability, for example, through the provision of information on development cooperation measures to the public. Hence, the evaluation process should be characterised by independence, impartiality and specifically the independence on the part of the evaluator. This independence is designed to avoid biased findings and improve the legitimacy of findings. It can be reached, for example, by separating the evaluation function from the process management of the development cooperation measure. Credibility of the evaluation also depends on the expertise of the evaluators and the transparency of the evaluation process. The evaluation outcomes must be presented in a clear and concise fashion so that utility of the whole procedure stands as a given. The aspect of timing is likewise important in that pursuit. Results are supposed to be available when they are needed in the decision-making process. Evaluation should not be limited to an ex-post analysis but rather can be a complement to regular monitoring (which is usually conducted by operational staff) during the process of the activity. Since evaluation findings are relevant to both parties, donors as well as recipients should be involved, ideally

complemented by the views and expertise of all groups affected by the activity. In order to avoid duplication of work and to enhance learning, different donors should collaborate with each other, for example, in the form of joint-evaluations. The overall coordination of evaluation should be guided by thorough planning organised by specialised agencies and complemented by guidelines and standards spelled out by the respective development cooperation agency. More concretely, the design and implementation of evaluations must entail the defined purpose and scope of the evaluation, clearly defined methods, underlying standards and determined resources along with time frames for the evaluation. The questions addressed in the evaluation should be stated a priori and constitute the basis for conclusions and recommendations. Hence, evaluation reporting should be made as clear and understandable as possible and should include feedback to all parties involved (DAC 2008b: 7-10).

In short, the DAC (2008c) summarised the main criteria for evaluating development assistance as follows:

- **Relevance:** This criterion refers to the question of whether the development cooperation activity or measure fits into the priority and policy setting conceptualisation of the target group, the recipient and the donor.
- **Effectiveness:** The measurement of the degree to which a development cooperation activity attains its objectives is in focus.
- **Efficiency:** This criterion refers to the qualitative and quantitative output in relation to input.
- **Impact:** Impact refers to the positive and negative implications directly or indirectly caused by development cooperation activities. It should involve intended and unintended results on – amongst other things – local social, economic and environmental development indicators.
- **Sustainability:** This criterion examines whether the positive impact of a development cooperation activity is likely to prove sustainable upon completion of the measure (i.e. the withdrawal of funding). To that end, activities and/or measures ought to be financially as well as environmentally sustainable. In case of failed sustainability, the question of what major factors lie behind the failure has to be posed.

(DAC 2008c)

2.7 FDI IN DEVELOPING COUNTRIES

The following subchapter elaborates on foreign direct investment in developing countries. FDI can have a significant impact on development in the recipient countries. This applies to developed as well as developing countries. It is however the subject of discussion whether the positive or the negative impact of FDI dominates, particularly in the case of developing countries.

A question that remains unaddressed in many studies about the impact of FDI is exactly how to categorise FDI into “good” or “bad” FDI. The choice of criteria applied to evaluate FDI is of central importance in that pursuit. From the point of view of a host country’s government, FDI evaluation is not limited to economic criteria. Rather, further criteria can be applied. FDI impact on income distribution

(regional or among ethnic groups) or its impact on political independence or security issues are for example of importance (Wells 2003: 107).

The role of other than economic factors in the evaluation of FDI from a development perspective is addressed in detail in the discussion of this matter in chapter 2.7.3 and 2.7.4. To begin with, the following subchapter briefly outlines the factors which determine the attractiveness of a country as a FDI host as well as the options available to policymakers for promoting FDI inflow.

The main focus of this subchapter is on the development relevance of FDI. Hence, the arguments which speak in favour or against the positive impact of FDI in developing countries will be summarised. This discussion is based on a brief summary of the volumes and directions of FDI towards developing countries.

Discussing FDI in this context is necessary for two reasons:

First, as it will be outlined in chapter 3, a core motivation for the establishment of PPP programmes is that development agencies recognised the potentially positive impact of FDI in developing countries. The need for a discussion of the positive and negative potential of FDI for development processes is thus a given. By establishing PPPs, development agencies aim at making use of the (perceived) positive external effects of this kind of capital inflow to developing countries or to ameliorate their negative external effects (Binder et al. 2007). In fact, making use of the positive potential of FDI for development purposes has been mentioned as the main motivation for the establishment of PPPs in the development cooperation framework. PPPs shall serve as a tool for making use of the increasing global FDI streams for development purposes (Widman 2008, Hartmann 2008). These objectives build on the changing attitudes on FDI for development purposes. In the debate about the role of FDI for development, a negative view, particularly in connection with the argument of exploitation of developing countries by multinational corporations (MNCs), the main sources of FDI, has long prevailed. This view has to a large extent been replaced by a debate on how to maximise the benefits of FDI for developing countries and how to minimise the attendant costs (Balasubramanyam 2003: 7).

Second, PPP projects can themselves be characterised as a controlled form of FDI. They are a vehicle from which to combine foreign private and public resources in a project aimed at improving the development status of the host country. In other words, PPPs directly foster FDI by providing companies with incentives to conduct investment in developing countries. During the last decade, ODA, for example by DAC countries, has stagnated, while FDI targeting developing countries showed a much higher increase. This fact heightens the importance of the private sector as a source of FDI and contributors to the economic growth and the reduction of poverty in developing countries (Tewes-Gratl et al. 2014: 10).

In the framework of this thesis, a brief outline of the relevance of FDI for developing countries shall be sufficient to that end. It will contribute to a better understanding of the motive for the integration of the private sector in development measures overall, and in the case of PPPs, in particular.²⁹

²⁹ For a more detailed discussion of the role of FDI for developing countries see e.g. Sauvart 2003.

2.7.1 DEFINITION AND VOLUMENS

FDI can be regarded as one of two major forms of international financial resource flows to developing countries. As outlined in this chapter, the first form is public and private development assistance. The second is foreign direct and portfolio investment. Foreign direct investment is in large part conducted by multinational corporations, the vast majority of which are rooted in developed countries. Portfolio investment entails investment in credit and equity markets by foreign private entities, e.g. banks, funds, corporations (Todaro and Smith 2006: 706). The main difference between FDI and portfolio investment lies in the extent of control monitoring. While portfolio investment goes hand in hand with the possession of financial claims, FDI goes along with the possession of proprietary rights. This means, for example, that a company from one country obtains control rights over another company or a subsidiary in a different country (Kjeldsen-Kragh 2002: 323).

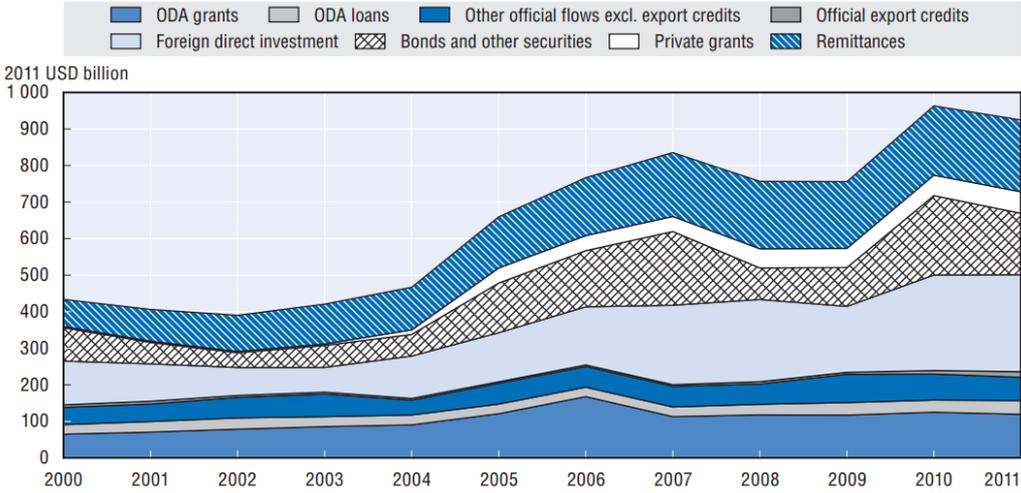
For the research subject of this thesis, private portfolio investment is of minor importance. So far, investment in credit and equity markets has not usually been subject in PPP projects.³⁰ Rather, PPP projects are typically characterised by a high degree of control by the private partner involved. Hence, the volume and impact of FDI will be of focus.

The main actors pursuing FDI are MNCs. This type of company is characterised by the ownership, control or management of facilities in several countries. MNCs generate about 25 % of the world's output, which makes them powerful players in the global economy (Salvatore 2007: 429). FDI and other non-ODA have been recognised as a source of financial resources for development. Moreover, the share of FDI in developing countries has shown a more stable, even countercyclical pattern compared to total global FDI flows (OECD 2014a: 72-73). The relative dependence on ODA flows for developing countries on the whole is decreasing. Nevertheless, the group of least developed countries remains more dependent than other groups, with a share of more than 70 % of total financial flows coming from ODA (OECD 2014a: 40-41, 44).

Figure 2.5 illustrates the shares of ODA as well as other financing sources for developing countries between 2000 and 2011. For the framework of this thesis, two observations concerning Global FDI trends shall be highlighted. First, developed countries remain the main source of FDI. Second, a structured and targeted channelling of ODA persists in serving as a vital factor particularly for the least developed countries. FDI has not been able to substitute ODA in the past and it seems unlikely that this situation will change in the near future. Thus, the task of setting up PPP frameworks to be vehicles combining ODA with “leveraging FDI” on the part of private actors remains relevant. PPP frameworks in this regard serve as a step to “bridge” ODA with FDI.

³⁰ There are however examples of PPP arrangements which potentially consist of portfolio investment e.g. in the field of microcredit schemes or shares of development agencies (such as bi- or multilateral banks) in larger PPP infrastructure projects. However, these arrangements do not represent the focus of this thesis and therefore the focus of analysis is on foreign direct investment instead of portfolio investment.

Figure 2.5 Relative weight of ODA in external financing to developing countries, 2000-2011



Notes: Total external financial resources include bilateral ODA, other official flows (OOF), private grants, private flows at market terms and remittances from DAC countries, and concessional and non-concessional outflows from multilateral agencies. From 2005 onwards, private grants are based on estimates from the Hudson Institute’s Centre for Global Prosperity, which uses a more generous definition than DAC statistics, including, for example, the imputed value of volunteer time.
 StatLink  <http://dx.doi.org/10.1787/888933121221>

Source: OECD 2014a: 41

2.7.2 ATTRACTIVENNES FOR AND PROMOTION OF FDI IN DEVELOPING COUNTRIES

Attractiveness as a FDI-location

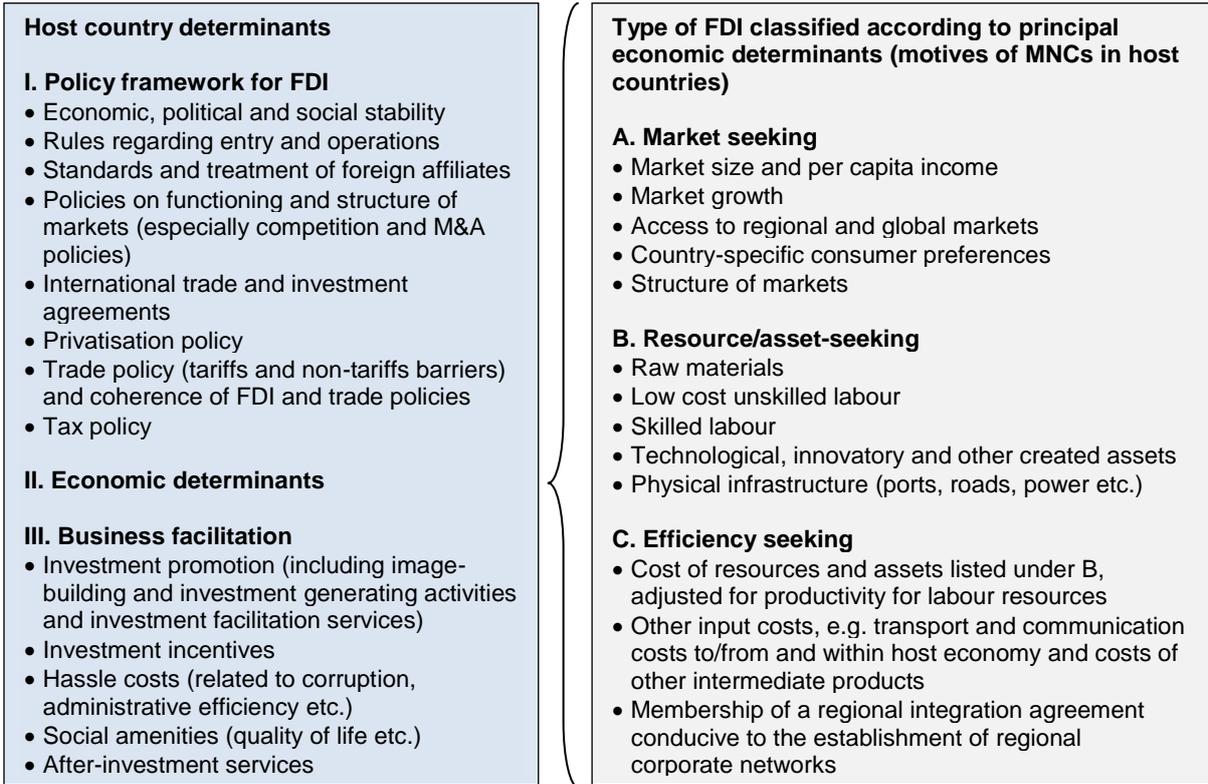
The primary objective behind FDI usually is not to make a development impact. Rather, MNCs follow economic objectives with their investment abroad. This can involve the development of new markets, the safeguarding of existing markets, the safeguarding of raw material sources or vertical integration aimed at reducing factor costs (Lachmann 1999: 226).

Different types of investors pursue different objectives when conducting FDI. Three main types can be classified. First, investors seeking markets aim at investments in large and/or growing markets. Second, investors seeking raw materials aim at securing natural resources for their own production. Third, investors seeking efficiency aim at establishing a competitive site for export production³¹ (Sauvant 2003: 86).

A selection of the main factors determining the attractiveness of a country for FDI is summarised in figure 2.6.

³¹ Other categorisations are possible, e.g. adding a fourth FDI category “strategic asset seeking”. For further information see e.g. Dunning 1998.

Figure 2.6 Selection of FDI determinants



Source: UNCTAD 1998: 91

Numerous attempts have been made to formulate the motivations and mechanisms behind FDI into one consistent theory. A wide variety of theoretical approaches attempt an explanation of FDI. It is however beyond the aim of this thesis to conduct a broad review of these approaches.

Nevertheless, three basic theories can illustrate the objectives behind FDI:

- **The theory of firm specific advantages:** In short, this theory states that FDI is motivated by the possibility of transferring specific know-how (e.g. technological or managerial) from one part of a company to a subsidiary abroad. This specific knowledge can lead to an advantage over competitors in the foreign market and therein to profit generation. This might occur in spite of other disadvantages related to the market entry (e.g. costs, lack of market specific knowledge etc.). This theory however does not explain why a company opts against choosing to export its goods or sell its specific know-how. Hence, a second theoretical aspect is taken into account.
- **The theory of location:** FDI can also be motivated by the existence of natural or artificial barrier costs (e.g. transport costs, tariffs, quotas). The establishment of a subsidiary can be utilised to circumvent these barriers instead of exporting. Finally, a third theory is needed to explain opting for FDI instead of selling company-specific knowledge to a foreign manufacturer.
- **The theory of internalisation:** This theory explains the motivation for FDI in advantages arising from horizontal or vertical integration processes. This can involve, for example, securing the supply side of raw or intermediate products by acquiring a supplier abroad. On

the downstream side, it can entail the establishment of a sales subsidiary abroad to exploit maximum revenue from the firm specific knowledge.

By taking these three factors – company specific advantages, location and internalisation – into consideration, the choice of a company between the three options a) to export b) to establish know-how contracts or c) to get involved in FDI, can be explained (Kjeldsen-Kragh 2002: 351-359).

Promoting FDI in developing countries

Overall, there has been a general development towards the liberalisation of FDI regimes and an increasing focus on FDI-attracting policies on the part of domestic governments (Christiansen and Ögütçü 2003: 28).

The promotion of FDI is of major concern in developing countries. That is, a market friendly approach is mainly pursued.³² Yet so far, FDI-attracting policies in developing countries do not substantially differ from policies in developed countries. At the same time, developing countries have to be particularly careful with regards to policymaking. Their market structures are less stable while their development needs are more dominant than in developed countries (Sauvant 2003: 86).

The following options summarise the primary ways of promoting FDI by the developing country policy makers:

The reduction of obstacles to FDI, for example, by lowering restrictions or admission barriers to the establishment and operation of foreign affiliates represents a key issue. Furthermore, the improvement of standards of treatment of foreign investors touches on the question of to what extent national treatment is granted to foreign corporations. Another central issue is the protection of foreign investors from, for example, nationalisation, expropriation or unfair treatment in dispute settlement. In addition to the creation of these basic framework conditions, the direct promotion of FDI inflows can be addressed by a country's government. This could entail an information campaign on local conditions and investment opportunities, or the offering of concrete incentives, or the improving of the institutional and administrative framework to specifically help accommodate foreign investment (Sauvant 2003: 87).

These options can be addressed by a single development country's government, but more importantly in the framework of bilateral, regional and interregional as well as multilateral agreements.

In addition, the promotion of FDI often is the objective or one of the objectives followed in private sector development programmes conducted by bilateral or multilateral donors.

The promotion of FDI is a broad and complex topic which shall however only be briefly addressed in the framework of this thesis. One aspect is particularly worth mentioning – summarised as a result of the fifth OECD Global forum on International Investment as follows: "FDI could not be allocated like state investment or ODA, but should be competed for and won. Therefore, the motto "policies matter" was widely shared among participants, if FDI's contribution to development were to be maximised" (Ögütçü 2003: 24).

³² For example, UNCTAD classified 236 of 248 regulatory changes in 70 countries in 2002 as FDI facilitating. In this liberalising trend, Asian countries play a leading role (Sauvant 2003: xv).

In that vein, the OECD summarised three main fields where host countries' governments can promote FDI through policymaking. First, general macroeconomic and institutional frameworks must be regulated in a stable and predictable way. Second, the regulatory environment must be designed appropriately. Third, domestic infrastructure, technology and human capital must be raised to such a level that the benefits from FDI can be reaped. A few policy examples are found, for example, in focusing on price stability and sustainable external accounts, fiscal discipline, public sector debt management, developing an appropriate tax system, establishing a sound financial system (Christiansen and Ögütçü 2003: 34-35).

At the same time, developing countries can be characterised by specific impediments to FDI. These potentially comprise weaknesses in the institutional environment and the legal framework (e.g. less developed business law concerning competition policy, regulatory policy, taxation, property rights). A lack of law enforcement might also apply. Further impediments to FDI can be found rooted in the informal institutions in developing countries, for example, in the dominance of traditional value systems (e.g. collectivist, particularistic, religious, or family-oriented values). Furthermore, interaction with business partners might be more relationship-oriented, partly due to a lack of trust in formal institutions such as the government (Meyer and Estrin 2004: 5).

2.7.3 ARGUMENTS PRO FDI FROM A DEVELOPMENT PERSPECTIVE

The following subchapter outlines the main arguments which back a positive view of FDI for development processes. Due to the complexity of the topic, this cannot however be regarded as an exhaustive outline. The main purpose rather is to obtain a better understanding of the motives behind promoting PPPs as a vehicle for FDI in developing countries.

The first arguments are based on neoclassical and new growth theory. These theories imply a domestically fuelled supply level of savings, foreign exchange, government revenue and skilled workforce and/or human capital. These resources are regarded as obvious preconditions for growth and development processes. If the desirable or necessary levels of these resources are not available domestically, FDI (and foreign aid) can fill the gap by a transfer of resources from abroad (Todaro and Smith 2006: 710).

Filling the investment gap: FDI can fill the gap between domestically available savings and the desired level of investment in order to enable development. Hence, development is defined as GDP growth (Todaro and Smith 2006: 711, Lachmann 1999: 227). This is of particular importance since in many developing countries, the rate of savings lags behind the desired level appropriate for ensuring capital building. In addition, many developing countries have only limited access to capital markets, which prevents them from conducting capital formation from this source. Even if saving rates are at appropriate levels, an insufficiently developed or unstable domestic banking system might prevent savings from being transferred to domestic investors (Christiansen and Ögütçü 2003: 30). The Harrod-Domar model (see chapter 2.3.2) is a simple but influential model formulating a relationship between the rate of a country's net savings and its output growth.

Filling the trade gap: As the mentioned gap in local savings suggests, a gap between a desired level of foreign exchange and the level domestically available from net export earnings plus net public foreign aid, can serve to hinder development. An inflow of private foreign capital can improve this situation in two ways. First, it can alleviate the deficit on the balance of payments current account on the occasion of the investment. Second, it can shorten the deficit over time by generating a net positive flow of export earnings (Todaro and Smith 2006: 711, Lachmann 1999: 227).

Trade integration: FDI may contribute to the integration of developing countries in the global economy by fostering and generating foreign trade flows. These trade flows may be a result of inter- (between companies) and intra- (e.g. between subsidiaries) firm linkages and networks. One policy option from the view of a developing country is, for example, to foster exports. This may be the case where FDI alleviates capital constraints so that a developing country can make use of its natural resources. Another policy option would be to limit imports by fostering domestic production through FDI (Christiansen and Ögütçü 2003: 31).

Filling the tax revenue gap: Domestic public budgets can be positively influenced by the taxation of operations of foreign subsidiaries (e.g. of MNCs). The revenues can in turn be used to finance public expenditures which foster development processes (Todaro and Smith 2006: 711, Lachmann 1999: 228).

Filling the human capital and knowledge gap: FDI may go along with the transfer of a bundle of technologies and knowledge. For example, the establishment of a production facility by a MNC in a developing country often involves the transfer of modern production equipment and management or entrepreneurial skills (Todaro and Smith 2006: 711). At the same time, developing countries are very often characterised by a lack of business and technical knowledge. Education and training measures, hands-on demonstrations of work-processes, or opportunities for simply learning while on-the-job, can all serve to substantially contribute to the local qualification level. This knowledge can be transferred by means of a change of workplace to local companies (Lachmann 1999: 228). For many developing countries, FDI represents the primary opportunity for increasing domestic real and human capital (Hemmer 2002: 338).

Spillover effects: The transfer of knowledge (e.g. about managerial and production methods related to a product or service) to domestic companies is usually entitled in literature as “spillover effects”. Spillover effects from FDI may occur horizontally, i.e. benefiting local competitors of the foreign firm. They may likewise occur vertically (i.e. up- or downstream the value chain).³³ Spillover effects stem in part from the fact that knowledge within a foreign company cannot be completely protected. A diffusion of knowledge (intended or unintended) to domestic companies might be the result (Burger 1998: 13-15).

Backward and forward linkages: The increase in demand for preliminary goods and services can benefit local suppliers. In addition, the international linkages of MNCs can lead to additional supply and/or demand options for local companies (Lachmann 1999: 228). In that process, the growth effect

³³ In literature, spillovers are sometimes divided into the two categories “technology diffusion” and “human capital building” as e.g. in OECD publications (see e.g. Christiansen and Ögütçü 2003: 31). In other publications, this strict categorisation is not applied.

of FDI increases, the higher the share of domestic companies in the value creation of the respective production (Hemmer 2002: 339).

Other direct effects: The potential direct positive effects of FDI are rather straightforward. That is, if investors cannot transfer the increase in real income caused by the investment completely into profits, then the local workforce nevertheless profits from increasing wages. Local workers generally profit from an increase in locally available jobs. A positive impact on unemployment and related migration of workforce is often the result. Domestic consumers can profit from an increase of supplied product variety and, in case of increased labour and capital productivity, from decreasing prices (Lachmann 1999: 227).

Stabilizing effects: Evidence suggests that a restriction of FDI can be a weakening factor for an economy. Korea's economy, for example, appeared to be relatively prone to crisis due to its open policy towards portfolio capital flows, with its however simultaneously restrictive existing policy towards FDI (Nunnenkamp 2006: 185). FDI can be counted as a more stable source of external finance compared to portfolio investment. In the case of financial crises, for example, portfolio investments (loans, short-term securities investments etc.) can be withdrawn from a country more easily and quickly than FDI. This argument is supported by the rates of volatility of FDI as compared to portfolio investment. To highlight, between 1990 and 2000, the volatility of FDI in a selection of developing countries³⁴ was significantly lower than the volatility of portfolio investment (Christiansen and Ögütçü 2003: 30).

Competition and enterprise development: The market entry of foreign firms through FDI may lead to increased competition particularly in developing and emerging markets, where competition might have been at a relatively low level. What's more, FDI often goes along with the transfer of management practices and corporate governance features (e.g. company policies, reporting system, principles of information disclosure). Increased effectiveness and/or efficiency on the industry or individual firm level may result (Christiansen and Ögütçü 2003: 32-33).

Environment and social issues: FDI may have significant implications on the environment and the social system of the host country. FDI may lead to the transfer of more environmentally friendly technologies to developing countries. The OECD concludes that in order to generate positive implications for the domestic environment, adequate environmental policies by the host government must be in place. Although only limited empirical research on the issues exists, the OECD furthermore concluded that FDI might lead to an improvement of domestic social standards (e.g. workers' rights). A general trend towards "a race to the bottom", both in term of environmental and social standards, cannot however be observed (Christiansen and Ögütçü 2003: 33-34).

³⁴ The countries in focus here have been: Argentina, Estonia, Indonesia, Mexico, Morocco, Pakistan, Philippines, Thailand, Venezuela. One exception is Brazil, where the volatility of FDI between 1990 and 2000 was higher than the volatility of portfolio investment (Christiansen and Ögütçü 2003: 30).

2.7.4 ARGUMENTS CONTRA FDI FROM A DEVELOPMENT PERSPECTIVE

In contrast to the arguments in favour of FDI to foster development, numerous arguments opposing the positive impact of FDI on developing countries can be identified:

Filling the investment gap: Foreign investment in developing countries may lead to lower levels of domestic savings and investment rates. Reasons for this controversial effect can be as follows: specific agreements with the domestic government which hinder competition, non-reinvesting of profits, the generation of profits for domestic groups with low saving propensities, the importing of intermediate goods instead of purchasing them from domestic companies. Finally, a crowding out of investment of local firms may be the result if foreign firms raise a share of their capital in the developing country (Todaro and Smith 2006: 712, Petras and Veltmeyer 2007: 133).

Filling the trade gap: The effect on the current as well as capital account of a country can also be negative rather than positive. In the case of import substitution, for example, an MNC might produce in a developing country for domestic consumption. The result can be a negative effect on the current account due to the import of equipment and intermediate products. Furthermore, a negative effect on the capital account can originate from the outflow of foreign exchange e.g. as profits, interests on private loans, royalty fees etc. (Todaro and Smith 2006: 711, Lachmann 1999: 229).

Trade integration: Empirical results from export promoting as well as import substituting policies through FDI are mixed. One important policy strategy is to foster exports through FDI by establishing export-processing zones. However, in reality, those zones have led to both increased exports as well increased imports. At the same time, these zones bore notable drawbacks and risks (e.g. costs for setting up these zones, the creation of unequal conditions for foreign and domestic companies etc.). In short, empirical observations concerning import substitution indicate that FDI in reality actually leads to an increase in imports (Christiansen and Ögütçü 2003: 31).

Filling the tax revenue gap: In practice, tax revenues from foreign investors (e.g. MNCs) in developing countries tend to be rather low. This can be due to tax concessions, investment allowances, hidden public subsidies or tariff protection of the MNC by the domestic government (Todaro and Smith 2006: 712, Petras and Veltmeyer 2007: 133). Plus, an efficient tax administration remains absent, i.e. not yet implemented in many developing countries (Lachmann 1999: 228).

Filling the gap of knowledge and skills: A transfer of skills and resources through FDI may in practice not actually take place. Furthermore, the dominant role of foreign owned companies in developing countries' markets may hinder the development of local companies (Todaro and Smith 2006: 712, Lachmann 1999: 231).

Apart from these arguments which directly oppose the "classical" arguments pro FDI in developing countries, an array of other contra arguments apply:

Fostering economic inequalities: FDI, for example, through MNC activities may well foster income inequalities in developing countries. A large wage differential between workers in modern sectors (e.g. production facilities of an MNC) and employment in traditional sectors (e.g. agricultural) may enter into

play. What's more, the interests of the modern sector might be favoured by policy measures which ultimately come at the expense of the traditional sector. An inappropriate diversion of resources away from food or the fostering of imbalances between rural and urban structures might be the result (Todaro and Smith: 713, Lachmann 1999: 230).

Inappropriate products: FDI may furthermore lead to the manufacturing of products which do not correspond to the needs of the majority of the population in a developing country, but rather to a small wealthy minority of the local population. Plus, self-destructive consumption preferences on the part of the local population may be also stimulated by advertising or excessive market power from foreign corporations (Todaro and Smith 2006: 713, Lachmann 1999: 229, Petras and Veltmeyer 2007: 132-133).

Exploiting of economic power: The strong bargaining position of MNCs might enable these corporations to demand measures by the domestic government which are unfavourable for development. Protective measures, tax exemptions, investment allowances or the provision of social services are but a few examples. In an extreme case, the foreign company's profits might even exceed the domestic social returns. Thus, the economic power of a MNC might lead to political power over the host country. Related to this aspect, the avoidance of local taxation by an MNC might take place by means of transfer pricing. By inserting an excessive price on intermediate products, a MNC might be able to shift profits from high tax to low tax countries (Todaro and Smith 2006: 713, Lachmann 1999: 229-230, Petras and Veltmeyer 2007: 131-132).

Competition and enterprise development: The argument of increased competition in the FDI host country might be obsolete regarding the potential market power of individual MNCs. Competition by MNCs might in fact lead to the closure of domestic companies and in the end, to decreased competition. In addition, potential efficiency and effectiveness gains through the transfer of corporate governance features might not take place in the host country on the whole. Rather, the transfer of these standards might only increase efficiency and/or effectiveness at the level of the industry or of the individual firm where foreign practices are superior to domestic practices (Christiansen and Ögütçü 2003: 32-33).

Environment and social issues: Although the majority of technology transferred to developing countries in the framework of FDI might be environmentally friendly, there has been, in the words of Christiansen and Ögütçü, "anecdotal evidence" (Christiansen and Ögütçü 2003: 33) of the transfer of technology which appeared environmentally unsuitable in the home country. What's more, cases might be found in which MNCs veritably undermine core social standards such as workers' rights.

2.8 THE PRIVATE SECTOR AND DEVELOPMENT COOPERATION

A prospering private sector is a source of innovation and employment and is thus of central importance for growth and poverty reduction in developing countries (OECD 2007b: 21). Jimoh (2004) summarised that "today, the conventional wisdom is that the private sector should be the engine of growth in developing countries" (Jimoh 2004: 92).

As outlined in the previous subchapters, more doubts exist concerning the effects of foreign investments in the private sector in developing countries. Both, the central importance of a sound private sector as well as the ambiguity of FDI in developing countries have been recognised by national and international institutions and organisations concerned with development issues. Based on these insights, numerous actors in developing cooperation have established initiatives and programmes to a) generally foster the private sector in developing countries and b) enhance the development impact of foreign investment in developing countries and create opportunities for the private sector to actively participate in the development cooperation framework.

The following subchapter elaborates on both of these aspects. First, a brief overview of the large existing range of private sector development efforts in the development cooperation framework is given. Second, driving forces of private sector participation in development cooperation measures are outlined.

Overall, strategies and measures related to the private sector have generally not only become an essential part in national policy making in developing countries. They are also in focus within the development corporation strategies of bilateral and multilateral donors (OECD 2007b: 11). Moreover, a shift in the source of development funding has taken place. Resources provided by public entities (e.g. ODA provided by developed countries' governments and supranational institutions) have been complemented substantially by private sector flows to the developing world (Teegen 2006: 263-264). The need to address these topics in the framework of this thesis seems to be evident since PPPs constitute part of the broad range of private sector integrating measures in development cooperation.

It has to be stressed that the strategies mentioned here do not exclusively refer to partnership arrangements between donors and the private sector. Neither do these measures exclusively involve measures which are implemented by donors or their agencies alone. It is rather often the case that donors take the role of supporting and advising developing countries' governments in policymaking and implementing. In any case, the private sector plays a crucial role in the aforementioned strategies and measures. Development institutions are likewise involved in all measures at some point along the way.

2.8.1 PRIVATE SECTOR DEVELOPMENT

Nelson (2002) outlined that “the greatest contribution business can make to development is to produce safe and cost-effective products and services in a profitable manner while obeying the law, enhancing the positive economic, social and environmental multipliers associated with this process and managing and minimizing the negative multipliers” (Nelson 2002: 223). This statement sums up the potential role of business in the development process. Specifically, when crossing borders, private businesses are expected to: produce income, revenues and investment (through taxes, dividends, wages etc.), create employment, contribute to the development and training of human resources, contribute to the development of other (local) businesses (through backward and forward linkages), distribute practices and standards (e.g. concerning environment, health and safety management, human rights, ethics etc.) (Nelson 2002: 223).

This basic rationale serves as the motivation for numerous variants of private sector development measures in the development cooperation framework.³⁵

A rough classification of these measures can be made according to the level where they take place. Table 2.2 illustrates a selection of elements of private sector development, classified into international, macro, meso and micro levels:

Table 2.1 Levels, elements and practical examples of private sector development

| | Elements | Examples |
|----------------------|--|--|
| International | <ul style="list-style-type: none"> • Free and rule-governed international trade • Access to international markets • Debt reduction • Donor policies and practices (including coordination) | <ul style="list-style-type: none"> • Lobby on behalf of poor countries multilaterally or towards donor countries • Increase trade with southern countries • Set up bilateral investment treaties with developing countries regulating FDI • Set up coherent private sector development policies among donors • Increased donor coordination and reduction of tied aid |
| Macro | <p>Macroeconomic policies:</p> <ul style="list-style-type: none"> • Trade policy • Privatisation • Exchange rate, monetary, labour market and fiscal policies • Inflation reduction • Financial institutions (capital market) • Balance of payments regulation <p>Physical infrastructure and human capital:</p> <ul style="list-style-type: none"> • Education and skill training • Healthcare • Roads, railways, telecommunication etc. • Social security and pension schemes <p>Good governance:</p> <ul style="list-style-type: none"> • Fight against corruption • Transparency | <ul style="list-style-type: none"> • Strengthening economic and industrial policy of developing countries through technical assistance, training and exposure • Support economic reform programmes • Support debt relief for poor countries • Improve physical infrastructure in developing countries • Improve human capital in developing countries (e.g. through technical or financial assistance) • Provide technical assistance in the fields of labour, laws and pension funds • Provide assistance in the field of policymaking, transparency of governments, the fight against |

³⁵ For a detailed list of existing private sector development programmes by bilateral and multilateral donors see e.g. Gibbon and Schulpen 2004: 73-84.

| | | |
|--------------|--|---|
| | <ul style="list-style-type: none"> • Legal system • Competition policy • Corporate governance | <p>corruption</p> <ul style="list-style-type: none"> • Increased coordination between donors |
| Meso | <p>Institutional Infrastructure:</p> <ul style="list-style-type: none"> • Chamber of commerce • Employers' organisation • Labour unions • Intermediary financial institutions • R&D institutions • Training institutions | <ul style="list-style-type: none"> • Strengthen the institutional framework through increased cooperation between labour unions, employers' organisations, chambers of commerce in developed and developing countries (e.g. through funding, training, exposure) • Provide training to foster cooperation between social partners (e.g. between labour and employers' organisations, civil society etc.) • Increase coordination among donors |
| Micro | <ul style="list-style-type: none"> • Access to technology, expertise and capital • Manpower • Management and entrepreneurship • Market access and information | <ul style="list-style-type: none"> • Support enterprises through e.g. transfer of technology, training and competence building, financing, supervision • Support for improving access to financing by micro credit schemes of governments and NGOs, providing risk capital, loan schemes, guarantee schemes and local investment funds to the private sector • Support for local market improvements, storage systems and marketing knowledge • Provide assistance to increase agricultural production as a base for economic growth • Increase local or regional procurement and the use of local or regional consultants within aid (including emergency aid) interventions • Increased intervention between donors |

Source: own illustration based on Gibbon and Schulpen 2004: 45-46

Another classification of private sector development measures can be made according to the content of the measures. Based on Kragh et. al (2000), a categorisation of support programmes into four broad fields is possible (Kragh et. al. 2000: 319-330)³⁶:

Investment support programmes: From the late 1960s onwards, a share of foreign aid from European countries was transferred through national venture capital funds. These funds were supposed to invest, usually in joint ventures, in the respective developing country. The basic objective of the establishment of these funds was grounded in the perception of the indispensable role which capital accumulation plays in economic growth in developing countries. In practice, international and national venture funds usually provide loans, equity or guarantees, sometimes accompanied by training measures or the funding of feasibility or technical studies. Funding is usually provided in foreign currency in circumstances close to market conditions but with more favourable elements. The International Finance Corporation (a part of the World Bank Group) is the largest multilateral source of private sector funding in developing countries. Furthermore, various regional development banks have created their own funds. Institutions providing these grants are potentially willing to take higher market risks with their investment, while the recipients enjoy more favourable conditions compared to acquiring funding on the free capital market. However, financial resources transferred through these funds cannot necessarily be classified as aid according to the DAC definition (Kragh et. al. 2000: 319-321).

Enabling environment support programmes: Kragh et al. (2000) summarised that “an enabling environment concerns rules, regulations, information, physical and financial infrastructure, research and development, education, training and other resources, created outside the company but affecting operations inside the company” (Kragh et al. 2000: 322). Measures in this category usually take place above the micro level. The advantage of supporting the environment above the firm level is that this way no distortions in competition arise since all companies benefit from the measures. In practice, the World Bank is the largest individual institution in this field. Within its structures, there is, for example, a “business environment group”, which supports domestic governments in all fields of fostering a private sector enabling environment. Areas of activities in this working group are as follows: market framework institutions and policies, consensus building (comprising Public Private Partnerships), export development and external linkages, as well as training and technology access (Kragh et al. 2000: 322-323).

Privatisation and commercialisation: The objective of measures in this field lies in the improvement of efficiency in the public sector. This should be achieved by restructuring the public sector through privatisation and commercialisation. In that process, privatisation entails the transfer of state owned enterprises into the private sector. Commercialisation involves strengthening the efficiency of operation of public enterprise (e.g. by introducing private sector type management systems etc.) without changing the ownership structures. In practice, once again, the World Bank is the most important player in such privatisation programmes. In addition, various bilateral donors have likewise implemented programmes in this field. Programmes consist of not only consultation for managing the privatisation process but also the loans to finance it. Assistance at all stages of the process, including

³⁶ Different classification systems are possible, e.g. a twofold classification into financial and non-financial instruments, as applied e.g. in Jimoh 2004: 102.

the post-privatisation stage serve to help to make the changes sustainable (Kragh et al. 2000: 325-326).

Business partnership programmes: Business partnership programmes draw on shortcomings of purely public investment promotion programmes. Private companies from donor countries are supposed to be integrated on a more permanent basis. These types of programmes involve the donor providing the participating company in the recipient country with complementary capital, technology, know-how or market access. Thus, the target group of these types of programmes are individual companies (Kragh et. al 2000: 328). The motivation behind establishing business partnership programmes is founded in the belief that the private sector can contribute to development objectives in various ways. Hence, the contributions of the private partner range from core activities and competencies, to policy input and philanthropic measures (Nelson 2002: 5).

Table 2.3 summarises the potential input of the private sector.

Table 2.2 Potential business resources for cooperation

| | |
|---|--|
| Core activities and competencies | Investment, employment, training, products and services, technology, infrastructure, business standards, business linkages |
| Policy input | Technical consultation on standard-setting and normative frameworks, involvement in broader policy dialogues and governance structures |
| Philanthropy | Philanthropic funds, social investments, product donations, involvement of volunteers |

Source: Nelson 2002: 5

The range of existing PPP programmes in the development cooperation framework is part of this category. They will be outlined more in detail in chapter 3.

2.8.2 DRIVING FORCES OF PRIVATE PARTICIPATION IN DEVELOPMENT COOPERATION

In the past, private enterprises played only a very limited role in development cooperation measures in developing countries. Rather, it was the state and the political class that became most important actors when it came to efforts of fostering development. However, politicians and bureaucrats in developing countries have in many cases not been able to fulfill their role as recipient and administrator of development aid resources (Stockmann 1997: 16).

This situation is changing. Integrating the private sector into development cooperation is becoming increasingly important in this pursuit. The following incomplete list summarises the driving forces behind the integration of the private sector in development cooperation:

FDI flows: Increasing volumes of private investment in developing countries gave rise to the need to make use of these private investment flows for development purposes (Hartmann 2008, Demtschük 2004: 12, Binder et al. 2007: 12).

Public budget restrictions: Monetary resources for financing development cooperation are limited. Following development objectives in the midst of scarce public budgets serves as a major driving force for integrating the private sector into developing cooperation measures (Lachmann 1999: XIX). Financial constraints are also a major motivation for developing countries' governments to make use of PPPs (Rondinelli 2002: 382).

Liberalisation and deregulation: Increased deregulation and liberalisation policies on the part of domestic economies give room for increased private activities in developing countries. In combination with political change and technological innovation, it leads to an internationalisation of production and consumption patterns (Binder et al. 2007: 12).

Privatisation and related trends: Traditional domains of public activity are being progressively reduced to core services provided by the public. Moreover, principles of private business are being introduced into public spheres whilst the private sector has taken on an active part in ongoing market reform processes in developing and industrial nations (Demtschük 2004: 12). In particular, developing countries' governments have made use of private financing structures to fund infrastructure investments (e.g. ports, railroads, airports, motorways etc.). Specifically, PPPs have been used as an alternative to full privatisation or as one step on the way to complete privatisation of former state-owned enterprises (Rondinelli 2002: 381).

Corporate social responsibility (CSR): The demand for participation in development cooperation projects on the part of private cooperations partly is founded in the trend of changing consumer behaviour. In that vein, social and ecological competencies and related activities are becoming a competition factor for cooperations (Demtschük 2004: 12).

Dealing with the risk of conflict: Globalisation led to increased corporate activities in global spaces, which are characterised by instable or even insecure political and social structures. At the same time, companies have been becoming more aware of this instability. The result is a rising corporate awareness of the importance of their contribution to mitigating the situation of instability in developing countries. This contribution could, in the framework of partnerships with development institutions, take the form of contributing to the development of future markets or the protection of sources of key raw materials (Nelson 2002: 210-211).

Integration of the private sector in global development efforts: The formulation of the Millenium Development Goal No. 8 ("Developing a Global Partnership for Development") calls for an integration of the private sector in development efforts. The particular strengths of various sectors are to be combined and utilised to reach development objectives (Teegen 2006: 265).

2.9 CHAPTER CONCLUSION

This chapter started with an examination of the most common definitions of the terms developing country and development cooperation. In this respect, the definition of a developing country applied in this thesis mainly refers to the criterion of the level of income, as proposed, for example by the World

Bank. However, it is well recognised that other factors (such as imperfect markets etc.) supplement the definition of a developing country.

Development cooperation has been defined as the process of putting development policy into practice by the means of a broad range of existing tools and channels.

On top of that, some fundamental approaches of economic development theory have been outlined. This consisted of neoclassical theory streams (Harrod-Domar and two-gap model), as well as new growth/endogenous growth theory (Romer model), complemented by a brief overview of the evolution of development theory. In that process, the factors of capital accumulation, human capital and/or knowledge, as well as the availability of technology and/or technological know-how have been identified as beneficial factors or even prerequisites for development processes (defined as economic growth).

In the following step, the main objectives of development cooperation were presented. There is economic growth, on the one hand, and multiple sets of objectives (e.g. the MDGs), on the other hand. This was complemented by an overview of the existing range of development cooperation tools and channels.

The question of whether development cooperation showed a positive performance (in regards to achieving central development objectives such as economic growth) is the focus in the next subchapter. At a macro level, studies showed diverging results concerning this question. However, a positive view of the impact of development cooperation on growth processes stands predominant. Nevertheless, studies on the micro (e.g. the project) level can deliver a more detailed picture in that pursuit. Hence, evaluations at the project level should focus on core elements such as efficiency, effectiveness and impact while considering some basic process rules (e.g. transparency).

The topic of FDI in developing countries was addressed as FDI presents a wide range of opportunities for the developing world. There are great potential benefits of FDI in terms of stimulated economic growth, amongst other advantages. The predominant view in literature is that of a positive view of the implications of FDI on growth (i.e. developing processes) in developing countries. However, a host of potential negative implications go hand in hand with FDI. The pros and cons of a positive view on FDI have been summarised.

At the micro level, critical factors in the analysis of FDI lie in answering the question, for example, of whether a real formation of physical or financial capital in developing countries occurs, along with whether a real formation of human capital or a transfer of technology actually take place. These aspects will therefore be considered in the empirical analyses in the subsequent chapters 4 and 5 of this thesis. In economic terms, it can be concluded that there are potential costs associated with FDI, for example, due to unintended side effects of the investment. At the same time, it can be argued that these costs are typically of a rather short duration and policy measures in the FDI host country can potentially allay these negative side effects (Christiansen and Ögütçü 2003: 29). This statement is of central importance in the framework of this thesis. Attracting FDI is a standard justification of the promotion of various private sector promotion policy measures in developing countries, both on the part of domestic policymakers and foreign developing institutions and agencies.

However, the issue is more complex than outlined in many developing strategy formulations of bilateral and multilateral donors. The recommendations of Kumar and Pradhan (2005) encapsulate the arguably most important conclusions on the topic. There is indication to believe that “causality runs from growth to FDI” (Kumar and Pradhan 2005: 66). Thus, policymakers should not simply “wait” for FDI. Rather, policymakers in developing countries should focus on human resources, improving infrastructure, developing local entrepreneurship and generally create stable macroeconomic framework conditions conducive to productive investment (Kumar and Pradhan 2005: 67).

This is a central motivation in all efforts to stimulate private sector involvement in developing countries. A high level overview of the variety of efforts aimed at fostering the private sector in developing cooperation has been given. The promotion of FDI in developing countries constitutes part of these efforts. Private sector promotion in general and FDI promotion in particular, form the relevant background setting of this thesis since the subject of this thesis, PPPs, can be regarded as a specific vehicle for FDI.

In the next chapter, this specific means of promoting private sector activity in developing countries will be outlined in detail.

3 PUBLIC PRIVATE PARTNERSHIPS

3.1 INTRODUCTION

This chapter outlines a definition of the term “Public Private Partnership” (PPP), its application in German development cooperation, along with a literature review of success factors in PPPs.

To start with, several definitions are given for understanding the purpose and mechanisms of public-private arrangements. In addition, the general characteristics of this kind of arrangement are addressed. This includes an analysis of the objectives and roles of the partners. Subsequently, a summary of various existing fields and forms of application of the PPP approach in practice will follow.

Since the central topic of this thesis is the application of PPP arrangements in development cooperation, a separate subchapter outlines the specific characteristics of this field of application. A classification of partnership arrangements in the development cooperation framework is likewise included. Of particular importance for answering the research questions is a summary of perceptions about benefits and limitations of PPPs in development cooperation.

As part of the background for the empirical analyses in chapter 4 and 5, the application of PPPs in the German development cooperation framework is outlined.

The subsequent literature review of success and failure mechanisms of PPPs directly contributes to answering the research questions and serves as further preparation for the empirical analyses in the subsequent chapters.

At the end of the chapter, two objectives shall be met. First, the reader should be familiar with the overall character of PPPs. Second, the specific aspects of the application of PPPs in development cooperation should be outlined. This comprises a discussion of benefits, risks, opportunities and obstacles concerning PPPs in development cooperation.

This mostly descriptive chapter is a necessary complement to the outline of development cooperation in the previous chapter. Combined, the two chapters form the framework for the empirical work in chapter 4 and 5.

3.2 DEFINITIONS

Pinpointing a definition of PPPs is commonly viewed as a difficult task: “Public Private Partnerships (PPPs) are notoriously hard to define” (Ewans and Bowman 2005). Moreover, there is indeed, in the words of IOB, “no universal accepted definition of Public Private Partnership” (IOB 2013: 17).

To get a grip on a definition of the term “Public Private Partnership”, several elements need clarification in advance. First, a distinction between the private and public sphere from an economic point of view has to be made. Second, the term partnership will be clarified before, in a final step, a working definition of the term Public Private Partnership is settled on.

The public and the private sphere

Peters (1994) stated that the terms “public” and “private” can be understood as main terms implemented in social and political order systems. In its first meaning, the term public together with the antonym private distinguish areas of social action and the responsibility of fundamentally differing normative characters. Public and private can refer to action, the institutional framework of action (functions/positions, competencies), and the conditions for action, with regards to the disposal over resources. Generally, in the private sphere, members of a society can pursue their objectives and take action without being controlled by collective decisions or having to legitimate their actions towards the public. The term public in this sense refers to the juridical, political, governmental community. Decisions taken in this framework are not only binding but are also supposed to be taken in the interest of the citizenry and be under the public’s control (Peters 1994: 42-45).

In an economic context, the aspect of property rights is of importance for distinguishing between the terms public and private. Kasper and Streit (1999) defined property rights as “a bundle of protected rights of individuals and organisations to hold or dispose of certain assets, for example by acquiring, using, mortgaging and transferring assets [...]” (Kasper and Streit 1999: 175-176).

In case of private property rights, the owners have the right to exclude others from possessing, using and obtaining benefits from the property. The attribute of excludability is the central precondition of all incentivizing mechanisms connected to private property rights. The internalisation of the benefits and costs which property rights bear can only take place if the exclusion of others is possible. In case of complete internalisation, the benefits and costs have direct and complete impact on decisions, expectations and decisions of the property rights owner (Kasper and Streit 1999: 175-178).

The term “partnership”

The term partnership describes a cooperative structure between two or more actors. Cooperation is typically characterised by the pursuit of a common objective on the part of the participating actors. In case of cooperation, these goals usually are the establishment of competitive advantages (Backhaus and Meyer 1993: 330).

Hence, the terms cooperation or partnership can be applied if people or organisations work together to reach a common goal, and if they pool their resources and power in order to reach a common goal in a better way (Kyrer 2001: 178).

The term partnership covers, according to McQuaid (2000) a “wide variety of relationship in a myriad of circumstances and locations” (McQuaid 2000: 10). A definition of the term “partnership” comes with several underlying assumptions. The first assumption is the existence of potential for synergy. Second, a partnership involves the development and delivery of a strategy or a set of projects or operations. Third, in a Public Private Partnership, the public sector does not follow exclusively commercial objectives (McQuaid 2000: 11).

In other words, the term partnership implies that two or more partners share risks and opportunities (i.e. gains) in a cooperative arrangement.

The risks attached can be of various kinds. First, there is the risk of moral hazard. In this case, one partner might not fulfil its obligations. Second, there is a technological risk. This type of risk describes

the fact that each PPP bears the risk of failure in the technical feasibility of the project. Third, there is an economic risk, referring to the rate of return of an investment (Lacasse and Wall 1994: 13).

The gains which may result from the cooperation constitute the so-called *cooperation rent*. It is defined as the positive difference of return in a situation with cooperation as opposed to a situation without cooperation (Kyrer 2001: 178).

More specifically, Nelson (2002) identified key features of a partnership, using the example of an analysis of the broad range of relationships of the UN system with the private sector:

- **Mutual dependency:** Partners share resources, benefits and risks. This individual input leads to a common stake in the process and outcome of the arrangement.
- **Commitment:** A partnership involves an explicit agreement or commitment. This formal or informal arrangement includes a clear conceptualisation of the problem or topic, an outline of the potentially differing interests of partners, as well as an agreement on the responsibility and roles of the partners.
- **Working together:** The central characteristic and distinguishing element as compared with other relationships (e.g. a procurement contract etc.), lies with the existence of shared decision-making and problem solving in the context of the partnership.
- **Voluntary nature:** Partners join voluntarily, although the private sector might be pressured into joining a partnership (e.g. through civil society).
- **Concept of “value added”:** In spite of transaction costs for building and maintaining a partnership, the sum of an effective and sustainable partnership is greater than its individual input.
- **Sharing of resources and competencies:** In a partnership, not only financial contributions of the private sector are relevant. Rather, other inputs such as management or technical know-how, networks or products can contribute to the common objective.

(Nelson 2002: 46-47)

Public Private Partnership (PPP)

No universally accepted clear definition of the term Public Private Partnership has been established so far (OECD 2008a: 16, Potacs 2003: 27, Roggencamp 1998: 25, IOB 2013: 17).

In addition to the lack of a clear definition, the term often is used for all kinds of cooperation between the public and the private sector (Budäus et al. 1997: 16), is used not sufficiently differentiated from the terms privatisation and deregulation (Roggencamp 1998: 25), and/or is used “in a very loose fashion” (Carroll and Steane 2000: 37).

Generally, the term PPP refers to a cooperative agreement between a public service provider or producer on the one hand, and private economic units on the other (Potacs 2003: 27).

McQuaid (2000) analysed the UK government’s definition of the term for their partnership approach. He listed the following issues as key elements of this definition: the voluntary nature of relationships, the wide range of participants, the requirement of having a commonly agreed upon strategy, the long-term perspective and agreed contribution of resources to the partnership process with a simultaneous sharing of risks (McQuaid 2000: 11-12).

The participants in a PPP can be public organisations, private organisations as well as semi-public and non-profit organisations (Roggencamp 1998: 36). The pooling of resources, furthermore, is a central characteristic of a PPP. The lifespan of this resource pooling process ultimately defines the time span of the existence of the given PPP. When the resource pooling is broken up, a PPP can be regarded as terminated (Budäus et al. 1997: 16-17).

In this thesis, the working definition of a PPP is based on the definition applied by Kouwenhoven (1993). This definition summarised the main characteristics of a PPP as follows:

- A PPP comprises an interaction between public and private actors that follows complementary/convergent objectives.
- The objectives might comprise social as well as commercial aspects.
- Within a PPP, synergy potentials are developed.
- Within a PPP, the identity and responsibility of the partners remain intact.
- In a PPP, cooperation is formalised by contract.

(Kouwenhoven 1993: 120)

Grimsey and Lewis (2004) incorporated these characteristics into their definition of a PPP as the following: “a risk-sharing relationship based on a shared aspiration between the public sector and one or more partners from the private and/or voluntary sector to deliver a publicly agreed outcome and/or public service” (Grimsey and Lewis 2004: xiv).

An outline of specific arrangements of PPPs in practice in the next subchapter illustrates these key characteristics.

3.3 PPPS IN PRACTICE

This subchapter elaborates on the application of PPPs in practice. To start with, the objectives and expectations of the public and the private partner towards a PPP are outlined. The process of establishing a PPP is drafted, an overview of the range of organisational settings in practice is given, and general trends and developments are then summarised.

3.3.1 OBJECTIVES AND EXPECTATIONS OF THE PUBLIC PARTNER

Public as well as private partners have specific expectations of a PPP. These expectations fulfil several functions at a time. First, participants are encouraged to consider and discuss the formation of a partnership. Second, expectations and beliefs of the partners about the specific terms and configuration of the partnership determine its practical shape and content. Third, expectations influence a partnership concerning their role of norms. Norms and perceptions about appropriate behaviour, furthermore, have implications on the proceedings of the partnership. Finally, expectations can induce change if the partnership’s content or its terms are no longer regarded as adequate (Carroll and Steane 2000: 38).

The most relevant expectations and objectives of the public partner can be summarised as follows:

Making use of private resources and shifting risks

The first motivation behind collaborating with private actors is a lack of resources on the part of the government, or the inability of the government to mobilise resources. Since the government does not act on its own account, but rather commands resources on behalf of the citizens, i.e. the taxpayer, the lack of resources or the inability to mobilise is connected to one of the following rationales.

Citizens might be unwilling to fund certain government projects. In case the will of citizens (i.e. agreement or rejections of a certain project) cannot be anticipated, there might still be a missing tolerance for certain projects on the part of the citizens on such grounds as budgets constraints. Tolerance by citizens for a certain project might only be reached in cases where funding is shared among governmental and private actors. Procedural impediments (e.g. debt limits or budget rules) might likewise prevent the funding of a certain project. Finally, the group that benefits most from a certain project might be rather small. In this case, citizens might call for a participation in funding of the project by the benefiting group (Donahue and Zeckhauser 2006: 506).

In any case, a PPP should, in theory, proceed on the basis of some kind of reduction of the taxpayer burden (Adams, Young and Zhihong 2006: 385). Thus, acquiring private resources to perform public tasks can be regarded as the most relevant objective of a public party in seeking to participate in a PPP (Budäus 2004: 14, Tewes-Gradl et al. 2014: 11). The International Monetary Fund (IMF) stressed, furthermore, the potential of PPPs to finance infrastructure without adding to governments' debt. At the same time, the objective of governments is to generate revenues with a PPP (IMF 2004: 4). In different terms, PPPs can be utilised by the public partner for the purpose of partly shifting risks (e.g. of an infrastructure investment) onto the private sector (Linder 2000: 29).

Risk sharing

This factor is closely related to the objective of risk shifting but generally is independent of the objective of leveraging additional resources. Plus, it exists at the nexus of public and private sectors.

In a PPP, the financial risk associated with a project is shared between public and private actors. The risk sharing protects taxpayers by transferring parts of the risk of a project to the private partner (Budäus 2004: 14). Future taxpayers, in particular, are protected from carrying the financial burden of decisions taken in the past (Adams et al. 2006: 385). Risk sharing can be seen as an offer of the public partner to the private partner (Callan and Davis 2013: 9).

Productivity gains

Another rationale behind public private collaboration is the achievement of productivity gains. Certain production capacities are simply not possessed by the government. In other cases, even if the public sector has the respective production capacity, private participation may increase efficiency in production and/or lower costs. Particularly in the case of the productivity advantages at the disposal of the private actor, collaboration becomes an appropriate tool for making use of them (Donahue and Zeckhauser 2006: 506, Linder 2000: 27).

In sum, the public partner potentially makes use of the effectiveness and efficiency of a private actor in the delivery of services. Achieving a similar efficiency in the public sector is prevented by bureaucratic and political modus operandi. Private actors can positively influence public sector work by introducing

more efficient and less bureaucratic work procedures (Adams et al. 2006: 385). Generally, PPPs provide the option of making use of markets and competitive structures, which includes making innovations accessible to the public. Reaching a higher efficiency level in performing tasks of the public sector is the underlying intention (Budäus 2004: 14). The final result should be increased service quality at lower costs (IMF 2004: 4).

Information

Information can be regarded as a specific form of resource. Information on such matters as technical processes might be exclusive to private actors. Making use of this information to fulfil public tasks may be impossible or only possible at prohibitively high costs in the absence of a partnership. In this case, collaboration with a private actor, who possesses the relevant information, can be inevitable even if the government's resources are not constrained or government productivity is on the same level as private productivity (Donahue and Zeckhauser 2006: 506).

Legitimacy, political and ideological reasons

Legitimacy gains through collaboration with private actors become particularly relevant in the case that pursuing a certain project by the government alone is regarded as inadequate by the public (Donahue and Zeckhauser 2006: 507).

Political reasons, for example, founded in an ideological belief in economic liberalisation, can be a further potential objective from a public partners' point of view (IOB 2013: 26).

Growth and employment

For the public partner, a PPP might be a means of achieving public policy objectives such as the generation of growth and employment (Budäus 2004: 14). Furthermore, the anticipated continuation of business after the end of public funding is expected to increase the sustainability and scalability of project outcomes.

Risks to a PPP from a public partner's perspective can be the need to prove the supplementary nature of the public funding share as well as potential losses in reputation (Tewes-Gradl et al. 2014: 11).

3.3.2 OBJECTIVES AND EXPECTATIONS OF THE PRIVATE PARTNER

On the private side of a Public Private Partnership, the expectations and objectives for collaboration do not differ from the objectives of a purely private business entity. Hence, the profit motive is of interest first and foremost. The striving for profit implies incentive mechanisms that can positively influence the efficiency of an operation (Donahue and Zeckhauser 2006: 506). As with all forms of investment, the opportunity for profit generation for the private partner goes hand in hand with investment risks. Purely financial PPPs (e.g. for infrastructure development), for example, bear in many constellations the financial risk of ownership (Linder 2000: 30). More concretely, the profits of the private partner can derive from several sources:

Capital investment

A PPP represents a new opportunity for the private partner to invest capital in a specific arrangement (Budäus 2004: 14). The generation of returns from the invested capital is the primary overall objective of a private company to participate in a PPP. Since returns from a PPP are often shared between the public and the private partner, the distribution of gains among the partners determines the private partner's profits. Obviously, the private partner is interested in acquiring the highest possible share (Vaillancourt-Rosenau 2000: 229). In short, the private partner is motivated by the access to public funding (Tewes-Gradl et al. 2014: 11).

Access to resources

Private partners might benefit from the access to local networks, new contacts or a facilitated contact with local governments as well as the access to technical support or complementary skills (Tewes-Gradl et al. 2014: 11). Facilitating contacts between private, public and civil society can be seen as a valuable offer on the part of the public partner (Callan and Davis 2013: 9).

New market development

PPPs can also serve as a vehicle for entry into new markets (Budäus 2004: 14).

Risk sharing

In a PPP, the risks of a project are shared among the partners. Hence, just as with the public partner, the private partner has the opportunity to profit from reduced project risks (Budäus 2004: 14). Upon reviewing comprehensive case study literature on development PPPs, IOB (2013) concluded that the risk sharing factor has up to now not been sufficiently analysed (IOB 2013: 12).

Strategy, corporate responsibility, reputation

Generally, a PPP might be a way of achieving strategic cooperative objectives (Vaillancourt-Rosenau 2000: 229). Positive reputational effects can be one motivation (Tewes-Gradl et al. 2014: 11), along with the promotion of sustainable business, and the public relations benefit attached to demonstrating responsible business behaviour (Byiers and Rosengren 2012: 6-7). Furthermore, PPPs can be the first step in a corporate strategy designed to fully privatise formerly public responsibilities (Budäus 2004: 14).

Apart from positive objectives, reporting and administrative burdens, as well the high visibility risk associated with the manoeuvre in case of failure, can be regarded as a risk of a PPP from a private partner's perspective (Tewes-Gradl et al. 2014: 11).

3.3.3 ESTABLISHING A PPP

There are two factors that are directly tied to the degree of institutionalisation of a PPP, i.e. the organisational structure of a PPP. The first factor is the anticipated cost of a PPP. The overall costs of a PPP are mainly determined by production costs as well as organisational costs. Production costs contain the direct costs needed to generate an output. In addition, organisational costs can significantly determine the overall costs of a PPP.

Second, the organisational structure has implications on the behaviour of participants in a PPP. This means that the organisational structure of a PPP in turn determines the roles of the individual partners. On top of that, it has implications on the information flow between the parties and sets the framework for decision-making, conflict resolution or processes.

Moreover, the mechanisms that determine the formation, progress und breakup of a PPP are to a large extent influenced by the organisational structures of a PPP (Budäus, Grüning and Steenbock 1998: 62-63).

In the phase of the formation and the founding of a PPP, the potential partners have to agree on several central questions:

- Which resources shall be pooled in the PPP?
- Which decision rules shall be implemented in the PPP?
- Which legal form shall be chosen?
- What are the objectives of the PPP?
- Which location is optimal for the PPP?
- How will conflicts be solved in the PPP?

(Budäus et al. 1998: 76)

The answers to these questions constitute the level of institutionalisation of the respective PPP. A choice of a certain form of implementation of the PPP in practice is the result.

3.3.4 ORGANISATIONAL SETTINGS IN PRACTICE

Budäus (2004) identified three distinct functional PPP categories:

1. The Finance-PPP: The main focus of the public partner is the acquisition of private resources. The private partner mainly seeks new capital investment opportunities.

2. The Management-PPP: The focus of the public partner is on the more efficient fulfilment of public tasks, along with the usage of markets and competitive structures, all to complement and/or enable potential economic policy goals. The private side in this case focuses on risk sharing as well as the capital investment objective.

3. The Innovation-PPP: (in a technical or organisational sense): In this case, the public partner probably focuses on the usage of markets and competitive structures. Meanwhile, the private partner focuses on the establishment and development of new markets.

The three categories explicitly overlap and show major mutual interdependencies (Budäus 2004: 14-15). In a Finance-PPP, a very common organisational setting is found in a Build-operate-transfer (BOT)-scheme. In a typical BOT-scheme, individual companies (e.g. equipment suppliers, financial institutions, construction companies, system operators) form a consortium which then acts as the private partner in the PPP. In a detailed contractual arrangement, this consortium obtains the right to build an infrastructure entity. As a return on their investment, the consortium further obtains the right to operate the entity for a number of years (typically 15 to 30 years). After this runtime, the infrastructure

facility is transferred to the state (BOT) or purchased completely by the operating company or consortium (Build-own-operate – BOO). In case of Build-own-operate-transfer (BOOT)-schemes, a company or consortium owns an infrastructure facility and operates it for a number of years. After this runtime, it then transfers the facility to the government (Rondinelli 2002: 384).

Within these basic types of arrangement scenarios, a range of variations exists. The most important ones are summarised in table 3.1 (PPP Schemes and modalities).³⁷

Table 3.1 PPP schemes and modalities

| Schemes | Modalities |
|--|--|
| Build-own-operate (BOO) Build-develop-operate (BDO) Design-construct-manage-finance (DCMF) | The private sector designs, builds, owns, develops, operates and manages an asset with no obligation to transfer ownership to the government. These are variants of design-build-finance-operate (DBFO) schemes. |
| Buy-build-operate (BBO) Lease-develop-operate (LDO) Wrap-around addition (WAA) | The private sector buys or leases an existing asset from the government, renovates, modernises, and/or expands it, and then manages the property, again with no obligation to transfer ownership back to the government. |
| Build-operate-transfer (BOT) Build-own-operate-transfer (BOOT) Build-rent-own-transfer (BROT) Build-lease-operate-transfer (BLOT) Build-transfer-operate (BTO) | The private sector designs and builds up assets, manages the infrastructure involved, and then transfers it to the government when the operating contract ends (or at some other pre-specified point in time). The private partner may subsequently rent or lease the asset from the government. |

Source: IMF 2004: 8

Empirical experience from various countries indicate that certain fields of application are more suitable than others for PPPs. PPPs seem to be more suitable for the development of economic infrastructure (transport etc.) than, for example, social infrastructure (education, health care etc.). Reasons for this discrepancy are manifold. First, economic infrastructure projects bear a higher potential of generating financial return and thus are rather attractive for private partners. Second, collecting fees for the usage of economic infrastructure is a realistic option and enhances the financial attractiveness of this kind of PPP. Third, for the economic infrastructure behind PPPs, better developed marketing approaches are at hand for combining the construction and the provision of enhanced and/or related services (e.g. construction and operation of a toll road) (Akitoby, Hemming and Schwartz 2007: 8-9).

³⁷ For an alternative summary of the range of public-private business models see e.g. Grimsey and Lewis 2004: 54.

The question of which sectors are suitable for PPPs is being discussed ambiguously. Following a principal-agent rationale, some argue that only those sectors are suitable for PPPs, where service quality can be guaranteed as well as concretely measured and specified. This task is rather complex in fields such as health care or education due to cost saving behaviour on the part of the private partner that conflicts with the interests of the public side of the equation (Renda and Schrefler 2005: 10).

In practice, the PPP schemes summarised in table 3.1 are particularly applied in the field of infrastructure development. Numerous examples for infrastructure financing through PPPs can also be found in developing countries (Rondinelli 2002: 384).

It should be stressed that providing a complete list of fields of application is beyond the scope of this thesis. Typical examples consist of the building and operating of hospitals, schools, prisons, roads, bridges and tunnels, light rail networks, air traffic control systems and water and sanitation plants (IMF 2004: 4). Often, PPPs are applied in sectors where full privatisation might be inappropriate or infeasible (e.g. due to the inability to assign property rights adequately) (Linder 2000: 21).

Another field of application for PPPs is research and development. PPPs can be used for public funding of private research projects. There are various reasons for public policymakers to get involved in shared financing of R&D projects. One main reason is the desire of public policymakers to create an innovation-friendly climate in an economy. Innovation leads to competitiveness and growth whilst social benefits likewise result. However, underinvestment in R&D might hinder innovation.³⁸

When conducting innovative R&D, private companies often bear a relatively high financial risk. At the same time, it is oftentimes particularly SMEs that foster innovative R&D. The financial resources of SMEs are usually significantly limited. Thus, the higher risk attached to innovative R&D might deter these companies from conducting innovative R&D and therein create a basis from which growth and social benefits derive. The results are more resources for innovation and a more competitive market. This fact is a plausible argument for public policymakers to reduce the risk for innovative companies by sharing R&D expenses between public and private, e.g. in the form of a PPP (Scott 2001: 764-765).

Further fields of application are social policy services (e.g. welfare services) or administrative and managerial services (Greve and Hodge 2005: 10).

A comprehensive meta-study of 47 empirical studies of development cooperation PPPs by IOB (2013) identified healthcare, infrastructure and water supply as the most frequent sector of application (IOB 2013: 21). Regarding the numerous fields of application of the various types of institutional arrangements, it still remains unclear in which fields or sectors with which type of PPP can successfully be applied. What, according to Greve and Hodge (2005) can be summarised is that PPPs are an "increasingly relevant and popular public policy option throughout the world" (Greve and Hodge 2005: 16).

³⁸ For a more detailed outline of the objectives of R&D PPPs see e.g. Stiglitz and Wallstein 2000: 42-45.

3.3.5 DEVELOPMENTS AND TRENDS

Budäus (2004) identified several key factors that explain the rising interest in PPPs, particularly in Germany. The first reason for increased interest in PPPs is the limitation of the volume of public debt. PPPs are seen as a vehicle for raising private capital to execute public obligations and projects without extending public debt. Second, the general trend towards a reformation of public administrative structures towards a more management and efficiency oriented system fosters the interest in PPPs. A third factor is the increasing role of (international) competition, in particular, triggered by European competition law. Sectors that were formerly characterised by monopolistic structures are being transformed in competitive markets (e.g. telecommunications or energy supply). Further factors behind the PPP upswing might be a possible underutilisation in certain private sectors (e.g. construction), enhanced legal structures for PPP implementation, or finally, enhanced information- and communication systems that changed existing administrative structures (Budäus 2004: 10-11).

The upswing of PPPs is closely connected to the development of privatisation. On a global scale, the privatisation of certain sectors (e.g. transportation) accelerated during the 1980s and 1990s. At the same time, other sectors (in particular public enterprises from areas such as electricity, gas, water utilities, oil, airlines) have undergone privatisation at a comparably lower scale. In the late 1990s, privatisation slowed down but concerns about the need for further infrastructure development remained in many countries. As a consequence, PPPs gained in importance as a substitute for privatisation (e.g. where obstacles hindered privatisation) as well as a complement to privatisation (IMF 2004: 4-5).

During the 1980s, this development was fostered, in Europe as well as the USA, by conservative governments (Linder 2000: 20). In Europe, the UK shows a particularly long record of experience with PPPs in the provision of goods traditionally provided by the public sector alone. The Private Finance Initiative (PFI) in the UK is an example of a PPP approach becoming a fixed part of public projects.

In as early as 1981, a set of rules ("Ryrie rules"³⁹) were introduced laying the groundwork for private participation in public projects. Finally, the PFI was formally introduced in 1992. Although revised repeatedly, the rules of the PFI call for an obligatory test of a privately financed option against a purely publicly financed option (Grout 1997: 56). The fostering of PPPs, in particular in the case of the PFI in the UK, took place against the background of overall market-friendly public sector reform in the UK during the 1980s (Falconer and McLaughlin 2000: 120).

Today, the PFI can be regarded as probably the best developed PPP programme among the OECD countries, representing more than 14 % of public investment. Furthermore, Ireland shows a particularly larger volume of PPPs. In the rest of the European Union, PPP initiatives exist e.g. in Germany, Finland, Greece, Italy, the Netherlands, Portugal and Spain. However, their volume (i.e. the share in total public investment) remains at a relatively low level. Due to fiscal constraints, PPP initiatives gained momentum in a number of countries in central and eastern Europe, such as Czech Republic, Hungary, or Poland. The USA shows a relatively intensive use of PPP projects. In particular,

³⁹ For details see e.g. Grout 1997: 56.

projects that are a variant of leasing models have been applied. Canada applied PPPs mainly in the field of road projects. South America, Mexico and Chile have been taking a leading role in the implementation of PPPs in Latin America. In Mexico, road finance projects already existed in the 1980s. Other types of PPP projects (e.g. in the energy field) followed from the middle of the 1990s (IMF 2004: 5-6). Of course, examples of individual PPP projects can be found in a number of other Latin American countries as well.⁴⁰ In Asia, Japan has gained experience with PPPs mainly with road projects. In a number of other Asian countries, in particular Korea and Singapore, the application of PPPs started later. Then there is Australia, which shows a significant volume of PPP projects, particularly in the state of Victoria. PPPs in other countries than those mentioned are of limited scope. Nevertheless, a rising interest in PPP is present in some further countries, for example, in South Africa (IMF: 2004: 5-6).

For developing countries, PPPs have become increasingly important as well. The privatisation of state enterprises or the private provision of infrastructure has become an “important strategic alternative” (Frankel 2005: 18) for many developing countries in the face of their debt situation.

The importance of the private sector for economic development was recognised a long time ago. The Pearson Report from 1969 stressed that a strong private sector can deliver a significant contribution to economic development in a country (Polte 2006: 162).

It should be stressed that it is beyond the scope of this thesis to cover all developments and trends in the numerous fields of PPP application. In any case, Public Private Partnerships are demonstrating an increasing importance in practice. At the same time, further systematic research is needed since the understanding of and knowledge about PPPs has long been lagging behind this rapid increase in practical relevance (Carroll and Steane 2000: 53).

3.4 PPPS IN DEVELOPMENT COOPERATION

3.4.1 PPPS AS A DEVELOPMENT COOPERATION TOOL

In chapter 2, a brief overview of the various ways in which the private sector can contribute to development processes in developing countries is given. This subchapter will outline the participation of the private sector in development cooperation by participating in a specifically arranged PPP.

Generally, “Public Private Partnerships (PPPs) are increasingly envisaged as an attractive proposition for involving the private sector in international development cooperation” (IOB 2013: 11). The OECD lists Public Private Partnerships as one potential source of additional financing for development (OECD 2014a: 202).

At the same time, PPP programmes should not be confused with general private sector development (see also chapter 2.8), but rather can be entitled as “private sector for development”. Table 3.2 summarises the underlying classification. While private sector development focuses on the development of countries’ domestic economies, amongst other means, by assisting public

⁴⁰ For a list of PPP projects in Colombia for example, see Nickson 2001: 14.

policy-makers in facilitating private sector transformation, “private sector for development” focuses on fostering either private investment in developing countries or leveraging direct private financing of developing efforts (Byiers and Rosengren 2012: 10).

Table 3.2 Forms of private sector involvement

| Private sector involvement | | | |
|-----------------------------|--|---|---|
| | Private sector development | Private sector for development | |
| | | Private sector investment for development | Private sector finance for development |
| Location | Domestic | Domestic & international | International |
| Role of donors | Supporting the enhancement of the domestic business climate, credit etc. | Encouraging private sector actors to make investments in developing countries by offsetting certain risks | Leveraging private sector to provide finance for development efforts |
| Types of instruments | Challenge, equity and credit guarantee funds etc. | Challenge funds for FDI, development related grants and subsidies | PPPs, portfolio investment, private equity, private infrastructure funds etc. |

Source: Byiers and Rosengren 2012: 10

The number of programmes offering structured funding options for development partnerships has been increasing particularly during the last decade. Heinrich (2013) even concluded that “donor partnerships with business are a key trend in development cooperation [...]” (Heinrich 2013: 4). Annex 7.2 lists the most relevant structured donor established frameworks amongst others in Germany, Sweden, Denmark, UK. It can be expected that this list is further increasing, given the fact that several multilateral commitments (e.g. by the Busan High Level Forum on Aid effectiveness, the G20 or the EU) have been made to foster partnerships with the private sector or generally promote the private sector (Byiers and Rosengren 2012: 9). The Donor Committee for Enterprise Development represents a constantly updated online directory guiding interested private partners through the PPP programme options (see DCED 2016).

The Busan High Level Forum on Aid Effectiveness, as one example, postulated that the goal at hand is to “enable the participation of the private sector in the design and implementation of development policies and strategies to foster sustainable growth and poverty reduction” and to “further develop innovative financial mechanisms to mobilise private finance for shared development goals” (OECD 2011: 10).

Callan and Davis (2013) furthermore remarked that “the universe of possible public-private partnerships for development is quite large, sparsely populated and largely uncharted” (Callan and Davis 2013: 3).

On the whole, a fixed and agreed classification of different schemes for PPPs in development cooperation has not yet been identified. Nevertheless, Callan and Davis (2013) suggested that a rough classification of partnerships between development agencies and the private sector for the delivery of private goods on the one hand, and the delivery of public goods on the other would be possible (Callan and Davis 2013: 50).

Regarding the practical implementation of PPPs in development cooperation, Germany has put up a strong effort to include the private sector in its development cooperation agenda with a particular focus on PPPs. This effort has sometimes been criticised as constituting a financial subsidy to companies for the purpose of creating new markets (Conley and Dukkupati 2012: 7).

A comparison between the PPP programme of the six leading European development agencies (UK, Germany, Netherlands, Ireland, Norway, France) showed, according to Conley and Dukkupati (2012), “[...] neither a uniform definition nor a common approach to private sector involvement in development [...]” (Conley and Dukkupati 2012: 2).

As outlined in chapter 2.2.2, development cooperation or aid is defined as a resource transfer to a framework of more favourable conditions than currently existent on the resource market. Moreover, economic transactions which are the result of regular commercial or business relations are not included in the definition of development aid. At the same time, however, an economic transaction can obtain the character of development aid if governmental subsidies or guaranties allow the transaction to be conducted in more favourable (for the recipient country) conditions than according to the usual international terms of the market. The critical value of subsidies or guaranties from which on a transaction obtains aid character is to be politically determined (Hemmer 2002: 930).

While the overall objectives of development cooperation (such as erasing poverty) remain valid for all development cooperation measures, organisational means of channelling subsidies vary widely. PPPs are one form of channelling resources to developing countries in order to achieve development objectives.

Hemmer (2002) described PPPs as a separate instrument in German development cooperation. The core element of this instrument is the promotion of private individual enterprises. The public subsidy or financial contribution is justified by the objectives of development cooperation fostered by the respective PPP. In that sense, the private participation in a PPP includes private profit objectives (Hemmer 2002: 944-945).

The most important characteristic of a PPP in development cooperation is the creation of an economic return for the participating companies while simultaneously creating development gains for people in developing countries (BMZ 2006a: 191). In that pursuit, the input of the private partner ranges from core activities and competencies to policy input and philanthropic measures (Nelson 2002: 5).

Based on the classification of channels of development cooperation outlined in chapter 2, PPPs at the project level can be classified into the field of technical development cooperation, as shown in table 3.3.

Table 3.3 PPPs in the range of development cooperation tools

| Criterion | PPP characteristics |
|--|--|
| Conditional vs. unconditional cooperation | <ul style="list-style-type: none"> • Conditional character since resource transfer is tied to conditions defined by the public partner |
| Financial vs. technical cooperation | <ul style="list-style-type: none"> • PPPs on project level obtain the character of technical cooperation projects |
| Project vs. programme cooperation | <ul style="list-style-type: none"> • PPPs mainly in the framework of projects, but integration in programmes is possible (e.g. trend towards "mainstreaming" PPPs in German development cooperation) |
| Bilateral vs. multilateral cooperation | <ul style="list-style-type: none"> • Bilateral donor recipient relationships dominant • However, the general partnership approach is widespread also among multilateral donors (in particular the UN system) |

Source: own illustration

While acknowledging that studies on PPPs oftentimes lack a clear definition of the term “PPP”, scholars have been able to pinpoint minimum criteria for identifying PPPs in development cooperation, summarised by the IOB (2013) as follows:

1. Cooperation between a public and private partner
2. Clear agreement on a goal
3. Combination of public and private funding
4. Agreement of sharing of resources and tasks
5. Distribution of risks between the public and the private sector

(IOB 2013: 23-24)

These attributes become clearer when analysing the benefits of PPPs in development cooperation more in detail.

3.4.2 BENEFITS OF PPPS IN DEVELOPMENT COOPERATION

The following subchapter gives a summary of expected benefits of PPPs in the development cooperation framework. Generally speaking, the benefits of the cooperation between public and private partners in a PPP for a developing country should be larger than the benefits of an investment that is being conducted by the public or the private partner on its own (Hemmer 2002: 945). The overall intention of PPPs in the development cooperation context remains valid regardless of the various existing organisational structures. According to Binder et al. (2007), it aims at a “positive development impact for donors and beneficiaries and a positive business case for the participating company” (Binder et al. 2007: 11).

More specifically, the following potential general benefits from PPPs are particularly relevant for PPPs in the development cooperation framework.

Triggering foreign investment

PPPs with a development cooperation background potentially generate the same advantages for developing countries than other purely private forms of foreign investments in developing countries (see chapter 2).

PPPs are intended to make use of this positive potential of private company investment in developing countries, for instance, by creating employment or transferring know-how and technologies (BMZ 2006a: 194). Furthermore, private investment in developing countries holds the potential for generating state revenue, including foreign exchange revenues. Although many companies profit from tax exemptions due to global competition, direct and indirect tax revenues can be expected. Moreover, private investment can generate revenue and employment effects on a much broader scale than “conventional” development cooperation measures (Polte 2006: 163).

In brief, the private sector plays a crucial role in the development process of a country or, as summarised by the BMZ, “a smoothly functioning, market-oriented private sector is a key factor in the worldwide onslaught on hunger and poverty” (BMZ 2005b: 20).

In short, financial motives have been identified as a major motive behind PPPs, in particular when local public entities do not possess sufficient financial resource to conduct projects alone (IOB 2013: 25).

Regional targeting of investment

As mentioned earlier, private capital flows to developing countries play a crucial role for development in these countries. However, not all regions profit from the increase in international capital flows. Many countries for example in North- and Sub-Saharan Africa or the Middle East have been completely bypassed in this respect (Binder et al. 2007: 13).

One motivation for the establishment of PPP projects and programmes can be to attract capital flow to these developing countries. Thus, one main potential benefit of PPP projects lies in the attraction of private capital flows to developing countries which would not have otherwise reached these countries without the partnership arrangement.

Enhancing the development impact of investment

Whether foreign investment might have reached a developing country with or also without being triggered by a PPP, a PPP can be a suitable mechanism for fostering the developmental impact of a foreign investment.

In these cases, the objective of development agencies was, according to Binder et al. (2007), “to generate maximum positive development impact from private sector activities in developing countries” (Binder et al. 2007: 14). Fostering environmentally friendly technologies or establishing social standards are examples of possible outcomes.

Enhanced innovativeness and efficiency in development cooperation

Additional private partners potentially contribute to applying new approaches to the preparation and implementation of projects (Demtschück 2004: 12). On top of that, the cooperation with the private

sector in development cooperation projects should lead to an increased efficiency⁴¹ of projects since the participating partners bring in their specific strengths as well as their own financial resources (BMZ 2006a: 194).

Enhanced efficiency can also derive from a leverage effect induced by the PPP structure. That is, each public financial contribution to a PPP project is connected to a private contribution to the same project. The private and public resources are pooled and used for the given development project. Regarded from this angle, the public contribution is used more efficiently (compared to an exclusively publicly funded project) since it theoretically raised additional funding than would have otherwise been available (Hartmann 2008).

Enhancing the sustainability of outcomes

On top of the above mentioned efficiency aspect, companies are simply interested in the sustainability and the success of projects. Hence, they often take care of the continuation of project content on their own (BMZ 2006a: 194). A further factor that may positively influence the sustainability of the cooperation is the enhanced legitimacy basis of the outcomes. Generally speaking, a PPP is a specific form of a multi-actor or multi-stakeholder model. Multi-actor approaches potentially have a broader legitimacy base due to the higher number of actors involved (Demtschück 2004: 12).

Contributing to “good” public policy

PPPs can have a particularly sustainable positive impact on local public policymaking in developing countries. PPPs can help to overcome or avoid social exclusion by integrating public and private components in local communities. Furthermore, PPPs can constitute part of the reform process of local public services in order to enhance their accessibility and responsibility. A more cost efficient provision of local service to meet social needs as well as enhanced flexibility and responsiveness in public policymaking are thus potential outcomes (Osborne 2000: 1-2).

Benefiting the private partner

PPPs in development cooperation can generate an array of potential benefits specifically for the private companies involved:

A company involved in a PPP can profit from the know-how of the development agency, the public project partner. Development agencies often obtain a network of offices or employees in developing countries. Thus, companies can profit from the connections of development agencies to governmental bodies or other institutions in developing countries (BMZ 2006a: 193, BMZ 2004: 84, GTZ 2008).

Companies can utilise the specific knowledge (e.g. county and sector specific, knowledge about the local legal framework) of development agencies (BMZ 2006a: 193, GTZ 2008).

In sum, a central advantage of PPPs for companies lies in the reduction of risk. When pursuing direct investment in developing countries, the assessment of risk e.g. for managers of a MNC, is particularly difficult. Risks occurring in many developing countries (e.g. political risks) are hard to incorporate in the risk management structures of a MNC (Wells 2003: 116).

⁴¹ The argument that private organisations operate in a more efficient and effective manner than public institutions is backed by numerous scholars, see e.g. Savas 2000:111-118 or Naschold and Otter: 1996: 39.

Many PPPs are used to prepare future business activities in the developing country or they generally represent a primary step in the new business environment. Thus, the reduction of risk through a PPP stands as a special incentive for private companies (GTZ 2008). PPPs reduce risk in two ways. First, they reduce the amount of actual investment through the public share in the investment. Second, they provide companies with additional competencies and specific knowledge about the developing country market or business environment on the part of the public partner. In other terms, the need for cooperation between the public and the private side enters into play if the private actor (i.e. a company) faces prohibitively large risks or diminished costs. Due to these risks or diminished costs, the private actor would eventually refuse market involvement without the cooperation of the public partner (Hemmer 2002: 944-945).

Given the aforementioned factors, PPPs generally can create better direct preconditions for investment (BMZ 2004: 84). Furthermore, PPPs can also contribute to better framework conditions for business involvement (e.g. through the creation of standards, qualifications measures, image improvement) (BMZ 2004: 84, GTZ 2008).

PPPs can furthermore support the market entry of a company or enhance the market position in developing economies (Nelson 2002: 4).

PPPs can be a means for reacting to the growing pressure of consumers, investors, governments and other stakeholders towards MNCs, in particular, in pursuit of corporate responsibility and contribution toward societal goals. In that process, a good relationship with the company's key stakeholders can be fostered (Nelson 2002: 3-4). Demonstrating "business responsibility" via PPP involvement can be a motivation for some companies (Byiers and Rosengren 2012: 6, 7).

PPP projects can lead to improved employee motivation and a positive influence on innovative ways of thinking (Nelson 2002: 4).

Finally, PPPs may improve a company's reputation (Nelson 2002: 4).

In conclusion, cooperative arrangements, such as PPPs can help to foster poverty eradication, environmental protection, human rights, democracy, good governance, peace and security and other global objectives. The core motivation behind engaging in PPPs and other forms of cooperation with development background should lie in the appreciation of the fact that these global objectives are preconditions for business success in the long run (Nelson 2002: 2).

With regards to the MDGs, PPPs contributed to reaching the MDGs at least by fostering MDG No. 8, the establishment of a global development partnership. Plus, every single PPP project can contribute with its specific project objectives aimed at reaching out to other MDGs (BMZ 2006c: I).

3.4.3 LIMITATIONS OF PPPS IN DEVELOPMENT COOPERATION

The following subchapter summarises the main limitations of PPPs in the development cooperation framework.

General risks of FDI

As outlined, PPPs in development cooperation are intended to channel foreign investment to developing countries. In an ideal case, these investments will lead to the sustainable establishment of a business or other institutional arrangement with participation or even ownership of a foreign private company. In that process, the general risks inherent to FDI for a developing country have to be taken into account in this context.

These risks may involve investments serving to foster a kind of economic disparity by widening the income gap between rural and urban sectors. In addition, it might encourage consumption counterproductive to development in the respective country. It might hinder the development of an indigenous capital goods industry or entrepreneurship by the transfer of inappropriate technology, or may even lead to the loss of control over economic policy and sovereignty of the developing country. What's more, the repatriation of profits by the home company might lead to a negative effect on the balance of payments of a country over a longer period of time (Thirlwall 2003: 594-595).

Lack of focus

Taking into account the global efforts to reduce poverty in developing countries (e.g. through the MDGs), it can be stated that conventional measures of development cooperation are to a large extent focused on directly elevating poverty criteria.

The question thus arises of whether the private sector can fill the gap of insufficient development cooperation resources appropriately, regarding the lack of focus on criteria specifically aimed at reducing poverty criteria. However, this question, whether the strong focus of "conventional" development cooperation projects is evident for reducing poverty, is partly obsolete. In many countries, particularly the poorest countries, there is growing evidence that projects introduced by "conventional" development cooperation (e.g. in the fields of education, health and infrastructure) show an unacceptable level of sustainability due to inadequate financial resources which indebted developing countries' governments are unable to provide. The debt situation of developing countries' governments clearly call for the generation of state income from investment flows from the private sector to pick up the slack (Polte 2006: 163).

Hidden intentions of the private partner

A frequently cited argument against the involvement of the private sector in development cooperation has been the ambiguous motivation of the private sector. That is, objectives on the part of the private sector in a partnership can vary between pure profit orientation, reputation-objectives and sincere corporate philanthropy.

However, objections against this limitation can be raised. From the point of view of a developing country, it is of secondary importance under which motives and objectives resource transfers are being conducted. For developing countries, it is of foremost importance that these countries receive transfers to conditions more favourable than strict market terms. The motives of the provider of the transfer, however self-serving they may be, are of secondary importance (Hemmer 2002: 938).

Hidden intensions of the public partner

The motives of the public side for engaging in a PPP are hardly always straightforward either. In case of BOT-type PPPs, in particular for infrastructure development, a common objection is that a PPP can be used to circumvent spending controls. Public investment is made possible without being reflected in the budget. Despite not being reflected in a government's balance sheets, public debts are being increased through the share of risk the government has to take in a PPP (IMF 2004: 3).

Lack of donor coordination

Kragh et al. (2000) identified a lack of donor coordination for specific areas in the field of private sector development in which PPP programmes can also be found. This lack of donor coordination may lead to competition e.g. among subcontractors (e.g. associations, NGOs etc.). Various subcontractors may compete for the scarce funding which is available. Thus, rent-seeking behaviour and a duplication of measures and activities may lead to an inefficient usage of already scarce funding. This observation was offered by Kragh et al. (2000) in that pursuit: "competition is healthy, but at the same time much donor effort and money is wasted in building separate systems" (Kragh et al. 2000: 325).

Fiscal risks

For infrastructure PPPs (BOT-schemes and related) in the development cooperation framework, the general limitations and risks of this type of PPP apply. These involve the risk that unfavourable contract design can lead to unexpected financial burdens for the public partners. This might even lead to higher public costs of an infrastructure facility provided through a PPP compared to a facility provided by purely public funding (Rondinelli 2002: 385-386).

This argument is amplified by the fact that an internationally accepted and unified fiscal accounting and reporting standard for PPPs does not exist. In particular, the kind of PPP that involves a limited risk transfer to the private sector entails complex accounting problems⁴² (IMF 2004: 3). This lack of standards is of particular importance since it raises the difficulty in preventing PPPs from being misappropriated to circumvent expenditure or budget controls (Akitoby et al. 2007: 13).

Risks for the private partner

For PPPs in the development cooperation framework, the basic risk mechanisms applying to every kind of PPP remain valid.

Each specific PPP project faces two general kinds of risks: systematic and specific risks. Systematic risks consist of macroeconomic developments that can hardly be influenced by private actors (e.g. labour costs, GDP growth/decline, inflation, etc.). Specific risks result from the nature of the PPP project. These are usually the subject of negotiation between the public and private side of the project and can be influenced to some extent (Adams et al. 2006: 392).

Generally, a risk of loss to reputation exists with many PPPs as well. In the case of failure of a partnership or when a partner conducts in inappropriate behaviour, both parties, the public and the private partner might suffer a loss of reputation (Binder et al. 2007: 19).

⁴² An overview of accounting and reporting standards that are presently applied in the case of PPPs see Akitoby et al. 2007: 13-17.

3.5 GERMAN DEVELOPMENT COOPERATION

The following subchapter illustrates the German development cooperation framework. First, the overall framework conditions are outlined. Second, the application of PPPs in German development cooperation is illustrated. These summaries constitute a necessary part of the framework of this thesis since the empirical analyses in chapter 4 and 5 focuses on PPPs funded by the BMZ PPP facility – the major funding source for project level PPPs in German development cooperation.

3.5.1 THE DEVELOPMENT COOPERATION FRAMEWORK

In this subchapter, the example of the development cooperation strategy and policy of the German Federal Ministry for Economic Cooperation and Development (BMZ) is briefly outlined.

Over the last decades, there have been numerous attempts to identify single key factors for development which outperform other factors. Whenever one of these key factors, often based on theory and translated into a popularised formulation, has however failed to lead to the promised development results, another key factor has emerged. In this process, there has been a tendency to strongly focus on single factors of development (World Bank 2008a: 12).

This fact is reflected by the permanent evolution of development policies and strategies. For the beginning of the 21st century, Jolly (2002) identified four priority areas from an international perspective:

1. Poverty reduction and working against the worst aspects of poverty
2. Making use of the benefits of globalisation and minimising its risks for development (in particular for the poor and least-developed countries)
3. Reducing inequalities within and between countries and reducing the forces behind these inequalities
4. Fostering human rights and human development as principles for national and international policy

(Jolly 2002: 20).

In each donor country context, individual development cooperation strategies are applied. The guiding principles of German development policy are to a large extent congruent with the internationally identified leading issue just outlined.

The German BMZ names the following priorities: 1. Fighting global poverty; 2. Protecting the environment; 3. Sustaining peace and implement democracy and 4. Fostering fairness in globalisation processes. These policy guidelines are summarised as a global sustainable development policy which encompass economic capacity, social justice, ecological viability and political stability to the same extent. Hence, these dimensions are considered to be interconnected. They serve to mutually facilitate each other's goals and likewise set boundaries on each other's activities (BMZ 2008a).

Generally, the German government formulated its development policy and concrete development cooperation activities according to the guiding role of international treaties and declarations. In that process, the Development Declaration of the UN and the Millennium Development Goals are of particular importance. In 2001, the German government introduced its own strategy for following the MDGs and other related objectives, the so-called “Program of action 2015 – the contribution of the German government to reducing global poverty by half” (BMZ 2008b: 14). This programme was made up of ten priority areas of action for poverty reduction. These are: fostering the economy and enabling the poor to participate in economic processes; supporting the “right to food” and implementing agrarian reform processes; a fair integration of developing countries in the world trade system; developing countries’ debt reduction to free resources for developing measures; fostering the implementation of basic social protection systems; fostering the access of the poor to vital resources including an intact environment; fostering human rights including core labour standards; fostering gender equality; fostering good governance and a participation of the poor in governance processes and, finally, fostering peace and security (BMZ 2001: 8-30).

Putting the development of the economic system – above all by supporting the private sector – on the top of this priority list, illustrates the importance of the private sector in developing processes from the point of view of the German government. This perception can be regarded as the core of the focus of German development cooperation in PPPs.

With regards to their most relevant development objective, the reduction of poverty, the German government names players that it regards as responsible for pursuing this objective. First, these are governments of developed countries and multilateral development organisations with their development-fostering activities, such as bringing in funding and expertise. Second, all governments and international organisations have their role in implementing regulatory framework conditions in favour of developing countries. Third, governments of developing countries have to implement a favourable framework for poverty reduction, particularly by means of fostering private sector initiatives. Finally, civil society and the private sector in developed and developing countries are held accountable for doing their part in fostering poverty reduction as well (BMZ 2001: 3-4).

Consequently, the importance of alliances among governments, multilateral development institutions, international organisations, civil society and the private sector comprise the explicit focus of the “Program of action 2015” (BMZ 2001: 31-35). Furthermore, the MDGs were of special interest in German development cooperation. In 2003 for example, a task force was established within the BMZ to promote the MDGs in all German development cooperation measures (Riddell 2007: 66).

German development cooperation activities take place in the overall framework of German foreign policy. The key decisions are made by the BMZ. The BMZ usually assigns the German development agencies with the task of implementing development policy measure. The biggest agencies are the GTZ and the KfW (Riddell 2007: 65).

In 2005, the volume of German ODA was at about 0.35 % of national GNI as opposed to 0.5 % in the early 1980s. The allocation of about 60 % of German ODA took place bilaterally, whereas the DAC average is 67 %. Thus, German ODA had 166 recipient countries in 2002, together with Japan and France, representing the highest number of recipients. What’s more, between 1990 and 2000, the

share of all German bilateral and multilateral ODA flowing to the low income countries decreased from 60 % to 55 %. From 1991 to 2001, the share of German ODA flowing to Sub-Saharan countries also decreased from 27 % to 23.5 % (Riddell 2007: 65).

Germany is also major player in the EU development policy. The EU development policy is a core policy field (besides trade policy and common foreign and security policy) of the European Union relevant for third (non-EU) countries. It is based on Art. 3 EC treaty, which states that coherence must prevail in the framework of the EU economic, development, foreign and security policy. Art. 178 EC treaty states that all policies of the EU that have implications for developing countries, have to take into account development policy principles (Freudenschuß-Reichl and Bayer 2008: 116).

Moreover, the German government explicitly stressed the guiding role of the “Paris Declaration” for German development cooperation. The declaration contains a European consensus on development policy, comprising common values and strategies in order to improve the efficiency of development cooperation (BMZ 2008b: 14).

3.5.2 PPPS IN GERMAN DEVELOPMENT COOPERATION

The German BMZ regards PPPs as part of their set of instruments for following development cooperation objectives, particularly with its primary objective, the fight against poverty. Hence, the overall objectives are in line with the objectives towards PPPs in development cooperation which can be found in literature respectively formulated by other development institutions (see also chapter 3.4): PPPs shall lead to the formation of projects which are beneficial for development objectives and offer incentives, in the form of potential profits, in particular for the participating companies. Two main objectives shall be reached: First, the effectiveness of development policy measures shall be increased. Second, private capital and know-how shall be attracted for developing countries (BMZ 2001: 32).

The most relevant activities of German development cooperation in the framework of cooperation between the public and the private sector are as follows.

- **The BMZ PPP facility:** This PPP programme (brand name: “develoPPP”) of the BMZ is the main focus of the empirical part of this thesis. It is outlined in detail in the subsequent subchapter.
- **PPPs in the framework of bilateral agreements:** A check for potential contributions of the private sector in the planning and processing of regular bilateral development cooperation is made within the regular project establishment processes of the BMZ.
- **Private sector support by the DEG:** The regular core business of the DEG comprises financial development cooperation measures, including the provision of equity capital, mezzanine finance, loans or guarantees for German and international private companies. A prerequisite is the development relevancy of the projects, which e.g. can be found in agriculture, industry, infrastructure, services and the financial sector.

- **Provision of skilled employees:** The “Centrum für internationale Migration und Entwicklung (CIM)” supports the selection of a skilled workforce and the arrangement of their local employment in the developing country (including a supplement to local salaries). Furthermore, the DED places development workers in projects, among them, projects conducted with the private sector.
- **Training and education:** “Invent – Capacity Building International”, a German non-profit organisation, offers a range of services connected to training and education in developing countries. These measures (e.g. preparatory courses for expatriates, recruitment support etc.) also benefit the private sector.
- **“PPP-Süd Programm” and “PPP-Africa facility”:** The DED (until merged to the GIZ) supported small-scale PPP projects with, in contrast to the “regular” BMZ PPP facility, local small and medium sized companies in developing countries.

(BMZ 2008c: 5-6)

Among these activities, the German PPP facility stands as the “flagship initiative” (Binder et al. 2007: 30) of the German government to promote the participation of private business in development cooperation. In the global development cooperation framework, the BMZ PPP facility is the longest existing programme. In contrast, the Global Development Alliance of USAID is the programme allocating the largest volume of resources in this context (Binder et al. 2007: 40).

3.5.3 THE BMZ PPP FACILITY

In the following subchapter, the so called “BMZ PPP facility”, promoted under the title “develoPPP” by the BMZ, will be outlined.

The BMZ PPP facility is of particular interest for the analysis conducted in this thesis for two reasons. First, the case studies in chapter 4 are all funded by the BMZ PPP facility. Second, the survey in chapter 5 addressed companies which participated in PPPs founded by the BMZ PPP facility. The conditions of the programme are thus highly relevant.

The BMZ PPP facility was introduced in 1999. It is a fund provided by the German government dedicated to financing projects in a PPP framework which would not have been otherwise financed due to their short-term character and/or small financial volume (BMZ 2005a: 5). The BMZ PPP facility is dedicated to meeting the needs of the private sector for a flexible and non-bureaucratic opportunity to participate in PPPs (BMZ 2006a: 192).

The PPP facility of the German BMZ is not intended to replace the more “conventional” instruments of financial and technical cooperation. Rather, it is dedicated to generating additional contributions of the private sector to development cooperation efforts (Demtschück 2004: 12-13).

Projects financed through the BMZ PPP facility generally entail measures that prepare further private investment or accompany further private investment (e.g. in the field of environmental protection, qualification measures, infrastructure, quality assurance, pilot facilities), measures to adapt products or production procedures to local circumstances or measures to improve workplace safety and health.

In any case, PPP projects financed by the BMZ PPP facility have to generate a development effect which would not have existed without the share of public financing (Polte 2006: 172).

The BMZ PPP facility is of particular importance since PPP projects initiated in this framework often obtain the character of instruments designed to induce innovative approaches. In addition, projects in this framework can deliver impulses for further cooperation between development agencies and the private sector e.g. in the framework of strategic alliances (BMZ 2006c: 13).

Conditions in the BMZ PPP facility/developPPP programme as of February 2016 envision clear application criteria for the private partner:

- The company must be **registered in Germany, the EU** or a country of the European Free Trade Association (EFTA). If a company is registered in an developing country, an EU-or EFTA based company must own a stake > 25 %.
- Companies must be **economically stable** (min. € 1 million turnover, 3 years of economic activity, 10 employees).
- Measure must be **in line with German development objectives**.
- **Complementarity**: public and private contributions must be combined in such a way to “achieve their respective objectives more quickly, more efficiently and more cost-effectively” (BMZ 2014: 18).
- **Competition neutrality**: the same selection criteria apply to all companies.
- **Contribution of the private sector**: the public contribution is < 50 % or a maximum of € 200,000; a higher level might apply to strategic development partnerships.
- **Commercial interest**: companies must show a commercial interest in the project and non-profit projects are not eligible.
- **Sustainability**: sustainability beyond the project end must be addressed.

After proving the fulfilment of the aforementioned criteria, companies can themselves choose a suitable public partner, either DEG (Deutsche Investitions- und Entwicklungsgesellschaft mbH), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ GmbH) or sequa gmbH and submit the application according to a fixed yearly application timeline (BMZ 2014: 8, BMZ 2016c).

The developPPP program generally also offers the option to fund the establishment of „Strategic Alliances”. These are broader, super-regional partnerships with a financial volume of more than € 750.000 (GIZ 2015: 15).

The following key facts refer to the total of all PPP projects funded via the BMZ PPP facility/developPPP programme between 1999 and October 2015. Overall, more than 1,500 projects have been funded. The share of private contribution was 62.8 % (€ 558.5 million), while 37.2 % (€ 330.5 million) was contributed by the public hand. The sectoral split shows a strong focus on Sustainable Economic Development (614 projects), Environment (273) and Agriculture (230). Table 3.4 summarises the regional split of projects (BMZ 2016a, BMZ 2016c).

Table 3.4 Split of develoPPP projects 1999 until October 2015

| Country | No. of projects | Project volume (€ million) |
|---------------------------|-----------------|----------------------------|
| East Asia | 496 | 237 |
| Africa – South of Sahara | 303 | 156 |
| Africa – North of Sahara | 77 | 30 |
| South and Central Asia | 206 | 91 |
| South America | 190 | 92 |
| Europe | 159 | 67 |
| North- and Middle America | 98 | 47 |
| Near and Middle East | 43 | 19 |
| Super-regional projects | 110 | 150 |

Source: BMZ 2016a

In 2014, for example, the total German bilateral ODA was ca. € 10.83 billion, of which ca. € 2.57 billion was spent for technical development cooperation (BMZ 2006b). Comparing this yearly figure to a total of ca. € 330.6 million spent for projects in the framework of the BMZ PPP facility over a timeframe of more than 15 years, illustrates the limited volume of the programme.

3.6 PPP SUCCESS FACTORS: LITERATURE REVIEW

This subchapter gives an overview of success factors of PPPs found in secondary sources. This overview serves as a basis for and complement of the outcomes of the empirical research in chapter 4 and 5. In these chapters, the identification of success factors for the specific types of PPPs analysed constitutes the focus of research.

The success factors mentioned here should apply to different organisational variants of PPPs and therefore remain on a rather general level. In any case, determining the likelihood of success or failure in advance of a PPP, as formulated by Vaillancourt-Rosenau (2000), “[...] although desirable, is extremely difficult, and monitoring partnerships for impact and performance is critical” (Vaillancourt-Rosenau 2000: 219).

Matching of partners

The first precondition for a successful PPP is the a priori suitability of the partners as contributors to the mutual objectives in the partnership. The identification of suitable partners should be the result of a systematic search process. At the same time reservations apply, as summarised by Austin (2000): “the alliance marketplace – the meeting ground and its accompanying mechanisms for organisations interested in cross-sector partnering – is currently underdeveloped and inefficient” (Austin 2000: 41).

Thus, informal networks and personal or professional connections often serve as a precondition for the matching process of partners (Austin 2000: 43-44).

Clarity of objectives

The purpose and the objective of the partnership have to be clearly specified. This comprises the understanding of common objectives as well as individual objectives of the partners (Nelson 2002: 162, McQuaid 2000: 30, Austin 2000: 61-63).

An appropriate contractual arrangement

The contractual setting should entail, for example, an adequate amount of risk transfer from the public to the private side, hence, adequate risk sharing, respectively. Furthermore, the overall project quality can be enhanced by issuing payment strictly contingent on the quality of delivery. In addition, efficiency can be achieved through a contractual system based on incentives or competition (IMF 2004: 3, Rondinelli 2002: 386).

Agreement on the organisational setting and organisational learning

The organisational structure, the disposal over resources and the assignment of responsibilities should be clearly constituted. This likewise entails clear structures of communication and decision-making. An appropriate system of incentives (within and between organisations) has to be put in place for encouraging behavioural changes. Mutual trust building efforts can also be classified under this aspect (McQuaid 2000: 30).

During the process of the partnership, the roles and responsibilities of the partners have to be clearly determined. Capacities, resources as well as constraints of the individual partners have to be understood by all parties involved. In particular, the private partner must find a transparent and clear set of obligations and restrictions. Open communication structures should allow for joint decision-making, whilst a system for conflict management should be established. Plus, stakeholders of the partnership have to be consulted and understood.

The progress of the partnership can be achieved by means of evaluating the success of the partnership and above all through constant learning and adaptation if necessary (Nelson 2002: 162, Rondinelli 2002: 386). Learning about the partner organisation can be a precondition for the creation of value in a partnership (Austin 2000: 100, 138). The government – or the public partner, respectively – has the special responsibility of developing skills for managing a PPP by means, for instance, of a thorough system of evaluation (IMF 2004: 3).

Strategic overlap

A fit between the partners' overall strategic objectives, including values and missions, can positively influence the likelihood of a partnership's success. This does not mean that that the strategic objectives have to be completely congruent, but a certain degree of overlap has to be given (Austin 2000: 166-177).

An appropriate project environment

Local characteristics play an important role in the development and operation of PPPs. In particular, a supportive institutional structure can be a crucial success factor for a PPP (McQuaid 2000: 30).

A supportive institutional framework for the PPP can e.g. be characterised by political commitment, good governance or supporting legislation (IMF 2004: 3).

Overall, the environmental setting in which a decision for or against a collaborative arrangement between public and private actors takes place, is of high relevance. Even over the course of a given PPP, objectives can, according to Donahue and Zeckhauser (2006), change, i.e. “the rationales for private involvement shift with time and locale” (Donahue and Zeckhauser 2006: 507). Shortcomings and/or weaknesses of the government with regards to resources, productivity, information and legitimacy influence the governments’ perception of possible gains from the involvement of private actors (Donahue and Zeckhauser 2006: 507).

Hence, a number of factors are generally considered to be obstacles to development, which can also be regarded as factors potentially hindering the functioning and/or success of PPPs in development cooperation. One example is state failure. Many developing countries, among them those with the lowest income levels, show characteristics of failed states. This means that there is hardly any or no provision of the basic services and features a functioning state should provide (protection, opportunities for citizens, legal processes etc.) (Frankel 2005: 267). In such an environment, there is hardly any incentive for the private sector to participate in any form whatsoever. A second example is a lack of political will towards development. Even in functioning states, the will of governmental bodies is not necessarily focused on the interest of citizens. Rather, self-interest and opposition to change tend to prevail (Frankel 2005: 269).

Trust

Beyond the aspects just outlined, the arguably most basic requirement for success is found in the existence of mutual trust and confidence in the partnership from both the private and the public side (Rondinelli 2002: 386, Austin 2000: 121). Trust is a special precondition since a PPP is usually characterised by a horizontal sharing of control, responsibility and risk, i.e. a sharing of power (Linder 2000: 31).

3.7 CHAPTER CONCLUSION

This chapter gave an introduction to the purpose and structure of collaborative arrangements between the public and the private sector entitled “Public Private Partnerships.” Since a generally accepted definition of the term is still lacking, a working definition has been outlined. According to this definition, a PPP is characterised by interaction between public and private actors with convergent objectives, by which synergies – a “win-win” situation – should be created. In that process, the identity of the partners remains intact and the cooperation is formalised to different extents.

Subsequently, a summary of expectations connected to the formation of a PPP is given. From the viewpoint of the public partner, these entail the acquisition of additional private resources for the accomplishment of the partnership’s objectives. Furthermore, efficiency gains due to the skills and knowledge of the private partner are in focus.

From the point of view of the private partner, a PPP mainly represents a vehicle from which to generate profits. Profits can be derived directly from a return on invested capital or from other returns from the partnerships which benefit the private partner – including intangible returns, such as reputation gains.

An overview of different PPP variants which can be found in practice illustrated the broad variety of existing applications of this model.

According to the research focus of this thesis, the application of PPPs in the field of development cooperation is addressed in the next section. A classification of existing PPPs in this field of application illustrate that PPPs in development countries take place on different levels – from small-scale project level PPPs to large infrastructure PPPs and strategic alliances. The perceived benefits and limitations of PPPs have been summarised. As for all kinds of PPPs, the public partner – mainly development agencies funded by donor countries' governments – focuses on the acquisition of additional resources from the private sector. In this field of application, these resources are raised to reach development policy objectives. In addition, efficiency gains are in focus. Limitations of PPPs in development countries furthermore, involve the overall risks connected to FDI in developing countries as well as specific limitations such as potentially hidden intentions.

In the next step, the application of PPPs in the German development cooperation framework was outlined. This was based on a rough outline of the overall political objectives in development on the part of the German government.

In a final step, a literature review of success factors in PPPs is conducted. Factors identified are, for instance, a clear specification of objectives, a thorough definition of responsibilities or a supportive local environment.

In chapter 2 (development cooperation), it is determined that “classical” means of development cooperation measures often fail to reach their objectives. This holds particularly true on the issue of elevating poverty by stimulating economic growth. A lesson from these experiences is to shift to a “bottom-up approach” and therein actively involve various stakeholders in development cooperation, especially local people and organisations (Frankel 2005: 265).

In this context, PPPs are a promising attempt at improving the success of development cooperation. Their core strengths include the raising of additional funds for development cooperation measures from the private sector, the utilisation of skills and know-how of the private sector and the improved efficiency of projects implemented.

PPPs can contribute to the achievements of development objectives at the level of individual projects as well as at higher levels involving a higher number of actors. Hence, PPPs at project level yield the most effective implementation of the bottom-up approach. These projects directly focus on the establishment of sustainable structures for stimulating growth and often serve as grassroots operations for cooperation at a higher level.

Presently, knowledge about the actual development impact of PPP programmes remains very limited. The first reason for this limited knowledge is that many of the PPP programmes have not yet been implemented for a sufficiently long period. A reasonable impact assessment needs a certain period of time between programme ending and assessment (e.g. 2-3 years). Second, most individual projects

are limited in terms of financial capacity. With regards to such a limited budget, intensive monitoring and evaluation efforts seem excessive. A third and probably most challenging aspect is found in the methodological hurdles. There is no evaluation tool in place which can reliably address the question of whether a partnership is the most effective way of implementing a certain project in pursuit of a certain project objective (Binder et al. 2007: 46).

Thus, the following empirical analyses of PPPs in the framework of the BMZ PPP facility intend to contribute to the research in the field. The empirical analysis will focus on the success mechanisms of PPPs, obstacles for successful project implementation as well as the project outcomes.

4 CASE STUDIES

4.1 INTRODUCTION

4.1.1 INTRODUCTION AND CHAPTER PURPOSE

In the following chapter, a case study analysis of 3 PPP projects is conducted. Qualitative research methods are applied.

According to Budäus et al. (1997), research on PPPs should incorporate empirical fieldwork. However, this empirical fieldwork should not be limited to a description and analysis of cases. Rather, it is recommendable to first develop a solid framework and identify patterns of cause and effect before ultimately drawing conclusions from empirical findings (Budäus et al. 1997: 28-32).

Consequently, a theoretical framework is essential to assessing findings from case study research on PPPs. Furthermore, following a case study approach, a solid theoretical framework is the basis of all replication procedures, i.e. enhancing the robustness of findings by connecting them to more than one empirical case. In the process of case study research, Yin (2003) postulated that the theoretical framework serves as “the vehicle for generalizing to new cases” (Yin 2003: 48). It has to state conditions under which certain phenomenon are likely to occur or under which they are unlikely to occur (Yin 2003: 47-48).

The role of theory in case study research is however not always properly considered in the broad range of existing case study literature. Furthermore, the borderlines between related research methods such as the grounded theory approach or the ethnographic approach sometimes are blurred with the result of an unclear view on the role of theory construction. According to de Vaus (2001), the importance attached to setting the fundamentals of the theory is however undisputed: “[...] the task of a case study researcher is fundamentally theoretical. Collecting and analysing information from case studies must be guided by theory” (de Vaus 2001: 221).

Since the focus of the research is on the analysis of PPPs as a certain form of cooperation, selected theoretical considerations on cooperation are outlined. At the same time, cooperation is a complex issue and numerous theoretical perspectives are relevant. When attempting to identify patterns to explain the existence and efficiency of cooperative structures, a multi-paradigm approach is necessary. This means that different theoretical perspectives have to be combined in order to analyse the emergence and existence of cooperation (Woratschek and Roth 2003: 143).

This applies to the general analysis of cooperation, yet is likewise valid for the analysis of PPPs as a specific form of cooperation. From the review of the relevant framework topics – development cooperation and PPPs in general – it became apparent that a thoroughly founded and commonly accepted theoretical framework for the explanation of the emergence of PPPs and the process analysis of PPPs in development cooperation does not exist. This implies that the deduction of testable hypotheses, which could then be applied to research on the topic, is not currently possible.⁴³

⁴³ On the formulation and role of hypotheses in the research process see e.g. Atteslander 2006: 38-44.

The deduction of hypotheses which appropriately describe the part of reality which represents the focus of research is a precondition for the application of purely quantitative research methods in the tradition of critical rationalism (Mayer 2004: 15-21).

As a result of the specific character of PPPs and the lack of a universally accepted theoretical framework, a mainly qualitative research approach is first of all applied on the subject. A qualitative approach should be applied if the research subject is complex and completely or partly unknown. In this case, the low degree of abstraction of qualitative research positively influences the results. In any case, if an inductive approach is chosen, i.e. if reality serves as a starting point of description and analysis, then the first step is a qualitative approach (Heinze 2001: 27).

Overall, then, the case study approach can be regarded as its own, separate source for hypotheses. The identification of patterns in relationships among variables when observing the study object can lead to testable hypotheses proposals (Crano and Brewer 2002: 7-8). Furthermore, the basic objective, according to Flick (2006), of a case study “is the precise description or reconstruction of a case” (Flick 2006: 141).

These two objectives – the precise reconstruction of cases and the inductive development of hypotheses respectively propositions concerning the research questions – are the two main purposes of the case studies conducted in this thesis.

To achieve these objectives, three theoretical streams (Game Theory, New Institutional Economics, The Resource-Based View) are identified as relevant for the analysis of cooperation. The main ideas of these theoretical directions are summarised. In a second step, these ideas are applied to the analysis of PPPs and research items for the empirical fieldwork are identified. These research items serve as guidance for data collection in chapter 4 (case studies) as well as chapter 5 (survey).

The actual case study research starts with a descriptive outline of the cases including the project idea, content, concrete organisational patterns and outcomes. Second, the cases are analysed separately according to the research items identified. In a final step, a cross-case analysis is conducted before conclusions are drawn.

4.1.2 RESEARCH DESIGN OF THE CASE STUDY ANALYSIS

The research design can be understood as a “blueprint of research” (Yin 2003: 21). For case studies, there are five aspects of particular importance: the study’s question, the propositions (if any), the unit of analysis, the logical linking of data to the propositions, interpretation criteria for the findings (Yin 2003: 21-27)

Applied to this thesis, these main points of a case study research design contain the following.

1. The study’s question

The three research questions have been stated in chapter one. The questions are distinct but build on each other in the sense that they step by step increase the granularity level of findings.

2. The propositions

The propositions serve as a lead in the right direction and may assist in the search for relevant evidence in the cases. As addressed in the previous subchapter, a theoretical foundation plays a central role in developing propositions. Propositions in this context are not to be formulated as strict hypotheses however, due to the qualitative nature of the case study research.

A systematic approach is generally the precondition for gaining scientific data. At the same time, there is no consensus on the question of to what extent qualitative research has to refer back to a theoretical foundation (Mayer 2004: 27).

In this thesis, the suggestion of Yin (1995) is followed, which states that theory shall serve as guidance for data collection. The role of theory development prior to the conduction of any data collection is a point in which the case study approach differs from other related methods, such as the ethnographic approach or grounded theory. These two alternative methods typically avoid the specification of a theoretical proposition a priori empirical research.

In the case study approach, theory development constitutes an essential element of the design phase. Theoretical propositions will form the essential elements of the research design blueprint and deliver guidance on data collection and analysis. This does not however necessarily refer to theory testing only, but to the process of data collection as well (Yin 1995: 27-28).

Due to the lack of a single appropriate theory base for the analysis of PPPs, a multiple theory base will be applied as guidance for case study research. Yin (1995) suggested that researchers should be aware of the full range of theories that might be relevant for one's own case study (Yin 1995: 29). At the same time, McQuaid (2000) stated that the theoretical base for the analysis and understanding of the numerous case studies on partnership arrangements is so far inadequately developed (McQuaid 2000: 9).

To make amends of this situation, a choice of various theoretical approaches is outlined at this point to serve as guidance on the case analysis. The theoretical approaches chosen all deliver reasons for the development and functioning or malfunctioning of cooperative structure, the motives for entering a cooperation and possible benefits. Since a PPP constitutes a specific form of cooperative structure, this theory base stands as an appropriate starting point for analysis.

The range of literature that deals with the broad topic "cooperation" can of course not be covered completely. A choice had to be made from the seemingly most relevant theoretical approaches. The theories incorporated include Game Theory, New Institutional Economics (Transaction Cost Theory, Principal-Agent Theory, Property Rights Theory) as well as the Resource-Based View.

The main ideas of each theory stream will be outlined and it will be extracted in which way these ideas can lead to a research item which is worth taking into account in pursuit of answers to the research questions. In a next step, the research items identified will be transferred into a semi-structured interview questionnaire.

3. Unit of analysis

The most important preliminary step is to identify cases which are relevant for the research question (Flick 2006: 141). Connected to this decision is the choice between a single or a multiple case analysis as well as the decision between an embedded and holistic case design.

Embedded vs. holistic case design: It is possible to distinguish between two case study variants with regards to the number of units of analysis involved. First, if there is a particular separation of subunits under the headline of only one single case and these subunits are being analysed to a certain degree separately, then the type “embedded case study” is given. The subunits are embedded in the structure of the larger case at hand. Second, if the focus of a case study is rather on the case subject as a whole, then the type “holistic case study” is given. The choice of the latter mentioned type is particularly appropriate when it is not clearly possible to separate logical subunits within one case and/or the theory base of the case study is of a holistic nature (Yin 2003: 42-46).

The character of the case study analysis in this thesis is the holistic case study approach. This character derives from the nature of a PPP. A PPP aims at pooling resources and at the common achievement of objectives. If this PPP construct would be analysed in strictly divided subunits which would involve following an embedded case study design, then the risk would arise of losing focus on the PPP as whole – i.e. the actual research subject. This does not mean that a separate view of the different constituent parts of a case, in particular, the single partners in a project, is avoided in that process. Nevertheless, it is the interaction between these partners, rather than the processes within the structures of e.g. one partner institution that are in the centre of interest in this thesis. Hence, the holistic, rather than the embedded case study approach seems most appropriate.

Multiple vs. single case design: The case study approach will be applied to three single cases. This represents a multiple-case design as opposed to a single-case design with only one case being investigated. Yin (2003) stated that multiple case-designs and single-case designs are variants of one and the same methodological approach⁴⁴ (Yin 2003: 46).

The main reason for elaborating on more than one case connected to the same research questions is the possibility of replication. Replication in this context means first, that the investigation of more than one case allows for the prediction of similar results in further (similar) cases, the so-called literal replication. Second, replication might allow for the prediction of contrasting results which are nevertheless predictable for the same reason as in the case of the primary results. Yin (2003) suggested that a number of two to three cases within a multiple-case design goes along with the first mentioned option, where the prediction of similar results can proceed by literal replication (Yin 2003: 47).

The choice of precisely three cases in this thesis thus seems appropriate. It should allow the literal replication of empirical findings based on the a priori developed theoretical framework to some extent. This procedure may well increase the robustness of results.

The investigated cases are the following three PPP projects:

- Case 1: “Jatropha”, located in India
- Case 2: “Abaca”, located on the Philippines
- Case 3: “Vocational Training Centre”, located in Malawi and Kenya

Yin (2003) stated that the decision for conducting a multiple-case study, instead of a single case study, has to be founded in a specific reasoning or in other words “every case should serve a specific

⁴⁴ Other authors have different views on this issue and regard single-case and multiple-case studies as entirely different approaches (Yin 2003: 46).

purpose within the overall scope of inquiry” (Yin 2003: 47).

The choice of cases analysed in this thesis is based on the following rationale. The three projects all are conducted under the same roof, i.e. they are funded by the BMZ PPP facility/developPPP programme. This implies that possible findings potentially allow for drawing conclusions on projects in the framework of the BMZ PPP facility.

At the same time, the projects show a heterogeneous character concerning their content, objectives, organisational structure and location. This variety should lead to a broad range of information about projects with different kinds of character.

4. and 5. The logical linking of data to propositions and interpretation criteria for the findings:

These aspects stand as, according to Yin (2003), “the least well developed in case studies” (Yin 2003: 26). Plus, no single standardised methodology for analysing qualitative data exists (Saunders, Lewis and Thornhill 2007: 478). Nevertheless, a strategic approach for interpreting data is obviously necessary (Yin 2003: 109).

In a first step, the strategy for developing a case description will be followed. The structure of the description will lead to a first reduction of the complexity of the data collected. This is an attempt to reach a categorical aggregation of case data collected. Categorical aggregation, as opposed to direct interpretation, is one approach to qualitative case analysis (Stake 1995: 74). Categorical aggregation can contribute to the principle understanding of cases, which is the primary objective and task of case studies (Stake 1995: 77).

In addition, basing case study analyses on theoretical propositions is the “first and most preferred strategy” (Yin 2003: 111) in analysing case evidence. Theoretical propositions – which not necessarily have to be hypotheses – provide the overall base and guide data collection. Furthermore, theoretical propositions provide guidance on the development of priorities in the analysis of data (Yin 2003: 112).

In a second step, the interpretation of data will thus be based strongly on the review of various theories on cooperation in this chapter. The research items identified in this review serve as the structure from which to conduct the data analysis.

In three individual case reports, the data collected will be coded according to the research items. The process of coding generally describes breaking down data and rearranging it into categories. That is, the findings within the categories or between the categories can be compared with each other. Categories can also be chosen without a theoretical framework but based on organisational rationale only (a type of categorisation than can frequently be found in qualitative research). However, categories based on theory are recommended for the purpose of handling larger amounts of data in order to be able to develop ideas which do not fit in existing organisational categories (Maxwell 2008: 238).

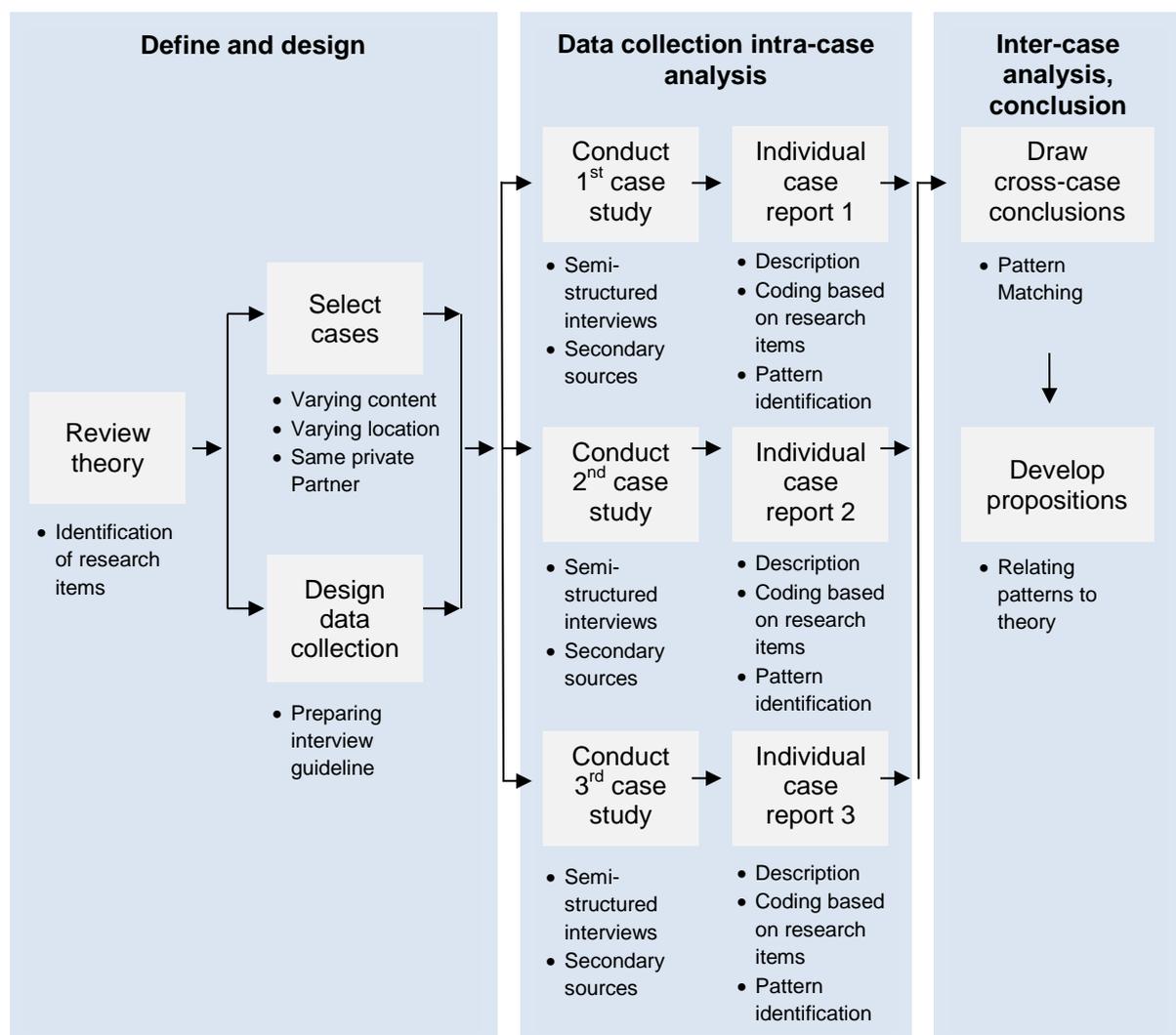
After coding the data into categories, the search for patterns in the data is conducted. As a final step of the case analysis, a cross-case synthesis is conducted. A cross-case synthesis can be based on previously individually analysed cases. By applying a cross-case synthesis, the robustness of findings can be increased (Yin 2003: 133).

Eisenhardt (1989) proposed several strategies for identifying patterns across cases. Based on the single inter-case analysis, one strategy is to search for resembling patterns within a priori set categories. Hence, a cross-case analysis enhances the chances of identifying the relevant information within the data. When a theory building approach is followed with a case study analysis, a cross-case analysis can have a positive impact on the reliability and accuracy of developed theory, i.e. the extent to which theory fits the data collected (Eisenhardt 1989: 540-541).

4.1.3 RESEARCH PROCESS OF THE CASE STUDY ANALYSIS

Figure 4.1 summarises the research process in the case study analysis conducted in this chapter.

Figure 4.1 Research process in Chapter 4



Source: based on Yin 2003: 50

In a first step, the theoretical foundation for the case analysis constitutes the review of various theories on the development, existence and functioning of cooperative structures. A selection of theories is reviewed and the major statements of the theory summarised. Thereafter these statements are put into the PPP context as a specific form of cooperation.

The second step consists of the development of a semi-structured interview guideline. Since the major source of case data is gathered by conducting interviews, a particular emphasis is set on the development of an interview guideline. The guideline is mainly based on the findings of the theoretical analysis in Step 1. This means that the relevant aspects (e.g. objectives of partners, cooperation drivers, sources of conflict etc.) extracted from the various theories are investigated in the data collection process. To do so, open, semi-structured questions are incorporated in the interview guideline.

Step three comprises the collection of data. The interview constitutes “one of the most important sources of case study information” (Yin 2003: 89). Semi-structured guideline-based interviews have been conducted to collect information on the cases. The application of semi-structured interviews is appropriate if the a priori knowledge about the subject is limited (Diekmann 1995: 438).

The semi-structured interview takes the form of an unstructured interview. The researcher has a list of topics with respective questions to address. However, these may be adapted and may vary from interview to interview, e.g. due to the specific relation of the interviewee to the research topic or the flow of the interview. The semi-structured interview is particularly suitable for explorative research (Saunders et al. 2007: 312).

Furthermore, the collection of answers about a concrete subject is focused instead of the collection of general opinions (Flick 1999: 114, Scholl 2003: 67). The semi-structured interview with open questions allows the researcher to be more flexible and investigate individual aspects up-close if necessary. Thus, the interview guideline is the framework of the interview (Flick 1999: 112-113, Liebhold and Trinczek 2002: 39).

The expert interview is a specific form of interview. In this process, the interviewee can be characterised as an expert e.g. based on his/her specific role or function within an organisation. An expert is responsible for a specific task within an organisation and has privileged access to relevant information (Scholl 2003: 67). In an expert interview, the interviewee is less of interest as a person, but rather for his specific knowledge on a given topic (Flick 2006: 165).

For the analyses of the three cases chosen in this thesis, altogether interviews with 11 experts were conducted. A detailed list of interviewees can be found in annex 7.3.

In the framework of the case study analysis, it is of particular importance to validate information gathered from various sources and to examine this information from various angles. This also includes gathering multiple viewpoints on the same subject or data set. In the framework of this case study analysis, the views of representatives from each main partner in the three PPP cases are included. To that end, the suggestion of Ghauri (2004) on incorporating all partners' views in the analyses of joint ventures is followed (Ghauri 2004: 115).

The data analysis in the final step follows the process described in the previous subchapter. That is, a structured descriptive outline of data collected about the cases is then followed by logical linking of findings based on the theoretical framework developed a priori.

The evaluation of qualitative data collected following the above described research design and steps therefore has to fulfil the following three criteria⁴⁵ according to the suggestion by Yin (2003: 33-39):

Construct validity: In the framework of case study research, this aspect refers to the operational measures applied in the research process. These measures have to be suitable with regards to the research subjects. Improving construct validity can be achieved, for instance, by combining multiple different sources of evidence (Yin 2003: 35-36). By applying expert interviews as well as integrating various sources of secondary data, this thesis aims at fulfilling the criterion of construct validity.

External validity: This criterion refers to the generalisability of the findings. In this pursuit, case studies follow the logic of analytical generalisation (as opposed to statistical generalisation e.g. in surveys). This can be achieved, for example, through the logic of replication by applying a multiple case study design (Yin 2003: 37). As outlined earlier, this thesis follows a multiple-case design. However, generalisability is a sensitive aspect and will be discussed once again in more detail further below.

Reliability: This criterion refers to the possibility of replicating the research process on further cases. Reliability refers to the degree to which research leads to the same results when applied once again under the same conditions and to the same subject (Atteslander 2006: 278). To do so, procedures have to be well documented in order to enable other researchers to follow the same steps. Furthermore, other sources of errors or bias problems have to be avoided (Yin 2003: 37-38). At the same time, the individual character of a case study limits the replicability of a research design to some extent. Some scholars collected overlook the appropriateness of this criterion for qualitative research in general (Lamnek 1993: 177).

The outline of interview results is not targeted at outlining the interviews in as much detail or comprehensiveness as possible. Rather, the outline aims at identifying problem areas. This does not therefore entail each sentence being quoted in detail, as it would be the case in e.g. objective hermeneutics (Mayer 2002: 47).

4.2 SELECTED THEORETICAL ASPECTS OF COOPERATION AND THEIR APPLICATION TO PPPS

As outlined above, Yin (2003) highlighted that a solid theoretical framework is the basis for all attempts at replicating findings. The theoretical framework has to formulate the conditions under which certain phenomena occur. Thus, it is the basis from which generalisation of specific findings to other cases (Yin 2003: 47-48) is enabled.

⁴⁵ A fourth possible criterion would be “internal validity”. However, this criterion does not apply to exploratory cases but rather to explanatory and causal case studies only (Yin 2003: 35). Since the case study analysis conducted in this thesis is of exploratory nature, the criterion is not discussed here.

In chapter 3, the principal character of partnerships and the particular character of a PPP have been outlined. A PPP is perceived as a specific form of collaboration or partnership, respectively. Thus, general theoretical approaches about the explication and analysis of general partnerships serve as the starting point for a target-oriented application with PPPs. This application is the basis for the identification of research items. As described in the previous subchapters, these research items will be incorporated into the empirical parts of this thesis. In chapter 4, the theoretical framework will be used as the basis for the case study analysis.

The formation of cooperative agreements, network structures, alliances or partnerships has demonstrated a heightened importance in business practice. Moreover, cooperation of this type can be regarded as an outstanding form of modern organisation of value creation chains in business operations, nationally as well as internationally (Zentes, Swoboda and Morschett 2003: III). Explicatory literature concerning this trend can be found on a large scale.⁴⁶

Amongst others, Budäus et al. (1997) named New Institutional Economics (Principal-Agent Theory, Property Rights Theory and Transaction Cost Theory), in particular, as suitable for explaining empirical phenomena in the PPP context (Budäus et al. 1997: 32).

On top of New Institutional Economics, Game Theory as well as the Resource-Based View, have been selected, which constitute further highly influential theoretical directions. After outlining the general ideas of each of the mentioned theoretical approaches, the main ideas will be applied to the analysis of PPPs. Hence, each theory stream delivers one or more research item(s) which serve as a basis for data collection as well as case analysis.

4.2.1 GAME THEORY

One major area that deals with issues of interaction and interrelation between actors is Game Theory (McQuaid 2000: 27-28). A basic outline of the concept is given for better appreciation of the development of partnerships as an outcome of interaction processes.

By analysing equilibria and equilibrium strategies, Game Theory can help firms, institutions and other actors to understand the implications of their behaviour (Magin et. al. 2003: 123). Of course, the outline of the topic in the framework of this thesis can only take place on a very limited scale. However, by outlining some basic features of games, some factors determining the rational decision-making in cooperative arrangements will become more transparent. A formalistic outline of game situations will not be given since the focus in this framework is on the basic assumptions behind this theory.

By taking into consideration the general intention of the analysis of games, it becomes apparent that there are potential benefits for the players if they take this analysis into proper consideration. According to Morris (1994), these benefits originate from the two main objectives of the analysis of games. First, there is the descriptive objective. This objective describes the pursuit of finding out

⁴⁶ A review of literature concerned with analysing cooperation particularly among business operations can e.g. be found in Swoboda 2003: 38-39.

exactly why the parties (i.e. players) in a game behave as they do in a competitive situation. Second, there is the more ambitious objective of advising the players about the best way to play. This means that the advice would comprise a strategy that guarantees that the players reach the maximum possible outcome. This second objective is however far-fetched in many games. The fact that the best possible outcome cannot even be defined for many games illustrates the unrealistic nature of this goal. However, Game Theory can even in these cases help players to play better and therefore achieve a better outcome in their game (Morris 1994: vii-viii).

The term “game”, as formulated by Montet and Serra (2003), in this context refers to “[...] a situation of conflict and cooperation between intelligent and rational individuals (or groups of people)” (Montet and Serra 2003: 1). Basic assumptions of Game Theory are rationality (a player takes decisions in a utility-maximising manner) and intelligence (i.e. each player is aware of the rationality of the other players) (Magin et al. 2003: 124).

A differentiation can be made between non-cooperative games and cooperative games. Games are termed non-cooperative if the commitments of players (e.g. promises, agreements) are not enforceable. Thus, the players’ decisions are based on self-interest only. In this process, the situation is therefore only determined by the rules of the game. Nevertheless, cooperative behaviour can well occur in non-cooperative games and a major topic within Game Theory thus is to prove that endogenous cooperation, i.e. cooperation founded in the nature of the game, can occur in non-cooperative game situations. Cooperative games, in contrast, assume that commitments are enforceable and binding, i.e. cooperation is seen as exogenous (Montet and Serra 2003: 2-3).

Non-cooperative games are usually presented in either the normal form or the extensive form. The normal form (a matrix structure) is applied if players take their decisions simultaneously, i.e. they are not informed beforehand about the decision of other players. The extensive form (a tree structure is applied) adds the factor of time. In this formalisation of a game, a sequential game can be displayed, i.e. players take their turn consecutively (Magin et al. 2003: 124-125).

A basic appreciation of the concept of Game Theory (in this case a non-cooperative, non-zero sum game) can be achieved by understanding the concept of the “Prisoner's Dilemma”. It illustrates the options of players to either cooperate with each other or to defect. The choice of the partners between these options is primarily influenced by the question of whether the partners are involved in a onetime game or whether an iteration of the game is likely. The simple and well-known example of the Prisoner’s Dilemma⁴⁷ is frequently quoted to illustrate the challenges in modelling a game situation and in the selection of a solution for a game.

Pénard (2008) summarised that “the Prisoner’s Dilemma is the most famous and certainly the most useful game for analysing social relationships” (Pénard 2008: 170). Two prisoners are suspected of having committed a crime. They are arrested and interrogated separately. The options the prisoners have are either to confess to the crime (i.e. to defect) or to cooperate with each other. If one of the suspects confesses to the crime and the other does not, he/she will be set free (i.e. receives a high positive pay-off). The other suspect would have to serve a long sentence (i.e. a zero pay-off). If both

⁴⁷ Several directly related variants of the basic prisoners’ dilemma exist. For a few examples see e.g. Schmidt 2004: 97-99.

prisoners confess to the crime, then they would both get a medium sentence (i.e. a low pay-off). If neither of the prisoners confesses to the crime, then they both would receive low sentences (i.e. a medium pay-off). Thus, if both remain silent, the combined welfare would then be maximised. In other words, the players have the two options of either cheating or cooperating. If both cooperate, they will both earn a higher payoff than if both cheat. In case one cooperates and one cheats, the one who cheats earns a higher payoff than the one who cooperated. Thus, for both players, cheating (instead of cooperation) stands as the dominant strategy. Thus, both prisoners cheating would be the predictable outcome (the Nash equilibrium). However, this outcome is not the Pareto Optimum. The individually decided upon best choice results stands as a suboptimal outcome for their combined welfare. Both would be better off if they cooperated. The question emerges of how to reach cooperation. Cooperation can be reached by repeating the game. Repeating the game numerous times would allow one of the players to recognise the behaviour of the other. Cooperation can become mutual beneficially. Even if cooperation leads to short-term costs, it might occur if future pay-offs are high enough to outweigh the short-term costs.⁴⁸ More concretely, cooperation might emerge due to reputation effects, one offers an incentive to cooperate for the other in the future by cooperating, and deterrent effects, one cooperates, i.e. does not cheat since he/she is afraid of reprisal (McQuaid 2000: 27-28, Pénard 2008: 170).

The Prisoner's dilemma illustrates that the rational behaviour of an individual player does not necessarily lead to the best achievable outcome for all players. This non-optimal outcome is based on the fact that there is no incentive to cooperate for a player (without consultation) in the case of a one-time game (since another player could use this cooperative behaviour to maximise his own utility by defecting) (Magin et al. 2003: 128). The situation becomes more complex when not only a one-time game, but a repetition of the game is taken into consideration. Axelrod (1984) conducted experiments to identify successful strategies in an infinitely repeated Prisoner's Dilemma game.⁴⁹ One result of these experiments was that there is a universal predisposition of the emergence of stable cooperation. That is, the existence of a sufficiently large "shadow of the future" enters into play. This means that chances are sufficiently high that the two players will indeed meet again and that the game is will be repeated. If this is the case, the anticipated next encounter is important enough for the individuals to come to the conclusion that defection constitutes an unprofitable strategy (Axelrod 1984: 174).

Axlerod's work is a good illustration of the attempt of Game Theory to predict stable outcomes of a game. A "Nash equilibrium" is, as formulated by Pénard (2008), reached if "[...] a stable situation in which no decision maker has an incentive to change strategy given the strategies chosen by the others" (Pénard 2008: 160). The situation of a Nash equilibrium is regarded as self-enforcing and self-organizing (Pénard 2008: 160). Moreover, the Prisoner's dilemma illustrates a central difference of Game Theory from other forms of decision theory. In decision theory, usually the decision-making of individual players is analysed, as opposed to the decision-making of several players in Game Theory. Thus, in decision theory, the decision of players (or agents) is based on the decision of player(s) and

⁴⁸ For a more detailed presentation of the Prisoners Dilemma see e.g. Sieg 2000: 3-5.

⁴⁹ He used a replication of the games via computer models. For the further outcomes of these experiments, in particular, the identification of the most successful strategy in the experiments ("Tit for Tat"), see Axelrod 1984: 175-177.

the state of nature. As a result, uncertainty in the decision problem prevails with regards to the shifting of chances (i.e. changes in nature). In other words, player(s) have, as summarised by Montet and Serra (2003), “exogenous beliefs about the probabilities of chance moves. In contrast, for game situations in which several agents have to make decisions, players’ expectations about their opponents’ decisions are endogenous. There is strategic uncertainty” (Montet and Serra 2003: 4).

This constitutes a central feature of Game Theory. The decision of one player depends on the decision(s) of other player(s). These decisions cannot be observed and must therefore be forecasted. Thus, if strategic uncertainty prevails, player(s) do not only take into account the structure and nature of the game, but also the decisions and behaviour of other player(s) (Montet and Serra 2003: 4).

Generally, the „evolutive scenario” (Montet and Serra 2003: 7) in Game Theory perceives that repeating a game, i.e. the repeated interaction of players, ultimately leads to an equilibrium. In these repeated interaction processes, players gain the ability of predicting the behaviour of other players by extrapolation. Players are able to do so even if they are characterised by limited rationality or limited cognitive or instrumental capacities. This evolutionary point of view in Game Theory seems more realistic than the purely rationalistic view (also termed deductive, introspective, educative view) of Game Theory. The latter mentioned states that the achievement of an equilibrium is only founded in the reasoning of the players. That is, players are believed to be capable of and likely to predict the behaviour of other players purely by means of applying rational principles and common knowledge, but without the experience of previous games (Montet and Serra 2003: 6-8). Accordingly, Klijn and Teisman (1997) described a game as „an ongoing, sequential chain of (strategic) actions between different players (actors), governed by the players’ perceptions and by existing formal and informal rules, which develop around issues or decisions in which the actors are interested” (Klijn and Teisman 1997: 101).

Furthermore, a second implication of Game Theory is that a core objective of institutions or organisations is to facilitate the coordination between players or decision-makers. This coordination allows them to reach an equilibrium by, for example, fostering the beliefs and expectations of players in this single equilibrium, even if multiple equilibria exist (Pénard 2008: 160).

Application to PPPs

Experiences of decision-makers with PPPs as well as with alternatives to PPPs from the past, serve to influence the perceptions and expectations of decision-makers in the present. That is, negative experience with the outcomes with PPPs will cause a rather low estimation of possible benefits of a PPP and vice versa. In addition, available information about the quality of outcomes of a PPP cannot necessarily be considered objective or accurate. Thus, more direct and personal negative or positive experience with PPP projects or alternatives to PPPs are likely to influence decision-makers more in the direction of being in favour or against PPPs (Budäus et al. 1998: 28-29).

Thus, experience with a PPP project is the central underlying factor in the decision of whether to enter and/or to withdraw from a PPP. If the experience with a PPP undermines the positive expectations that existed towards the PPP in the beginning, then the expectations towards the net-utility of the PPP are positively influenced. A withdrawal from the PPP then becomes less likely (Budäus et al. 1998: 41-42). Thus, based on basic perceptions of (evolutionary) Game Theory, a research item of interest in

the case analyses is the previous overall experience of a partner in a PPP with the PPP tool and/or previous experience with the other partners in the PPP. A positive previous experience with the partners should then increase the willingness of the parties involved to participate in a PPP with these partners once again.

→ Research item R1: **Previous experience with the partners involved**

4.2.2 NEW INSTITUTIONAL ECONOMICS

In the following subchapter, the focus will be set on New Institutional Economics (NIE).

A main reason for the development of NIE is the existence of market failure. Bates (1995) summarised that “market failure arises when the necessary and sufficient conditions for market equilibrium fail to hold” (Bates 1995: 29). It is in the case of market failure, in particular, where, for example, production externalities and imperfect information or the coordination of public goods, gives rise to the development of other institutions than markets alone (Bates 1995: 29-30).

On a general level, Williamson (2002) distinguished between two different levels within NIE. These are first, the institutional environment, including formal (e.g. laws) and informal (e.g. norms) rules and second, the institutions of governance (e.g. markets, firms). In other words, New Institutional Economics comprises “the rules of the game” as well as the “play of the game” (Williamson 2002: 49).

NIE refers to market institutions as well as non-market institutions such as political institutions (legal system, constitution state). NIE combines several theoretical directions rooted in neoclassical theory. Core premises of NIE are as follows: methodological individualism (the economic basis of the decision of each individual determines the action of social groups); individual rationality (Individuals maximise their individual value within the given decision situation and the given restrictions; at the same time, the concept of limited rationality influenced NIE); asymmetrical distribution of information among actors; the identification of various forms of insecurity (exogenous insecurity: occurrence insecurity and endogenous insecurity: market insecurity) (Woratschek and Roth 2003: 146).

The market institutions in focus of NIE are: Transaction Cost Theory; Property Rights Theory and Principal-Agent Theory. Non-market institutions in the framework of New Institutional Economics comprise New Political Economy; Economic Analysis of Law or Constitutional Economics. Hence, individual parts of the framework of New Institutional Economics partly overlap and should not be regarded as strictly separate (Woratschek and Roth 2003: 147).

In the following, the three approaches termed as market institutions (Transaction Cost Theory, Property Rights Theory and Principal-Agent Theory) will be outlined briefly and set in relation to PPPs. The relevance of these theories for a whole range of organisational and managerial research qualifies them as a suitable part of this theoretical basis for the analysis of PPPs.

4.2.2.1 THE TRANSACTION COST APPROACH AND COOPERATION

According to Swoboda (2003), Transaction Cost Theory can be regarded as “a pillar of New Institutional Economics” (Swoboda 2003: 47) and is to a large extent integrated in the other two main directions of theory within NIE (Property Rights Theory, Principal-Agent Theory) (Swoboda 2003: 47). The basic idea of Transaction Cost Theory goes back to an essay by Coase from 1937 (“The nature of the firm”). It was however, the work of others, in particular by Williamson, which made the concept much more applicable and made it a highly relevant concept in organisational and managerial science (Williamson 2008: xxv).

In his essay, Coase showed that there are at least two possibilities for coordinating economic activity. These are the company-internal and the company-external coordination which are based on the existence of a market-based economy. The company-internal coordination uses hierarchical structures. In contrast, the company-external market uses price mechanisms. The reason for the formation of a company is that using the price mechanism is associated with transaction costs (Erlei, Leschke and Sauerland 2007: 66).

Transaction costs are defined as costs which occur during the implementation of a transaction. They entail the costs attached to information search and collection, bargaining costs, control costs, as well as opportunity costs which occur if the efficient implementation of a transaction fails (Rao 2003: xvi).

Furthermore, Coase assumed that there are decreasing rates of return in a firm. The marginal costs of processing company-internal transactions increase due to the fact, for instance, that it becomes increasingly difficult to allocate resources within a company in an efficient manner. This implies that there is an optimal company size at the point where the marginal costs of using the price mechanism equal to the marginal costs of using the company-internal hierarchical structures. Thus, Coase introduced the transaction cost approach as a tool for analysing the connection between organisational costs and price mechanisms. In the end, the approach delivers a tool for assisting in the decision-making between purchasing goods or services from the market, i.e. company-externally or integrating the respective source of goods or services into the company, i.e. pursuing the transaction company-internally (Erlei et al. 2007: 66).

The work of Williamson (e.g. 1985) is regarded as a significant further development of the transaction cost approach and its application in various fields of research. Transaction cost economics have broadly influenced organisational and management research, among other fields. Of particular interest in this framework are the generic modes of governance that result from these ideas. Williamson (2005) categorised three leading modes of governance: market, hybrid and hierarchy (Williamson 2005: 49). These are summarised in table 4.1.

Table 4.1 Attributes of leading generic modes of governance

| Governance attributes | Governance mode | | |
|---------------------------------------|-----------------|-----------------------|--------------------------------------|
| | Market | Hybrid | Hierarchy |
| Incentives | High-powered | Less high-powered | Low-powered |
| Administrative support by bureaucracy | None | Some | Much |
| Contract law regime | Legalistic | Contract as framework | Firm as own court of ultimate appeal |

Source: Williamson 2005: 49

As it can be seen in table 4.1, “incentive intensity”, “administrative controls” and “contract law regime” are the core attributes for describing governance structure. “Transaction Cost Economics uncovers and explicates the incentive and bureaucratic cost consequences to move from market to hierarchy [...]” (Williamson 2005: 50). In short, transaction cost economics intends to analyse and compare the different possible ways of managing transactions. In that process, the choice of the right mode of transaction is of critical importance, since all organisational modes bear costs. However these costs differ according to the different modes, as do the advantages of the modes. Costs emerge in the process of negotiation, monitoring and enforcement of contracts, among other areas. Hence, two main sources of costs can be identified. First, safeguards for preventing opportunism exist since transactions involve agents. Second, the environment transactions taking place in, bears uncertainties concerning the source of costs (Ménard 2003: 284).

Application to PPPs

As for the analysis of PPPs, the following implications can be deduced from the transaction cost approach. The main underlying characteristic of a PPP project in this context is the specificity of the capital invested in transaction mechanisms related to a PPP. In case of a failure of the PPP, the capital invested can hardly or in no way be spent on a purpose of use different than the PPP. This implies that the failure of a PPP is associated with high costs. Thus, the organised fulfilment of the underlying contract is of special importance.

Strongly connected to this aspect is the avoidance of opportunistic behaviour, facilitated by means of integrating control- and regulation mechanisms into a PPP framework. Plus, the question of an early termination of the PPP contract by one party is of further relevance. These requirements have to be fulfilled without increasing the complexity of PPP contracts and regulations in such a way that the organisational costs increase inappropriately due to such factors, for example, as time-consuming bureaucracy.

To sum up, the transaction cost approach calls for a specific analysis of the whole range of internal coordination mechanisms such as problem solving mechanisms, sanction mechanisms, opting out clauses, control obligations or decision-making processes. The question has to be addressed of whether the costs connected to these factors hinder the efficiency of PPP projects, entail negative

impact on reaching project objectives, or have deterrent effects on potential partners in the private sector.

→ Research item R 2: **Coordination of project processing; control and sanction mechanisms; decision-making processes**

Another aspect to be considered is the number of participants involved. The number of participants in a PPP can have implications on the transaction costs of internal coordination, i.e. on the expected benefits as well as costs of a given PPP.

If a PPP aims at tackling an extensive problem that requires extensive commitment of resources, then a higher number of actors willing to pool their resources can influence the ultimate probability of success of a PPP. Furthermore, the production costs can be shared among more actors and in so doing, decrease per individual actor. Thus, the gains and benefits from a PPP can be generated by fewer costs per partner. At the same time, a higher number of participants might cause higher organisational costs (Budäus et al. 1998: 65-67).

A relevant aspect in the case analysis is therefore to determine what implications a higher or smaller number of partners involved in the PPP might have on the related costs and benefits of the project.

→ Research item R 3: **Number of partners in the PPP**

Hence, operating in developing countries can be associated with specifically higher attendant transaction costs. As mentioned earlier in chapter 2 (development cooperation), these high transaction costs can be caused by such matters as weaknesses in the institutional environment (e.g. the existence and enforcement of a proper legal system) or prevailing informal institutions (e.g. traditional value system). As a result, companies might opt to perform business transactions internally in situations where they would have otherwise made use of the market (i.e. not internalised) in developed economies (Meyer and Estrin 2004: 4-5). Thereby, complex authority structures may be more effective in managing internal and external stakeholders in regards to a complex and rapidly changing environment than hierarchical management structures. Cooperation in this context can be seen as a respond to rapidly altering environments (McQuaid 2000: 29).

In short, a complex and unfavourable environmental setting in a developing country might a) influence the transaction costs connected to a PPP and b) might influence a company's decision to participate in a PPP. The value of the expertise about local conditions and/or the local network of a partner in a PPP might increase due to a complex environmental setting.

→ Research item R 4: **Implications of the micro and macro environment of the PPP in the developing country**

4.2.2.2 PRINCIPAL-AGENT THEORY AND COOPERATION

In focus of the Principal-Agent Theory is the analysis of relations between two parties who act in an opportunistic manner. The basic thought of the Principal-Agent Theory is that it has to be ensured that agents (those who fulfil tasks, e.g. managers or corporations) follow the assignments of the principals (those who delegate tasks, e.g. capital owners or corporations). Due to the room for manoeuvre on the part of the agents involved, this is however far from guaranteed. Hence, the core agency problem lies in the creation of structures designed to facilitate the ongoing win-win situation. That is, by following his/her own interests, the agent should be working sufficiently towards fulfilling the interests of the principal (i.e. the owner of property rights). This can be achieved through organisational or contractual regulations, the provision of information, control-, incentive and sanction mechanisms, among other options. Thus, the Principal-Agent Theory is essentially concerned with the uncertainty (event uncertainty and behavioural uncertainty) which ensues after the creation of a contract. Uncertainty emerges since it is impossible for the principal to control the agent completely e.g. due to external factors (i.e. environmental factors). Factors fostering a solution of this agency problem without the creation of overbearing bureaucratic regulations are, for example, good knowledge of the partner and/or a solid basis of trust (Swoboda 2003: 49-50).

According to Williamson (1985), a basic obstacle for the success of principle-agent relations is opportunism since “[...] opportunism refers to the incomplete or distorted disclosure of information, especially calculated efforts to mislead, distort, disguise, obfuscate, or otherwise confuse” (Williamson 1985: 47).

Furthermore, the perception usually is that the agent obtains an informational advantage compared to the principal. Three types of asymmetrical information are distinguished in agency theory. First, “hidden characteristics” describe the inability of the principle to identify significant and relevant characteristics of the agent or properties of the services offered by the agent a priori the conclusion of a contract. Second, “hidden action” describes the inability of the principal to observe and control the activities of the agent after the conclusion of a contract or to judge and evaluate the agent’s activities due to insufficient expert knowledge and/or expertise. Hence, the agent might seek advantages and cause costs for the principal by reducing his/her efforts accordingly. In this case, one speaks of a “moral hazard” on the part of the agent. Third, agency theory speaks of “hidden intention” in the case that the principal can indeed observe and evaluate the activities and services of the agent. However, the agent may have been able to create a situation of dependency on him/her, so that the agent is able, for instance, to re-negotiate contracts in his/her interest (“hold-up”) (Burr 2003: 551).

Application to PPPs

Opportunistic behaviour and the connected phenomena just described (hidden characteristics, hidden action/moral hazard, hidden intention) can directly be applied to a PPP.

A partner faces the risk that other partners do not possess the attributes they claim to have (hidden characteristics). Partners’ behaviour in the partnership may be negatively influenced by the distribution of risk and information among the partners (hidden action). The real intentions of the partners may be unclear (hidden intention).

Hidden characteristics: The quality of the partners involved is a central aspect when evaluating the success probability of a PPP. Information about the real quality of a partner, i.e. the possession of certain resources (knowledge, skills, network connections), is of course best known to the partner himself. An opportunistic actor will claim to possess precisely these resources that are demanded for the successful formation of a PPP. A comprehensive verification of this information by the other partners is not possible a priori. Hence, the problem of asymmetric information arises. This means that partners base their decision of joining or not joining a PPP on wrong cost vs. benefit assumptions. When the real characteristics of a partner become apparent after the formation of a PPP, the cost vs. benefit assumptions have to be corrected. If a partner fails to provide the resources he claimed to possess a priori, (i.e. qualities), the expected net benefit of the other partners might decrease. On the other hand, if a partner claimed to pool resources of a certain quality and this quality level can indeed be observed and evaluated by the other partners, then the expected net benefits and/or utility of the other partners' might increase (Budäus et al. 1998: 47-48).

Thus, the approval of claimed characteristics and quality of resources and services reduces the agency problem and serves to contribute to the success of the PPP.

→ Research item R 5: **Quality of resources pooled in the PPP/services delivered in the PPP (match of expectations with actual performance)**

Moral hazard/hidden action: Another aspect of opportunistic behaviour is hidden action. This means that one partner in a PPP conducts certain action while the other partners cannot truly evaluate these actions. One possibility is that actions are taken in pursuit of the PPP's objectives and therefore can be evaluated positively. However, there also exists the possibility that action is taken for self-seeking reasons. In this case, these actions can only be evaluated negatively by the other partners. "Hidden action" in a PPP might benefit one partner to the expense of other partners' benefit (Budäus et al. 1998: 49-50).

Hidden intentions: The real intentions of each actor cannot be entirely anticipated by each of the other partners. Only over the course of progress of a PPP, can one partner judge the real intentions of the other partners. Contrary to hidden characteristics, hidden intentions can actually be influenced by the respective actor. Partners will experience a reduced benefit from the PPP if one partner deceives the other partners with untruthful statements and the actual intentions become apparent ex post (Budäus et al. 1998: 48-49).

Thus, the actual motivation and objectives of the partners in the PPP determine the success of the PPP as well as the benefits of the other partners from the PPP.

→ Research item R 6: **Character, motivation and objectives of the partners**

The time factor influences the described phenomena of opportunistic behaviour. The time frame for different PPPs may vary significantly. In case of a longer expected time frame for the existence of a PPP, the partners expect a higher benefit from a long-term cooperation.

As stated earlier, Game Theory speaks of the “shadow of the future”. A long shadow of the future has implications for opportunistic behaviour and the decision of whether to enter a PPP, stay in a PPP, or to leave a PPP (Budäus et al. 1998: 53-54).

Enlarging the shadow of the future means increasing the importance of the future relative to the present and potential benefits of cooperative behaviour. Frequent interaction between the actors involved can have this effect. The existence of hierarchical structures in an organisation can bind people or institutions in relationships. The likelihood of repeated interaction in the future therein increases. Furthermore, towards the end of the partnership, there might be an increased tendency of displaying opportunistic behaviour, i.e. focusing on one's own interests instead of the common interests within the partnership. However, this tendency particularly applies if the partners involved perceive the partnership as an one-time, closed cooperation that is running out. If the partners instead perceive the partnership as the precursor to further cooperation with the other partners, then the likelihood of success of the partnership increases (McQuaid 2000: 28).

The longer the shadow of the future in a PPP is, i.e. the longer the expected time frame of a PPP or follow up projects of a PPP is, the lower the expected advantage which might stem from opportunistic behaviour (Budäus et al. 1998: 53-54).

➔ **Research item R 7: Interest of the partners in a long-term relationship (reaching over the end of the PPP project)**

Generally, the installation of an appropriate system of incentives, control, sanctions and information can reduce the risk of opportunistic behaviour occurring and the risks associated with information asymmetries. In other words, the installation of control, information and incentive systems increase the opportunity costs of opportunistic behaviour of the agent and thus make opportunistic behaviour less likely (Budäus et al. 1998: 92-93).

At the same time, these mechanisms can have a negative impact on the project success if they are too extensive and create bureaucratic obstacles to smooth project processing. Finding the “right” level of control system could have a positive impact on the project. This factor once again calls for an analysis of the already identified research item “R 2: internal control and coordination mechanisms; control and sanction mechanisms, decision making processes.” It is in this framework of particular interest whether control, sanction and decision mechanisms have a positive or negative impact on the project.

4.2.2.3 PROPERTY RIGHTS THEORY AND COOPERATION

The basic idea behind the Property Rights Theory is that the exchange of goods in markets represents an exchange not only of physical goods, but of a bundle of property rights. The allocation and usage of goods is influenced by the distribution of these property rights. Usually, a distinction is made between the right to use a good (usus), to use the gain a return from a good (usus fructus), and to formally or

physically alter the good (abusus). The main focus of Property Rights Theory is on the analysis of situations where these property rights are not allocated completely and distinctions between market players are somewhat unspecific. The situation of completely defined and enforceable property rights would allow for an efficient resource allocation, which is independent of property rights. However, in reality, this is not the case. Rather, the allocation of property rights goes along with transaction costs (e.g. for the specification, assignment and implementation of property rights). The existence of property rights, moreover, has implications on the behaviour of market players. More concretely, it delivers incentives to cooperate, to establish enterprises or to form other cooperative arrangements instead of relying exclusively on the free market (Woratschek and Roth 2003: 148-149).

Application to PPPs

As mentioned above, it is market imperfections that foster the development of alternative institutions other than markets, one of these imperfect conditions being the existing of external effects.

Bates (1995) summarised that "[...] the creation of property rights represents a response to the problem of external effects" (Bates 1995: 30). The creation and assignment of property rights makes exchange possible connected to the (physical) interdependence related to production processes. On this basis, economic incentives can emerge, leading profit maximising individuals (e.g. firms) to socially appropriate decisions about their production processes. For example, if positive external effects emerge during a production process (or more general a process of economic activity), the existence of property rights would make it necessary for the beneficiary to financially reward the provider of external benefits. This reward would be an incentive to the provider of the external effects to carry on the economic activity which produces the socially positive external effects (Bates 1995: 20).

In the case of PPPs in development cooperation contexts, companies produce positive external effects by their activities in a developing country. The firms' activities, along with their pooling of resources (including the transfer of capital or know-how) to a developing country is, from the view of a (development) policymaker, a socially desirable activity. This activity is associated with positive effects on the overall development of the development country. Thus, from the point of view of Property Rights Theory, property rights concerning these positive effects can be assigned to the company. At the same time, a concrete quantification of these external effects, i.e. putting a price tag on the socially beneficial outcomes, would hardly be possible.

Viewed from this angle, the public subsidies to a PPP in development cooperation can be understood as a compensation for the socially desirable outcome produced by the private partner. In other words, by assuming that a company produces positive outcomes, in the sense of development policy objectives, the existence of property rights call for company compensation for these benefits. This way, companies are provided with an incentive for extending the activities leading to the positive external effects, i.e. to expand their economic activities in developing countries.

Of course, this view can provide a justification for the public contribution to a PPP project only if a – in regards to development policy objectives – positive effect from a PPP for a developing country does indeed emerge. Hence, the analysis has to focus on the question of whether the actual outcomes of

the PPP in fact contribute to the development in the developing country. Only then would the public contribution be justified.

➔ Research item P8: **Outcomes and effects of the PPP project**

Based on the idea of property rights and the classification of different modes of governments into the options firm, hybrid and markets (see table 4.1), PPPs can be classified as hybrid arrangements.

Firms internalise many transactions and integrate many property rights. In contrast, hybrid arrangements do not internalise as many transactions. Rather, hybrids cover only a specific set of transactions and various companies, or more generally parties, are involved. They are characterised by the pooling of some resources. Furthermore, certain decision-making processes involving these resources are shared among the parties involved. In short, Ménard (2003) summarised that the “[...] notion of hybrids thus includes all forms of inter-firm collaboration in which property rights remain distinct while joint decisions are made, requiring specific modes of coordination” (Ménard 2003: 294).

The basic underlying question for a firm or other market player is to what extent it makes sense to integrate horizontally complementary activities into a common enterprise. Connected to that is the question of to what extent the production specific resources should be acquired from the free market or alternatively by establishing a mixed arrangement. The incentive to form some kind of cooperative arrangement (i.e. not to rely exclusively on the free market) increases with the specificity of the resources which have to be brought into a production process or service delivery process. In addition, the incentive increases over time and over the duration of the contractual relationships. If resource specificity is high and the time horizon of contractual relations is high, then the probability of integrating at least some resources and decision-making into a common cooperative arrangement stands rather high (Woratschek and Roth 2003: 150).

The most fundamental motivation behind these hybrid arrangements is the creation of rents by sharing certain resources and by coordinating some decisions. Hence, in order to generate rents, the pooling of resources can only generate rents if the hybrid arrangement is characterised by some degree of continuity and cooperation. Problems specific to hybrid arrangements consist of the following. First, the different parties involved must find a way to coordinate their activities without losing out on the advantages of decentralised decision-making, i.e. the advantage of staying independent. Second, as in other arrangements, hybrids are based on incomplete contracts. In order to secure the relationships, ways of minimizing or avoiding renegotiations, in order to reduce transaction costs, must be determined. This aspect is particularly relevant since partners follow regular operations, parallel to those operations and resources pooled in the hybrid arrangements. Thus, developments might occur in other parts of a company that have implications on the hybrid arrangement. Third, an optimal manner of decision-making, conflict solving or eventually sanctioning must be pursued (Ménard 2003: 296).

Hence, the distribution of property rights in hybrid cooperative arrangements has to be conducted through a thoroughly designed cooperative agreement. This cooperative agreement must include a system of incentives which is as efficient as possible. That is, on the one hand, this system has to

guarantee that all partners participating in the hybrid arrangement, i.e. the PPP can benefit sufficiently from the cooperation gains, i.e. the outcomes of the PPP. On the other hand, control and incentive mechanisms have to be established which ensure that all partners contribute adequately to the common production or service process, i.e. to the project itself (Woratschek and Roth 2003: 151).

Thus, another research item within the case study analysis is the distribution of property rights within PPP projects. This refers, in particular, to the gains generated in the PPP. The regulation of the usage of the partnership gains has significant implications on the incentive of the partners to contribute to the partnership success.

➔ **Research item P9: Regulations about the distribution of partnership gains**

Property Rights Theory can also be applied to outline the differences between a PPP project in the development cooperation framework and a “conventional” development cooperation project, i.e. a project exclusively undertaken by public institutions (usually a development agency). A conventional development cooperation project aims at establishing goods and services which usually are not assigned to one private owner. Rather, goods and services are usually provided to a public entity (e.g. state institutions) of the developing country. Property rights concerning the outcomes of a conventional development cooperation project are transferred to the state. Usually, the intention connected to this transfer is that the state should care about the distribution of the good or service, so that the maximum societal utility is generated. In contrast to this approach, property rights in a PPP are split. A PPP project intends to generate outcomes which are first, beneficial for the private partner, whose interest it is to keep property rights concerning the benefits and second, beneficial for the public partner, whose interest it is to transfer property rights to the citizens of the recipient developing country.

Thus, the analysis of the assignment of property rights of PPP outcomes is of interest for the purpose of clarifying to what extent a PPP benefits the public in a developing country. In the end, the final objective of development cooperation does not lie in fostering the development of single (private) entities, but in fostering the development of the society of the country as a whole. The other side of this equation regarding the distribution of gains is of course the sharing of risks. The sharing of risks can be regarded as a key factor in the definition of a PPP (IOB 2013: 17).

4.2.3 THE RESOURCE-BASED VIEW

In this framework, the Resource-Based View should be included as a complementary theoretical approach and represents the completion of the analytical framework by a highly influential theory from the field of strategic management. Including the Resource-Based View in this theoretical framework is designed to assist in analysing the decision-making processes, in particular, on the private side of the PPP arrangement.

The Resource-Based View is strongly connected to the ideas of new institutional economics in particular within Property Rights Theory and transaction cost theory. It shares with the transaction cost

theory an objectivistic view on resources and control over resources (Ortmann and Sydow 2003: 904). However, it applies a strongly micro-focused view on primarily the competitiveness of firms but in a second step, also on the emergence of cooperation. Its basic idea addresses the question of how specific resources in a firm contribute to the sustainable competitive advantage of this firm. Thus, the starting point of the Resource-Based View is the business level, where unique or specific resources serve to give the firm a competitive edge. The approach has also been used to explain diversification pattern of firms. In that process, diversification must in some way match the core competencies of the firm in order to be successful (Priem and Butler 2001: 23).

There are two major differences to other streams of strategy research. First, the Resource-Based View assumes that within one industry or sector, firms can be heterogeneous due to the different firm specific resources they control. Other theories assumed that firms within one sector have homogenous resources so that a competitive advantage could not emerge from firm specific resources. These differences in the possession of resources can be the source of competitive advantages. Second, the Resource-Based View assumes that these resources are not perfectly mobile between firms. As a result, differences between the firms can occur over time (Barney 2001: 101).

What is most relevant in the context of this thesis is the Resource-Based View on cooperation in and of itself. In certain situations, firms decide to reduce the barriers they established in pursuit of securing their resources. Instead, they bring in their resources into some external relation, e.g. in the framework of a network or other form of cooperation. This is the case if the formation of a cooperative arrangement is the only way to develop certain abilities, to make use of certain potential, or to produce or establish new resources. This process has to be rated as positive if value creation takes place. In this case, not cooperating, and keeping the specific resources in the boundaries for the firm, would constitute a disadvantage to the firm (Stein 2003: 176).

Setting the boundaries of a firm or organisational arrangement means determining who can make use of specific resources. The boundaries of an organisation, be it completely integrated or in a hybrid or network type of cooperation, will be based on the question of whether it is more beneficial to a firm to keep the exclusive right to control and utilise its own resources or to share the resources with others (Ortmann and Sydow 2003: 904).

In management practice, the Resource-Based View transformed over time to a “competence based Strategic Management” (Oelsnitz 2003: 191). Making the best possible use of the existing resources stands as a competency which is under specific scrutiny in this management approach. In that vein, cooperation with other partners plays a crucial role. Cooperative arrangements of companies can focus on the establishment and acquisition of new competencies or resources, respectively. Cooperation can also focus on the connection of existing competencies in the framework of an integrated value chain, in order to improve the competitive edge of the company. Furthermore, cooperation can focus on the extension of market share concerning product or service components in the framework of vertical integration. There are several practical ways of cooperating in order to make the best possible use of one’s own resources in pursuit of enlarging one’s own resources. Strategic alliances or partnerships in the value chain are only two examples that should be mentioned here (Oelsnitz 2003: 191-193).

In short, the Resource-Based View assumes that the existence of scarce resources and companies can acquire these scarce resources through exchange with other organisations. That is, companies attempt to hold onto their autonomy. Where this is not completely possible, they try to control the dependency-relation they entered into. Thus, the aspect of power in relationships is of importance as an important aspect in management practice. Hence, the resource-based approach mainly focuses on vertical relations but can just as well deliver explanations for horizontal relations (Swoboda 2003: 53).

At the same time, the Resource-Based View on the explanation of cooperation has its limitations. Ortmann and Sydow (2003) stressed that it applies a rather objectivistic view of resources. This means that it (too) strongly focuses on actual real existence of resources. The question of how the allocation of these resources is conducted, e.g. in cooperation processes, is not however sufficiently addressed by the Resource-Based View (Ortmann and Sydow 2003: 904).

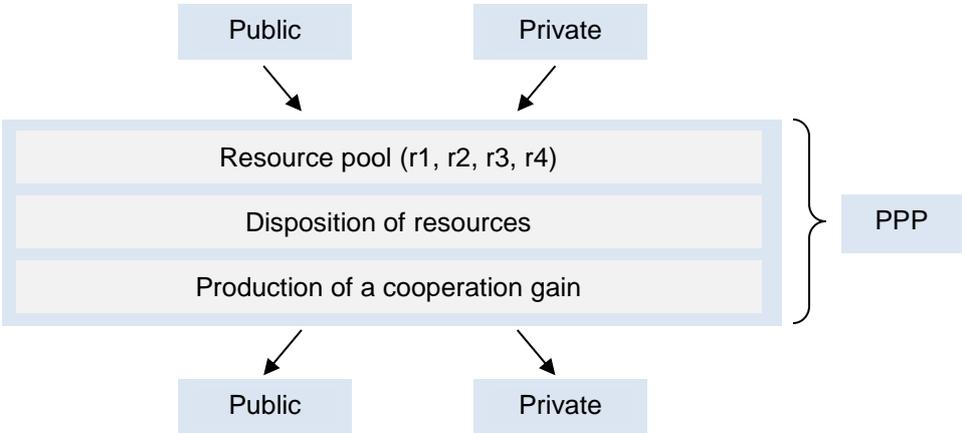
Nevertheless, the Resource-Based View can be seen as a fruitful approach for analysing the motivation for the formation of exchange and cooperative structures such as PPPs.

Application to PPPs

As stated earlier, particularly in chapter 3.2, the existence of pooled resources is a central characteristic of a PPP. The partners involved pool some of their resources in a PPP in order to accomplish their objectives (Roggencamp 1998: 29).

The Resource-Based View provides a fruitful tool for arriving at a structured analysis of the formation, existence and breakup of a PPP. Furthermore, it illustrates that the question of how to organise the disposition and control over these pooled resources, as the determinant factor for the inner organisational structure of a PPP. Different forms of institutionalisation are a result of varying answers to the question of how exactly to carry out resource disposition. Finally, regulation about the distribution of the outcome of the resource pooling along with the revenue from cooperation both have to be established (Budäus et al. 1998: 16-20). Figure 4.2 illustrates the resourced based view on a PPP.

Figure 4.2 Model of resource pooling in a PPP



Source: based on Budäus et al. 1998: 19

Budäus et al. (1998) concluded that an individualistic point of view is appropriate in PPP research. This means that cooperative behaviour, i.e. the decision for or against joining a PPP by a private company, will take place when individuals expect the cooperation to be useful for approaching their individual goals. Thus, action of individuals is being explained by rational choice (Budäus et al. 1998: 21-22).

This is in line with the general point of view of resource-based theory on decision makers. The rational manager who bases decisions on objective facts is assumed. The existence of subjective decision-making, e.g. based on personal relations or experiences, is not considered in the resource-based approach (Swoboda 2003: 53).

Thus, the individual decision of a company in favour or against joining a PPP is based exclusively on rational, objective facts. If an individual has the alternative of joining a PPP or not joining a PPP, he will choose the alternative of joining if the net benefit of a PPP, i.e. the difference between costs and benefits of a PPP, exceeds the opportunity costs (Budäus et al. 1998: 23).

An important aspect is therefore the supposition of the partner. The expectations about which resources can be acquired by joining a PPP play a crucial role in the decision for or against participating in a PPP.

➔ Research item R 10: **Resources targeted by the partners**

It has to be stressed that the term resources does not only comprise tangible or physical resources, respectively (e.g. financial means, assets). Intangible resources, such as knowledge (product or process knowledge, tacit knowledge) or the network relations of a partner involved are also highly relevant resources. In particular, existing relationships make an actor potentially attractive for the formation of a PPP (Budäus et al. 1998: 47). Thus, the degree of an actor's integration in a network becomes a partner's quality attribute. It can be regarded as a resource in and of itself.

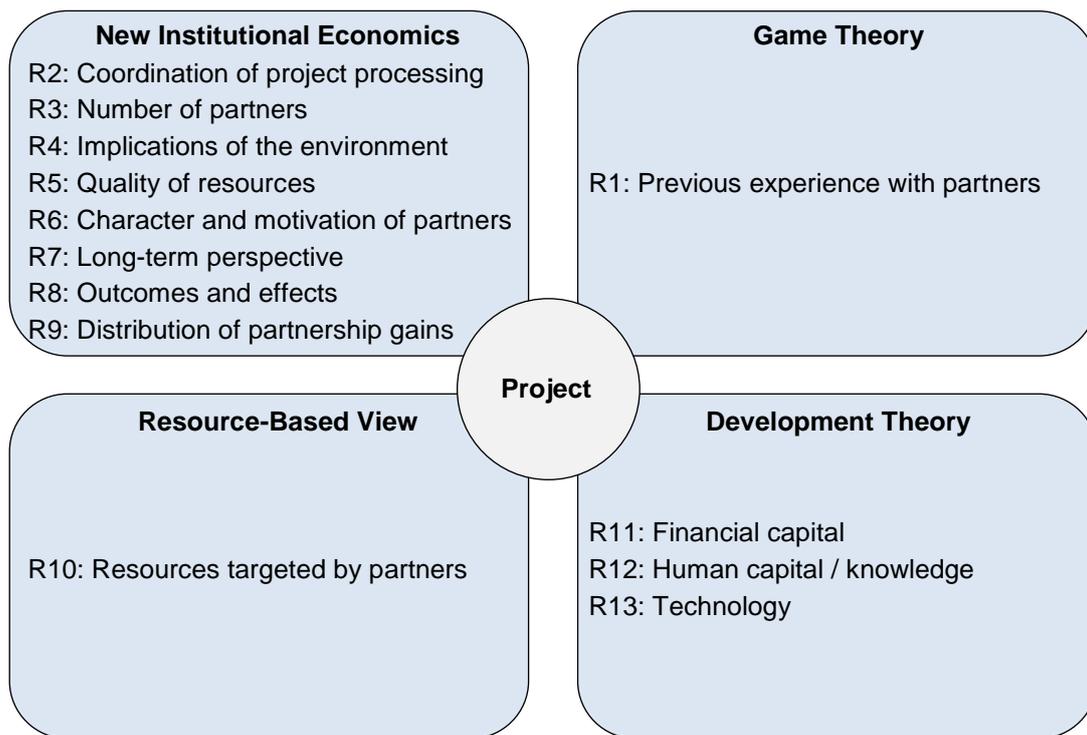
The case analysis in chapter 4 should therefore also entail a close look at the precise makeup of the pooled resources. Are physical, tangible resources generally in focus? What type of resources are the individual partners able and willing to pool? Hence, it has to be considered that PPPs represent a hybrid form of cooperative arrangement (see further above). In this arrangement, only some resources of a company are pooled and only some decisions are made jointly in the PPP. Parallel to the PPP, the partners perform other operations. Thus, it is of interest whether other operations of the partners in the PPP have their implications on the PPP project. These might not only refer to the control rights over resources. It is also of interest whether the initial motivation, i.e. the perceived resource gain through the cooperation has e.g. been based on overall strategic directions and if this strategy is altered over time.

4.3 THE ANALYTICAL FRAMEWORK

As outlined in earlier chapters, the role of the theoretical approaches discussed above is to guide data collection within the case studies (chapter 4), as well as later on in the survey (chapter 5). The theoretical propositions will serve as a guideline for studying structures, processes, events etc. within the cases. In that process, the theoretical propositions are an important part of the research design. They ultimately determine the choice of data to collect (Yin 2003: 29).

Above, several research items have been identified based on a selection of theories on cooperation. Figure 4.3 summarises the research items and their foundation in theory.

Figure 4.3 Visualisation of the analytical framework



Source: own illustration

It should be stressed that theory is not used for an a priori formulation of hypotheses due to the explorative character of analyses. Thus, the theoretical elements identified obtain the character of propositions which will be used for guiding data collection on the one hand and data analysis, on the other. Yin (2003) summarised that “theoretical propositions about causal relations – answers to “who” and “why” questions – can be extremely useful in guiding case study analysis in this manner” (Yin 2003: 112).

After the deduction of research items from the theoretical framework, the research items have been operationalised in a semi-structured interview guideline to conduct the case study analysis. Table 4.2 shows examples of guideline questions which are named according to the research item they refer to.

Table 4.2 Summary of research items and examples of their operationalisation

| Research item (Reference-theory in brackets) | Operationalisation of research items in the interview guideline with example questions |
|--|---|
| R 1 Previous experience with the instrument PPP and previous experience with other partners involved in the PPP (Game Theory) | Partnership development <ul style="list-style-type: none"> • How was the partnership initiated? Previous experience with partners/repeated interaction between partners <ul style="list-style-type: none"> • How did the contact between the project partners evolve? • Who initiated the project in the first place? • Did your organisation have previous experience with the other project partners? |
| R 2 Internal control and coordination mechanisms; control and sanction mechanisms; decision making processes (Transaction Cost Theory, Principal-Agent Theory) | Control structures/sanction mechanisms /conflict management <ul style="list-style-type: none"> • How is the operational control of the project organised? • Do specific sanction mechanisms exist? • Have any conflicts arisen? • Did sanction mechanisms and or decision-making processes impact project outcomes? |
| R 3 Number of partners in the PPP (Transaction Cost Theory) | Number of partners involved in the project <ul style="list-style-type: none"> • Would positive or negative implications ensue from a larger/smaller number of partners for the project? |
| R 4 Implications of the micro and macro environment of the PPP in the developing country (Transaction Cost Theory) | The local micro and macro environment <ul style="list-style-type: none"> • How do you rate the implications of the local and national environmental settings of the project, e.g. concerning: infrastructure, stability of the law, availability of human resources etc.? • Was a skilled local workforce available? • Did instances of corruption have any implications on the project? |
| R 5 Quality of resources pooled in the PPP/services delivered in the PPP (match of expectations with actual performance) (Principal-Agent Theory, also: Game Theory) | Perceived quality of resources and services of the partners/quality of the partners' resources <ul style="list-style-type: none"> • How do you rate the performance of the individual partners? • Did the performance or the volume and quality of resources pooled match your expectations? |

| | |
|---|---|
| <p>R 6 Character, motivation and objectives of the partners (Principal-Agent Theory)</p> | <p>Motivation and objectives of partners</p> <ul style="list-style-type: none"> • What is the core motivation behind your organisation's participation in the partnership? • Which explicit and implicit objectives did your organisation follow by entering the partnership? |
| <p>R 7 Interest of the partners in a long-term relationship, extending beyond the end of the PPP project (Principal-Agent Theory, also: Game Theory)</p> | <p>Partnership development</p> <ul style="list-style-type: none"> • How was the partnership initiated? <p>Duration of the partnership and time horizon of the partners</p> <ul style="list-style-type: none"> • Is your organisation interested in a longer term relationship (beyond the one-time PPP project) with the other partner(s) involved? |
| <p>R 8 Outcomes and effects of the PPP project (Property Rights Theory)</p> | <p>Outcomes of the partnership</p> <ul style="list-style-type: none"> • Which outcomes have been achieved by the project (e.g. concerning local employment, creation of infrastructure etc.)? • Are the project results only temporary or sustainable? |
| <p>R 9 Regulations about the distribution of partnership gains (Property Rights Theory)</p> | <p>Regulations about the distribution of the PPP outcome</p> <ul style="list-style-type: none"> • Have there been formal regulations about the usage of project outcomes put into place? |
| <p>R 10 Resources in focus of the partners (Resource-Based View)</p> | <p>Expectations about partner resources and actual performance of partners</p> <ul style="list-style-type: none"> • Which contributions did the individual partners make to the PPP? <p>Opportunity of continuing the project without the other partner(s)</p> <ul style="list-style-type: none"> • Would an activity of your organisation comparable to the project exist without participation of the other partner(s)? |

Source: own illustration

In chapter 2, further theoretical considerations have been made concerning several development theories. In chapter 2.3.4 (Implications of classical development theory), the main findings from these theoretical considerations have been summarised. To that end, three main elements of economic development processes have been identified: financial capital, human capital/knowledge and technology. In order to evaluate the performance of the PPP projects concerning developing objectives, these items have to be considered in the interview guideline as well and are summarised in table 4.3.

Table 4.3 Summary of research items and examples of their operationalisation (continuation)

| Research item | Operationalisation of research items in the interview guideline with example questions |
|-------------------------------------|--|
| R 11 Financial capital | <p>Contributions by the individual partners to the PPP</p> <ul style="list-style-type: none"> • Which resource contributions have been made by the individual partners? • How can the overall project volume be quantified? |
| R 12 Human capital/knowledge | <p>Outcomes and effects of the PPP</p> <ul style="list-style-type: none"> • Did the project objectives contain transfer of knowledge and/or the formation of local staff? • Have local workers been employed who could have enabled knowledge transfer? |
| R 13 Technology | <p>Outcomes and effects of the PPP</p> <ul style="list-style-type: none"> • Did the project objective comprise the transfer or creation of technology? • Did a technology transfer take place? |

Source: own illustration

4.4 THE INVOLVED PARTNERS

In the following, a brief introduction to the formal partners involved in the PPP projects analysed in chapter 4, the development agencies DEG and GIZ/GTZ as well as the company Daimler AG are outlined.

GTZ/GIZ

In 2011, GTZ merged with DED (German Development Service) and InWent (Capacity Building International Germany) to the new GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit) (GIZ 2016a).

In 2015, GIZ managed a business volume of € 2.1 billion in over 130 countries with a workforce, including national staff of over 17,000. Thereof, the absolute majority of business volume was generated in the public benefit area, i.e. the operation on behalf the German government, specifically the BMZ (GIZ 2016b: 58, 61).

The GTZ was and the GIZ is a major development agency in the German development cooperation framework. In addition to its main client, the BMZ, the GTZ was and the GIZ is providing services to other institutions such as other federal agencies, foreign governments, the European Commission, the UN or the World Bank. Furthermore, it offers its services also to the private sector. In these pursuits, the GTZ/GIZ outlined its local relationships as well as its general expertise as main advantages, which it can offer to private companies in particular in markets “[...] that are frequently uncharted for private enterprises” (GTZ 2007: 8).

Already in 2007, the GTZ stressed the benefits of PPPs for all stakeholders and expected the importance of PPPs to increase in the future (GTZ 2007: 8). In that pursuit, the involvement of the GTZ with the private sector comprised the realisation of formal PPP projects in the framework of the BMZ PPP facility (GTZ 2006).

The BMZ PPP facility (see chapter 3.5.3), which is promoted under “developpp.de”, has a history of more than 1,500 implemented projects since 1999 and is run via the three implementing organisations (IOs): GIZ, DEG and sequa. GIZ and the predecessor GTZ played a major role in implementing the BMZ PPP facility from the start.

DEG

The German Investment and Development Society DEG was founded in 1962 with the main intention of promoting private sector development. The main objective of the DEG is to establish private sector structures in developing countries (Polte 2006: 168).

More concretely, the DEG finances private investment in developing countries. In that pursuit, sustainable growth and the improvement of living conditions in developing countries are supposed to be reached. In contrast to commercial banks, the DEG is willing to take higher country- and project risks and generally adheres to a long-term approach. Hence, the DEG targets countries which usually are not reached by commercial capital flows (BMZ 2008c: 17).

In short, the DEG constitutes “[...] one of the largest European development finance institutes specializing in private-sector promotion in developing and emerging market countries” (DEG 2008: 4). The DEG conducts its operations in close cooperation with regional and local development corporations, the European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD), the multilateral World Bank subsidiary, the International Finance Corporation (IFC) as well as other European national development finance institutions (DEG 2008: 4).

By the end of 2014, the DEG portfolio comprised € 7.8 billion and altogether the DEG financed 3,100 entrepreneurial investments (DEG 2016: 17). Regular business activities also comprise public private arrangements (e.g. for infrastructure finance). From the year of its establishment in 1999 onwards, the DEG was also involved in the processing of the BMZ PPP facility (BMZ 2008c: 17). In addition to the implementation of the BMZ PPP facility, the DEG is involved in larger-scale strategic PPP alliances as well as the implementation of the PPP study facility, a separate source of funding for financing for preliminary studies about possible PPP infrastructure project in emerging-/developing countries.

Daimler AG

Daimler AG⁵⁰ is a globally operating producer of passenger cars and trucks, headquartered in Stuttgart, Germany. In 2015 it generated a turnover of almost € 150 billion with about 284,000 employees. The company consists of the subunits Mercedes-Benz Cars, Daimler Trucks, Mercedes-Benz Vans Daimler Buses and Daimler Financial Services (Daimler 2016: ii, iv).

⁵⁰ DaimlerChrysler AG has been renamed Daimler AG following major structural changes in August 2007: DaimlerChrysler transferred a majority interest in the Chrysler Group (including Chrysler's financial services units) to Cerberus Capital Management L.P. This development had no impact on the data collected from DaimlerChrysler/Daimler AG whatsoever.

The company has been actively communicating its involvement in the fields of Corporate Social Responsibility, Sustainability and Innovation. It has been publishing information about its activities in various formats, amongst others a comprehensive yearly Sustainability Report.

4.5 STRUCTURE OF CASE ANALYSIS AND CASE SUMMARY

When the choice of cases is made, the subsequent necessary step reflects on the methodological approach which is required for conducting a reconstruction of the cases (Flick 2006: 141-142). A thoughtful descriptive outline of the case content lays the groundwork for further analysis.

McQuaid (2000) stated that it is necessary to define key characteristics or dimensions to clarify different types of partnerships. This way it is possible to avoid an inappropriate level of generality. At the same time, the definition of key characteristics or dimensions can help to avoid sticking to a series of case studies and their detailed characteristics without sufficiently considering underlying principles influencing the partnership. Furthermore, McQuaid stated that each partnership comprises a set of multiple dimensions. The exact makeup of these dimensions differs widely from partnership to partnership, while the characteristics may alter over the duration of the partnership (McQuaid 2000: 12).

Specifically, McQuaid offered a setting of 5 key dimensions.⁵¹ The set has been slightly modified to fit to the research framework. Based on this proposal of key dimensions, the following dimensions have been chosen to undertake a structured descriptive outline of the cases:

1. Purpose of the partnership: what is the partnership seeking to do?
2. Key actors in a partnership: who is involved?
3. Case genesis, timeframe and status: how and when did the partnership evolve?
4. Environmental setting: where and under what circumstances did the partnership take place?
5. Operational processing: how is the operational processing being managed?
6. Outcomes of the project: which results have been achieved?

(McQuaid 2000: 5)

The descriptive outline of the cases follows this structure. After this descriptive outline, the analysis of the case data based on the research items identified follows.

⁵¹ See McQuaid 2000: 12-19 for a detailed outline of the proposed key dimensions.

4.6 CASE 1: JATROPHA

Table 4.4 Project overview: Jatropha

| | |
|-------------------------------|--|
| Formal public partner | <ul style="list-style-type: none">• German Investment and Development Society DEG, Germany |
| Formal private partner | <ul style="list-style-type: none">• Daimler AG, Stuttgart, Germany and India |
| Other partners | <ul style="list-style-type: none">• University of Hohenheim, Stuttgart, Germany• Central Salt & Marine Chemicals Research Institute (CSMCRI), India |
| Project location | <ul style="list-style-type: none">• India: pilot plant for Jatropha production: Bhavnagar; Jatropha production sites: Chorvadla (Gujarat) and Gopalpur, Humma (Orissa) |
| Time frame | <ul style="list-style-type: none">• Phase 1: 2003 – 2005• Phase 2: 2005 – 2007 |

Source: own illustration

4.6.1 DESCRIPTIVE OUTLINE

4.6.1.1 BACKGROUND AND SUBJECT OF THE PARTNERSHIP

The overall topic of the partnership was research on the production and utilisation of biofuel produced from the Jatropha plant.

The Jatropha plant is a shrub which belongs to the plant family of wood spurge originated in Middle and South America. Today, Jatropha can be found in tropical or subtropical environments around the globe. The plant grows in very dry conditions (precipitation of about 250 mm/year) as well as in more humid conditions (precipitation of up to 2500 mm/year). Plus, the plant can be cultivated on soil which is stony and devoid of nutrients. It is thus theoretically possible to grow Jatropha in locations where it might help to prevent or even reverse soil damages caused by erosion (Sieg 2006: 27).

The adaptability of the plant allows it to grow in dry and hot conditions as well as in humid tropes (Becker and Francis 2005: 2). Hence, the Jatropha bush, which can yield fruits annually for more than 30 years and has an overall life span up to 50 years, can be used to re-cultivate eroded farmland or to make use of otherwise non-arable wasteland (Fairless 2007).

What's more, a biodiesel (according to the EN 14214 standard) can be produced from the Jatropha nut, in a relatively simple process of transesterification (Becker and Francis 2005: 17-18).

The Jatropha plant as a potential source of biofuel, is a potential source of income for small-scale farmers, and can be a useful tool for treating eroded soils. It has attracted considerable attention both in India as well as in other regions in Africa, Asia and Latin America.

This attraction is not only based on the technical characteristics of the plant. Rather, it is the sum of potential benefits such as:

- Jatropha potentially grows in conditions and in soils which otherwise only allow for very low yields from the plantation of alternative plants.
- It can contribute to preventing soil erosion or even reversing erosion.
- The fruits from the plant can be processed into a biofuel. The biofuel production can be conducted with relatively simple methods in a decentralised way (e.g. on village level in developing countries).
- From the biofuel production process, bi-products can potentially be used (e.g. as fertilizer or forage).
- The production of biofuel and bi-products represents a potential source of income for small-scale farmers in developing countries, in particular. These farmers could sell the cultivated Jatropha nuts.

(Becker and Francis 2005, Degen 2008)

The PPP project consisted of two project phases (phase 1: 2003-2005, phase 2: 2005-2007), each of which was formalised in a separate PPP contract. Project phase 2 was directly based on phase 1 and continued and extended the objectives of phase 1. The two phases are analysed as one overall project.

4.6.1.2 OBJECTIVES OF THE PARTNERSHIP AND THE PARTNERS

The explicit objectives of the project involved scientific research on the Jatropha plant, in particular the search for a Jatropha species with an appropriate yield volume, as well as the identification of efficient cultivation methods of the Jatropha plant (Degen 2008).

In that process, the objectives not only included the ecological component, but also socio-economic aspects, such as the generation of income for farmers from the cultivation and/or harvesting of the Jatropha nut (Becker 2007, Sieg and Böthling 2007: 63).

The explicit main objectives of project phase 1 entailed the following:

- The establishment of experimental Jatropha plantations on two locations in India.
- The specification of the experimental setting and the production of Jatropha seedlings, including the identification of elite plants.
- The development of a process for producing biodiesel from Jatropha oil in a pilot facility and for producing a certain amount of biodiesel.
- To reach a certain fuel quality level so that the fuel can be used in a regular Diesel engine.

The objectives of project phase 2 comprised

- The continuation of research from phase 1, including the production of high quality plant material, the optimisation of Jatropha plantations, in particular yield optimisation.
- The extension of Jatropha plantations.
- The transfer of know-how about the plantation of Jatropha to the local population and local farmers, respectively, through workshops in Gujarat and Orissa.

- Optimisation of the small-scale biodiesel production (“transesterification”) unit.
- Provision of a small-scale biodiesel production unit in Gujarat and Orissa and training of local farmers.
- The production of Jatropha biodiesel and its sale to Daimler AG, India.

(Degen 2008, CSMCRI 2008)

All partners essentially focused on these main objectives in the partnership.

The DEG focused on the development implications of the project, e.g. the ecological implications of planting Jatropha on eroded soils as well as the generation of income for local farmers (Duscha 2008).

Daimler AG was particularly interested in the biofuel produced in the framework of the project. This involved research on the appropriate cultivation method as well as methods of production of the biofuel. On top of the related technical questions, the price aspect was in focus as well. The underlying idea was that biofuel produced from the Jatropha nut has to compete with Diesel generated from fossil sources. In order to increase the returns from Jatropha, research also had to concentrate on other products than biofuel that can be generated from the plant. This included, for example, glycerine, which evolves during the production process. Furthermore, the press cake of plant remains evolving during the biofuel production process could be used as a natural fertilizer. In cases where it is possible to free the press cake from toxins it naturally contains (mainly “Phorbolester” and the protein “Curcin”), then the material can also be used as forage (Daimler AG 2007b). To sum up, the company was mainly interested in evaluating the opportunity to utilise Jatropha-biodiesel in regular vehicle engines. Furthermore, the company seemed aware of the fact that Jatropha biodiesel would have to compete on the market and thus has to fulfil not only adequate quality criteria, but also has to be competitively priced.

With regards to the overall strategy of Daimler AG, the participation in the project could be seen as one project amongst other efforts to become proactive in the field of biofuels.⁵² The topic is regarded as an important field of research particularly due to the expected role of biofuels as an alternative or complement to fossil fuels in the future (Degen 2008).

The University of Hohenheim as well as the Central Salt & Marine Chemicals Research Institute were first and foremost interested in the results from agricultural research on the Jatropha plant (Becker 2007).

4.6.1.3 PARTNERS INVOLVED AND THEIR CONTRIBUTION

DEG

The DEG was the legal public partner development agency in this PPP. It was concerned with the usual obligations of the public partner in a PPP. These entailed monitoring of the project process and approving of the payment of the public contribution to the project on the basis of project progress.

⁵² One example of another involvement in biofuel research is the participation of Daimler AG in the biofuel producing company Choren, see e.g. Choren 2007.

Apart from these basic functions, the role of the DEG in practical project implementation was very limited.

However, the DEG contributed organisational support locally in India, where it obtains a local network as well as market specific expertise (Degen 2008).

Daimler AG

Daimler AG obtained the role as formal private partner in the project. Daimler AG participated in the practical research process only indirectly. Rather than being involved in the actual agricultural research, Daimler AG was assigned with tasks such as the overall organisation and structuring of the project, the thorough documentation of the project, along with promoting public awareness of the project (Degen 2008).

University of Hohenheim

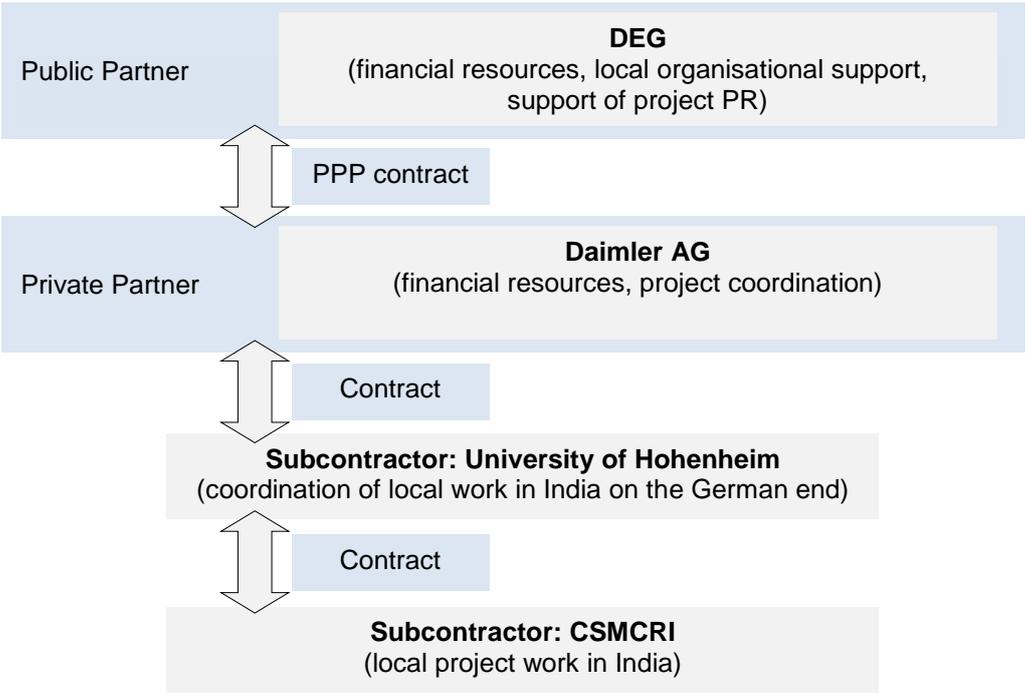
The University of Hohenheim acted as a (sub-) contract partner of Daimler AG. The University of Hohenheim coordinated and supported the CSMCRI in their local research work in India (Degen 2008). Most importantly, the University of Hohenheim obtained the first-hand expertise about the Jatropha plant.

Central Salt & Marine Chemicals Research Institute (CSMCRI)

The CSMCRI acted as a contract partner of the University of Hohenheim. Its main tasks were to conduct local research work in India (Degen 2008).

Figure 4.4 summarises the organisational setting of the project:

Figure 4.4 Organisational setting of the Jatropha project (and main contributions of partners)



Source: own illustration

4.6.1.4 PROJECT PROCESS, TIMEFRAME AND STATUS

Based on several years of research experience on *Jatropha*, the University of Hohenheim (the Center for Agriculture in the Tropics and Subtropics), developed the idea of conducting research on the cultivation and processing of the *Jatropha* plant. Approaching Daimler with the idea of integrating a car manufacturer into these efforts was a result of a personal contact of a Daimler employee with the institute of the University of Hohenheim. The participation of the CSMCRI in India into the project in turn was based on previous contacts from the institute of the University of Hohenheim with the CSMCRI in India. However, no direct working experience between the University of Hohenheim and CSMCRI had hitherto existed (Becker 2007).

The concrete project idea was further formulated and substantiated during a Daimler environmental stakeholder conference (“Magdeburg environmental forum”) in 2002. The planning phase of the project started in 2002 and was followed by the official start of the first project phase in January 2003, lasting 2 years. A second project phase started in 2005⁵³ (Degen 2008).

4.6.1.5 ENVIRONMENTAL SETTING OF THE PARTNERSHIP

Highly relevant for the project was an increasing attempt on the part of the Indian government to reduce the country’s dependence on the import of fossil fuels. The dominant fossil fuel consumed in the country has been Diesel (consumption in 2007: 320 million barrels/44 million tons of Diesel, 94 million barrels of gasoline). In many sectors, in particular railway, attempts have been made to replace an increasing amount of fossil diesel fuel by biofuels in the future (Fairless 2007).

In 2003, there were governmental plans (by India’s planning commission) to establish a two-phase support programme of biofuels (“mission on biofuel”). In its first phase, this programme oversaw the establishment of 500,000 hectares of *Jatropha* planting on governmental land all over the country. In the second phase, the expansion of *Jatropha* cultivation should grow to 12 million hectares. The procedure for approval of this programme’s implementation remained somewhat unclear. Nevertheless, there have been several attempts to promote *Jatropha* cultivation in various Indian states. According to estimations of the Ministry of Rural Development, *Jatropha* has been grown on 500,000 to 600,000 hectares across India (Fairless 2007).

Jatropha has the potential to contribute to the energy supply of rural populations with biofuel. In India almost 80,000 of a total of 600,000 villages in the country have no access to fuel or electricity. *Jatropha* could represent a way of achieving energy self-sufficiency in these villages by providing an opportunity to conduct both the cultivation of the plant and the processing of it into a biofuel locally at the village level (Fairless 2007).

⁵³ In 2006, a commercial facility for the production of biofuels from *Jatropha* was put in operation in Hyderabad (Andhra Pradesh). This production facility was established in a separated PPP project, in the context of a cooperation between the German Lurgi AG and the GTZ (Sieg 2006: 26). This separated PPP is however not part of the analysis in the framework of this thesis.

4.6.1.6 OPERATIONAL PROCESSING, SHORTCOMINGS AND CONFLICTS

The overall project coordination and control was conducted by Daimler AG (Degen 2008).

The main content of the project was agricultural research on the Jatropha plant. This research, mainly conducted locally in India, was conducted by the CSMCRI, the local Indian institute, and coordinated on the German end by the University of Hohenheim. The University of Hohenheim carried out a key role in the project. It functioned as the (sub-) contract partner of Daimler AG and bundled research findings on the Jatropha plant. Research activities on the Jatropha plant not only existed in the PPP framework but were also conducted independently from the context of PPP arrangements (Becker 2007).

There was no specific controlling system whatsoever installed by Daimler AG. Rather project progress was mainly documented in the regular project reports which have been distributed to all partners (Degen 2008).

Major conflicts during the project process did not get reported. However, Daimler AG did mention one specific learning effect during the project concerning the organisational structuring of the project content. While the division of labour in the beginning of the project could not completely prevent redundant work, the division of labour later on in the project progress was defined more thoroughly in order to increase project efficiency (Degen 2008).

The University of Hohenheim did not name specific conflicts with the partners in the project processing either (Becker 2007).

4.6.1.7 OUTCOMES OF THE PROJECT

The main objectives of the project have been reached. Specifically, they included:

- Conducting research on the Jatropha plant with measurable progress.
- The establishment of two Jatropha plantations in Gujarat and Orissa (India).
- The production of biodiesel from the Jatropha nut.
- The development and optimisation of small-scale transesterification-units.
- Training local farmers in India about the cultivation of Jatropha.

A central challenge regarding the achievement of the project objectives was that the Jatropha plantations need about four to five years to grow until crops (i.e. Jatropha nuts) can be yielded (Degen 2008).

The University of Hohenheim stressed that the project terminated about one year before the full yield of the plants could be reached. The growth of the plantations was furthermore delayed by unfavourable weather conditions (Becker 2007).

The biofuel produced from the Jatropha nut ultimately reached a quality level which was sufficient to meet European quality standards (concerning power, efficiency, emissions). This was approved by tests conducted by Daimler AG as well as the Austrian Biofuel Institute. Hence, it even managed to

outperform the characteristics of biodiesel from rapeseed, sunflower and soya bean oil concerning the lack of propensity to oxidise⁵⁴ (Becker and Francis 2005: 18, Fairless 2007).

From 2004 to 2007, Daimler AG organised several test drive events with Mercedes-Benz vehicles through various parts of India. In that process, the task was to prove that regular Mercedes-Benz Diesel engines are able to run on biofuel from the Jatropha plant over a longer distance. Journalists were present at each of these test drives. As a result, extensive media coverage, in particular in the Indian, but also in German press publications was generated (Daimler AG 2008a). This media coverage contributed to the overall popularity of Jatropha biofuel and the popularity of the project in particular.

In order to provide enough Jatropha biofuel for this test-drive, CSMCRI developed a transesterification unit with a capacity to produce about 250 litres of biofuel per day (Fairless 2007). The data measured concerning the emissions during this test-drive confirmed the quality characteristics of Jatropha biofuel and met existing norms and value limits (Becker and Francis 2005: 19).

Development implications

Social aspects

The most relevant aspect in this context was the possible future role of Jatropha as a source of biodiesel. If the Jatropha planting material and planting methods are further developed to an adequate level, Jatropha could represent a significant source of sustainable income for developing countries (Becker 2007, Degen 2008). The direct, i.e. present social effects of the project itself are limited to a temporary increase in the local employment opportunities locally in India.

Ecological aspects

The entire project approach was mainly based on the favourable ecological potential of Jatropha. The plant can grow on eroded soils and is therefore a plant which stands in no way in competition with food crops, and on top of that, grows well under unfavourable conditions. At the same time, the plant represents a possible energy source (by producing a biofuel from the plant's fruits and possibly using the by-products as organic fertilizer and/or forage). Thus, the potentially very positive ecological characteristics constituted the most relevant development implications of Jatropha (Becker 2007).

Structural and economic aspects

The project generated employment for local workers. However, these employment opportunities were limited to the project duration (Degen 2008).

The project gained broad attention amongst the local population and farmers (Degen 2008).

If the volume of Jatropha planting (outside the project framework) could be significantly magnified, this increase might lead to additional sources of income for farmers (Becker 2007). Significant local infrastructure was however not generated by the project (Degen 2008).

An economic effect was generated by a temporal market price increase of the Jatropha nut. This market price increase was caused by an increase in the demand for the Jatropha nut caused by direct project activities as well as follow-up activities outside the project framework. For example, the required amount of Jatropha biodiesel for testing purposes was mostly produced from Jatropha nuts

⁵⁴ The concrete specifications of the biodiesel can be found in Becker and Francis 2005: 18.

collected from plants growing wildly since plants from the plantation did not yet yield at that time. These *Jatropha* nuts were purchased on the market, which caused the price increase (Becker 2007).

Millennium Development Goals (MDGs)

With regards to the MDGs, the project was perceived to have strong implications for MDG No. 1 (Fighting poverty and hunger), strong implication for MDG No. 7 (ecological sustainability) and medium implications for goal no. 8 (building a global development partnership), according to a self-assessment of the project staff involved (Becker 2007, Degen 2008).

Perspectives

The *Jatropha* plant has received considerable public attention not only in the development community. A main reason for this attention might have been the encouraging prospects which the cultivation of the *Jatropha* plant offers for rural areas, in particularly areas with eroded soils.

In India, a report of the Indian Ministry of Rural Development identified more than 130 million hectares of land, which is either already eroded or otherwise non-arable, or is in high danger of becoming eroded or non-arable. Hence, it is estimated that 33 million hectares are theoretically suitable for the cultivation of *Jatropha* (Becker and Francis 2005: 6, Fairless 2007).

In other parts of the world, numerous initiatives have been made to cultivate the *Jatropha* plant as a source of biofuel.⁵⁵ In particular in China, Myanmar/Burma, the Philippines and several African states, the large-scale plantation of *Jatropha* has been initiated (Fairless 2007).

Above project level, the main risks towards all attempts to make use of the *Jatropha* plant lie in the difficulties related to the domesticated cultivation of the plant. Presently, *Jatropha* is available on a relatively large-scale in the wild. However, research on the most efficient and fertile domestic cultivation of *Jatropha* has yet to be conducted (Fairless 2007).

The progress of research on the cultivation and the yields from cultivated plants seem to determine the future of the usage of *Jatropha* for biofuel production.

The fact that the cultivation of *Jatropha* is being subsidised in various parts of the world bears the risk that these subsidies are going to inefficient plantations. Further research on the domestication of the *Jatropha* plant seemed evident in order to guarantee an adequate yield of the plants.

Moreover, additional research had to be undertaken on the detoxification of the *Jatropha* press cake (i.e. compressed left over material from the biodiesel production). As mentioned above, this detoxification would allow the usage of the press cake as a bi-product of the biodiesel production process as forage. This usage would considerably increase the economic value of the fruits. What's more, the potential of utilizing *Jatropha* in mixed cultivation (with food plants such as fruits) is another subject for further research (Becker and Francis 2005: 22).

The project attracted considerable attention from outside stakeholders, including public institutions, investors etc. (Becker 2007). Thus, it seemed most likely, that further research on the utilisation of the plant would be conducted.⁵⁶

⁵⁵ See e.g. Gexsi 2007: 18-20 for a selection of locations where *Jatropha* plantations for the purpose of biofuel productions have been established.

4.6.2 CASE ANALYSIS

R 1 Previous experience with the partners involved

There have been no direct previous experiences of directly involved Daimler AG staff with the DEG. However, other Daimler AG staff who was involved in the project planning to some extent, had previous working experience with the DEG. The direct as well as the indirect Daimler AG staff involvement included previous working experience with the University of Hohenheim but not with the directly involved institute. Furthermore, there had been no previous collaborative working experience on the part of Daimler AG with the CSMCRI (Degen 2008).

The University of Hohenheim had no direct previous collaborative working experience with the CSMCRI either, although some contact had existed (Becker 2007).

R 2 Coordination of project processing; control and sanction mechanisms; decision-making processes

Daimler AG as the formal private contractual partner was responsible for coordinating the overall project processing (Degen 2008). The direct agricultural research activities locally in India were conducted by the CSMCRI. The University of Hohenheim was responsible for the coordination of this agricultural work (Degen 2008, Becker 2007).

During the actual project processing, DEG contributed local support, for instance, concerning making contacts with local public authorities (Duscha 2008, Degen 2008).

In principle, operational decisions have been taken on the basis of consensus. Several workshops have been organised in order to facilitate practical project work (Becker 2007).

Specific conflict-solving mechanisms or procedures were however not noted (Becker 2007).

Besides the general monitoring of project progress, Daimler AG has not implemented a specific project control mechanism whatsoever (Degen 2008).

R 3 Number of partners in the PPP

From the point of view of Daimler AG, the project processing would have become more complex with a higher number of partners involved. The actual division of work was regarded as appropriate with regards to the project objectives and it was not immediately apparent how e.g. an additional private sub-contractor could have contributed significantly to the project success (Degen 2008).

The University of Hohenheim pronounced the number of partners involved to be adequate and went on to mention concerns that a higher number of partners involved would have had negative impact on the efficiency of the project processing. Nevertheless, additional scientific partners potentially could have contributed beneficial input in the second project phase, i.e. in the further agricultural research (Becker 2007).

⁵⁶ Daimler AG was involved in further research on the Jatropha plant as well. For example, Daimler AG, Bayer CropScience AG as well as the US based company Archer Midland Co. (AMD) were jointly conducting further research on the plant (Bayer 2008).

R 4 Implications of the micro and macro environment of the PPP in the developing country

The well-developed local network of the CSMCRI was regarded as a very positive aspect from the point of view of Daimler AG. These connections facilitated the project progress significantly. Furthermore, the CSMCRI significantly facilitated the work with local authorities (Degen 2008).

Shortcomings in the local infrastructure (the non-existence of high-power current) prevented the installation of further transesterification facilities, i.e. biodiesel production facilities, in further rural regions in India. Further negative implications of the local infrastructure conditions were identified. Overall, the availability and quality of local infrastructure (e.g. transport lanes, energy provision etc.) was rated as rather poor (Becker 2007, Degen 2008).

Furthermore, the availability of local workforce did not cause any problem. For example, the local work on the plantations could be conducted by an instructed farm worker and the instruction has been given by the CSMCRI (Degen 2008).

A specific challenge for the project was the acquisition of land for Jatropha plantations. In the end, this issue was successfully managed by the local partner CSMCRI. Altogether, several public institutions and authorities were identified as relevant bodies for joining in on the efforts of the project, e.g. the local ministry of agriculture (Becker 2007).

Issues related to corruption did not exist in the project (Degen 2008, Becker 2007).

To sum up, the local macro and micro environmental conditions in India were rather poor with regards to the availability of infrastructure etc. However, since these conditions were well known a priori and were recognised in the project planning, no major shortcomings, i.e. obstacles for the project progress resulted from these conditions.

R 5 Quality of resources pooled in the PPP/services delivered in the PPP (match of expectations with actual performance)

From the point of view of the DEG, the performance of Daimler AG and the other partners involved in the project was rated as satisfying (Duscha 2008).

From the point of view of Daimler AG, the performance of the DEG as the public partner was fully satisfactory. The performance of the CSMCRI was also rated as satisfactory (Degen 2008).

From the point of view of the University of Hohenheim the performance in and commitment to the project of the DEG was perceived as very positive (Becker 2007).

R 6 Character, motivation and objectives of the partners

The DEG focused on the potential development implications of Jatropha, i.e. its potential role as a source of income for developing countries while having positive ecological implications (Duscha 2008).

By participating in the project, Daimler AG followed long-term strategic objectives. The overall project objectives were in line with other more business-oriented strategic goals of Daimler AG. To put it concretely, research on biofuel was seen as a long-term contribution to business development although the production of biofuel does not constitute part of Daimler AG's core business. Promoting the utilisation of biofuel in developing countries can have positive impact on the core business of Daimler AG (i.e. the development and sale of cars and trucks) e.g. through the favourable emission value of biodiesel compared to fossil diesel along with potentially higher acceptance of biofuels for

utilisation in particular in developing countries' cities (e.g. through favourable legal regulations and/or facilitated admission processes).

Hence, Daimler AG regarded the project explicitly as a source of impulses for the topic of "biofuels" as a whole. This means, for example, that the public awareness generated by the project was regarded as a positive stimulus for the further development of biofuels and thus in the long-run, a positive development for Daimler AG. Thus, the explicit scientific insights generated by the project can to a certain extent be regarded as "a means to an end" (Degen 2008) only.

To sum up, there was a basic interest of Daimler AG in the scientific results of the project. However, much more important was the interest in making a contribution to the development of sustainable biofuels overall and in reaping the benefits of the project in the framework of CSR and public relations (Degen 2008).

The objectives of the University of Hohenheim as a key player in the project have been distinctive in terms of the research results from the project. The University of Hohenheim as well as Daimler AG stated that they were mutually dependant on each other and the realisation of the project without the other partner would not have been possible. Furthermore, the realisation of the project without DEG participation was perceived to have been otherwise impossible as well (Becker 2007, Degen 2008).

The University of Hohenheim likewise stated that a realisation of the project without the local partner CSMCRI would not have been possible (Becker 2007).

R 7 Interest of the partners in a long-term relationship, extending beyond the end of the PPP project

DEG expressed a positive view on potential future projects in cooperation with Daimler AG or similar multinational companies. However, the main focus was on the concrete project time frame. Direct follow up projects were not targeted (Duscha 2008).

From the point of view of Daimler AG, there was no a priori intention of establishing a long-term working relationship with the partners. However, there was in principle a positive attitude towards further cooperation on the base of the initial project content. However, this did not mean that this potential further participation in the project related topics necessarily would have to be conducted with the same partners (Degen 2008).

The University of Hohenheim expressed a general interest in further cooperation with the CSMCRI (Becker 2007).

R 8 Outcomes and effects of the PPP project

The overall degree of target achievement in the project was rated positively by all project partners (Becker 2007, Degen 2008, Duscha 2008).

A major shortcoming in the project was that research on the utilisation of the press cake (i.e. the by-product of the oil production from the Jatropha nut) did not make progress as expected. During the four years of project duration, research progress by the University of Hohenheim towards the detoxification of the press cake turned out unsatisfactory. At the same time, using this by-product from the Diesel production process stood as a significant factor concerning the overall profitability of the Jatropha nut (Degen 2008).

The University of Hohenheim stressed that agricultural science is generally reliant on the external natural conditions. In the project, the time plan was partly delayed due to a lack of precipitation in 2004/2005 (Becker 2007).

From the point of view of Daimler AG, public awareness of the project and the resulting reputation gain for the partners was very positive. The project was the first research project on *Jatropha* which showed that the actual production and utilisation of a biofuel from *Jatropha* is indeed possible. As a result, Daimler AG was frequently contacted by researchers as well as commercial investors showing interest in *Jatropha* as a source of biofuel (Degen 2008). Daimler AG doubted that this level of public awareness could have been reached with a strictly publicly operated project without private partners' initiatives and expertise (Degen 2008).

To sum up, the project laid significant groundwork for the future production and utilisation of *Jatropha* as a source of biodiesel in developing countries. However, during the two project phases, not all (agricultural) challenges related to the plantation of *Jatropha* and an economically feasible production of biofuel and other bi-products from the plant were able to be resolved.

Research progress to this end distinctively determines the development potential of the plant. The full potential of the plant as an ecologically and economically sustainable source of income – and thus growth stimulus – for developing countries cannot yet however be evaluated.

R 9 Regulations about the distribution of partnership gains

From the point of view of Daimler AG, transparency and publicity concerning the project outcomes was of particular importance. The publishing of all project content was a basic rule. If certain technological output could be covered by patents (i.e. a procedure to detoxicate the *Jatropha* press cake so that it can be used as forage), this patent could have remained in the hands of the partner who is responsible for the respective development, in particular the University of Hohenheim (Becker 2007, Degen 2008).

Thus, the utilisation of partnerships gains was regarded as an unproblematic factor by the partners due to the principle of transparency.

R 10 Resources in focus of the partners

The DEG focused particularly on the know-how and reputation of Daimler AG as a multinational company and on the distinct agricultural know-how of the University of Hohenheim and CSMCRI (Duscha 2008).

By cooperating with the University of Hohenheim, Daimler AG targeted the scientific know-how in the field of agricultural research of the University of Hohenheim. However, as mentioned already above, the outcomes of agricultural research from the project have not been the only objective of Daimler AG in the project. Rather, Daimler intended to demonstrate that the generation and utilisation of biodiesel from *Jatropha* is an applicable model overall. This demonstration is designed, in the long-run, to have positive implications on the core business of Daimler AG. Further, the University of Hohenheim was regarded as an important factor in the organisational structure since it was the University of Hohenheim team who contracted and supervised the work of the local partner CSMCRI in India (Degen 2008).

Daimler AG, the private project partner, explicitly focused on more than the financial resources only as a contribution by the DEG, the public project partner. Daimler AG expected the DEG to contribute to the local project organisation in India. A high level of expertise in the organisation of local work in India was perceived and the raise of public awareness of the project expected (Degen 2008).

The University of Hohenheim perceived a priori that an involvement of Daimler AG in the project would have a positive impact on public awareness concerning the project. A second motivation behind collaborating with Daimler AG in the project was that this collaboration made funding of the project in the PPP framework possible in the first place (Becker 2007).

R 11 Financial capital

The overall financial volume of the project is in the usual range of PPP projects. That is, the DEG contributed two times a PPP subsidy of € 200,000. This was complemented by financial contributions as well as allowances in kind by Daimler AG in a range about € 500,000 for both project phases (Becker 2007, Degen 2007). The overall financial project volume stood at slightly below € 1 million.

R 12 Human capital/knowledge

The project objectives comprised the transfer of know-how about the opportunities which the Jatropha plant offers and about cultivation methods of the plant to local farmers (Becker 2007).

Specifically, workshops with local farms on the two plantation sites in India were conducted (CSMCRI 2008, Becker 2007). It should be stressed that the knowledge transferred in these workshops can only then be highly relevant concerning developmental issues if the research on the Jatropha plant ultimately served to solve the most pressing agricultural problems, in particular the increase of yields.

R 13 Technology

Daimler AG regarded its involvement in the project explicitly as a contribution to promoting the generation and utilisation of biofuels in developing countries as a whole. Thus, it was part of the overall objectives to contribute to the further distribution of biofuel related knowledge and technology in developing countries (Degen 2008).

As a result of testing Jatropha biofuel in regular combustion engines, technological knowledge increased. In the project framework itself, biofuel production ("transesterification") units were developed, optimised and made available in at least one project location in India (Becker 2007, CSMCRI 2008). These units can be regarded as the main technology transfer in the project.

4.7 CASE 2: ABACA

Table 4.5 Project overview: Abaca

| | |
|-------------------------------|---|
| Formal public partner | <ul style="list-style-type: none">• German Investment and Development Society DEG, Germany |
| Formal private partner | <ul style="list-style-type: none">• Daimler AG, Stuttgart, Germany |
| Other partners | <ul style="list-style-type: none">• University of Hohenheim, Stuttgart, Germany• Leyte State University/National Abaca Research Center, Philippines• University of Applied Sciences, Reutlingen• European Nature Heritage Fund "Euronatur" |
| Project location | <ul style="list-style-type: none">• Philippines |
| Time frame | <ul style="list-style-type: none">• Phase 1: 2003 – 2005• Phase 2: 2006 – 2008 |

Source: own illustration

4.7.1 DESCRIPTIVE OUTLINE

4.7.1.1 BACKGROUND AND SUBJECT OF THE PARTNERSHIP

The main content of the project was conducting research on the ecological production and utilisation of fibres from the Abaca plant. Abaca ("Musa textilis") is a plant which is mainly grown on the Philippines but can also be found in Borneo and Sumatra. It is a banana species with considerable economic importance due to the characteristics of its fibres (sometimes referred to as "Manila Hemp"). The fibres are long and robust and the fibre bundles can be extracted from the plant. Rope, twine and paper are some examples of products made from Abaca fibres. The characteristics of Abaca also make it possible to produce a composite material using Polyester. This composite material obtains characteristics that make it an alternative to glass fibre composite materials in industrial production processes (Mühlbauer 2008).

Amongst other purposes, it is possible to use Abaca as a substitute for glass fibres in the manufacturing of composites for the production of automobile parts. Hence, the application of Abaca fibres might lead to improved quality characteristics of these parts (e.g. concerning stiffness and damping) and reduced weight. In addition, the production process of these parts potentially leads to a reduction in CO₂-emission and energy consumption compared to the production of parts from other materials such as glass fibres.

From an agricultural point of view, it is mainly relevant that Abaca can be planted in different agro-ecosystems. Finally, the local production of the Abaca fibres in rural areas represents a potential source of income for the rural population (Tropenzentrum 2007).

Thus, the Abaca plant can be seen as a good prospect for establishing sustainable source of income for rural farmers. Furthermore, it could serve as means of preventing erosion in areas endangered by erosion due to monocultures or cleared wooden areas.

The Abaca project analysed in this framework consisted of two project phases (phase 1: 2003-2005, phase 2: 2006-2008) each of which based on its own separate PPP contract. The two phases are directly linked to each other since phase 2 was a direct continuation of the project content of phase 1. The two PPP project phases are thus analysed as one project in this thesis.

4.7.1.2 OBJECTIVES OF THE PARTNERSHIP AND THE PARTNERS

The partnership mainly focused on research on the ecological plantation of Abaca plants, the extraction of fibres from the plant and the processing of the fibres. Furthermore, a value chain incorporating the fibres produced in the surroundings of the research site of Leyte State University on the Philippines should be established. This value chain should reach from the ecological plantation of the fibres to the final usage of the fibres in automotive serial production (Greiner 2007, Mühlbauer 2008).

The main overall objectives of the partnership, as fixed in the PPP contract, specifically covered the following aspects:

Phase 1: (2003-2005)

- The establishment of a sustainable production of Abaca fibres which includes the integration of local small-scale farmers and local Abaca processing facilities.
- The integration of Abaca into local monocultures in order to increase biodiversity, reduce erosion and increase soil productivity.
- The integration of Abaca into the so-called “Rainforestation concept” (a concept developed by the GTZ that foresees reforesting cleared rainforest with different plant and tree species, amongst others with fruit trees).

Phase 2: (2006-2008)

- The optimisation and reproduction of disease free planting material and/or seedlings and the cultivation of Abaca following ecological principles.
- The expansion of ecological Abaca plantations from 10 to 100 hectares.
- The development and distribution of technology to produce high quality Abaca fibres.
- The development of a quality management system and the logistics to produce and process Abaca fibres.
- Qualification of suppliers (i.e. local farmers).
- The production of Abaca composite material and automotive parts from this material.
- The publishing of outcomes of the project.

Daimler AG and the subcontracting partners have been obliged to consider ecologically and socially relevant aspects in all project work. This means all activities in the project framework had at least to meet national and local environmental and social regulations and standards (Greiner 2007, Mühlbauer 2008).

In accordance with the main idea behind the PPP model, all the partners were interested in these main objectives being followed. Different partners nevertheless focused on different sub-objectives.

The DEG focused in particular on the potential contribution of the project to the improvement of the development state, i.e. income and thereby living conditions of the rural population on the Philippines (Duscha 2008).

The main focus of Daimler AG was on the applicability of parts manufactured from the Abaca fibre in industrial processes in the automotive industry.⁵⁷ Furthermore, the company stressed the role of the establishment of a sustainable and functioning supply chain as one objective of the project. This involves establishing a stable supply chain consisting of rural farmers in the Philippines, the producer of automotive parts from the Abaca fibres, as well as Daimler AG as the automobile producer who applies the parts in automotive serial production. A further objective, i.e. not stipulated by contract, comprised public relation measures. The project was, for example, publicly promoted in the framework of CSR activities of Daimler AG (Greiner 2007).

The University of Hohenheim functioned, furthermore, as a sub-contractor of Daimler AG. The institute involved (Institute for Agricultural Engineering in the Tropics and Subtropics) was particularly interested in the agro-scientific results from research conducted in the Philippines. Thus, it shared this objective with Leyte State University (LSU). This research specifically focused on the following main objectives. First, the production of high quality Abaca fibres was intended. These fibres are to be produced from plants which are cultivated under suitable and sustainable conditions in various agro-ecosystems. Second, the production of high quality and disease-free planting material was intended. This material could be used for the establishment of Abaca plantations. Third, the development of technology, equipment and processes that enable a sustainable production of Abaca fibres on the village level was planned.

Euronatur as a subcontractor of the University of Hohenheim focused in particular on the knowledge transfer and communication aspects within the project (Hutter 2007).

In addition, the University of Applied Sciences Reutlingen conducted further research on the development of composite material using Abaca fibres. However, this contribution was intended as a complementary synergy-measure which did not directly contribute to the core project objectives (Greiner 2007).

4.7.1.3 PARTNERS INVOLVED AND THEIR CONTRIBUTION

DEG

The development finance institution DEG was the formal public partner in this PPP. The DEG was stipulated by contract to provide support where necessary in bringing together cooperation partners, to assist in the public promotion of the PPP project in the partner country (the Philippines) in order to increase the broad effect of the project, to deliver assistance in the carrying out of the project (e.g. if necessary in negotiations with local or national authorities), and finally the DEG was obliged to approve the intermediate and final report of the private partner (Greiner 2007, Duscha 2008).

⁵⁷ Since 2004, a car component (spare wheel recess cover) made from the Abaca fibre has been used in serial production. It was the first utilisation of an Abaca-based part in an exterior application and demonstrates the quality of Abaca parts (Daimler 2005).

Thus, the DEG obtained rather a monitoring role during the project. Nevertheless, the DEG also contributed significantly to developing the project concept (Greiner 2007).

Daimler AG

Daimler AG took on the role of the official private partner in the project. This means that the formal contractual partner in the PPP contract was Daimler AG. The University of Hohenheim was a sub-contractor of Daimler AG. Thus, it was the task of Daimler AG to oversee subcontractors' fulfilment of their responsibilities. Daimler AG was in charge of submitting the intermediate and final project reports to the DEG (the reports being the precondition for the public payments). In the practical project undertaking, Daimler AG mainly contributed its expertise in the development of automotive parts from Abaca fibre. This development was conducted in cooperation with a specialised tier one automotive supplier, Swiss company Rieter, which was not formally associated with the project (Greiner: 2008).

University of Hohenheim

The University of Hohenheim served as a subcontractor of Daimler AG. Its main obligation was the coordination of the project processing on the research site in the Philippines. This involved, for example, the creation of work plans and schedules, financing plans and the general supervision of the project work of the partner institution in the Philippines.

By functioning as a contract partner of LSU as well as Euronatur, the University of Hohenheim had a key responsibility for the coordination of all partners involved locally in the Philippines (Mühlbauer 2008).

Leyte State University

Leyte State University (LSU) conducted the local research concerning the production of Abaca fibre, and provided technical support and assurances on ecological sustainability issues. This entailed e.g.:

- **Production:** The main objective was the establishment of Abaca plantations which deliver fibres suitable for application in the automotive industry. This included sub-objectives such as the selection and growing of Abaca varieties with high strength and a uniform fibre strand; the production of Abaca seedlings (using tissue culture technology); the promotion of further research on the production of Abaca under varying ecosystems as well as the coordination of the establishment of Abaca plantations in different areas in Leyte.
- **Ecological soundness:** The main objective in this regard was the establishment of Abaca plantations under varying agro-ecosystem conditions. Sub-objectives were pilot tests of the production of Abaca plants under different agro-ecosystems and the establishment of Abaca plantations in different parts of Leyte with ecological sustainable methods and technologies.
- **Technical component:** The main objective was the production of Abaca fibres at a quality level that enables applications in the automotive industry. Sub-objectives comprised the optimisation of an Abaca stripping machine so that fibre stripping can be conducted at the village level; the development of a solar dryer, so that Abaca fibres can be dried at village level; the establishment of an Abaca processing centre on village level; supporting the construction of a centralised warehouse to classify, certificate and warehouse Abaca fibres.

(Tropenzentrum 2007)

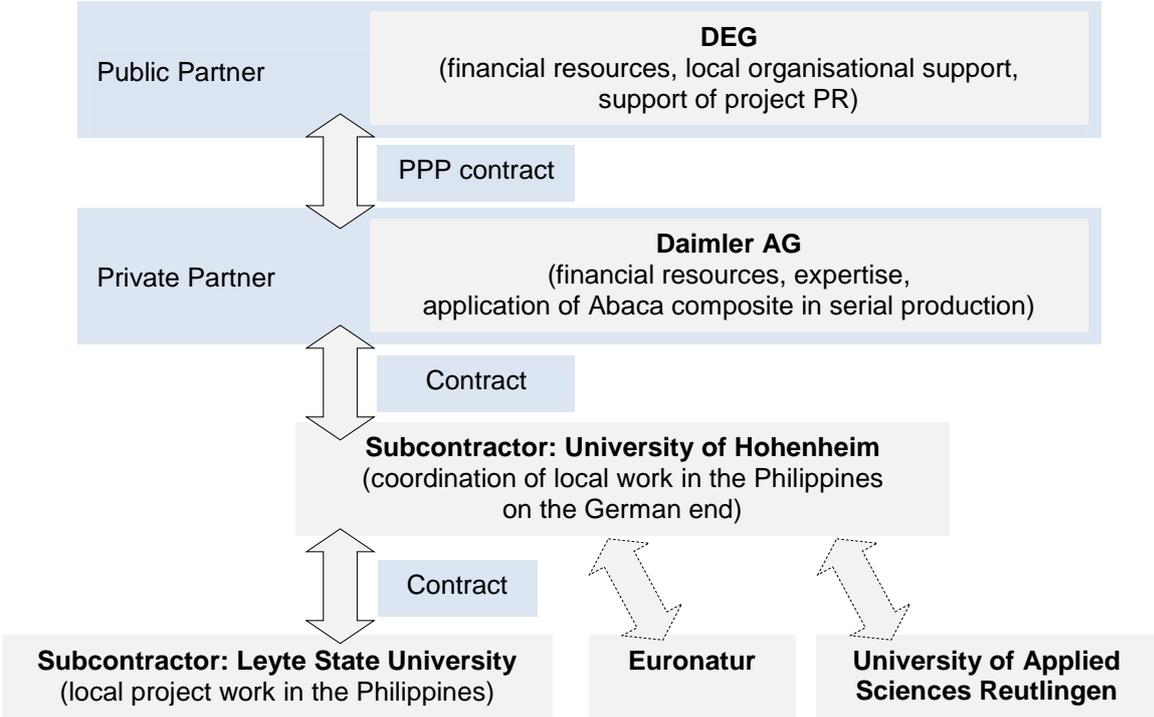
Two further parties were involved in the project. First, the European Nature Heritage Fund Euronatur functioned as a subcontractor of the University of Hohenheim. Its main task was to implement training measures for local farmers and to organise a conference on the topic in order to increase the widespread impact of the project (Hutter 2007).

Second, the University of Applied Sciences Reutlingen was involved in further research on the manufacturing of the composite material which the Abaca automotive parts are made of (Greiner 2007).

The tasks of these two partners can be classified as additional measures which contributed to the central project objectives in a very limited way only. The processing of the project itself would have been well possible without these two partners with the exception of the training measures of local farmers (Greiner 2007). Hence, they are taken into consideration only on a limited scale.

Figure 4.5 summarises the organisational setting of the PPP project:

Figure 4.5 Organisational setting of the Abaca project (and main contributions of partners)



Source: own illustration

4.7.1.4 PROJECT PROCESS, TIMEFRAME AND STATUS

The initial project idea was developed during an environmental conference (“Second Environmental Forum Magdeburg”, co-hosted by Daimler and UNEP) in 2001 and officially launched during the successor conference (“Third Environmental Forum Magdeburg” 2003) (Daimler AG 2005).

To be exact, the University of Hohenheim institute involved had, prior to the project, conducted several research activities in the Philippines. The institute head had encountered the Abaca plant and become aware of its potential in industrial production processes. Based on previous personal contacts with employees of Daimler AG, he made a first proposal to cooperate in this context. With this rough idea,

he approached a Daimler executive within the research and development department. As a result of this consultation, the concrete project proposal for the PPP project emerged. Thus, the original proposal to conduct the project in the PPP framework was made by the University of Hohenheim. Subsequently, Daimler and the University of Hohenheim contacted the DEG as a potential public partner (Mühlbauer 2008).

At the same time, the application of Abaca composite material in structural automobile parts (parts which are under physical strain) was designed so that the positive characteristics (strength, robustness) of the Abaca fibre could be used. This whole process was then evaluated by Daimler in cooperation with the Swiss automotive supplier Rieter. Thus, the company Rieter became another key player in this project since it was the obligation of this company to ensure a functioning and effective production of the Abaca-based parts. It was the Rieter team who ultimately developed the specific technology to process the Abaca fibre in such a way that an adequate and constant quality level could be attained (Greiner 2007, Mühlbauer 2008),

The process just outlined led to the establishment of the first project phase in January 2003. The first project phase ended in the end of 2005. The second project phase started in August 2006 and ended in June 2008.

It has to be stressed that it was not initially intended to conduct a second project phase subsequent to the first phase. However, the project status at the end of the first phase made the continuation of the project in a second phase a logical and necessary step in order not to jeopardise the overall project objectives (Mühlbauer 2008).

4.7.1.5 OPERATIONAL PROCESSING, SHORTCOMINGS AND CONFLICTS

Daimler AG obtained the formal project leadership, both with respect to the public partner DEG as well as with the sub-partners. This means that Daimler AG obtained the final responsibility for the project outcomes, which was of particular importance since the public payments were connected to achieving the intermediate and final project objectives.⁵⁸ Due to the specific constellation of responsibilities, Daimler AG delegated the coordination of local work in the Philippines to the University of Hohenheim, which in turn involved Leyte State University with local work in the Philippines (Greiner 2007).

While in the first project phase, the project objectives and working steps for achieving these objectives were only outlined roughly, a detailed working plan was established for the second project phase. This increased target orientation was a result of experiences from the first project phase (Mühlbauer 2008).

Major conflicts did not occur during the project processing. However, the project reached a critical status in the transition from project phase 1 to project phase 2. Between the two project phases, a time gap of several months occurred. At the same time, research on the Philippines went on and thus the need to finance the ongoing research remained. The organisation of a smooth transition between

⁵⁸ As usual in PPP projects, the processing of payments from the public partner (DEG) was conducted successively. The first payment was transferred on the occasion of the contract signing. The second payment was conducted on the occasion of the handing in of an intermediate status report, the third payment was connected to the handing in of a final project report (Duscha 2008, Greiner 2008).

the phases was apparently not given. This became a pivotal issue regarding the payment procedures of Daimler AG. The company could only pay out upon receipt of an invoice. Payments in advance were not possible. In a development project, payments in advance however are common in order to ensure the seamless continuation of projects (Mühlbauer 2008). This problem had been solved by stabilizing the project facilities in the Philippines with payments out of the PPP contract.

4.7.1.6 ENVIRONMENTAL SETTING OF THE PARTNERSHIP

The Philippines have been facing massive problems due to the large-scale deforestation of its original rainforest. As early as the beginning of the 20th century, coconut plantations had been established in sloping sites as well as in lowlands. The economic utility of these plantations has been strongly decreasing which leads to decreasing revenues of the small-scale farmers.

In 2006, there were about 63,000 small-scale farms, which produced about 72,000 t of Abaca on an area of 106,000 hectares. This equalled 83 % of the world production volume of Abaca. 1.5 million people (of a total of about 75 million inhabitants) generated their income by producing and/or processing the Abaca fibre (Mühlbauer 2008).

4.7.1.7 OUTCOMES OF THE PROJECT

The overall project achievements were rated positively by all project partners (Greiner 2007, Mühlbauer 2008, Duscha 2008).

As a result of the research conducted in phase 1 of the project, it was possible to identify Abaca plant species with particularly positive characteristics regarding their fibre quality. Furthermore, five village-cooperatives were founded. All cooperatives were committed to cultivating Abaca in a sustainable way and to preserving the existing tree population. There were accompanying training measures for the members of the cooperatives upfront, providing these cooperatives with the necessary seedlings. The objectives of the second phase of the project were mainly based on needs occurring during the final phase of phase one in the areas of seedling production and the processing of the Abaca fibres. Thus, the continuation with the second project phase seemed necessary in order to ensure overall project success (Mühlbauer 2008).

The status regarding the main objectives of both project phases can be summarised as follows:

- The production of disease-free seedlings, the ecological production of Abaca fibres was optimised e.g. through the reduction of virus infections of seedlings, an increase of the area of cultivable land for the ecological cultivation of Abaca and an increase in the amount of fibre production.
- The technology for the production of high quality Abaca fibres was further developed and distributed. This involved the development of a transportable fibre stripping machine and making machines of this type available to the local village-collectives. The mechanical (as

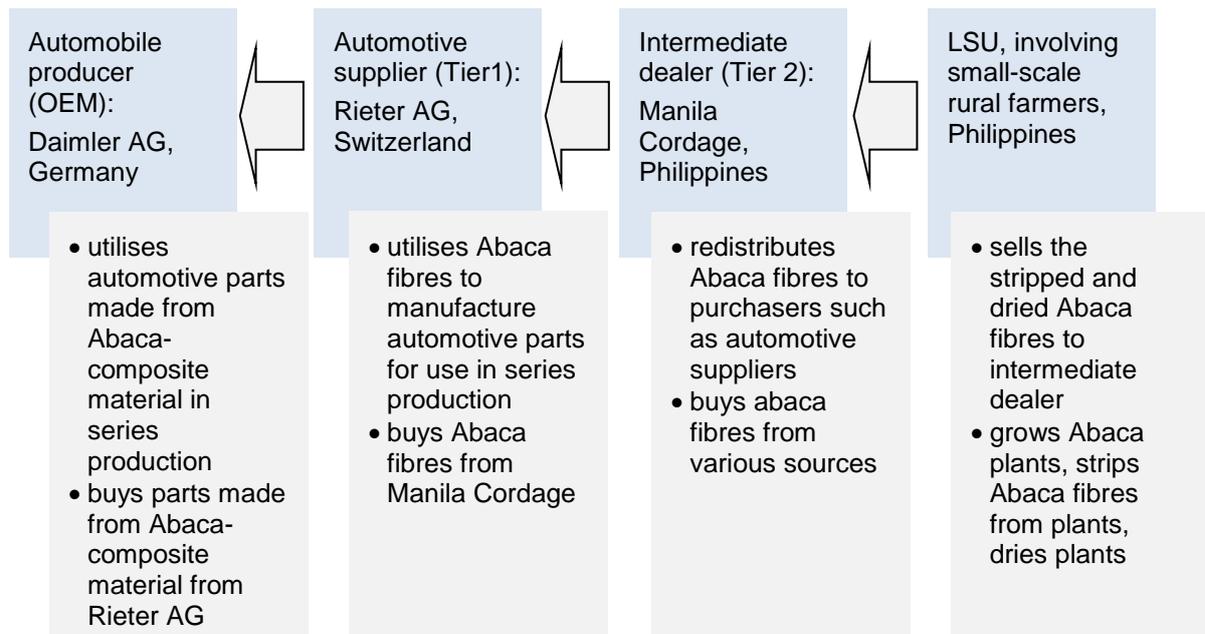
opposed to manual) stripping of the fibres from the Abaca plant was a crucial precondition for using the fibre in industrial processes. Plus, solar fibre drying machines were optimised.

- Logistics and quality management systems for the production and procession of Abaca fibre was established e.g. through the establishment of training material for fibre classification which enables the fibre classification according to the needs of the industrial utilisation of the fibres.
- The manufacturing of composite materials and automotive parts from the Abaca fibre was further developed (e.g. through the identification of fibre and automotive parts specifications and the establishment of supply contracts).
- The project content was promoted towards the public in order to promote the project impact e.g. through generating media response.
- In 2008, about 50,000 Abaca seedlings were planted out on about 50 hectares of plantation area.

(Mühlbauer 2008, Greiner 2007)

One explicit objective of the project was not reached: the establishment of a complete and stable supply chain. A suggestion was made to establish a supply chain from the project plantations run by the LSU and involving rural small-scale farmers (who ecologically grow the Abaca plant and strip the fibres from the plant) to the buyer of Abaca fibres (who buys the fibres from the small-scale farmers and redistributes it to automotive suppliers (in this case: the Philippine company Manila cordage) to the automotive supplier (in this case: the Swiss company Rieter) to the final automobile producer (in this case: Daimler AG). The supply chain looks as outlined figure 4.6.

Figure 4.6 Value chain of the Abaca fibre in the automotive production process



Source: own illustration

One intention behind the project was to ensure that the tier one automotive supplier Rieter should commit himself to purchasing a certain amount of available Abaca fibres from ecological production from Manila cordage. Furthermore, the intermediate buyer Manila Cordage should commit himself to purchasing a fixed amount of Abaca fibres from those plantations established and developed in the framework of the project, i.e. that are applying ecological methods for the production of Abaca fibres involving small-scale farmers. In that process, the constant supply of ecologically produced Abaca fibres from the small-scale farmer to the final automobile producer should be ensured. This ideal supply chain would guarantee income for the small-scale farmers while creating incentives for the ecological production of Abaca fibres.

However, ensuring the stability of this ideal supply chain in the mid- or long-term was not achieved. It could not be completely ensured that the intermediate buyer (Manila Cordage) commits himself to purchasing a fixed amount of Abaca fibres from the ecological plantations (run e.g. by the village-collectives) and that the automotive supplier commits himself to issuing a long-term purchasing guarantee to the intermediate buyer.

The reasons for this shortcoming could be found in several levels of the supply chain. First, there are historically established buyer-supplier relationships at the local level in the Philippines. This means that farmers or village authorities were not necessarily able and/or willing to freely choose who they sell their Abaca fibres to for various reasons. Transport and logistics problems represent one possible reason. If rural farms are not able to reach certain markets, they rather sell their Abaca fibres to small intermediate buyers who then organise the transport to bigger buyers (such as Manila cordage). Other reasons, e.g. existing union structures, are also plausible. Second, accepting commitments to purchasing a certain amount of ecologically produced Abaca fibres would mean additional expenses for the intermediate buyer Manila cordage (e.g. to buy and resell only Abaca fibres of a specific high quality class). Third, the processing of Abaca fibres (due to the relatively small amounts) means additional expenses for the Tier one supplier Rieter as well (e.g. to maintain and further develop the necessary specific machinery). These additional expenses might have caused incentives not to enter into long-term commitments (Mühlbauer 2008).

In short, as far as these shortcomings are concerned, it became clear that an industrial production process of automotive parts from Abaca constitutes a multi-step value chain with stations in several countries. Companies involved at the various supply chain stations had varying interests. At the same time, neither a single OEM (an automobile producer) nor a single tier one supplier (a producer of automotive parts) had the market power to dictate the entire value chain of the production process. Rather, each company has only a limited range of influence on the lower parts of the value chain. This issue becomes increasingly relevant when volumes processed in the value chain (here: the volume of automotive parts produced from Abaca) are relatively small and thereby account for only a small part of the overall business of the suppliers. To sum up, the failure to establish the described stable value chain could not be attributed to one single cause.

A second drawback was mentioned with regards to the objective of integrating the Abaca plant in the "Rainforestation Concept."

The Rainforestation Concept was developed by the GTZ in cooperation with the University of Hohenheim and Euronatur against the backdrop of the existence of large areas of cleared rainforest on the Philippines. This concept foresaw the need to replant degraded areas with indigenous rainforest and fruit trees in order to regain the ecological function of these areas.

The original objective of integrating Abaca in plantations established in this framework failed mainly for biological reasons. The yield from Abaca in a mixed plantation, for example, with fruit trees is very low due to the shadow cast by the trees. In addition, the total yield volumes of Abaca fibres from these mixed plantations is simply too low to enable an economically sustainable processing of the plant material, particularly regarding the quality standards which must be attained if the fibre material is supposed to be used in industrial processes (Mühlbauer 2008).

Development implications

The main focus of the project was on the improvement of the economic and living conditions of the rural population on the Philippines through the ecological plantation of Abaca and the usage of the Abaca fibre in industrial processes (Greiner 2007).

Social aspects

The project generated income opportunities for the rural population, specifically through the village-cooperatives which were founded. Amongst others benefits, this additional source of income potentially helped to reduce migration from the land (Mühlbauer 2008).

Ecological aspects

One project focus was the utilisation of renewable primary products in industrial production processes, which can be regarded as a generally positive ecological implication.

Locally in the Philippines, the project fostered the establishment of mixed cultures (Abaca plantation within monocultures). Hence, the project contributed to the reduction of erosion, the reduction of karst development and the prevention of the siltation of coastal waters (Mühlbauer 2008).

Structural and economic effects

The project contributed to the establishment of physical structures to cultivate and process Abaca at the LSU institute involved. This entailed the establishment of a stable and functioning process for producing Abaca plant seedlings, methods for establishing ecological Abaca plantations, for extracting the fibres from the plant, and for drying the Abaca plant material, etc. This involved the creation of physical assets (e.g. mobile fibre stripping machines, drying facilities). These assets remained at Leyte State University in the case of fibre stripping machines, or at the local farmer collectives (Mühlbauer 2008, Greiner 2007).

In 2008, after the project end, the production of Abaca seedlings by Leyte State University was ongoing. Selling the seedlings means an additional source of income for the institute. This income contributes to ensuring the continued production process and thus to ensure local employment (Mühlbauer 2008).

Creation of employment

A labour intensive step in the cultivation of Abaca plants is planting the seedlings in the field. Since this task could not have been performed by Leyte state University alone, local collectives were

founded to perform this task. By founding these collectives consisting of local farmers, the project generated local employment (Mühlbauer 2008).

MDGs

The interviewees were asked whether the outcomes of the project had implications on one or more of the MDGs. As a result, there was a consensus that the project strongly influences MDG No. 7 (ecological sustainability). Furthermore, consensus existed that the project contributed to goal No. 8 (the establishment of a global development partnership due to the very nature of a PPP) (Duscha 2008, Greiner 2007, Mühlbauer 2008).

4.7.2 CASE ANALYSIS

R 1 Previous experience with the partners involved

The DEG stressed that Daimler AG was involved in other (previous) PPP projects funded by the DEG. The experience from these projects contributed to the picture of a reliable partner from the point of view of the DEG (Duscha 2008).

Direct and/or personal previous working experience of Daimler AG was partly given, i.e. some staff involved in the project establishment had direct working experience with the DEG (Greiner 2007).

The outline of the project process above illustrates that the University of Hohenheim played a key role in the project genesis as well as in the project implementation. Approaching Daimler AG as a possible player in the project was based on personal direct and indirect experience, i.e. knowledge of activities of Daimler AG in other projects in the field of natural fibre application in industrial production, with the company by key staff at the involved institute of the University of Hohenheim (Mühlbauer 2008).

R 2 Coordination of project processing; control and sanction mechanisms; decision-making processes

As outlined above, Daimler AG was the formal private partner in the project. This means that Daimler AG took responsibility for the project results concerning the public partner DEG. At the same time, Daimler AG delegated responsibilities for the coordination of local work in the Philippines to the University of Hohenheim, which in turn contracted LSU with the actual work in the Philippines. The formal integration of more than one private partner in the PPP contract with the DEG (e.g. integrating the University of Hohenheim as a direct private partner) was not feasible due to formal requirements. At the same time, Daimler AG did not have the competence necessary in the field of agricultural work and therefore was dependent on the University of Hohenheim or LSU, respectively. Daimler AG explicitly mentioned that this organisational construction had the downside that the company had to take responsibility for the outcomes of the activities in the Philippines (in particular, the sustainable production of Abaca fibres) in which it was hardly involved and therefore could hardly influence. From the point of view of Daimler AG, the formal of the University of Hohenheim integration in the PPP contracts as a full and responsible partner would have been an improvement with regards to the clear allocation of responsibilities for project progress (Greiner 2007).

In practice, the University of Hohenheim reported to Daimler AG about the project progress so that the company could intervene if necessary. Operational decisions were in principle made by consensus (Greiner 2007).

A structured sanction mechanism did not exist in the project. However, the connection of payment by the DEG to project progress could be regarded as a sanction mechanism. Without appropriate project progress, the split payments by the DEG would not have taken place (Mühlbauer 2008, Greiner 2007).

Apart from the general monitoring of project progress, Daimler AG did not implement a specific project control mechanism of any kind (Greiner 2007).

Daimler AG expressed the view that there are noticeable general differences in the character of a private company and a public institution (the University of Hohenheim and LSU). This became apparent during various occasions along the way with regards to organisational efficiency and target orientation (Greiner 2007).

R 3 Number of partners in the PPP

The partners involved in the operational processing of the project (i.e. Daimler AG, University of Hohenheim) were asked whether a higher or smaller number of partners in the project would have made sense and/or would have had positive or negative implications for the project.

The interviewees considered this question highly hypothetical. The number of partners was considered suitable due to the character of the partners. However, concerns were raised that a higher number of partners would have complicated the coordination process (Mühlbauer 2008, Greiner 2007).

R 4 Implications of the micro and macro environment of the PPP in the developing country

Good relations with official institutions in the Philippines were rated as a critical aspect for the project success by all partners (Mühlbauer 2008, Greiner 2007).

The project was supported, either through concrete supporting measures or at least through good will, from representatives from various institutional authorities.⁵⁹ This was a very critical issue for ensuring project success. The good relations with local authorities were mainly rooted in the existing connections of LSU staff, in particular the LSU president (Mühlbauer 2008, Greiner 2007).

Qualified staff was available locally in the Philippines (Mühlbauer 2008, Greiner 2007). Thus, the availability of a qualified local workforce was not a critical issue in the project.

As mentioned above, the establishment of stable value-supply chain related to the project content could not be achieved. In other words, the establishment of new Abaca trading relationships locally in the Philippines could not be achieved. The historically grown Abaca trading relationships in the Philippines seem to be the main reason for this (Greiner 2007).

Asked if issues related to corruption in any way ever had implications for the project outcomes, those involved with practical project operations stated that they were not aware of any concrete issues in this regards (Greiner 2007, Mühlbauer 2008).

⁵⁹ E.g in order to solve logistical needs, a road in the surrounding of the project plantations was built by a local mayor (Mühlbauer 2008).

However, it is not completely out of sight that corruptibility played a role in the existence of fixed Abaca trading relationships in the Philippines (Greiner 2007). As mentioned, these could be regarded as a main factor behind the failure to establish a new supply chain in the project framework.

R 5 Quality of resources pooled in the PPP/services delivered in the PPP (match of expectations with actual performance)

Daimler rated the quality of the performance of the DEG in the project as positive (Greiner 2007).

The University of Hohenheim shared this view. The practical cooperation work with the DEG as the public partner was regarded as unproblematic. However, it was stressed that the contribution to the actual project operations of the DEG was very limited. However, this lack of operational participation was not regarded as a negative point. The University of Hohenheim critically mentioned that the DEG did not a priori outline completely and adequately stress all the formal requirements (e.g. concerning the formal processing of invoices). By giving clear operational guidelines, the DEG could have fostered a smooth processing of the cooperation work even further (Mühlbauer 2008).

As outlined above, Leyte State University, coordinated by the University of Hohenheim, had to carry out practically all project work locally in the Philippines. Both from the perspective of Daimler AG and the University of Hohenheim, these tasks were fulfilled satisfactorily. Furthermore, LSUs' good contacts with local authorities and the positive results from the project were highlighted by Daimler AG and the University of Hohenheim (Mühlbauer 2008, Greiner 2007).

Daimler AG rated the overall performance of the University of Hohenheim and its subcontractor as positive. From the view of Daimler AG, the performance of the LSU left room for improvement since Daimler AG regarded LSU as responsible for the establishment of a stable supply chain (see above), an objective which was not reached (Greiner 2007).

R 6 Character, motivation and objectives of the partners

The focus of the public partner (DEG) was on the development objectives of the project (Duscha 2008).

The motivation and objectives of the private partner were more complex. It can be summarised that the implicit motivation of the private partners involved (the formal partner Daimler AG and its main subcontractor the University of Hohenheim) to participate in the project were closely linked to the "core businesses" of the partners. Daimler AG regarded research on the Abaca fibre in the project framework as a contribution to the company's activities in the field of renewable primary product application. Furthermore, broader interests such as reputation gains were also in focus. Thus, the Abaca project was promoted as a company activity in the CSR framework.

At the same time, the University of Hohenheim, its counterpart on the Philippines, Leyte State University, were strongly focused on the outcomes of agricultural research, the integration of local farmers and the further development of ecological cultivation of Abaca.

Nevertheless, all objectives that were targeted by the partners were congruent with formal i.e. explicit project objectives which were fixed in the project contracts. In other words, no "hidden agenda" of one or more of the partners could be identified. The partners were also well aware of the potential reputational benefits for their institution on account of the project.

The opportunity to generate reputation gains with the project was mentioned as an additional motivation behind participating in the project by all main partners (DEG, Daimler AG, University of Hohenheim) (Greiner 2007, Mühlbauer 2008, Duscha 2008).

R 7 Interest of the partners in a long-term relationship, extending beyond the end of the PPP project

The DEG as the public partner in the project stressed the potential positive aspects of working together with a large multinational company such as Daimler AG, e.g. concerning the public awareness of the project (Duscha 2008). Thus, it can be assumed that the DEG was generally interested in a good long-term relationship with Daimler AG as a possible PPP partner.

The time horizon of Daimler AG has to be regarded from two angles. First, on the project level, the concrete objectives and the timeframe of the project was in focus. Further follow-up projects had not been anticipated. Nevertheless, it appeared possible to establish other projects, possibly in other regions in cooperation with the DEG (Greiner 2007).

The interest of Daimler AG concerning the cooperation with the University of Hohenheim in this case was strongly focused on the project timeframe (Greiner 2007). There is no indication that a long-term (strategic) relationship with the University of Hohenheim was sought against the background of the project content.

From the point of view of the University of Hohenheim, several promising approaches to make further use of the Abaca fibre existed. It would have been theoretically an option to proceed with some of these approaches in further cooperation with Daimler AG (Mühlbauer 2008).

R 8 Outcomes and effects of the PPP project

As outlined above, the main objectives of the project were achieved. Research on the plantation of Abaca plants and the extraction and processing of fibres from the plant was brought forward.

The development policy effects of the project can be seen particularly in the creation of an additional source of income for local small-scale farmers on the Philippines from the sustainable cultivation of the Abaca plant. This included training measures concerning the plantation and processing as well as the distribution of mobile fibre stripping machines. By adding Abaca plants to coconut monocultures, local farmers could generate a considerable increase in their income⁶⁰ (Mühlbauer 2008).

In addition to the explicit project outcomes, the project also generated considerable public attention, including media coverage (Greiner 2007).

R 9 Regulations about the distribution of partnership gains

The PPP contract specifically anticipated that the finding and outcomes of the project shall not remain with a one partner only. At the same time, commercially exploitable outcomes could hardly be expected (Mühlbauer 2008, Greiner 2007).

Apart from the direct project achievements, public relation effects of the project for the public as well as private partners (Daimler as the direct contractual partner and the University of Hohenheim as the

⁶⁰ Roughly estimated, an average small-scale farmer could generate an income of about 30,000 Peso per year from cultivating coconuts only. By adding Abaca plants to the plantations, up to 50,000 Peso extra income could be generated (Mühlbauer 2008).

main subcontractor) ensued. There was mutual understanding that each of the partners could make use of the public relations potential associated with the project (Mühlbauer 2008, Greiner 2007).

R 10 Resources in focus of the partners

By cooperating with the University of Hohenheim, Daimler AG intended to make use of the expertise of the University of Hohenheim in agricultural research. Furthermore, from the beginning on, it was part of the project concept to integrate Leyte State University as the local partner in the Philippines. In this sense, the University of Hohenheim functioned as a kind of “middleman” for coordinating the local work in the Philippines (Greiner 2007).

From the point of view of the University of Hohenheim, the participation of Daimler AG in the project made the public subsidy through the BMZ PPP facility possible in the first place (since the participation of a private company is prerequisite for the formation of a PPP). The University likewise had its PR-objectives. The reputation of a multinational company was regarded as a positive factor for the project objectives (Mühlbauer 2008).

On top of the general objectives of the BMZ PPP facility, i.e. the acquisition of additional resources for development projects etc., the DEG specifically mentioned the expertise of the private partner Daimler AG in the field of the application of renewable primary products. It was also mentioned that the stable and smooth operation of larger companies was generally regarded as positive for these kinds of PPP projects. Furthermore, the high profile of the company and the anticipated PR-benefits were mentioned as further de facto advantages (Duscha 2008).

In their orientation toward the DEG, Daimler AG fulfilled its role as the formal private contractual partner by focusing primarily on the financial contribution to the project. At the same time, the expertise and experience about local conditions in India as well as the local network of the DEG in India were mentioned as resources provided by Daimler AG (Greiner 2007).

The players involved in the practical project execution (Daimler AG, University of Hohenheim) both agreed that a similar activity on the part of their institution would not have been possible without the other partners involved. The University of Hohenheim commented, for example, that without Daimler AG being part of the project, the scale of the project would have been notably smaller. Rather than building structures which enable local farms to directly use and implement the results of research on the Abaca plant, it would have been thinkable to establish a project with pure research character if the combined funding from Daimler AG and DEG had not existed (Mühlbauer 2008, Greiner 2007).

R 11 Financial capital

The two project phases were each conducted in the framework of their own formal PPP. In both project phases, a public subsidy of about € 200,000 was processed. At the same time, the private contribution to the project as a precondition for funding by the BMZ PPP facility has to be more than 50 %. This obligation was fulfilled for both project phases, but was not exceeded significantly (Greiner 2007, Mühlbauer 2008, Duscha 2008). Thus, the overall value of all goods and services pooled in the two project phases barely exceeded € 500,000 each. The overwhelming majority of these resources were used for local work on the Philippines. Exceptions were with minor overhead costs e.g. for coordinating staff. To sum up, the overall value of goods and services channelled to the Philippines in the framework of the project can be estimated to amount to less than € 1 million.

R 12 Human capital/knowledge

Since all research on the plantation and processing of abaca was conducted locally in the Philippines, the knowledge, in particular the intrinsic knowledge generated during the research, likewise remained in the Philippines.

Moreover, local farmers were particularly targeted with the project. Training measures were conducted for directly transferring knowledge about Abaca processing directly to these farmers (Mühlbauer 2008, Hutter 2007). Regarding the overall economic importance of the Abaca plant for Filipino farmers, this knowledge can be rated as highly valuable for those farmers involved.

Thus, it can be summarised that the project contributed to enhancing knowledge in an area of critical economic importance to farmers in the Philippines.

R 13 Technology

The development and production of automotive parts from the Abaca fibre was conducted by Daimler AG in Germany and by automotive supplier Rieter in Switzerland. In this sense, a technology transfer from a developed country (Germany) to a developing country (Philippines) did not take place.

However, the project contained the further development of technologies for extracting the Abaca fibre from the plant to further process the fibre and other related technological solutions (e.g. a solar dryer). These technologies were developed locally in the Philippines by own work of LSU. These technologies contributed to a more effective production of Abaca fibres, an important source of income for local farmers.

Thus, the project did contribute to the further development of the technological stock in the Philippines.

4.8 CASE 3: VOCATIONAL TRAINING CENTRE

Table 4.6 Project overview: Vocational Training Centre

| | |
|-------------------------------|--|
| Formal public partner | <ul style="list-style-type: none">• GTZ, Germany• CIM: "Centrum für internationale Migration und Entwicklung" (human resources placement organisation for German development cooperation) |
| Formal private partner | <ul style="list-style-type: none">• Daimler AG, Germany |
| Other partners | <ul style="list-style-type: none">• Local Daimler AG/Mercedes Benz dealership, Malawi and Kenya |
| Project locations | <ul style="list-style-type: none">• Blantyre, Malawi• Nairobi, Kenya |
| Time frame | <ul style="list-style-type: none">• December 2005 – November 2009 |

Source: own illustration

4.8.1 DESCRIPTIVE OUTLINE

4.8.1.1 BACKGROUND AND SUBJECT OF THE PARTNERSHIP

The overall objective of this project was the establishment of vocational training courses in two African states. Vocational training is regarded as a base for the creation of employment opportunities in developing countries. At the same time, vocational training facilities and courses in Africa, in particular, often suffer from significant shortcomings.

The vocational training system in Malawi concerning the automotive field suffered from impediments which led to an inadequate training level in the fields of motor mechanics and automotive mechatronics. The training system prior to the project establishment was mainly based on theory-based pedagogics, similar to the school instruction. Practical components in the training courses were hardly in place. Plus, the technical equipment of the vocational training schools was inadequate. As a result, apprentices who completed a vocational training course usually did not possess the skills necessary to proceed with independent work in a garage (Bela 2007, 2008a). Furthermore, the profession of automotive mechatronics technician was relatively new and constitutes a combination between traditional training in motor mechanics and additional training components related to electronics. Qualified automotive mechatronics technicians were however hardly existent in many rural areas in Africa (Asfaw 2008).

This situation called for measures to improve the existing vocational training facilities and establish and expand vocational training coursework offerings.

4.8.1.2 OBJECTIVES OF THE PARTNERSHIP AND THE PARTNERS

The main project content was the establishment of a vocational training course for the profession of “automotive mechatronics technician” in Blantyre, Malawi. By establishing a practically-oriented vocational training course, the number of well-trained staff in the field of automotive mechatronics technicians in the region was supposed to be increased. In that process, the apprentices trained were supposed to acquire a high level and practically oriented vocational training. In addition to the training centre in Malawi, an existing vocational training facility in Nairobi, Kenya was supposed to be further developed in the project framework. The main focus of the project was set on the training centre in Malawi (Bela 2007, 2008a).

The explicit project objectives entailed:

- Establishing a cross regional training centre in Malawi in order to train automotive mechatronics technicians for Malawi and the neighbouring countries. This project was supposed to include:
 - The equipment of a training centre in Malawi with state of the art training equipment (e.g. tools, electronic devices etc.).

- To start the training of apprentices as automotive mechatronics technicians. In that process, the training curriculum should be based on the German professional training curriculum.
- A German training expert should be assigned as training manager to implement the measures.
- By cooperating with local institutions, the objective of an officially recognised training course and/or curriculum should be followed.
- Existing vocational training courses in Nairobi, Kenya, are to be expanded and upgraded. The existing automotive training facilities should likewise be upgraded. In addition, the curriculum of existing training measures at this location should be complemented with elements from the field of automotive mechatronics. The renewed vocational training should be made available for training measures by companies and/or institutions from Kenya and the neighbouring countries.
- Finally, a network of the public and private institutions involved in the project from all African countries should be established.

Most importantly, sustainability of all project outcomes should be reached. This means that all established training courses and related measures should be able to exist without support from development cooperation donors (Bela 2008a, 2008c).

In addition to the project objectives in Malawi and Kenya, the project also included supra-regional objectives. Using the example of the vocational training curriculum of automotive mechatronics technicians, it should be proven that a supra-national harmonisation of the training curricula in various African countries could be achieved. The harmonisation of the training curricula of other vocational training courses was a long term objective (Asfaw 2008).

Altogether, GTZ concluded that the project objectives comprised structure-building elements, the establishment of training facilities and courses, as well as political elements, the establishment of officially recognised vocational training curricula in the respective countries (Asfaw 2008).

4.8.1.3 PROJECT PROCESS, TIMEFRAME AND STATUS

The project was initiated by Daimler AG. Daimler employees responsible for international vocational training activities initially started talks with local partners and in a second step approached the GTZ with a concrete project proposal (Bela 2008a).

First talks about the project were conducted in 2004. The PPP contract between Daimler AG and GTZ was finally signed at the end of 2005. On 1 August 2006, the German vocational training expert who was assigned to work locally in Malawi started with the establishment of the vocational training centre. At the beginning of 2007, the selection of trainees and apprentices for the first vocational training course started. The first training course involved 16 trainees. In order to ensure that the training courses would be continued after the end of the development project, two local engineers were hired on 1 February 2007. In April 2007, the first training course started with 13 male and 3 female trainees from Malawi. In all, 4 trainees were employed by the local general distributor of Daimler AG in Malawi,

12 were employed by car dealers or other automotive brands, and 2 trainees were hired by a public technical institute (Bela 2007, 2008a).

The project duration was 1 December 2005 – 30 November 2009 in two subsequent project phases.

4.8.1.4 PARTNERS INVOLVED AND THEIR CONTRIBUTION

GTZ (in cooperation with CIM)

The GTZ was the legal public partner development agency in this PPP. The GTZ was in charge of monitoring project process, approving the payment of the public contribution to the project on the basis of project progress, and all other basic functions which the public partner has to fulfil in a PPP.

CIM was the second public development agency formally associated in the project. CIM was responsible for all activities related to the placement and management of the German technical and/or training expert who was sent to manage the training activities locally in Malawi. One exception was the hiring process of the training expert. While in similar projects, CIM usually took responsibility for the selection and hiring of suitable experts, Daimler AG took over this function in this project as well (Bela 2008a).

In addition to the financial contribution, GTZ stressed its strength in contributing to the project objectives with their local network and country-specific knowledge. These aspects were of particular importance with regards to the objective of establishing officially recognised vocational training curricula. Additional input was provided by the vocational training experts from within GTZ in the phase of project design. After the project design phase, the operational processing was mainly handed over to the private partner Daimler AG (Asfaw 2008).

Daimler AG

Daimler AG obtained the role as formal private partner in the project. Consequently, Daimler AG was ultimately in charge of the progress towards the project objectives (Bela 2008a).

A further partner associated in the project was the local Daimler AG respectively Mercedes-Benz general distributor “Stansfield Motors Ltd.”. Stansfield Motors Ltd. provided major parts of the training facilities in Blantyre, Malawi. Plus, Stansfield Motors Ltd. was committed to integrating apprentices into the training measures who were not employed by Daimler AG. Only 4 of the altogether 16 trainees of the first training course were employed by Daimler AG. Hence, the project was supposed to generate positive outcomes not only for Daimler AG but also for further companies – an important aspect with regards to the broad effect of the project (Bela 2008a).

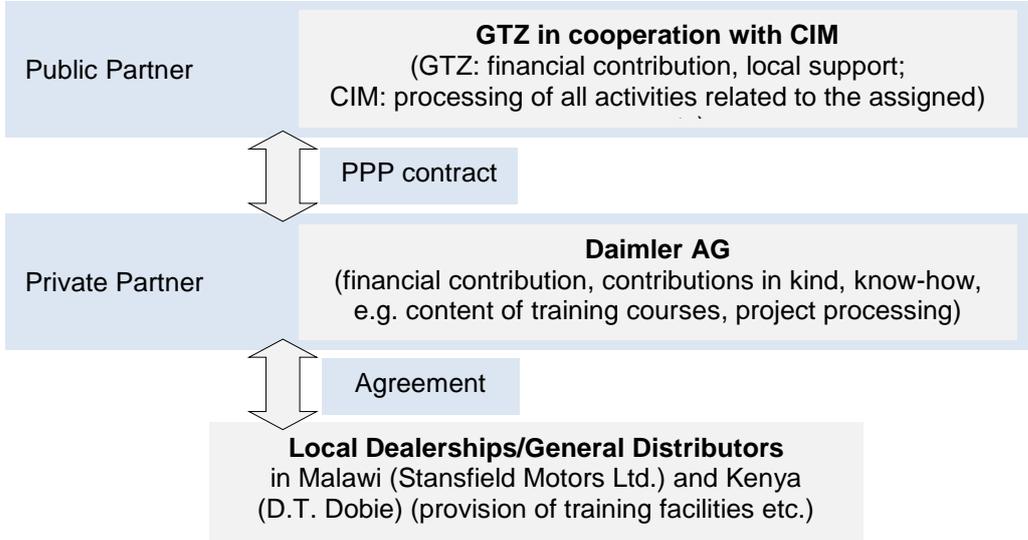
On the second project location in Nairobi, Kenya, another local distribution company (“D.T. Dobie”) was supposed to be integrated into the project. This company was supposed to provide its existing vocational training facilities for use in the project (Bela 2008a).

The main agreements with the two participating local dealerships in Malawi and Kenia were not fixed by contract but rather were based on oral agreements (Bela 2008a).

On top of their financial and other contributions, Daimler AG was significantly in charge of the project work with respect to content. In particular, the content of training measures and related issues were designed by Daimler AG (Bela 2008a).

A summary of the setting is shown in figure 4.7.

Figure 4.7 Organisational setting of the Vocational Training Centre project (and main contributions of partners)



Source: own illustration

4.8.1.5 ENVIRONMENTAL SETTING OF THE PARTNERSHIP

Key to understanding the project purpose was the local situation in the automotive service sector in Malawi and Kenya, respectively. The need for well-trained automotive service personnel in Malawi was rising. This was due to an increase in the market of motor vehicles, in particular for commercial vehicles. At the same time, the technical level of commercial vehicles and automobiles used in Malawi was increasing, i.e. more modern vehicles were in use. This resulted in an increased need for service personal with special knowledge about modern motor technology, in particular electronic components (Bela 2008b).

As mentioned before, the vocational training system in Malawi could not provide the level and quality of vocational training necessary to train apprentices to practically conduct their profession. The existing training system was mainly focused on theoretical teaching. Practical components in the training courses hardly existed. In addition, the technical equipment of the vocational training schools proved to be inadequate (Asfaw 2008, Bela 2007, 2008a, 2008b).

This situation, an increasing need for well-trained automotive service personnel and a lack of appropriate training facilities, represented the starting point for the project idea. A comparable situation existed in Kenya.

4.8.1.6 OPERATIONAL PROCESSING, SHORTCOMINGS AND CONFLICTS

The operational processing of the project was mainly coordinated and conducted by Daimler AG (Bela 2008a). While GTZ was significantly involved in designing the project content and objectives prior to the project begin, it then handed over the main parts of the operational processing to Daimler AG (Asfaw 2008).

In Germany, the project was coordinated by staff within Daimler AG headquarters in Stuttgart. Locally in charge of project operations in Malawi was a German training expert who had been specifically hired from Daimler AG staff in Germany (Bela 2008a, Asfaw 2008).

A significant obstacle in the project was a delay of about 10 months due to the retreat of the designated training expert who should have been sent to Malawi. The first candidate for the job as expert had previously been recruited from staff of Daimler AG in Germany. Shortly before signing the final contracts, the designated candidate however refused to accept the position in Malawi. Hence, a renewed search for a new candidate became necessary (Bela 2007, 2008a).

Project costs were covered from various sources. The provision of physical training equipment for the training centre in Malawi was covered by the project budget. The German training expert who operated the project locally was paid from the project budget as well. The apprentices who received vocational training in the training centre were paid by various sources. Meanwhile, the local general distributor of Daimler paid a monthly contribution for 4 apprentices, while 12 other apprentices were financed by other companies (mostly dealerships/general distributors of other brands) (Bela 2008a).

Major disputes between the contracted parties did not occur. However, some renegotiations about the structure and division of the financial budget were necessary. These renegotiations were solved in mutual talks between Daimler AG and GTZ. A specific mechanism for conflict resolution was not outlined in the contract (Bela 2008a).

4.8.1.7 OUTCOMES OF THE PROJECT

Concerning project location one in Malawi, the main sub-objectives have been reached:

- A German training expert was hired from within Daimler AG and relocated to Malawi. This expert was in charge of the local training centre.
- A fully equipped, modern vocational training centre on the premises of the local Daimler AG/Mercedes-Benz General Distributor was established. The training centre was designed to be used by all local automotive dealers, i.e. also other dealerships of other brands.
- The German training curriculum for the profession of automotive mechatronics technician was adapted to local needs, implemented, and officially recognised by public authorities in Malawi.
- Local engineers as future trainers were hired and integrated into the training measures.
- A vocational training programme was established and a first training course with 16 apprentices and two local engineers as future trainers started in 2007.

Concerning project location two in Kenya, the project objectives were primarily reached:

- At the existing vocational training centre in Kenya (located at the local partner Dealership “D.T. Dobie”), course content and training equipment was adapted to meet the needs of the new vocational training for automotive mechatronics technicians.
- The standard German training curriculum was adapted to local requirements and officially approved. Thus, in Kenya as well as Malawi, a 2-year training curriculum was established according to German standards.
- An exchange programme for trainers and trainees was conducted with the training centre of Daimler AG in Stuttgart (two weeks in Germany and one week in Kenya).
- The German training expert located at Malawi, regularly visited the training centre in Nairobi.

Concerning the further project objectives, several activities in pursuit of establishing of a network between the private and public parties involved, took place:

- The German Malawi based training expert visited the involved private and public institutions on a regular base.
- International “train the trainer workshops” in order to pass on professional and methodological knowledge were established (two times a two week course in Malawi as well as in Kenya).
- The working focus of the German training expert was gradually shifting towards the networking objective. This was made possible since the vocational training activities in Malawi were gradually taken over by local trainers.

(Bela 2008a, 2008b, Asfaw 2008)

Development implications

Social aspects

The project focused on the establishment of training facilities and succeeded in reaching its most relevant objectives. By establishing vocational training facilities, the project provided prospects for generating future income opportunities for local youth. This outcome can be interpreted as a significant contribution to fostering stable societal structures.

Ecological aspects

Ecological implications of the project outcomes could not be identified. However, the training curriculum for the profession of automotive mechatronics technician contained teaching modulus with basic ecological content (e.g. waste treatment in a garage etc.) (Bela 2008a).

Structural and economic effects

The project mainly focused on the sustainable establishment and extension of training facilities and activities in Malawi and Kenya. Direct employment effects involved the employment of apprentices and trainers (in Malawi: 16 apprentices and 2 local engineers in the first vocational training course, 10 apprentices for the second course. The establishment of physical training facilities (e.g. training class rooms, laboratories) was also achieved.

In Kenya, additional building elements were limited since the project focus was on updating the vocational training curriculum. This training curriculum for the profession of automotive mechatronics technician in Kenya was officially approved. What’s more, the existing training facilities at the local

distributor have been adapted according to the training content of the profession of automotive mechatronics technician (Bela 2008a).

By integrating two local engineers in the project in Malawi, the preconditions for the continued existence of the training courses and facilities in future were set.

The objective of establishing vocational training facilities which could thereafter function self-sufficiently, i.e. without support from a development cooperation donor, was of central importance with regards to the development implications of the project (Asfaw 2008).

4.8.2 CASE ANALYSIS

R 1 Previous experience with the partners involved

GTZ conducted previous cooperation projects outside the PPP framework in the field of vocational training with Daimler AG. In that sense, previous contacts between the respective departments at Daimler AG and GTZ were already in place (Asfaw 2008).

R 2 Coordination of project processing; control and sanction mechanisms; decision-making processes

The operational processing of the project was mainly conducted by the private partner Daimler AG. The involvement of the public partners GTZ and CIM in the operational processing was very limited. An exception was the management of all issues related to the assignment of the German training expert by CIM. That is, the need for organisational consultation between the public and private partner during the project processing was basically limited to coordination and approval of changes in the planned expenses (Bela 2008).

GTZ stressed that overall decision-making processes in the project were conducted in a cooperative (i.e. through consensus) manner between Daimler AG and GTZ (Asfaw 2008).

As usual, the PPP contracts contained clauses for the case of breach of contract by a party. However, additional ordinances for the case of conflicts were not implemented. Serious conflicts did not evolve during the project (Asfaw 2008).

R 3 Number of partners in the PPP

The question of whether more or less partners would have provided the project with any advantages, was regarded as hypothetical by Daimler AG. Nevertheless, Daimler AG expressed concerns that more partners would have had a negative impact on the project due to an increase in coordination requirements. During cooperation projects with other automotive producers in vocational training projects in other (in particular Asian) developing countries, rather negative experiences resulted. Cooperation with one public partner, the GTZ, who had a strong interest in a positive project outcome, was therefore regarded as adequate (Bela 2008a). GTZ shared concerns that a higher number of parties involved would have increased the coordination needs. At the same time, it was in principle regarded as possible to integrate further parties (e.g. other automotive producers) into similar projects (Asfaw 2008).

R 4 Implications of the micro and macro environment of the PPP in the developing country

The choice of Malawi and Kenya as the two project locations was based on the intention of establishing the two training locations as cross-regional training centres. This means that the ideal project idea was to establish a cross-regional vocational training centre in Malawi for southern Africa and a cross-regional vocational training centre in Kenya for eastern Africa (Asfaw 2008).

The choice of Malawi as a location for a training facility was based on two main aspects. First, it represented a (politically, socially etc.) relatively stable environment. Second, due to its geographical location and political stability, Malawi had the potential of serving as a source of highly qualified technicians for other African countries (in particular Angola, Mozambique, Zimbabwe, Zambia). The same intention applied to the choice of Nairobi, Kenya, which was supposed to serve as a local training centre for Ethiopia, Uganda and Tanzania as well (Bela 2008a, 2008b, Asfaw 2008).

Thus, the stability of the macro and micro-environment strongly determined to project design, in particular with regards to the choice of location for the training sites.

Another significant aspect behind the choice of location of the training sites was that in Malawi as well as in Kenya, basic infrastructure for the establishment of training courses was available. This infrastructure was existent since local automotive general distributors and dealerships had already been established and were able and willing to provide support for the training courses (Bela 2008a, 2008b, Asfaw 2008).

Cooperating with existing dealerships to establish and extend training facilities was more promising than “starting from the scratch” (Asfaw 2008).

Daimler AG stated that the local environment in Kenya impeded the project process. Two main impediments for the project progress in Kenya occurred. First, the import of technical training equipment to Kenya was complicated, even partially completely inhibited. Prohibitively high custom quotas prevented the import of equipment. Second, a German training expert was supposed to be sent to Kenya to offer assistance in similar training activities as in Malawi. However, the responsible public institutions refused to issue a work permit for a foreign training expert. These problems could not be solved although the GTZ offered local support e.g. with regards to contact with local authorities. From the point of view of Daimler AG, local public authorities in Kenya are fully accountable for these two failures (Bela 2008a).

GTZ shared the point of view that the obstacles in Kenya were due to the behaviour of local public authorities. In contrast, the cooperation with public authorities (e.g. in regards to custom modalities) in Malawi proved to be uncomplicated. GTZ’s existing contacts in Malawi helped level the path for this seamless cooperation with public authorities (Asfaw 2008).

A mixed picture arose on the question of the availability of a qualified workforce. The availability of suitable candidates for the vocational training courses in Malawi was unproblematic. The programme attracted highly qualified and motivated candidates. However, the assignment of a German expert to build up the training courses and run the project locally attests to the fact that a local expert for this task was not available, hence a suitable expert could not be found. However, two local engineers in Malawi were integrated into the programme in order to get qualified to run the vocational training courses in the future (“train the trainer”). In Kenya, as mentioned above, the plan of sending a

(German) training expert to launch the training courses ultimately failed since public authorities refused to issue a work permit for this foreign expert. Daimler AG expressed concern that in behaving this way, local public authorities wanted to ensure that this position would be filled by a local Kenyan candidate. However, Daimler AG and GTZ assumed that such an expert could not be found in Kenya. As a result, the lack of a specifically skilled workforce in Kenya prevented the establishment of additional vocational training courses as originally planned in the project framework (Bela 2008a).

Both, the private as well as the public partner, conjectured that bribery was an issue for the project in Kenya. Without having concrete information about such issues, it was assumed that payments would have facilitated more favourable treatment by public authorities in Kenya (Bela 2008, Asfaw 2008).

In Malawi, no indication for the existence of issues related to bribery occurred (Bela 2008, Asfaw 2008).

R 5 Quality of resources pooled in the PPP/services delivered in the PPP (match of expectations with actual performance)

Daimler AG, in particular, intended to acquire additional financial resources to establish the project. The vehicle sales volumes, i.e. the turnover and profit generated, in the African regions involved were relatively low. Based on these relatively low business volumes, additional financial resources, in the form of subsidies from the BMZ PPP facility, thus led to the decision to invest in vocational training facilities in this region (Bela 2008b).

Daimler AG critically noted that GTZ hardly participated in the project organisation and processing on the German end at all. The view was expressed that additional input and participation by the GTZ would have benefited the project (Bela 2008b).

At the same time, GTZ stated that the private partner was supposed to take responsibility for the operational processing of the project and that GTZ should only be involved in terms of regular consultations. Yet overall, GTZ was satisfied with the performance and commitment of the private partner (Asfaw 2008).

R 6 Character, motivation and objectives of the partners

The main motivation of Daimler AG for participating in the project was founded in the specific regional situation in Africa. Daimler employees realised that there was a significant lack of know-how with regards to repairing and servicing modern automobiles and commercial vehicles in this region. Modern vehicle technology requires specific know-how, in particular with regards to electronic systems, in order to be properly maintained. Yet service stations with this basic know-how hardly existed in the region. Hence, Daimler AG's goal was to build up the respective know-how by establishing training facilities. In other words, the lack of specialised, skilled workforce was the main motivation of Daimler AG for getting involved in the project. The opportunity to have the project regarded as a CSR measure likewise played a role as a minor motivation for taking up the project (Bela 2008a).

GTZ stressed that no contradiction between the business interests of Daimler AG in the project and the developmental objectives could be observed. The overall project objective was the long-term establishment of two regional vocational training centres for southern (Malawi) and eastern (Kenya) Africa, respectively. GTZ stressed that these objectives were fully in line with the overall objectives of GTZ. Furthermore, GTZ recognised that the choice of location (Malawi and Kenya) was based on the

fact that well equipped local Daimler AG dealerships already existed there. This was regarded as a positive factor for the probability of success of the project.

GTZ saw a further significant benefit in the fact that the role of the vocational trainer was fulfilled by an experienced professional from Daimler AG. In similar vocational training projects in the development cooperation framework, the training content is much more theory-focused than it was the case in this project. The integration of an experienced trainer recruited from staff of the private partner was mentioned as a distinct advantage. A lack of practical orientation of vocational trainers was mentioned as an otherwise significant problem faced by many vocational training courses in Africa (Asfaw 2008).

GTZ added that the project content was consistent with the overall strategic priorities of GTZ for Africa (Asfaw 2008).

R 7 Interest of the partners towards a long-term relationship, extending beyond the end of the PPP

Daimler AG stressed that there were activities planned for establishing vocational training structures based on German standards in other emerging markets and developing countries. However, it remained open whether these activities would be conducted in a PPP framework or by the company alone (Bela 2008a).

Hence, an interest in a long-term relationship on the part of Daimler AG with GTZ and CIM directly based on the project could not be identified. However, since the project team members were aware that there had been several cooperation projects between Daimler AG and GTZ/CIM in the past, it can be assumed, that decision makers at Daimler AG were interested in maintaining a good long-term relationship with GTZ/CIM.

GTZ stressed that it focused first and foremost on the project. The primary objective was the successful completion of the project and the establishment of sustainable structures extending beyond the project timeframe. However, if the project content proved to be successful, it is entirely plausible that similar projects in other regions could be replicated. Overall, PPP projects could have led to strategic alliances, independently of the project content. However, the options for continuing cooperative activities with private partners existed in principle for all PPPs and were not in focus prior to the project (Asfaw 2008).

R 8 Outcomes and effects of the PPP project

The main project goals in Malawi were reached. Namely, physical equipment for vocational training was installed, a German vocational training expert was put to work locally and a course was given to train apprentices and local engineers to themselves be future trainers.

The developmental implication of these outcomes was clearly apparent and was described in detail above.

In Kenya, the groundwork was successfully laid for future vocational training for automotive mechatronics technicians to take place. The development implications of the project in Kenya were visible, although much more limited than in the case of Malawi.

The peripheral development objective of establishing networking activities among the various partners involved in the different countries is hard to evaluate due to limited insights in concrete outcomes.

R 9 Regulations about the distribution of partnership gains

The main output or overall partnership gain of the project was supposed to be well-trained automotive mechatronics technicians. The question about the distribution of partnerships gains thus refers to this readily trained staff. It was clearly arranged from the start that the graduates of the apprenticeships would be further employed by those private institutions which had funded the whole training programme. As mentioned above, several automotive dealerships as well as public technical research institutions shared in covering the costs of the apprentices during the vocational training (Bela 2008a).

The fact that the number of apprentices was not limited by the need of the private partner (Daimler AG) is an important aspect with regards to the development implications of the project. Under this setup, the regional automotive sector as a whole, rather than one company alone, could ultimately profit from the project (Asfaw 2008).

R 10 Resources in focus of the partners

By participating in a PPP, Daimler AG not only intended to acquire additional financial resources for establishing training facilities, but just as well to make use of the know-how and the local network of the GTZ. In particular, the experience of the GTZ in the involved African regions was expected to positively impact the project (Bela 2008a).

The motivation behind integrating local partners (i.e. local dealerships) in the project was with the expectation that these partners could facilitate networking and cooperation with local public authorities. Good contacts with local authorities were regarded as critical factors for the project success. Hence, the private partner Daimler AG would not have established a comparable project without the public contribution by the GTZ in the PPP framework (Bela 2008a).

GTZ stressed that the know-how transfers which could be reached by the participation of a private partner in the project were the main objective to run this kind of project in the PPP framework. Furthermore, GTZ expected positive impact on public awareness about the project which could be achieved by the cooperation with a well-established and well known private company (Asfaw 2008).

R 11 Financial capital

The overall project costs were covered to an extent of 60 % by the private partner, Daimler AG, while 40 % of the overall volume was covered by the public partner. The overall project volume stood at slightly above € 900,000 (Bela 2008a).

R 12 Human capital/knowledge

The project aimed above all at the forming of a skilled workforce in two African countries, most significantly in Malawi. Thus, the project outcomes so far represented a direct contribution to the development of human capital in Malawi as well as Kenya. On top of that, knowledge transfers, in particular through the assignment of a German trainer, constituted a central part of the project.

R 13 Technology

GTZ affirmed that technical training equipment of high quality, above the usual African standard, was transferred to the training facilities in Malawi (Asfaw 2008).

Of course, the equipment is only one part of providing appropriate vocational training. It is the knowledge about the technology which was in focus with the project, rather than the technology itself.

4.9 CROSS-CASE ANALYSIS

Tewes-Gradl et al. (2014) offered some important insight on the learning process attached to PPPs: “learning takes place not only within a development partnership but, even more importantly, across partnership” (Tewes-Gradl et al. 2014: 30). In that vein, the cross-case analysis serves a twofold purpose. First, it should allow the identification of general patterns reflecting back to the inductively summarised research items. The generation of theory can then follow. Second, and more concretely, good practices in the sense of successful or effective mechanisms should be identified.

Table 4.7 summarises the findings from all three projects analysed. The research items identified a priori represent the structure of the cross-case analysis. In that process, a further aggregation of research findings should be reached. Furthermore, the overview allows the identification of recurring findings.

Table 4.7 Overview cross-case analysis

| | Jatropha | Abaca | Vocational Training Centre |
|---|--|---|--|
| R 1 Previous experience with the partners involved | <ul style="list-style-type: none"> • Past collaborative experience by the institutions given • Personal contacts given, and relevant for the project genesis | <ul style="list-style-type: none"> • Past collaborative experience by the institutions given • Personal contacts given, and relevant for the project genesis | <ul style="list-style-type: none"> • Past collaborative experience by the institutions given • Some personal experience/contacts, but not directly relevant for the project genesis |
| Conclusions | In all three cases, previous contact and collaborative work experience by the institutions (in particular between GTZ/DEG and Daimler AG) was given. This fact seemed relevant for the identification of possible project partners in the pre-project phase. | | |
| R 2 Coordination of project processing; control and sanction mechanisms; decision-making processes | <ul style="list-style-type: none"> • Private partner and subcontractors exclusively in charge of organisational processing • No sanction mechanisms | <ul style="list-style-type: none"> • Private partner and subcontractors exclusively in charge of organisational processing • No sanction mechanisms • Critically remarked by private partner that a full and responsible | <ul style="list-style-type: none"> • Private partner exclusively in charge of organisational processing • No sanction mechanisms • Private partner critical about lack of operational participation of public partner |

| | | | |
|--|--|--|--|
| | | integration of further (private) partner(s) in the PPP contract was not possible | |
| Conclusions | <p>In case one (Jatropha) and case two (Abaca), the most relevant part of the project work was conducted by private subcontractors of the formal private partner Daimler AG in the PPP contract. These constellations involved additional coordination needs (including additional manpower etc.) for the private partner. In case two (Abaca), the private partner explicitly complained that it was not possible to integrate further partners as responsible partners into the current PPP contract.</p> <p>In case three (vocational training), the most relevant part of project work was conducted by a designated German expert in Malawi. Apart from the financial contribution, the public partner was involved in the practical project processing to a very limited extent only. The public partner mainly facilitated local contact with public authorities.</p> <p>In all three cases, decision-making was conducted by way of consensus between the public and the private partner. Apart from contractual possibilities for withdrawal in the case of insufficient performance, no specific sanction mechanisms existed. Likewise, no specific (project-) control system was implemented.</p> <p>To sum up, the project processing was basically conducted by the private partner alone, with some exception insofar the public partner provided essential networking with local contacts in the developing countries.</p> <p>Regarding the participation of further (private) subcontractors and/or participating parties in all three cases, the question arose whether it would be possible to integrate more than one private partner formally into the PPP contract.</p> | | |
| R 3 Number of partners in the PPP | <ul style="list-style-type: none"> • Perceived as hypothetical • Negative implications of a higher number of partners expected due to coordination needs | <ul style="list-style-type: none"> • Perceived as hypothetical • Negative implications of a higher number of partners expected due to coordination needs | <ul style="list-style-type: none"> • Perceived as hypothetical • Negative implications of a higher number of partners expected due to coordination needs |
| Conclusions | <p>The question of the implications of a higher number of partners in the project was in all three cases regarded as hypothetical. The actual number of direct and indirect partners and/or subcontractors derived from</p> | | |

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| | <p>the project needs and was basically regarded as suitable for each respective project. Nevertheless, in all three cases, concerns were raised that a higher number of partners would have increased the coordination needs and thereby negatively influenced the project success.</p> | | |
| <p>R 4 Implications of the micro and macro environment of the PPP in the developing country</p> | <ul style="list-style-type: none"> • No major critical aspects • Some non-achievement due to lack of infrastructure | <ul style="list-style-type: none"> • Critical aspects concerning project success • Obstacles partly solved by using good local contacts of local contract partner (LSU) | <ul style="list-style-type: none"> • Malawi: uncritical; distinct local public support • Kenya: critical, no local public support |
| <p>Conclusions</p> | <p>In all three cases, the project partners generally expressed awareness of the somewhat unfavourable local conditions. At the same time, the common view was expressed that a well-developed local network, good contact with local authorities and an overall good knowledge about local conditions was critical to the project success. Except for one project location of project three (vocational training, specifically in Kenya), obstacles for the projects deriving from local conditions existed but were overcome. In all three cases, a local partner played a noticeable role in making local project processing successful. This partner was in part a local subcontractor (case two), a development agency (case three), or both (case one).</p> <p>Hence, specific knowledge about local conditions and/or a local network seems crucial for project success.</p> <p>No open issues concerning corruption existed in any of the three cases.</p> | | |
| <p>R 5 Quality of resources pooled in the PPP/services delivered in the PPP (match of expectations with actual performance)</p> | <ul style="list-style-type: none"> • Private partner: positive rating • Public Partner: positive rating | <ul style="list-style-type: none"> • Private partner: positive rating • Lack of operational participation of the public partner mentioned, but not criticised • Public partner: positive rating | <ul style="list-style-type: none"> • Private partner: positive rating • Lack of operational participation of the public partner criticised • Public partner: positive rating |
| <p>Conclusions</p> | <p>In all three cases, the contribution to the operational project processing by the public partner was low and mainly limited to the project planning phase. While this fact was not necessarily rated negatively by the private partner, the private partner was to some extent a priori unaware of this low</p> | | |

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| | <p>operational contribution by the public partner. In particular in case three (vocational training), the public partner stated that operational project processing by private partner alone was intended by design.</p> <p>Thus, a distinct clarification and division of work a priori the project start would decrease the risk of conflicts arising from diverging perceptions.</p> | | |
| R 6 Character, motivation and objectives of the partners | <ul style="list-style-type: none"> Objectives transparent and complementary Public partner: development objectives Private partner: indirect, long-term business related objectives, PR, CSR | <ul style="list-style-type: none"> Objectives transparent and complementary Public partner: development objectives Private partner: indirect business interests, PR, CSR | <ul style="list-style-type: none"> Objectives transparent and complementary Public partner: development objectives Private partner: concrete business need |
| Conclusions | <p>The formal and actual project objectives and objectives of the partners were clear to the parties involved a priori. These also involved business objectives followed by the private partner as well as potential PR objectives. From the point of view of the public partners, the developmental potential of the projects was obvious. The projects would not have come into being at all if developmental implications had not been visible. The formal project objectives represented the intersection of interests between the public partner and the private partner. In all three cases, a “hidden agenda” could not be identified.</p> <p>Thus, this aspect seemed uncritical to the project success. Furthermore, a direct or indirect business interest was apparent in all cases and seemed, from the point of view of all partners, to pose no contradiction to development objectives.</p> | | |
| R 7 Interest of the partners towards a long-term relationship, extending beyond the end of the PPP | <ul style="list-style-type: none"> Private partners and public partner: no specific a priori interest, but generally positive towards future cooperation | <ul style="list-style-type: none"> Private Partners and Public Partners: no specific a priori interest, but generally positive towards future cooperation | <ul style="list-style-type: none"> Public and Private Partner: no project specific a priori interest, but generally positive towards future cooperation |
| Conclusions | <p>In all three cases, the main focus of the private and the public partner was on the concrete project time frame. Thus, a distinct long-term interest does not seem to be a precondition for a successful cooperation.</p> <p>However, overall goodwill for further cooperation was demonstrated by the</p> | | |

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| | public as well as the private partners. | | |
| R 8 Outcomes and effects of the PPP project | <ul style="list-style-type: none"> • Main project objectives reached • Development implications during project phase to large extent temporary • Groundwork for sustainable structures laid, know-how and technology transfer focused • Prospects for large-scale development implications of the Jatropha plant | <ul style="list-style-type: none"> • Main project objectives reached • Shortcoming in the establishment of a stable value chain • Development implications apparently sustainable | <ul style="list-style-type: none"> • Main project objectives reached, but shortcomings in 2nd project location (Kenya) • Distinct development implications already during project phase • Distinct focus on sustainability, know-how transfer focused |
| Conclusions | <p>The potential to imply positive development outcomes were visible in all three projects. However, in case one (Jatropha) the project focused on scientific groundwork. Direct sustainable development implications were very limited. In case two (Abaca) and case three (vocational training) direct development implications were visible.</p> <p>In all three cases, the sustainability of local development effects was of distinctive focus in the project-planning phase.</p> | | |
| R 9 Regulations about the distribution of partnership gains | <ul style="list-style-type: none"> • Clearly regulated • No source of conflict | <ul style="list-style-type: none"> • Clearly regulated • No source of conflict | <ul style="list-style-type: none"> • Clearly regulated • No source of conflict |
| Conclusions | <p>The distribution of project outcomes and/or gains from the partnership can be rated as uncritical for all three projects. If there was economically exploitable output, a clear regulation about its usage was given.</p> | | |
| R 10 Resources in focus of the partners | <ul style="list-style-type: none"> • Private partner: Primary focus on financial resources, secondary on know-how, in particular about local conditions and local network | <ul style="list-style-type: none"> • Private partner: Primary focus on financial resources, secondary on know-how, local expertise and network • Public partners: Focus on know-how, | <ul style="list-style-type: none"> • Private partner: Primary focus on financial resources, secondary on know-how • Public partners: Focus on know-how, financial resources |

| | | | |
|--------------------------------------|--|---|--|
| | <ul style="list-style-type: none"> Public partners: Focus on know-how, financial resources and contributions in kind, potential public relation effects | financial resources, reputation/potential public relations effects | and contributions in kind |
| Conclusions | <p>In all three cases, the private partner had a distinct focus on the financial resources contributed by the public partners. The know-how and/or network of the public partner were only secondarily targeted. The public partners DEG and GTZ had a distinct focus on the know-how of the private partner (and the subcontractors). This specifically involved the expertise to conduct the organisational processing of the project which was in all three cases conducted almost completely by the private partner alone.</p> <p>Thus, apart from the project-planning phase and limited support during the operational project processing, in particular through local contacts and networks, the public partner mainly provided financial contributions to the project. In at least one case (vocational training), more contributions with regards to content by the public partner would have been favoured by the private partner.</p> | | |
| R 11 Financial capital | <ul style="list-style-type: none"> Limited volume Mainly contributions in kind | <ul style="list-style-type: none"> Limited volume Mainly contributions in kind | <ul style="list-style-type: none"> Limited volume Mainly contributions in kind |
| Conclusions | <p>In all three projects, the direct transfer of financial capital to the developing country was very limited. The overall project volume mostly consisted of contributions in kind. This fact conforms to the intended character of projects funded in the framework of the BMZ PPP facility.</p> <p>Hence, direct financial transfer did not constitute the key to positive developmental implications of the projects.</p> | | |
| R 12 Human capital /knowledge | <ul style="list-style-type: none"> Medium impact Complementary part of project objectives | <ul style="list-style-type: none"> High impact Important part of project objectives | <ul style="list-style-type: none"> High impact Central project objective |
| Conclusions | <p>Case three (vocational training) had a distinct focus on the formation of human capital or knowledge transfer, respectively. Since the main project objectives were reached, a formation of human capital locally in the developing country can be assumed. In case one (Jatropha) and case two (Abaca), local knowledge transfer was part of the project objectives and respective measures were implemented.</p> <p>A distinct focus on knowledge transfer was thus present in all three cases</p> | | |

| | | | |
|---------------------------|---|---|---|
| | and has explicitly been regarded as key part of the intended positive development impact. | | |
| R 13 Technology | <ul style="list-style-type: none"> • Technological research is central project objective • Outcomes mostly positive • Technology was ex post partly available in the developing country | <ul style="list-style-type: none"> • Technology development is a central project objective • Technology was ex post available in the developing country | <ul style="list-style-type: none"> • Transfer given in the framework of training measures (e.g. through equipment) • No distinct focus on technology transfer (but on technological know-how) |
| Conclusions | <p>In case one (Jatropha) and case two (Abaca) technology development and/or transfer was a central project focus. In both cases, core technology was made available locally in the developing country. In case three (vocational training), transfer of modern equipment to the developing countries was given, but only as a means for training measures.</p> <p>Making additional technology locally available represented thus a core target of projects one and two. The transfer of technology was also an integrated part of the vocational training measures in case three.</p> | | |
| Other key findings | <ul style="list-style-type: none"> • Additional subcontractors (University of Hohenheim, CSMCRI) played crucial role | <ul style="list-style-type: none"> • Additional subcontractors (University of Hohenheim, LSU) played crucial role | <ul style="list-style-type: none"> • Additional local private partners (local general distributors) played crucial role |
| Conclusions | <p>Most remarkably, in particular in case one (Jatropha) and case two (Abaca), additional private subcontractors (in both cases research institutions) played a crucial role in the project processing and outcomes. Also in case three, local private partners (local dealerships) represented a precondition for the project processing. Nevertheless, the actual PPP contract was in all three cases conducted between the development agency and one private partner (Daimler AG). Another organisational setting was not possible due to the preconditions of the BMZ PPP facility. The question arises whether projects funded by the BMZ PPP facility would benefit from offering this additional flexibility.</p> | | |

Source: own illustration

4.10 CHAPTER CONCLUSION

In this chapter four, a case study analysis of three separate PPP cases has been conducted. All three cases were carried out in the framework of the BMZ PPP facility (see chapter 3.5.3).

The starting point of the case study analysis was the identification of research items which served as a guideline for the case analyses. These research items were identified by applying the basic ideas of different theories (Game Theory, New Institutional Theory, Resource-Based View) to PPPs. The result were 10 research items. These were complemented by three research items deducted from the theoretical consideration on development economics in chapter two. Data about these research items was gathered by means of expert interviews, guided by a semi-structured interview guideline. Each case was outlined separately, followed by a separate discussion of the research items.

Finally, a cross-case analysis, i.e. a comparative extraction of the main results was conducted. Based on this analysis, the following main findings can be summarised:

All three cases succeeded in implementing the basic ideas of PPPs in development cooperation. A cooperative structure between a public development agency and a private enterprise was created, in which each party was able to pursue its main objectives. In case of the development agencies as the public partners, fostering development in developing countries constituted the primary motivation. In case of the private company, the motivation behind participating in a PPP was first and foremost based on direct or indirect business interests. Direct business interest in this case means direct (long term) support of the own business base. Indirect business interests can be mentioned in the form of public relation effects generated by the projects. Presenting the projects as Corporate Social Responsibility measures was a further motivation of note. In any case, it became apparent that these interests contained no contradiction and led to a win-win situation for both parties.

Analysis of the practical implementation of all three cases nevertheless identified room for improvement. The most important findings are as follows:

All three cases showed a rather complex organisational setting including third parties (the first row parties being the official public and private partner), which proved crucial to the conduct of the projects (e.g. a university or local companies in developing countries). Yet, the actual contractual PPP agreement was however concluded between two parties, the development agency and Daimler AG as the private partner only. The private partner Daimler AG thus took on full responsibility for the project results towards the public partner, although a third party indeed played a crucial role in all three cases. Integrating these third parties into a PPP contract as further fully responsible contractual partners was not possible due to formal preconditions. This can be interpreted as a shortcoming. The practical needs of the projects clearly made the involvement of a third party in all three cases necessary. Integrating these third parties as responsible partners in the projects would have been a potentially desirable step. It became clear that the local project environment can significantly determine the probability of project success. It seemed crucially important that at least one partner in a PPP obtained detailed knowledge about local conditions and/or good (public) local contacts. Without this a priori knowledge of at least one party, the feasibility of the projects would have been lower. Against this background, the development agencies could contribute with their specific expertise, in particular.

At the same time, the contribution of the development agencies during the project implementation was rather low. The development agencies mainly contributed to the projects during the project-planning phases. In at least in two cases, the private partner was unaware of this fact beforehand. It seems highly recommended that the parties clearly state their perceived and intended role during all project phases from the beginning. In that process, misperceptions and sources of conflict could be avoided. Another factor which should be determined prior to commencement of the project is the outline of all formal requirements (e.g. concerning project reporting or processing invoices). The private partner was not been aware in detail of all requirements beforehand.

The practical working relationship between the public and the private partner was generally characterised by goodwill. A decision-making by way of consensus was applied in all three cases and critical decisions could indeed be taken by mutual agreement.

The most critical factor for evaluating the success of a PPP project is its local effects for development, both in the short-term and long-term. In this regard, positive development implications in all three cases were apparent. These positive implications for development of the target country mainly derived from the transfer of knowledge and/or the transfer of technology. In contrast, the transfer of financial means was too low to significantly contribute to local development alone. In addition, the contributions of the private partner to the project mainly consisted of contribution in kind (including manpower) instead of direct financial means. In the cases analysed, development implications derived from agricultural scientific groundwork (*Jatropha*), research on the generation and processing of agricultural primary products (*Abaca*), as well as the establishment of vocational training courses (vocational training). In all three cases, a distinctive focus lied in creating sustainable local structures, which succeeded at least in case two and three. Furthermore, in all three cases, a distinct focus was set on integrating local workers as recipients of knowledge.

The focus on the factors human capital and/or knowledge as well as technology in the projects analysed has to be rated positively taking into account the role of these factors for development processes as outlined in chapter two.

At the same time, the role of FDI for developing countries was discussed in chapter two. It is a main overall objective of PPPs in development cooperation to attract FDI for developing countries.

The projects analysed illustrate that rather than the quantitative value of a FDI inflow to a developing country, it is the quality of FDI which determines the development implications of the resource flows. In case of the PPP projects analysed, the quantitative project volume was rather low. However, the potential or actual development implications are considerable. It seems reasonable to argue that a focus on human capital and/or technology seems to be a way of generating relatively high development implications with relatively low financial means.

In any case, these findings are generalisable only to a very limited extent. The case analysis showed that the character and objectives of an organisational setting of each PPP is unique and each PPP takes place in a distinct local environment with unique characteristics.

In a next step, the generalisability of some key perceptions about PPPs as well as the some of the key finding will be tested on a broader empirical basis by applying a survey in the subsequent chapter.

The following table 4.8 summarises once again the key characteristics of the analysed cases:

Table 4.8 Overview of case characteristics

| | Project Abaca | Project Jatropha | Project Vocational Training Centre |
|---|--|---|---|
| Project data | | | |
| Years | 2003-2007 | 2003-2008 | 2005-2009 |
| Geographic area | India | Philippines | Malawi and Kenya |
| Primary beneficiaries | <ul style="list-style-type: none"> • Local farmers • German and Indian universities | <ul style="list-style-type: none"> • Local farmers • German and Indian universities | <ul style="list-style-type: none"> • Local youth (potential apprentices) • Local business |
| Methodological approach | | | |
| Pre-project data available? (baseline) | <ul style="list-style-type: none"> • Generally no, apart from descriptive outline of initial situation gathered in interviews | | |
| Data collection methods | <ul style="list-style-type: none"> • Interviews • Project documentation • Secondary data (press coverage etc.) | | |
| Analysis approach | <ul style="list-style-type: none"> • Reconstruction of intervention logic • Qualitative reasoning referring to research items identified in theory | | |
| Outline of the impact chain | | | |
| Inputs | <ul style="list-style-type: none"> • Financial funding of PPP • Know-how of involved universities and company | <ul style="list-style-type: none"> • Financial funding of PPP • Know-how of involved universities and company | <ul style="list-style-type: none"> • Financial funding of PPP • Know-how about vocational training • Qualified trainer |
| Activities | <ul style="list-style-type: none"> • Research work in Germany and India • Cultivation of plant on several sites in India | <ul style="list-style-type: none"> • Research work on the Philippines • Cultivation of plants • Training • Production of composite fibres | <ul style="list-style-type: none"> • Set up training centre in Malawi • Further develop training centre in Kenya • Set up curriculum • Send trainer |

| | | | |
|--|--|---|---|
| <p>Outputs/ intermediate results</p> | <ul style="list-style-type: none"> • Jatropha plantations • Limited amount of Jatropha-based biofuel • Scientific know-how about Jatropha cultivation | <ul style="list-style-type: none"> • Abaca plantations • Abaca composite fibres • Scientific know-how about the plantation of Abaca, extraction of fibres from the plant, processing of the fibres. • Trained local farmers | <ul style="list-style-type: none"> • Training centres established/further developed • Recognised training curriculum • Conducted trainings • Networking events |
| <p>Outcomes/ specific objectives</p> | <ul style="list-style-type: none"> • Proof of concept of the biofuel production process from Jatropha and identification of most suitable plant • Proof of concept of the cultivation options of the plant • Income/employment for local farmers on cultivation site during project runtime | <ul style="list-style-type: none"> • Sustainable ways of cultivating Abaca plants • Further developed technology to produce Abaca fibres • Know-how gain about fibre production and processing by local farmers | <ul style="list-style-type: none"> • Provide apprentices with job opportunities • Increase (technical) capabilities of local service stations • Know-how transfer |
| <p>Impact/ overall objectives</p> <p>Out of scope of case analysis due to no/limited assessment options</p> | <ul style="list-style-type: none"> • Promotion of applicability of Jatropha for biofuel production • Proof that decentral Jatropha plantations can serve as source of income for local farmers also from eroded soils | <ul style="list-style-type: none"> • Generate new sources of income for Abaca producing countries • Positive ecological effects of the application of natural fibres in vehicle production | <ul style="list-style-type: none"> • Generate income in target countries • Establish lighthouse vocational training course • Spillover of technical know-how amongst involved companies and across countries |

Source: own illustration, partly based on Office of the Special Evaluator (2013): 43-45

5 SURVEY

5.1 INTRODUCTION AND CHAPTER PURPOSE

In this chapter, the research questions of this thesis are approached by analysing data gathered through a survey. The questionnaire was distributed to private companies who participated in a PPP project in the framework of the BMZ PPP facility (see chapter 3.5.3).

Since a comparable study, in particular with regards to the level of detail, could not be found, the questionnaire is mainly explorative in nature. It approaches the research questions from various angles and therein allows for the generation of new insights. The survey was designed to analyse possible interrelationships between variables identified beforehand primarily through literature review in chapter 4.2 and 4.3. A better understanding of the role of these variables should be the result.

Finally, data from the survey is put in relation to the main findings from the case studies in chapter 4. In so doing, the validity of the main findings from the case study analysis is the objective.

Apart from case studies, the availability of primary data from companies participating in development cooperation PPPs is limited. No comparable study could be found in secondary literature. Hence, the survey represents a contribution to the research field.

To sum up, the questionnaire represents a second empirical analysis in addition to the case study analyses in chapter 4. Both empirical analyses contribute to answering the research questions.

5.2 RESEARCH METHODOLOGY

5.2.1 QUESTIONNAIRE DESIGN

First of all, the content of the questionnaire has explorative character. The questionnaire contains open as well as closed questions covering general aspects of the research subject.

Second, various independent and dependant variables and possible interrelationships between those variables were identified. The indicators derived from reviewing secondary literature (see chapter 4.2 and 4.3). The variables were incorporated into the questionnaire.

Research variables and their possible relationships are summarised in table 5.1. An “x” indicates an a priori suspected relationship. These relationships have been tested applying the methods outlined below where applicable. The test results are incorporated in chapter 5.3 as well as in a summary in annex 7.1.1.

Table 5.1 Independent and dependent variables

| Dependent variables | Independent variables | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | PPP experience | | | | | | | | | |
| | Experience with implementing organisation | | | | | | | | | |
| | Company size | | | | | | | | | |
| | Commercial activity abroad | | | | | | | | | |
| | Commercial activity in developing country | | | | | | | | | |
| | Experience in project developing country | | | | | | | | | |
| | Project environment infrastructure | | | | | | | | | |
| | Project environment institutions | | | | | | | | | |
| | Importance of CSR in company | | | | | | | | | |
| CSR competence in company | | | | | | | | | | |
| Satisfaction with implementing org. | | x | | | | | | x | x | |
| Private financial project contribution | | | x | | x | | | | | x |
| Deviation from budget | x | x | | | | | | x | x | |
| Deviation from schedule | x | x | | | | | | x | x | |
| Sustainability of project results | x | | x | | | | x | x | x | |
| Overall project success | x | x | x | x | x | x | x | x | x | x |
| Volume of PPP experience | | | x | | x | | | | | x |
| Commercial activity in developing country | | | | | | | | | | x |
| Willingness to get involved in development policy | | | | | x | | | | | x |

Source: own illustration

The questionnaire contains an operationalisation of selected research items identified as relevant for the analysis of PPPs from the various theoretical approaches (see chapter 4). This replication constitutes a basis from which to test the validity of some of the findings from the case study analysis.

However, the analysis of PPP experience by the means of a questionnaire cannot be nearly as detailed as in the framework of a case study analysis. In order to keep the questionnaire as brief as possible, a focus has been set on several main items. The questionnaire contains open, half-open, and closed questions. When formulating the questions, attempts were made to follow certain ground rules of question formulation in surveys such as short and concrete formulations or avoiding leading questions (Atteslander 2006: 146, Mayer 2004: 89-93). A five-item Likert type scale⁶¹ was applied for several research items. The overall structure follows a logical structure that should facilitate respondents' answers. The topics included:

- General information on the company
- Experience from the PPP project
- Opinion on the relationship between the private sector and development policy
- Corporate social responsibility

⁶¹ For further information on likert type scales see e.g. Atteslander 2006: 222-223.

5.2.2 RESEARCH DESIGN AND STEPS

The survey was conducted via an internet-based system. Applying an internet-based survey has particular advantages with regards to the direct availability of survey results without the risk of mistakes when collecting the results of manual questionnaires into an electronic system. In addition, web-based surveys are time- and cost-efficient. At the same time, they do not substantially differ from paper-based surveys and therefore require the same formal requirements when it comes to a consistent questionnaire design (Weber and Brake 2005: 65, 70).

The target group of the survey were companies who had already participated in a PPP in the framework of the BMZ PPP facility. The companies were identified and approached with the support of the PPP office of the German development agency GTZ. The GTZ PPP office forwarded a link to the online questionnaire to contacts in 250 companies who participated in PPPs, primarily with the German GTZ as a public partner, from 2003 onwards. The companies approached in this way were supposed to enter a webpage and fill out the survey completely online.⁶² This way of identifying and contacting companies with PPP experience was necessary due to data privacy. Disclosure of data from the participating companies was not necessary since companies were able to fill out the online questionnaire anonymously. The quality of data should not be influenced negatively as a result. The possibility of filling out the questionnaire online was designed to increase the answer rate and speed up the survey process. Due to data privacy, a full list of private PPP partners was not disclosed by the development agencies.

Two rounds of pre-tests were conducted before sending out the email. A pre-test is essential for double-checking the comprehensibility, unambiguousness and completeness of questions as well as the duration of answering the questionnaire (Mayer 2004: 97). In the first round, the link to the online questionnaire was forwarded to four test persons (doctoral candidates) in order to check for the aforementioned aspects. In a second round, the online questionnaire was sent to the GTZ-PPP office for the same purpose.

Finally, the link integrated in a cover letter was sent out by email to 250 companies from the GTZ Database in March 2009. A reminder email was sent out 2 weeks after the initial email in order to increase the number of responses. The response rate was about 15 %, or 37 answered questionnaires. All statistical analyses were conducted using "PASW Statistics 18" (Version 18.0.0).

5.2.3 STATISTICAL METHODS

Due to the explorative character of the survey, a descriptive outline of the results follows in the subsequent chapter. In that process, (graphical) univariate frequency distributions of all variables are outlined.

⁶² The provider of the system was "2ask", see <http://www.2ask.de>.

In table 5.1 independent and dependent variables identified in secondary literature, case analyses as well as interviews were summarised. In order to clarify the influence and relationships between the variables, suspected relationships were tested with suitable methods. The methods briefly outlined below were applied. For all tests, a significance level of 5 % applied.

Chi-square test / Fisher exact test

The Chi-square (χ^2)-test for contingency (or contingency Chi-square or Chi-square test for independence) is an appropriate means for testing the relationships of variables in cross tabulations (Sirkin 2006: 398). Generally, cross tabulations allow the outline of relationships between two or more categorical variables. The number of n rows and m columns of a cross tabulation is determined by the number of values of each single variable. Each cell thus stands for a distinct combination of values.

The formula to calculate the χ^2 value for a cross tabulation with n rows and m columns is:

$$\chi^2 = \sum_{i=1}^n \sum_{j=1}^m \frac{(n_{ij} - \hat{n}_{ij})^2}{\hat{n}_{ij}}$$

Hence, n_{ij} is the observed frequency in cell in row i , column j . \hat{n}_{ij} is the expected frequency (Brosius 2006: 418). In other words, for each cell of the cross tabulation, the squared deviation of the expected frequency from the observed frequency is divided by the expected frequency. The χ^2 value is the sum of these values from all cells of the cross tabulation. Thus, a high χ^2 value stands for high deviation of observed values from the expected values. It might therefore indicate a relationship between the variables.

Furthermore, the degree of freedom is based on the number of rows and columns: degree of freedom = (number of rows – 1) x (number of columns – 1).

With the χ^2 value and the degrees of freedom, it is possible to determine the probability with which the existing difference between expected and observed frequencies could occur if there were no relationship between the variables in the sample (Brosius 2006: 418-419).

As for the other types of statistical tests applied in this thesis, the level of significance is 5 %, Thus, p-values of less than $p = 0.05$ are regarded as significant.

Generally, tests for statistical significance are used to test for a null hypothesis. If the null hypothesis applies, it is assumed that there is no systematic relationship between the two variables:

H_0 There is no significant relationship between the two variables

H_1 There is a significant relationship between the two variables

Thus, p-values below 0.05 indicate that the null hypotheses can be rejected and a relationship on a significant level between the variables exists.

It has to be stressed that a significant relationship identified via a Chi-square test says nothing about causality. It only indicates that certain values of one variable tend to occur with certain values of the other variable. Theoretical considerations about causal relationships have to be done beforehand. The Chi-square test can then confirm or reject the compatibility of this hypothesis with empirical observations. The Chi-square test is particularly suitable for testing variables on a nominal scale. For variables of a higher scale level, more suitable test are available (Brosius 2006: 420-421).

The Chi-square test is a frequently applied test for conducting a contingency analysis, i.e. to test for systematic relationships between two variables. This test procedure is popular since it allows testing for a relationship between variables at different scale levels in one analysis (since variables on a higher scale level can always be transformed on a nominal scale level) (Backhaus et al. 2006: 231). The Chi-square test is tied to certain preconditions. The Chi-Square test is only applicable if there is no expected frequency of less than 5, i.e. no cell of a cross tabulation has a value less than 5. In some literature it is stated that less than 20% of the cells of a cross tabulation should have expected values below 5. Moreover, there may not be a single expected value smaller than 1 (Brosius 2006: 421). If the sample size is too small, the Fisher exact test is applied instead of a Chi-square test. In contrast to a Chi-square test, which is also applicable to variables with more than 2 dimensions, the Fisher exact test is usually only applicable to 2x2 tables (Hartung 2005: 416).

Nevertheless, PASW Statistics 18 offers the opportunity to calculate exact p-values for larger cross tabulations, which applies to several analyses in this chapter.

For small sample sizes, the Fisher exact test usually gives more reliable results (Brosius 2006: 424). A Chi-square respectively Fisher exact test indicates only if there is a relationship between variables. It gives no information about the strength of the relationship. Hence, after testing for a relationship using a Chi-square test or a Fisher exact test, a test for the strength of the relationship has to follow. Which test is suitable amongst others depends on the scale of measure.⁶³ In addition, Chi-square and the Fisher exact test are only applicable for independent data samples. Finally, the application of the two-sided version of the Fisher exact test is applied. The one-sided version would only be applicable if a theoretically deduced reason for a one-sided relationship could be stated.

Mann-Whitney U-test

The Mann-Whitney U-test is a non-parametrical test which allows comparing 2 independent samples on an ordinal scale concerning their central tendency. In that process, no assumption about the distribution of the dependent variable has to be made. The test compares the empirical rank order with the best possible rank order (Brosius 2006: 833).

For all Mann-Whitney U-tests applies:

H_0 The two samples do not differ in their central tendency

H_1 The two samples do differ significantly in their central tendency

As stated above, a significance level of 5 % ($p = 0.05$) applies. The p-value indicates the probability of untruly rejecting the null hypothesis. If the resulting p-value is lower than 0.05 (for a two-sided test), H_0 is thus rejected at a sufficiently high level of significance (Eckstein 2008: 120-121).

Spearman rank correlation

By the Spearman rank correlation test, a correlation between two variables on ordinal scales that are rank ordered can be measured. The result is the value of Spearman's *roh* (r), which indicates the relationship between the two variables which express rank orders. This type of test is only useful if both variables are rank-ordered (Weisberg, Krosnick and Bowen 1996: 270-271).

⁶³ See Brosius 2006: 427 for an overview of various possible tests.

The calculation of Spearman's *rho* is similar to the calculation of Pearson's correlation coefficient, only that it is applicable to rank ordered variables (Brosius 2006: 521).

The formula for calculating Spearman's *rho* (r) in an already shortened version is:

$$r_s = 1 - \frac{6 \sum (R_i^x - R_i^y)^2}{n(n^2 - 1)}$$

The values of variables (x_i, y_i) have been transformed to pairs of rankorders R_i^x, R_i^y . This formula is only valid if all values of variables (x_i, y_i) are distinct, i.e. no ties occur (Meißner 2004: 174).

The result is a figure between -1 (perfect negative correlation) and +1 (perfect positive correlation). Thus, the Spearman rank correlation is a non-parametric test that can be used to measure the degree of association between two variables (Brosius 2006: 523-524).

No assumption about the distribution of variables has to be given, as opposed to Pearson's correlation, for example, where the variables are assumed to be normally distributed.

5.3 SURVEY RESULTS

In the following subchapter, an outline of survey results is given in the following structure:

- General aspects
- Experience with the PPP project(s)
- CSR and other aspects

As stated above, an outline of the univariate frequency distributions is the basis from which to extract information according to the explorative objective of the survey. Interpretation of the content follows. What's more, results from bivariate tests according to table 5.1 (independent and dependent variables) are outlined and interpretations of the test results given.

5.3.1 GENERAL ASPECTS

23 (62.2 %) of the responding companies were limited companies, while 6 (16.2 %) were stock corporations. 8 (21.6 %) were registered under another legal form: partnership under the German civil code (GbR), ordinary partnership (oHG), European company (SE), sole proprietorship as well as one non-profit organisation registered as e.V. (registered association).

The number of employees and turnover in 2007 illustrates that companies of various sizes were surveyed. For further analyses, companies were grouped into three categories: micro and small enterprises (1-49 employees), medium-sized companies (50-249 employees) as well as large enterprises (250 and more employees).

A possible relationship between company size and several variables was tested by calculating the Spearman rank correlation coefficient. Yet, no significant correlation between company size and the

volume of private financial contribution, the sustainability of project results, the overall project success as well as the volume of PPP experience per company could be detected.

The absence of a significant correlation between these variables might be due foremost to the small sample size. Furthermore, it might illustrate that the framework conditions of the BMZ PPP facility (maximum subsidy share, time frame etc.) generally end up to a comparable financial project volume for companies regardless of their size. Comparable project framework conditions might end up in no significant differences in the perceived project success.

The sector of the responding companies' varied as outlined in Figure 5.3. 2 companies (5.4 %) did not further specify their sector.

Figure 5.1 Legal form of the company (%)

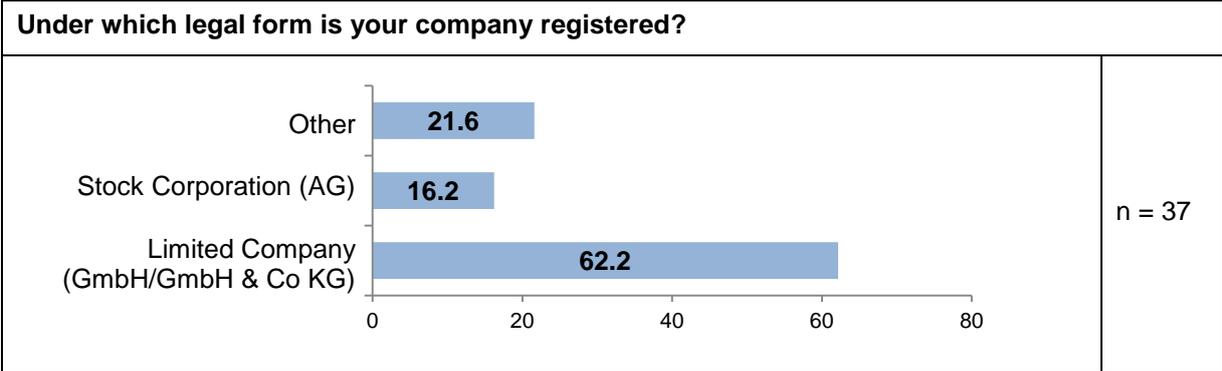


Figure 5.2 Employees 2007 (%)

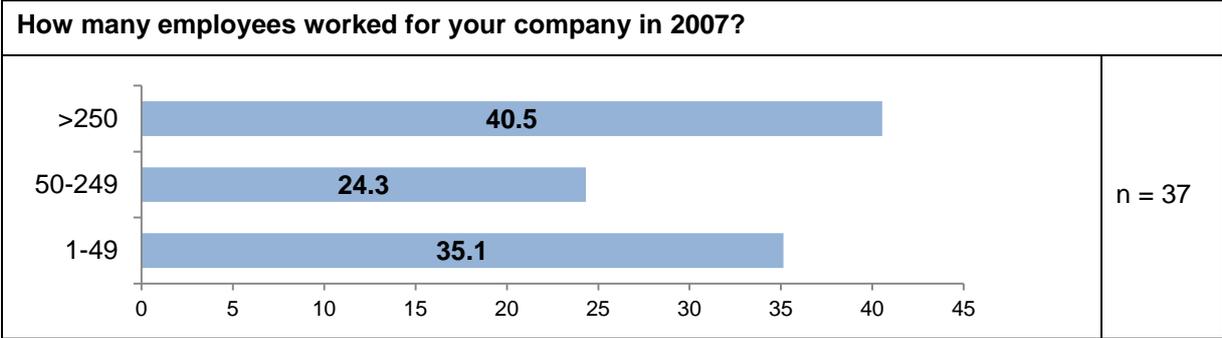
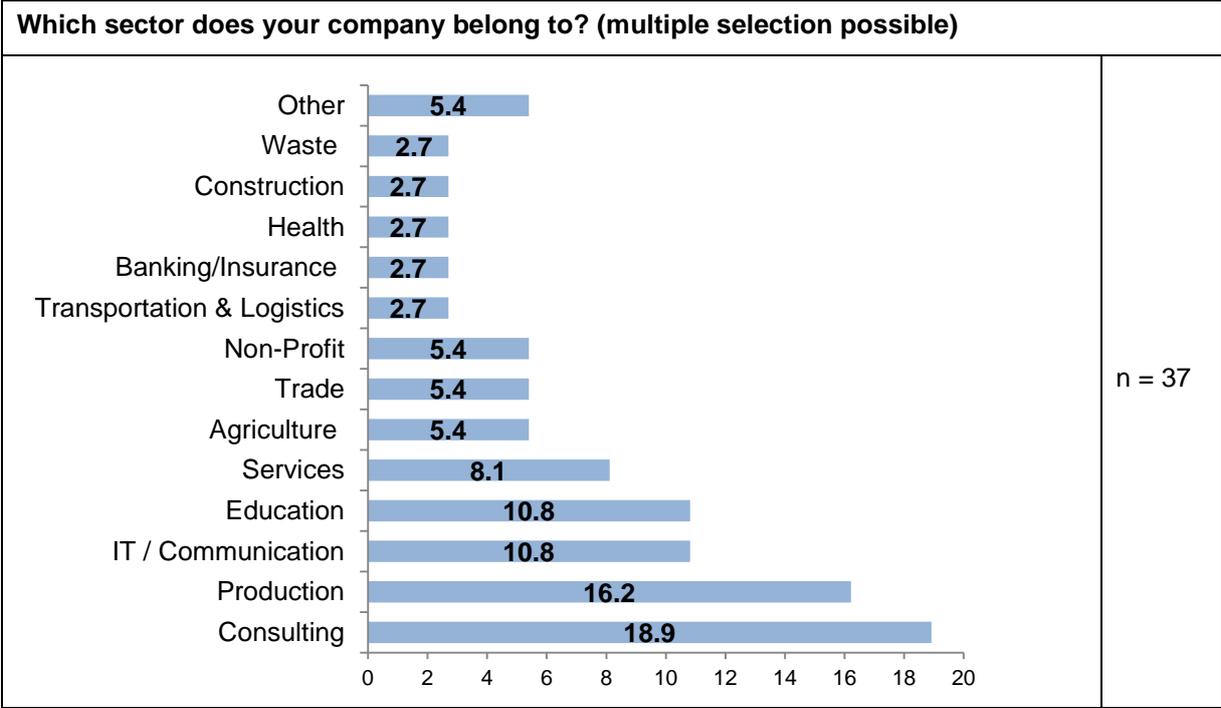


Figure 5.3 Companies' sectors (%)



Companies were asked about their commercial activities outside their home countries as well as specifically in developing countries. The existence of subsidiaries abroad and/or in developing countries was considered the most relevant indicator in this context. While 27 (73.0 %) of the responding companies had subsidiaries abroad, 16 (43.2 %) had subsidiaries in developing countries. It was tested (Mann-Whitney U-test) whether companies with and without subsidiaries abroad differ significantly concerning their evaluation of the overall project success. A significant difference concerning this relation could not be found.

Furthermore, it was tested (Mann-Whitney U-test) whether companies with and without subsidiaries in developing countries differ significantly concerning 1) their evaluation of the overall project success, 2) the volume of their private financial project contribution to the project, and 3) their PPP experience as well as their willingness to get involved in development policy.

In that process, a significant relationship between the commercial activity in developing countries (i.e. companies having subsidiaries in developing countries) and the evaluation of overall project success was found. Respondents from companies with subsidiaries in developing countries stated a significantly higher overall evaluation of project success (Mann-Whitney U-test: $r = 0.01$ with $\alpha = 0.05$). A mean rank of companies with subsidiaries of 25.00 as opposed to a mean rank of companies without subsidiaries of 14.43 illustrates the higher evaluation of project success by companies with subsidiaries in developing countries.

Finally, no significant relationship between companies' commercial activity in developing countries and the general willingness to get involved in development policy measures (both content-wise and financially) could be found.

Figure 5.4 Commercial activities abroad (%)

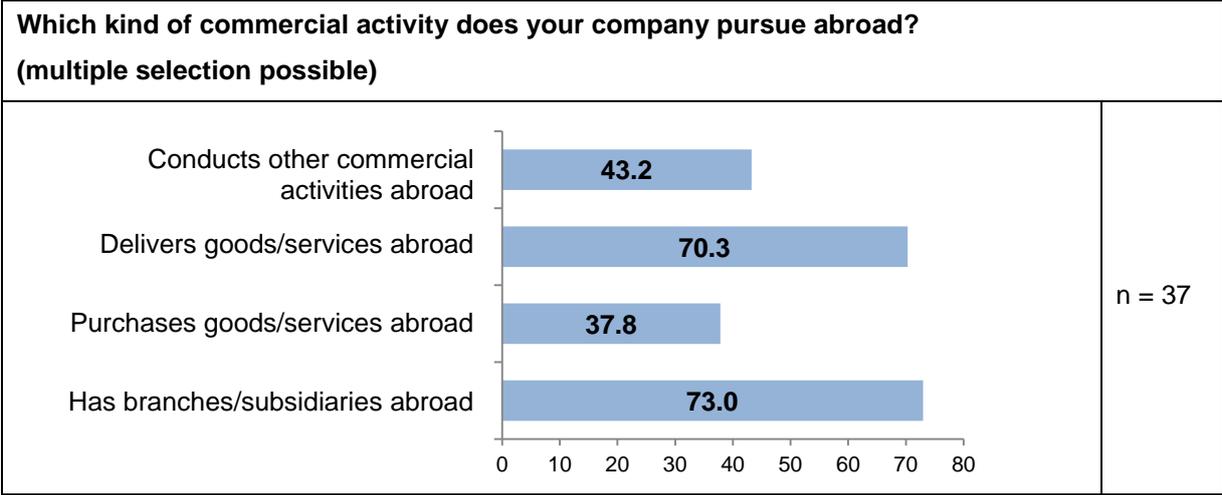
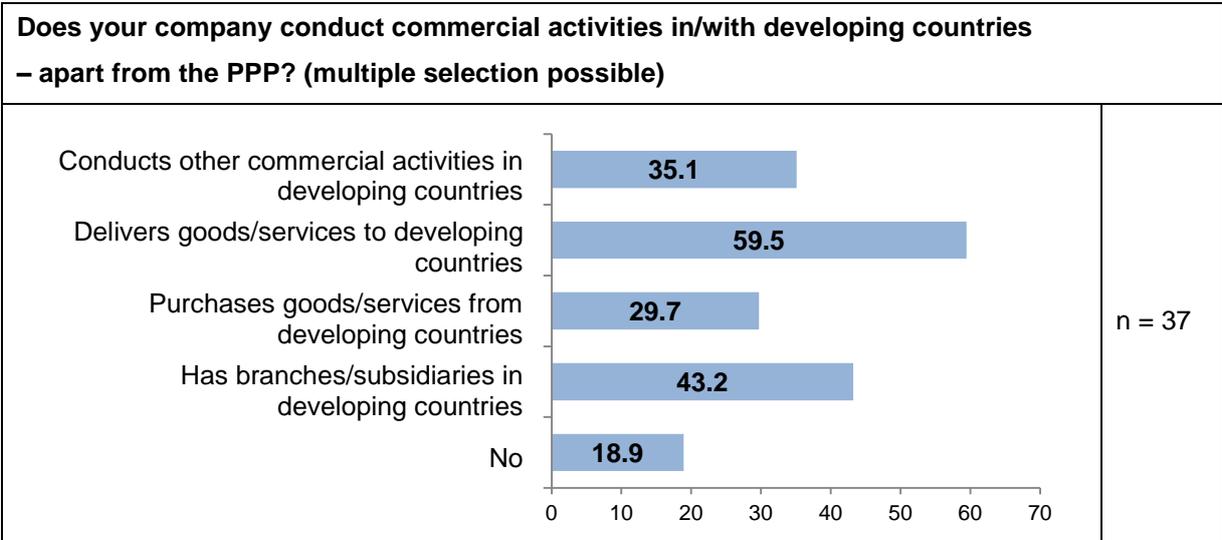


Figure 5.5 Commercial activities of the company in developing countries (%)

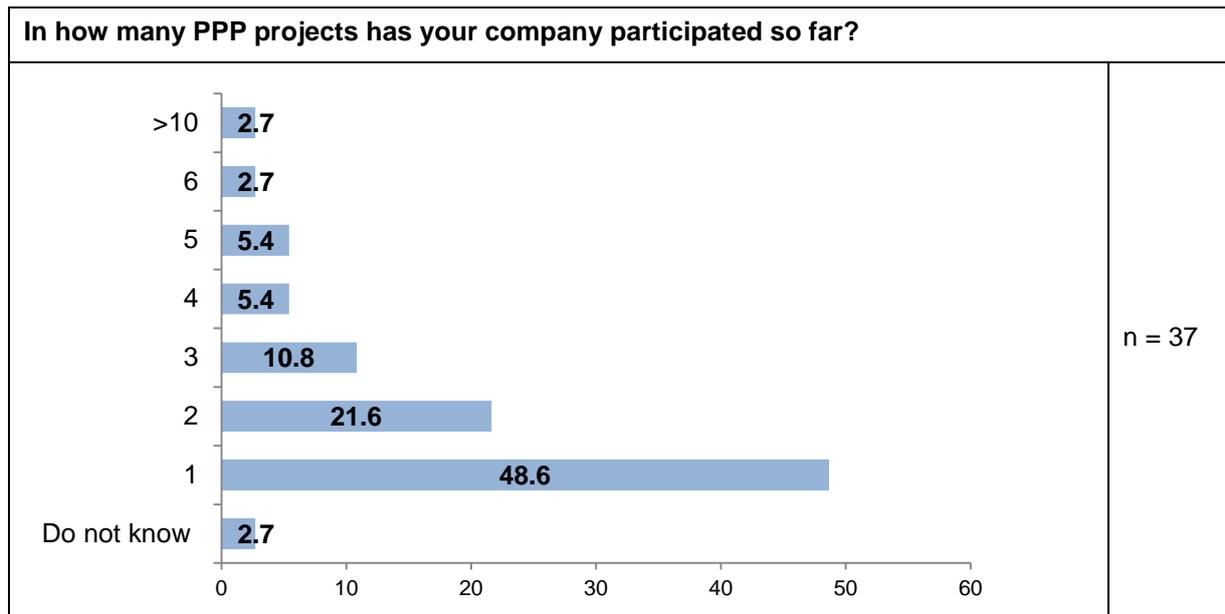


18 (48.6 %) of the responding companies so far participated in one PPP project only.

A possible relationship of the variable PPP experience with deviation (i.e. exceeding) from project budget, deviation (i.e. exceeding) from project schedule, the sustainability of project results, and finally, the overall project success was tested. No significant correlations or relationships could be found.

One reason for the absence of statistically significant differences concerning the mentioned variables might be the high concentration of respondents in one group (experience with one PPP only).

Figure 5.6 Number of PPP projects per company up till now (%)



5.3.2 EXPERIENCE WITH THE PPP PROJECT

After a detailed picture of the characteristics of the responding companies in the last subchapter, the following subchapter outlines the experiences which the responding companies made while participating in a PPP project.

First, the general character of the project and the respective company participation is outlined. Second, the motivation for the project participation is outlined. This is followed by results concerning the project processing and finally project content and outcomes.

5.3.2.1 PROJECT CHARACTER

In 34 (91.9 %) of the projects, the public project partner was the GTZ. In only one project Sequa (2.7 %) and two the DEG (5.4 %) played the role of the public partner. Since the survey was sent to companies in the GTZ database, this result was expected. The sample mean of the project runtime was 2.68 years and the median 3 years.

Figure 5.7 Public project partner/implementing organisation (%)

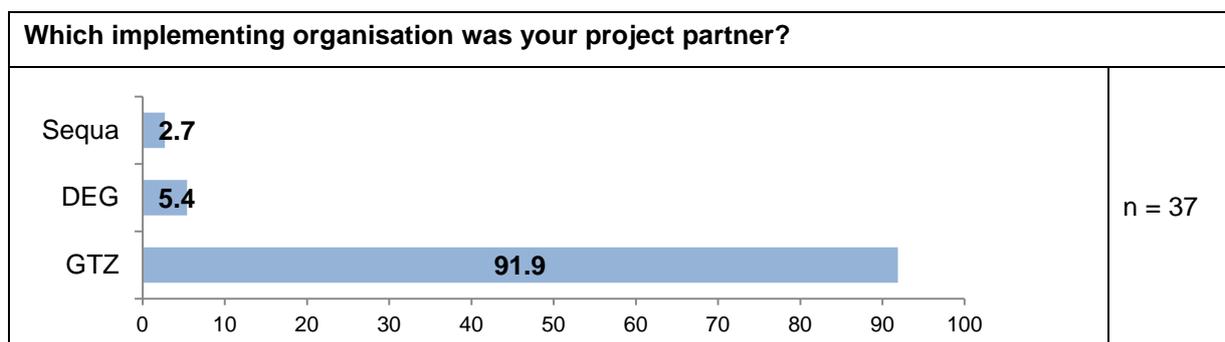
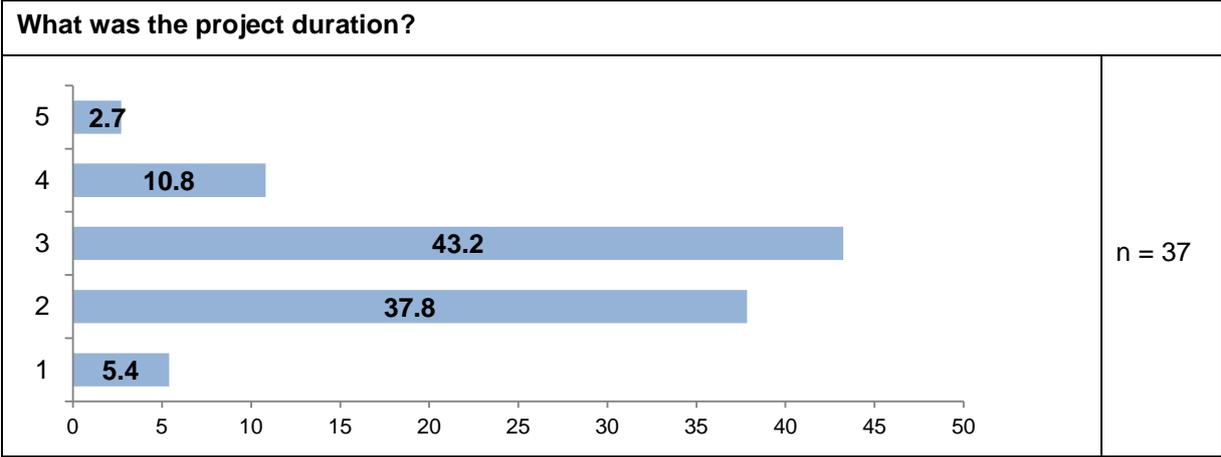


Figure 5.8 Runtime per project (years; %)



Asked for prior working experience with the public partner, i.e. the implementing organisation, 14 (40.5 %) respondents confirmed this question.

As outlined in table 5.1 (independent and dependent variables), it was tested whether a relationship between prior experience with the implementing organisation and the satisfaction of companies with the implementing organisation, a possible deviation from the project schedule, a possible deviation from project budget as well as the evaluation of the overall project success, exists. As a result, no significant relationship could be found.

Prior working relationships between the respective company and the implementing organisation had no significant effect on project outcomes, the quality of project processing or the overall evaluation of the organisation’s performance from the perspective of the company.

It was further of interest, whether prior commercial activities of companies in the project developing country existed. 28 respondents (75.7 %) confirmed this question.

This result directly illustrates that the choice of the project location for about 3 out of 4 companies had a direct relationship with commercial activity. Further, it illustrates that in the case of 9 (24.3 %) companies, the PPP project was the first commercial step in the respective developing country.

An assumed relationship between prior commercial experience in the project developing country and the evaluation of the sustainability of project results (i.e. if the project is continued on a smaller, the same or a larger scale after the end of the public subsidy), along with the evaluation of the overall project success was tested. As a result, no significant influence of prior experience in the project developing country on the mentioned variables was identified.

Hence, prior working experience among partners has no significant implications on overall project success.

Figure 5.9 Companies' experience with the implementing organisation prior to the PPP (%)

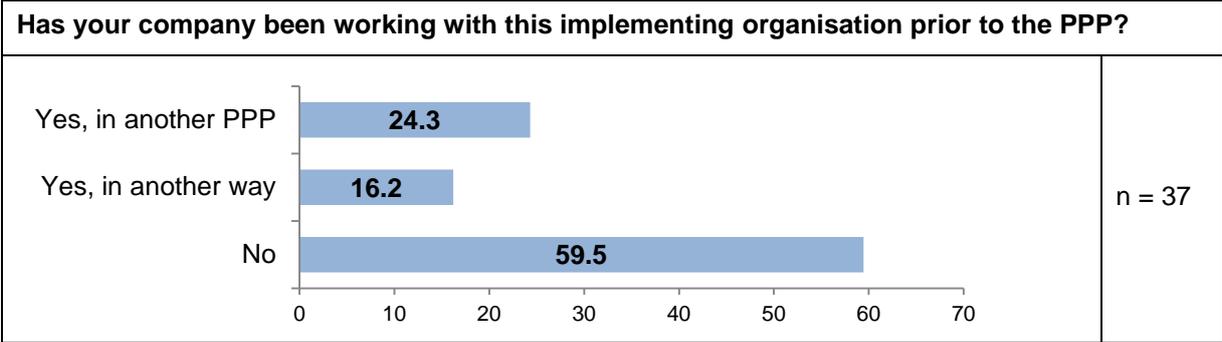
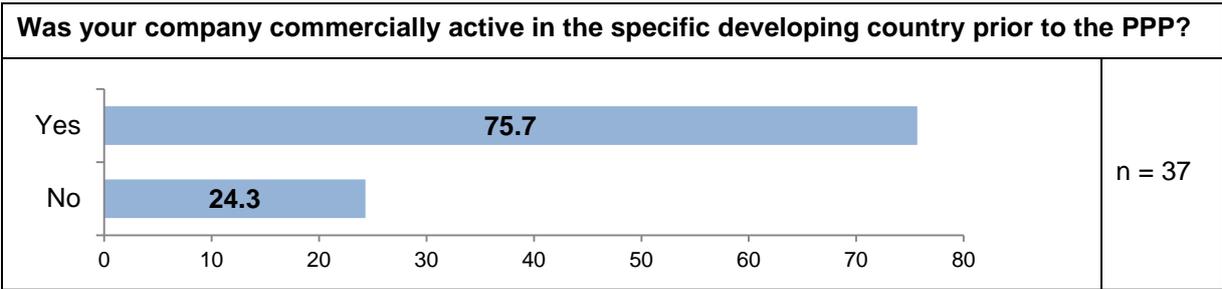


Figure 5.10 Commercial activities of companies in the specific developing country prior to the PPP (%)



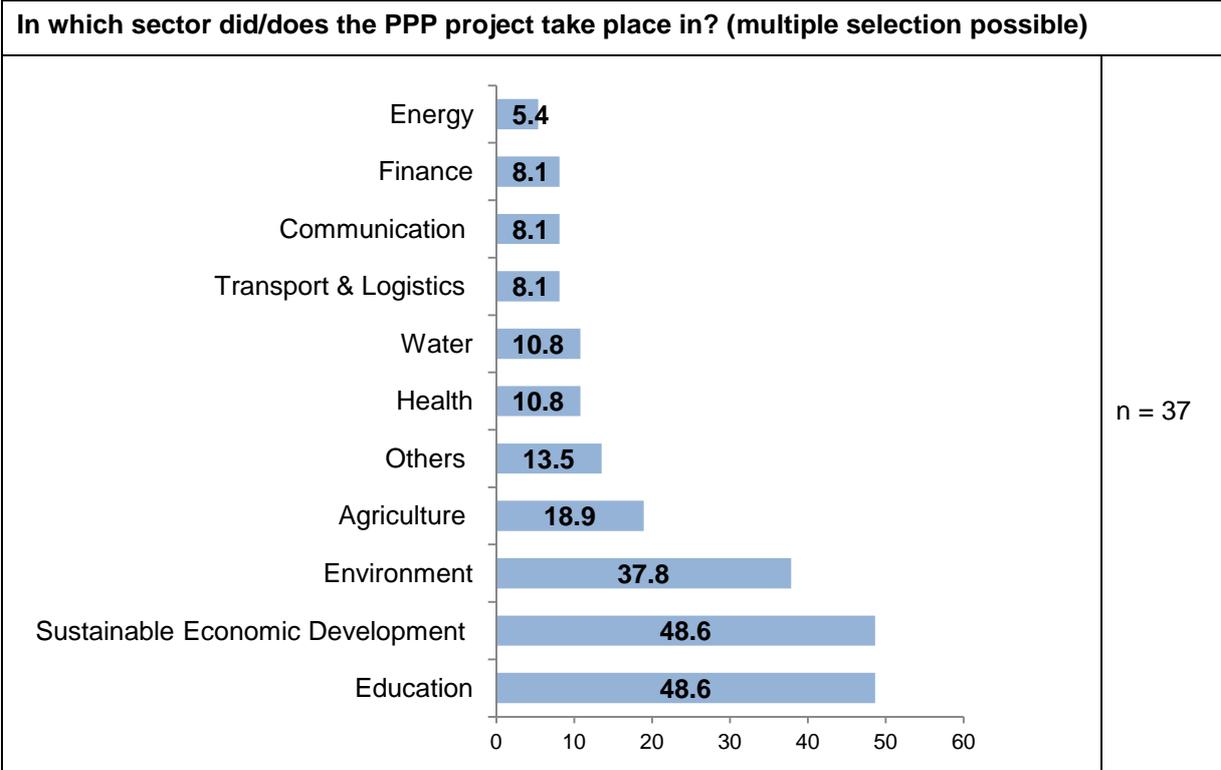
Companies were asked to name the sector in which the project took place, multiple selection i.e. classification of a project in more than one sector, was possible.

The identification of “a typical” sector for a PPP is of course not comprehensively possible based on this data. However, Education and the very general categories Environment and Sustainable Economic Development were named most frequently.

In an additional question, respondents were asked in an open question to name sectors which, from their point of view, are most suitable for the type of PPP examined in this survey. Among the 20 responses, a wide range of sectors was named⁶⁴: Education (4), Environment/Environmental Protection (3), Agriculture (3) and Health (2) were the only sectors named more than once. Again, this indicator can only be of limited validity when approaching the question of a typical or most suitable sector for this type of PPP.

⁶⁴ The sectors named were: Education, Production, Health, IT, Insurance, Facility Management, Agriculture, Infrastructure, Water, Renewable Energies, Construction, Environmental Protection, Social and environmental Service, All Raw Material Exporting Sectors, SME Promotion.

Figure 5.11 Sector of the PPP project (%)



28 companies stated information about their direct financial contribution to the project. The private contribution ranged from € 30,000 to € 1,400,000. The highest value (€ 1,400,000) can be regarded as an outlier. The median was € 200,000, the sample mean € 262,123 including the outlier. The graphical distribution in figure 5.12 grouped the financial contribution into classes.

33 companies stated information about the public contribution to the project. The public contribution ranged from € 32,000 to € 1,000,000. Again, the highest value (€ 1,000,000) can be regarded as an outlier. The median is € 200,000 and the sample mean € 240,060. A graphical distribution is given in figure 5.13.

It has to be stressed that the granting of the public financial project contribution is directly connected to the private financial contribution. By the time of the survey, the subsidy preconditions, formulated by the implementing organisations, respectively the BMZ, usually allowed a maximum subsidy of 50 % of the overall project volume.⁶⁵

The overall project volume had a median of € 400,000 and a sample mean of € 494,208 with a range from € 78,000 to € 2,400,000.

⁶⁵ In 3 cases where contributions from both sides (private and public) were stated, this criterion was not met. Reasons might be that the amount of the private contribution might not have been completely foreseeable yet, that the project was ongoing or that data might not have been at hand.

Figure 5.12 Direct private financial contribution to the project (% of classes in €)

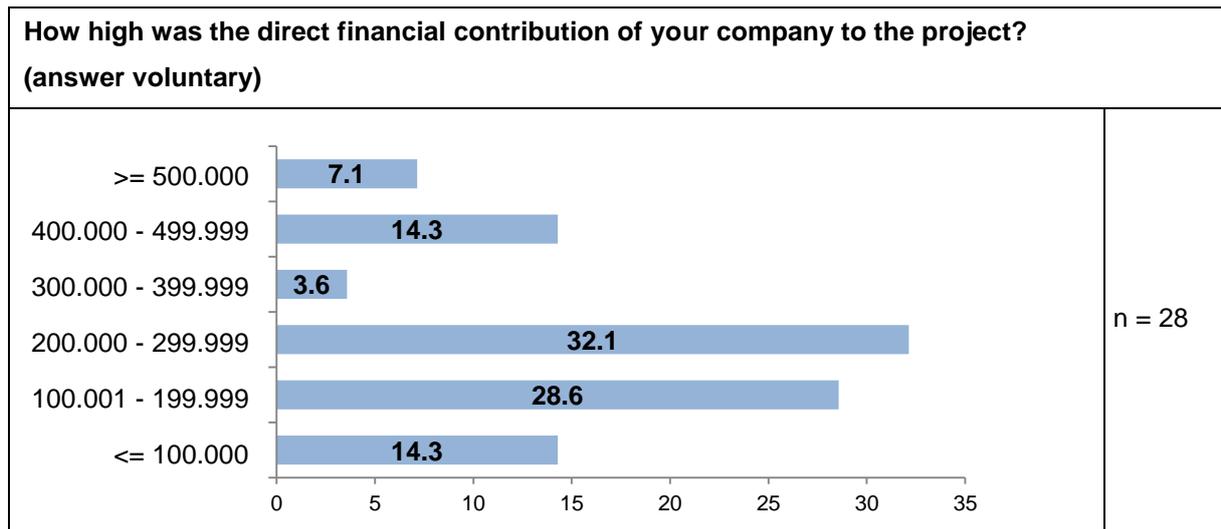


Figure 5.13 Public financial contribution to the project (% of classes in €)

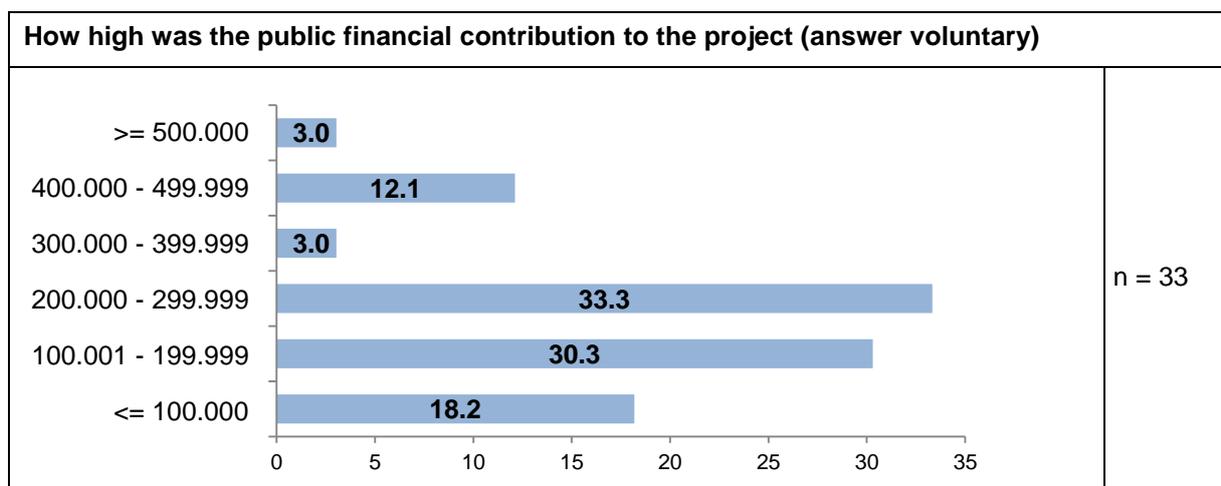
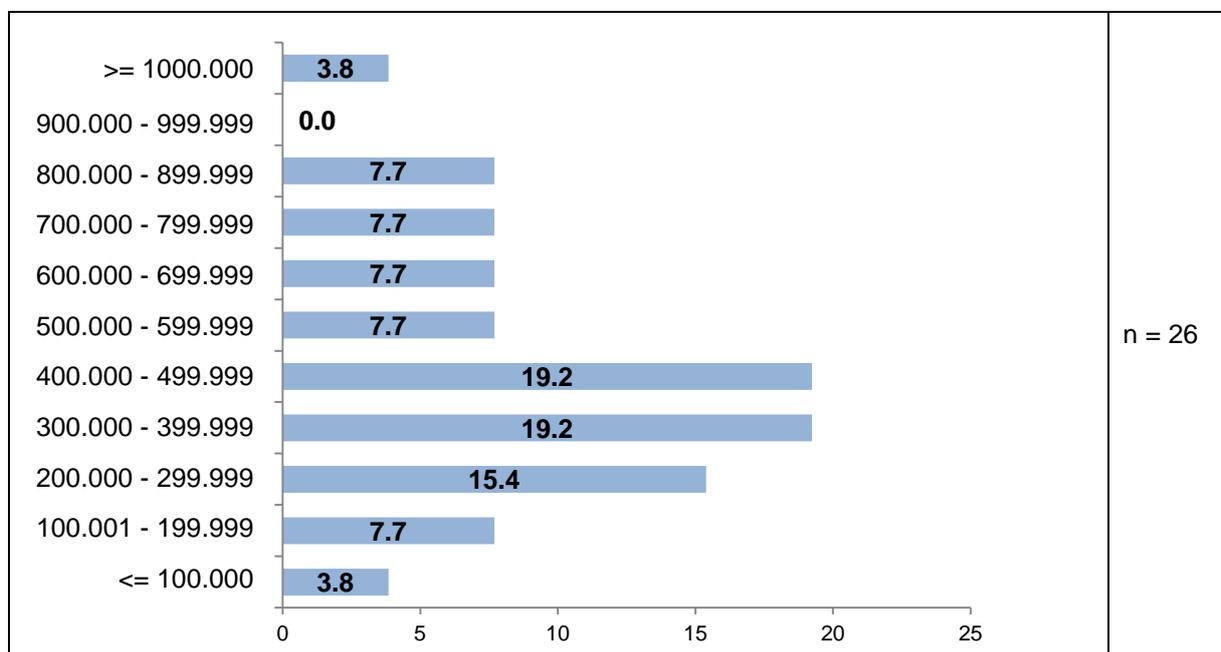


Figure 5.14 Overall private and public project volume (% of classes in €, where both values available)



5.3.2.2 MOTIVATION

Companies were asked to evaluate factors behind their decision to participate in the PPP project and to implement the project in the developing country.

21 (56.7 %) companies agreed or strongly agreed that the PPP delivers relevant market information. Only 9 (24.2 %) disagreed or strongly disagreed on this factor.

Moreover, 18 (48.6 %) respondents agreed or strongly agreed that the PPP is a measure for preparing the market entry of the company. 13 (35.1 %) respondents disagreed on this statement.

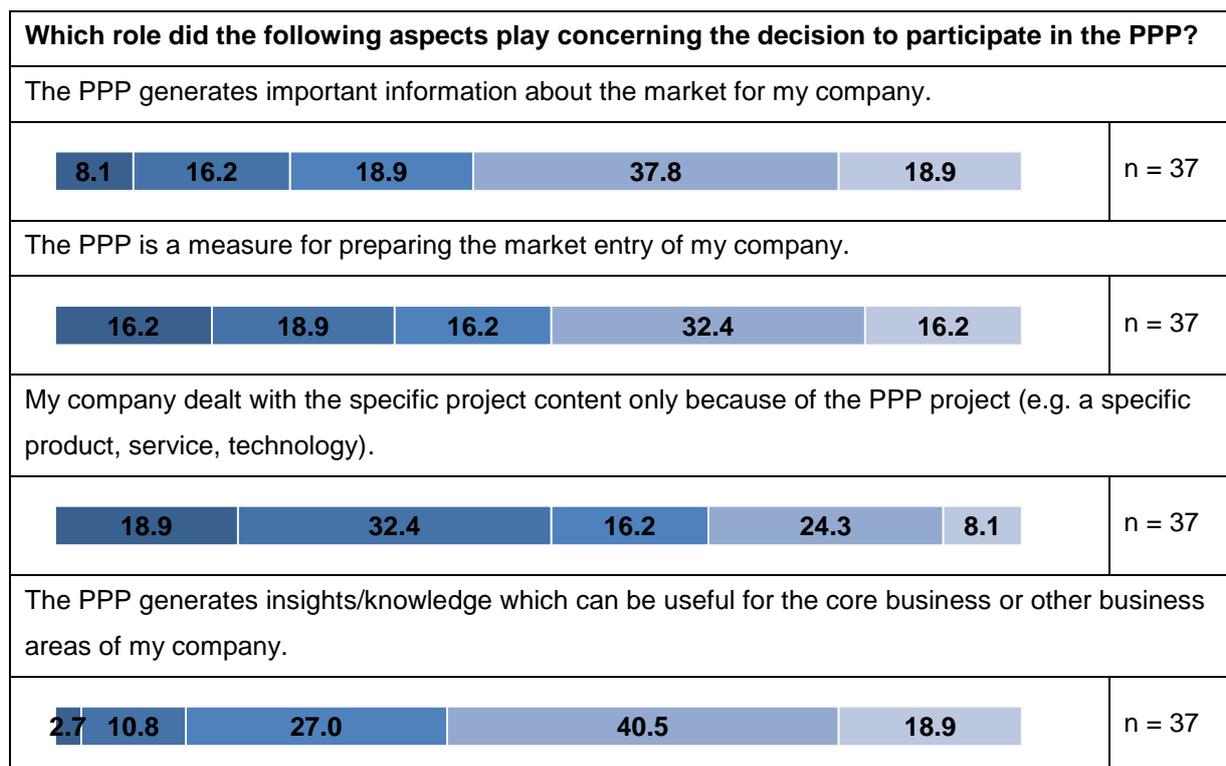
The evaluation of these statements illustrates that commercial interests (market information or even the preparation of market entry) constituted relevant factors for about half of respondents. Only about 1/4 respectively 1/3 of respondents neglected these factors.

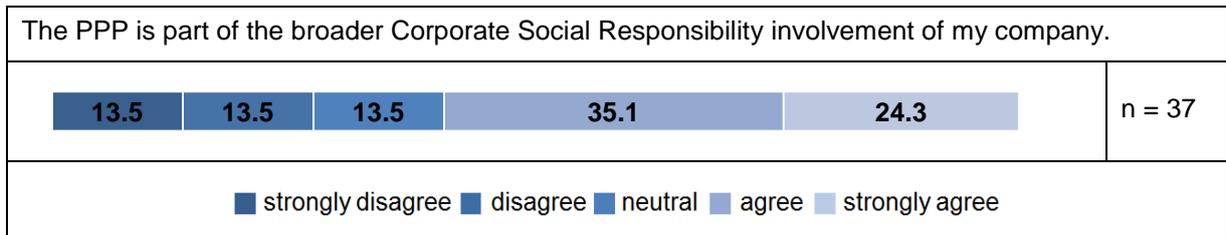
19 (51.3 %) respondents disagreed or strongly disagreed on the question of whether the company dealt with the specific project content only because of the PPP project (32.4 % agreed or strongly agreed). An interpretation might be that for a slight majority of companies project content is somehow related to regular company activity.

A majority (59.4 %) of respondents agreed or strongly agreed with the existence of positive spillover effects of project content to core business. Only 13.5 % disagreed or strongly disagreed.

The PPP project in the majority of cases (59.4 %) was regarded as part of CSR activities of the companies. Only 10 (27.0 %) respondents did not share this view on the project.

Figure 5.15 Rating of factors concerning the decision to participate in the PPP project (%)





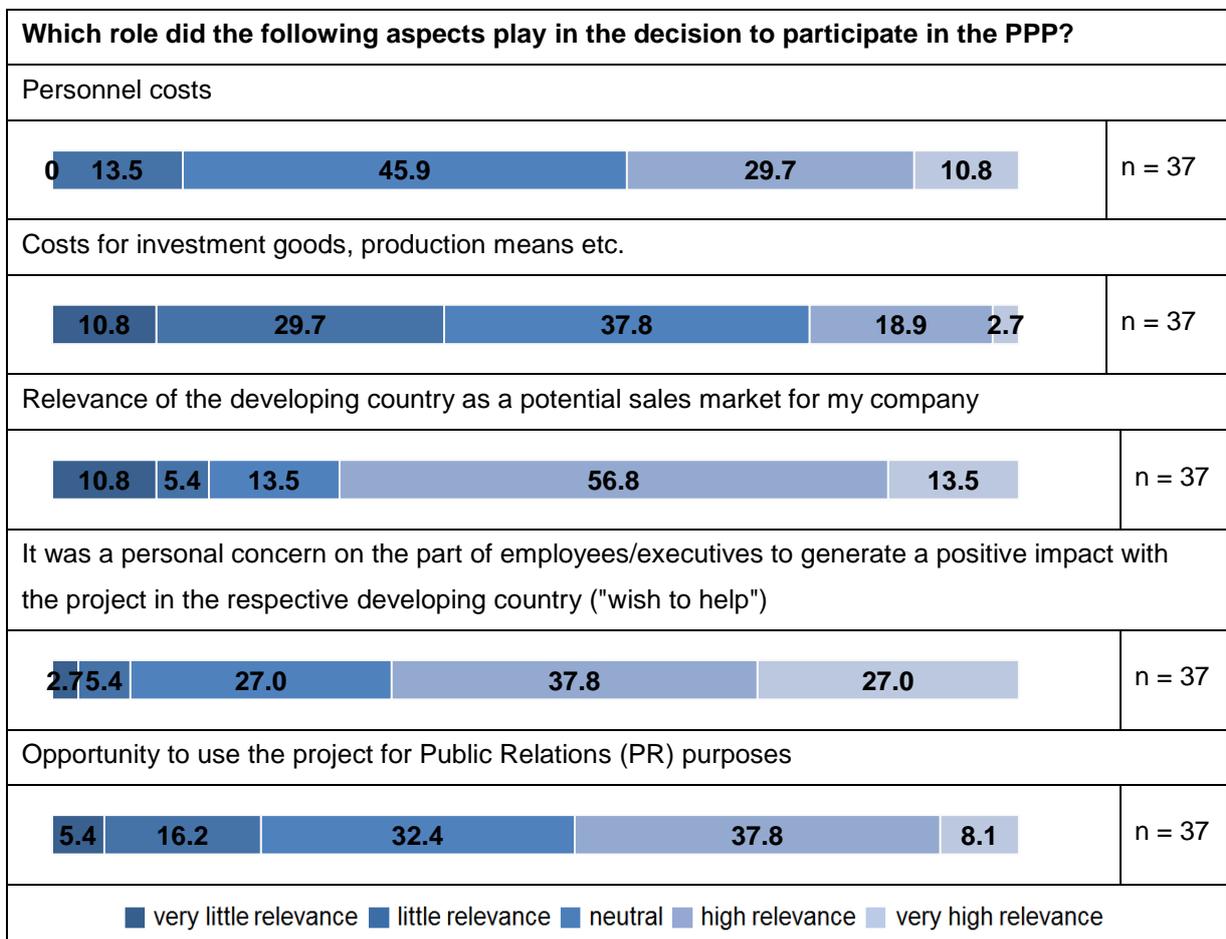
When asked about the relevance of cost factors (personnel and investment costs), only a minority of respondents (40.5 % personnel, 21.6 % investment costs) stated a high or very high relevance of these factors. 15 (40.5 %) respondents even regarded the relevance of investment costs as low or very low.

The commercial interest connected to a PPP project is once again illustrated by the statement of 70.3 % of respondents that the role of the project country as a potential sales market is rated as relevant or highly relevant.

Altruistic motives ("wish to help") were rated as relevant or highly relevant by 64.8 % of respondents. Only for a small minority (8.1 %) was this factor of little or very little relevance.

For almost half of respondents (45.9 %), public relations opportunities related to the project were of high or very high relevance. For 21.6 % of respondents, this factor was of little or very little relevance.

Figure 5.16 Relevance of factors concerning the decision to participate in the PPP project (%)



The motivation behind establishing a project in a specific developing country has been analysed as well. Natural space conditions were of little or very little relevance for the majority of respondents (56.7 % vs. 29.7 % high/very high relevance). This outcome might be strongly connected to the character of the PPP projects analysed in this survey. Many of those most likely have little or no relation to natural space conditions regarding the sector they belong to (see figure 5.11).

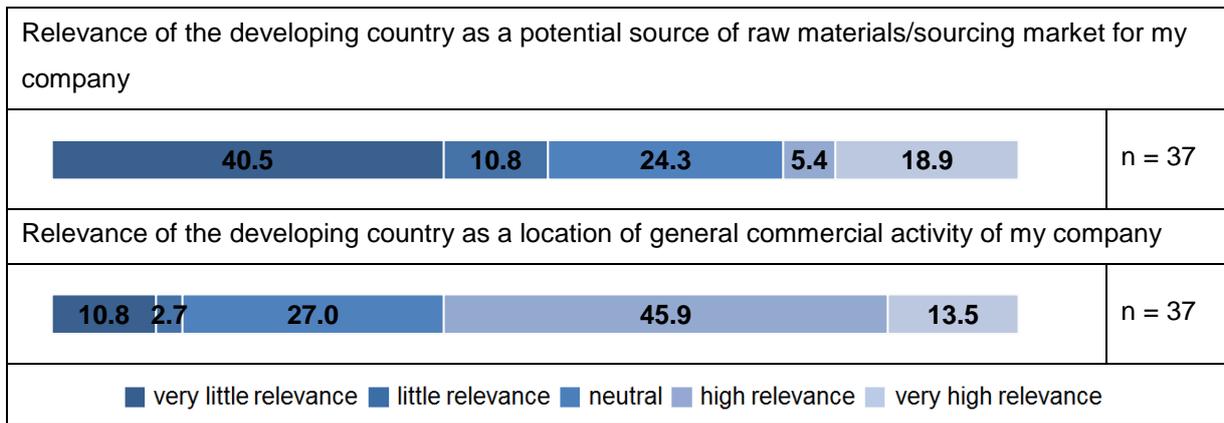
A mixed picture evolved concerning the importance of legal certainty (37.8 % low/very low relevance vs. 34.1 % high/very high relevance). This is a somewhat surprising result considering the presumed central role of legal certainty for any commercial activity.

Physical infrastructure was of high or very high relevance for only about 1/3 of respondents. Having a qualified local workforce seemed to play a relatively central role in the choice of the project country (51.3 % high/very high relevance vs. 24.3 % little/very little relevance).

While the role of the developing country as a potential sales market (59.4 % high/very high relevance vs. 18.9 % low/very low relevance) seemed to be of relatively high importance, the role of the developing country as a potential sourcing market seemed less important (24.3 % high/very high relevance vs. 51.3 % low/very low relevance). The overall commercial interest of companies in the developing country was however rated as relevant or highly relevant by a clear majority of companies (59.4 % high/very high relevance vs. 13.5 % low/very low relevance).

Figure 5.17 Rating of factors concerning the decision to get involved in particularly this developing country (%)

| Which role did the following aspects play concerning the decision to get involved in this specific developing country? | | | | | |
|--|------|------|------|------|--------|
| Existence of suitable natural space conditions (suitable/cultivable land, soil, climatic conditions etc.) | | | | | |
| 43.2 | 13.5 | 13.5 | 10.8 | 18.9 | n = 37 |
| Existence of legal certainty (contract certainty, absence of corruption, property rights etc.) | | | | | |
| 18.9 | 18.9 | 27.0 | 27.0 | 8.1 | n = 37 |
| Existence of physical infrastructure (roads, information and communication channels etc.) | | | | | |
| 16.2 | 21.6 | 29.7 | 27.0 | 5.4 | n = 37 |
| Existence of qualified local workforce | | | | | |
| 5.4 | 18.9 | 24.3 | 45.9 | 5.4 | n = 37 |
| Relevance of the developing country as a potential sales market for my company | | | | | |
| 10.8 | 8.1 | 21.6 | 37.8 | 21.6 | n = 37 |



5.3.2.3 PROJECT PROCESSING

In the following subchapter, results of an analysis of the project process, outcomes as well as the performance of the public partner from companies' point of view are outlined.

About half of respondents stated that the project exceeded the originally planned timeframe. In only about 37.8 % of projects did the project stick to the schedule. About 1/3 of respondents stated that the originally planned financial budget was exceeded. The same share of respondents (37.8 %) stated that the budget was met. In 5.4 % of projects, expenditures were lower than planned.

Figure 5.18 Congruence of the project processing with the originally planned timeframe (%)

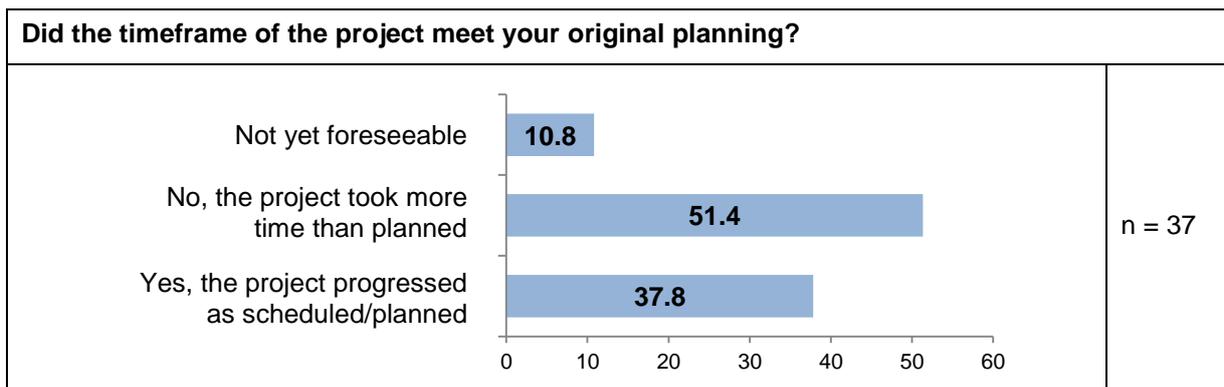
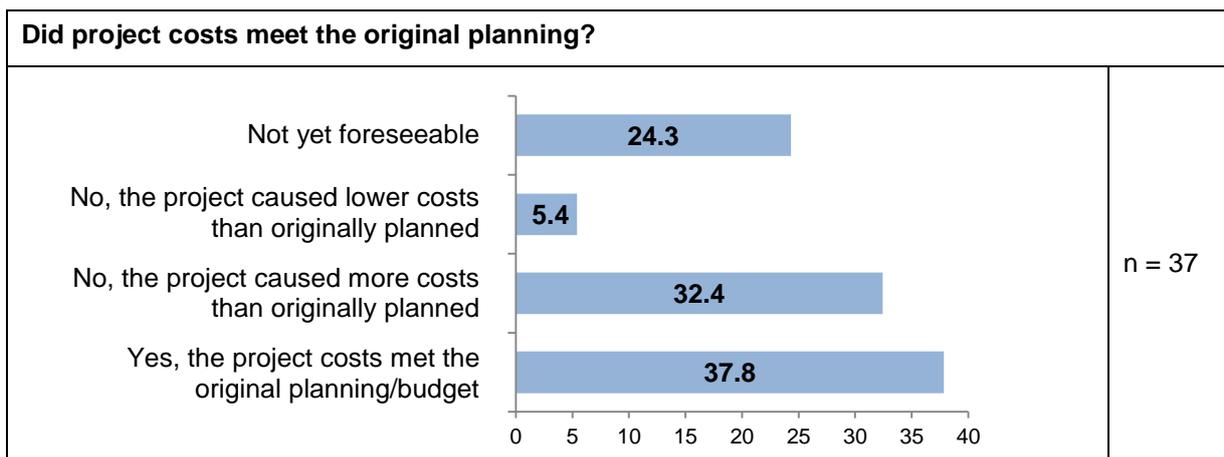


Figure 5.19 Congruence of actual project costs with the originally planned budget (%)



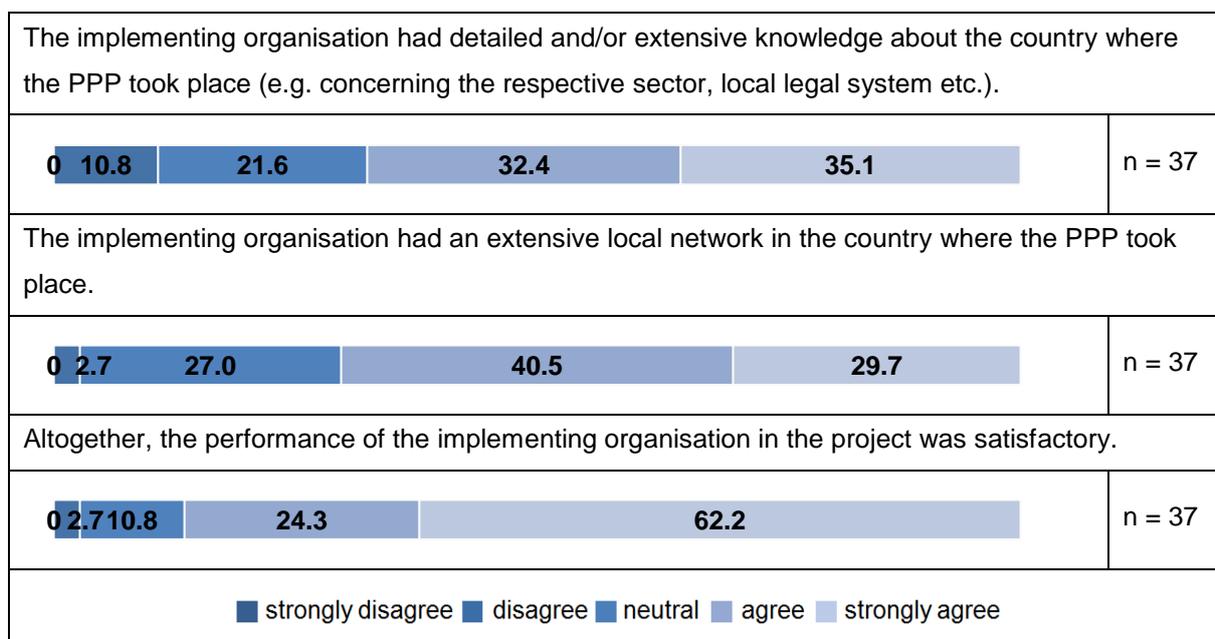
62.2 % of the responding companies agreed or strongly agreed that the overall performance of the implementing organisation in the project was satisfying. Only 13.5 % disagreed or strongly disagreed.

The majority of respondents agreed or strongly agreed with a positive view on the performance of the implementing organisation concerning: information about PPP preconditions prior to the project (78.3 %), support in (further) developing the project idea (78,3 %), cooperative decision-making during the project (75.7 %), the availability of a contact person during project processing (89.2 %), knowledge about local conditions (67.5 %) as well as the existence of a local network in the developing country (70.2 %).

A less positive evaluation was given concerning negative outcomes of a bureaucratic working style of the implementing organisation (21.6 % disagreed/strongly disagreed vs. 51.3 % agreed/strongly agreed). The evaluation of the performance of the implementing organisation was aggregated in a combined index for application in statistical testing (see annex 7.1.2).

Figure 5.20 Rating of the performance of the public partner (implementing organisation) in the project (%)

| To which degree do the following statements about the performance of the public partner (implementing organisation) in the project apply? | | | | |
|---|------|------|------|--------|
| Prior to the project/in the planning phase of the project, the implementing organisation offered sufficient information about the overall preconditions of a PPP. | | | | |
| 0 | 8.1 | 13.5 | 35.1 | 43.2 |
| | | | | n = 37 |
| The implementing organisation offered extensive support in the further development of the project idea. | | | | |
| 2.7 | 10.8 | 8.1 | 48.6 | 29.7 |
| | | | | n = 37 |
| Decision-making concerning operative and strategic questions in the PPP was conducted in a cooperative manner together with the implementing organisation. | | | | |
| 05.4 | 18.9 | 24.3 | 51.4 | |
| | | | | n = 37 |
| A contact person in the implementing organisation was available at all times. | | | | |
| 05.4 | 5.4 | 24.3 | 64.9 | |
| | | | | n = 37 |
| The way of working of the implementing organisation was bureaucratic. This impeded the cooperation. | | | | |
| 18.9 | 32.4 | 27.0 | 18.9 | 2.7 |
| | | | | n = 37 |

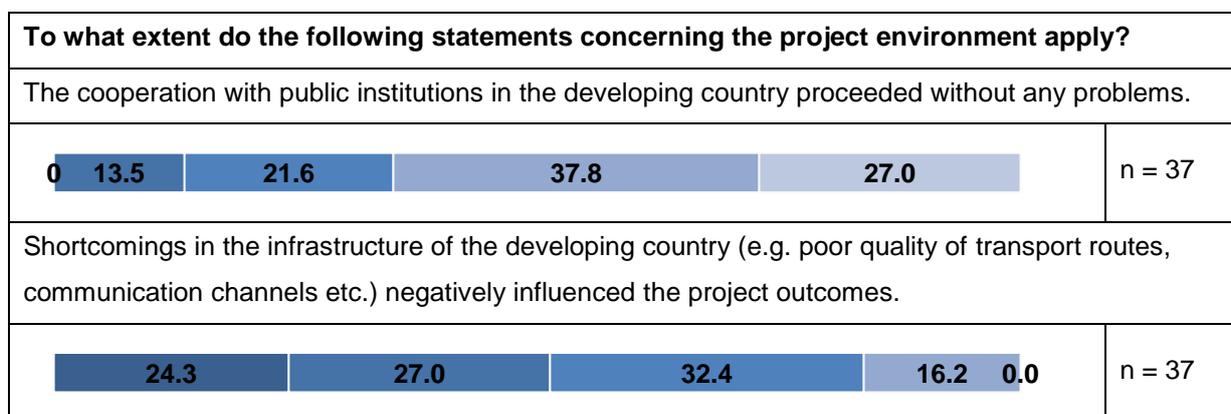


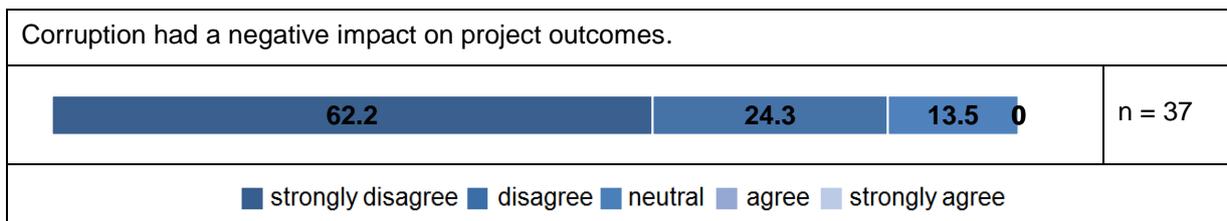
The quality of the project environment was evaluated concerning three dimensions.

First, the cooperation with public institutions in the developing countries was evaluated. 64.8 % of respondents agreed or strongly agreed, while 13.5 % disagreed and partly disagreed, on a positive view. Second, 51.3 % of respondents disagreed or strongly disagreed on the existence of negative impact due to shortcomings in the infrastructure. 16.2 % of respondents agreed and partly agreed. Finally, 86.4 % of respondents disagreed or strongly disagreed on the negative impact of corruption, while 13.5 % answered neutral and no one agreed or strongly agreed.

Two of these dimensions – institutional and infrastructure environment – were tested for a relationship with the following variables: satisfaction with the implementing organisation, sustainability of project results (i.e. whether and on what scale the project will be continued after the end of the public contribution), overall project success, deviation from budget and deviation from schedule. However, no significant relationship could be identified.

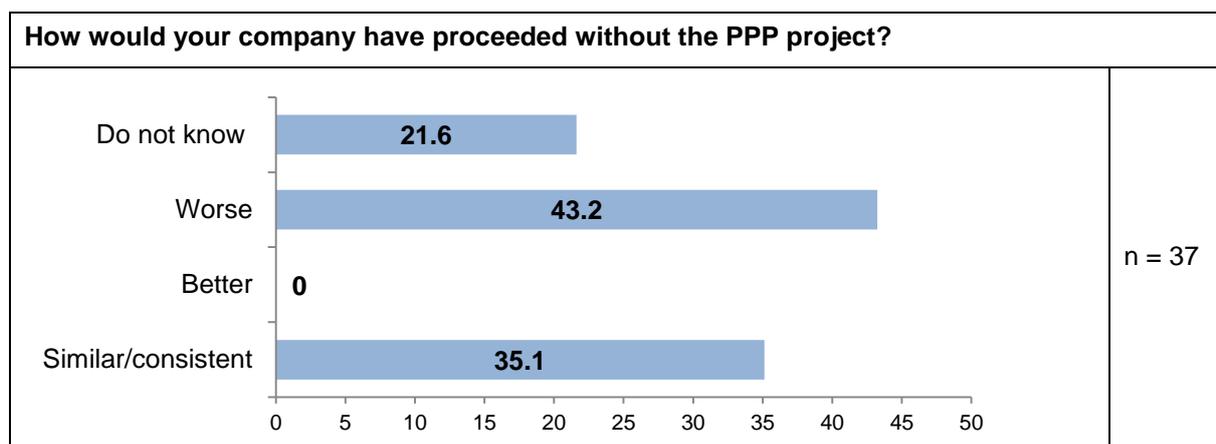
Figure 5.21 Rating of aspects concerning the project environment (%)





Finally, respondents were asked to state how their company would have otherwise proceeded if the company had not participated in the PPP project. While 21.6 % of respondents were unable to give an evaluation, 43.2 % of respondents stated a somewhat positive impact of the PPP on the company's development, or the lack of a negative impact.

Figure 5.22 Evaluation of the company's development without the PPP project (%)



5.3.2.4 PROJECT CONTENT AND OUTCOMES

In the following subchapter, an analysis of project content and outcomes, in particular development policy effects, follows.

To start with, respondents were asked to evaluate the extent to which the project objectives were reached. The result was a positive view on the outcomes. 94.6 % of respondents agreed or strongly agreed that the project objectives were reached completely and 83.8 % of respondents agreed or strongly agreed that the objectives of their company were reached completely. In a summarizing question, 83.8 % of companies agreed or strongly agreed that the PPP project was a success, 16.2 % of respondents had a neutral view on the question and no one disagreed.

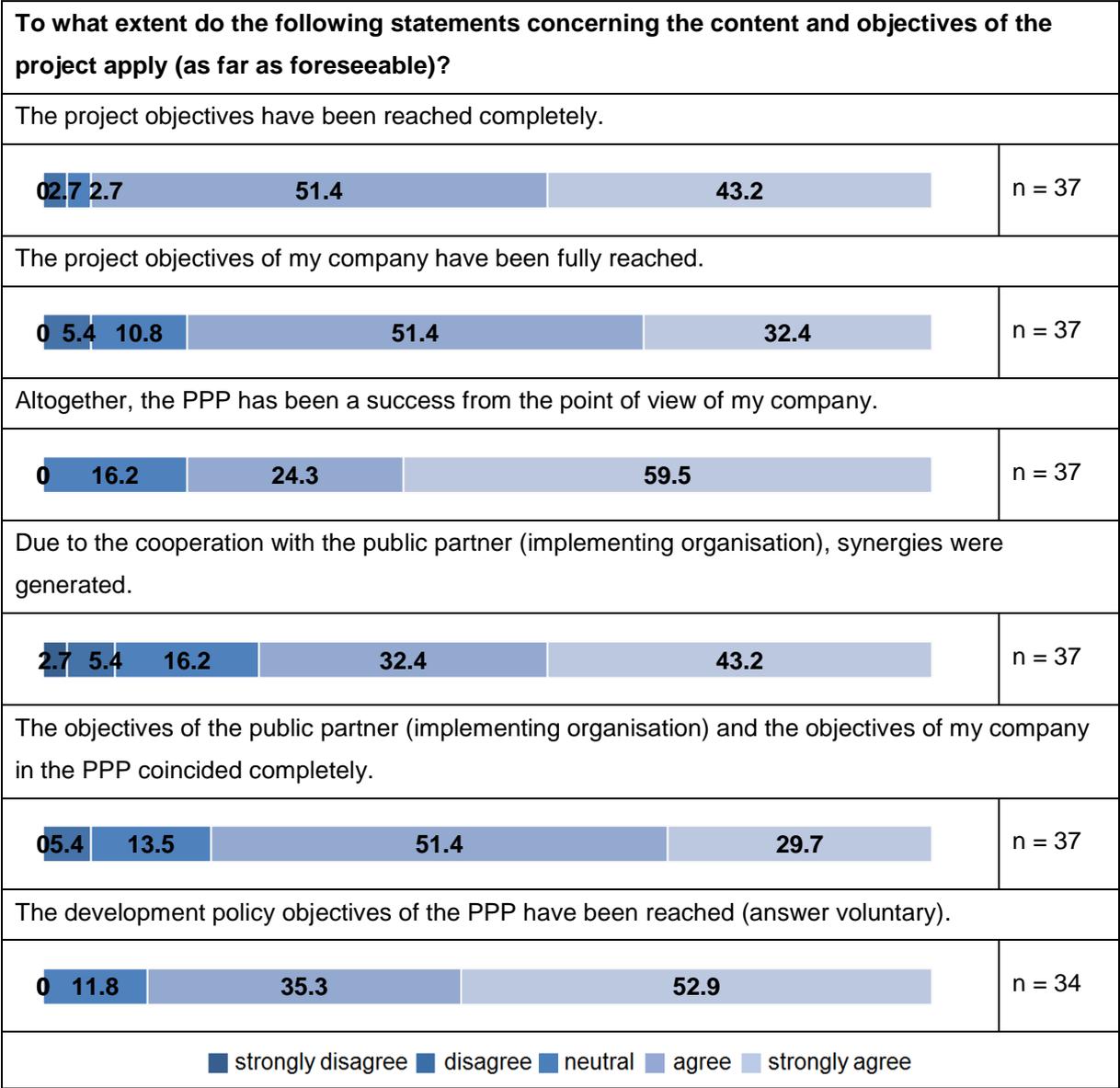
The question about the generation of synergies – a central idea behind the PPP approach – was answered positively by 75.6 % (agreed and strongly agreed) of respondents, while 8.1 % disagreed or strongly disagreed.

81.1 % of respondents agreed or strongly agreed that objectives of their company and the implementing organisation coincided completely, only 5.4 % disagreed.

Finally, companies were asked whether the development policy objectives of the project were achieved. 34 out of 37 companies answered to this question and 88.2 % of respondents answered positively (agreed or strongly agreed).

Altogether, the rating of the overall outcomes of the projects was positive. This includes the view on two central intentions of the PPP approach: the generation of synergies as well as the matching of mutual interests of the public and the private partner in the project.⁶⁶

Figure 5.23 Rating of statements concerning the content and objectives of the project (%)



An evaluation of the concrete development effects of the project was conducted using several dimensions. First, companies were asked about project effects on core development policy objectives and fundamental drivers of development (see chapter 2). Second, effects on the Millennium Development Goals were analysed.

Respondents named the improvement of education/qualification of local population (77.8 %), the creation of local jobs (73.0 %) as well as the transfer of technology to the developing country (69.7 %) most frequently. Improvement of the local environment (56.3 %), of the supply of local population (35.3 %) as well as other development related effects (46.2 %) were named less frequently.

⁶⁶ For further statistical analyses, an index about the evaluation of the overall project success by companies has been calculated (see annex 7.1.2).

Evaluating effects of projects on the Millennium Development Goals was expected to be a rather complicated task for respondents. Consequently, answers were voluntary and the actual answer rate was low. The most frequent response with high or very high impact referred to goals number 8. Develop a global partnership for development (68.9 %); 7. Ensure environmental sustainability (56.7 %); 1. Eradicate extreme poverty and hunger (30.0 %) and 3. Promote gender equality and empower women (25.0 %). The evaluation of high or very high impact on the other four goals remained at a low level.

Analysing the sustainability of project outcomes, 75.6 % of respondents stated that the project will be continued. This can be rated as a strong positive indicator in regards to the sustainability of projects.

Figure 5.24 Local project impact in the developing country (%)

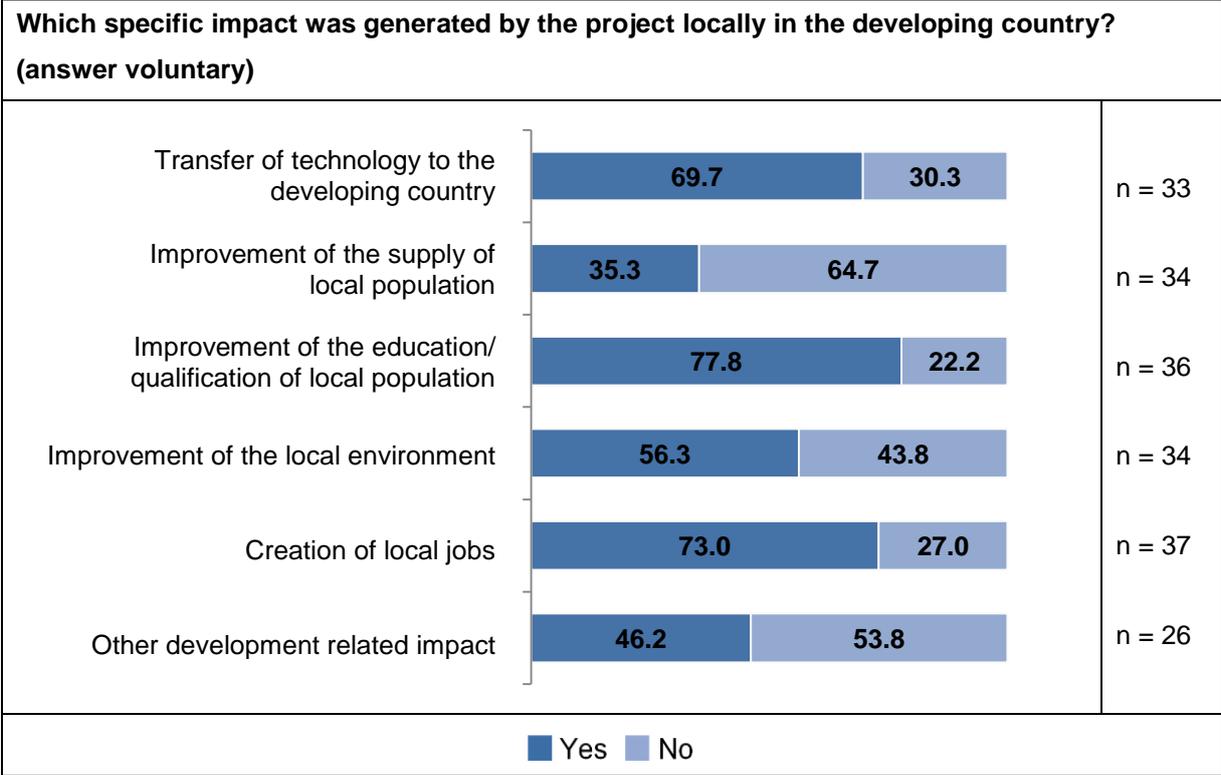
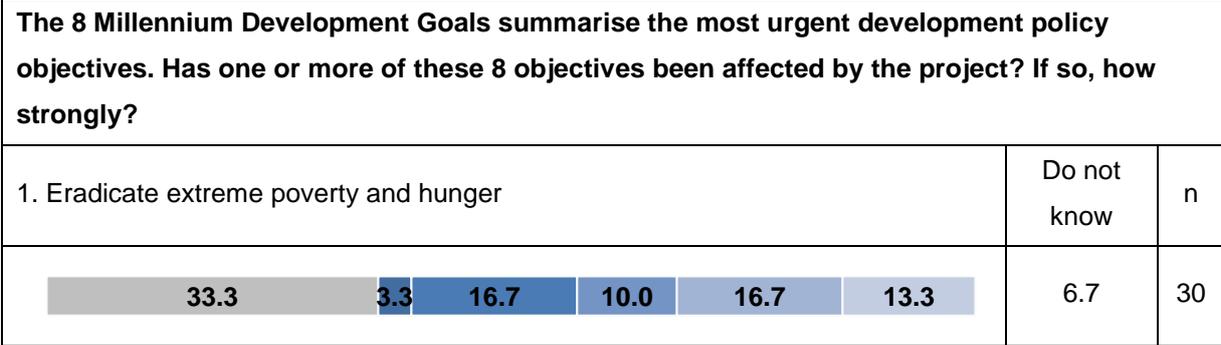
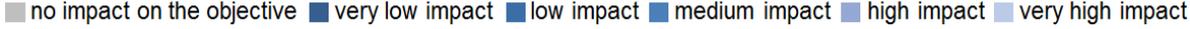


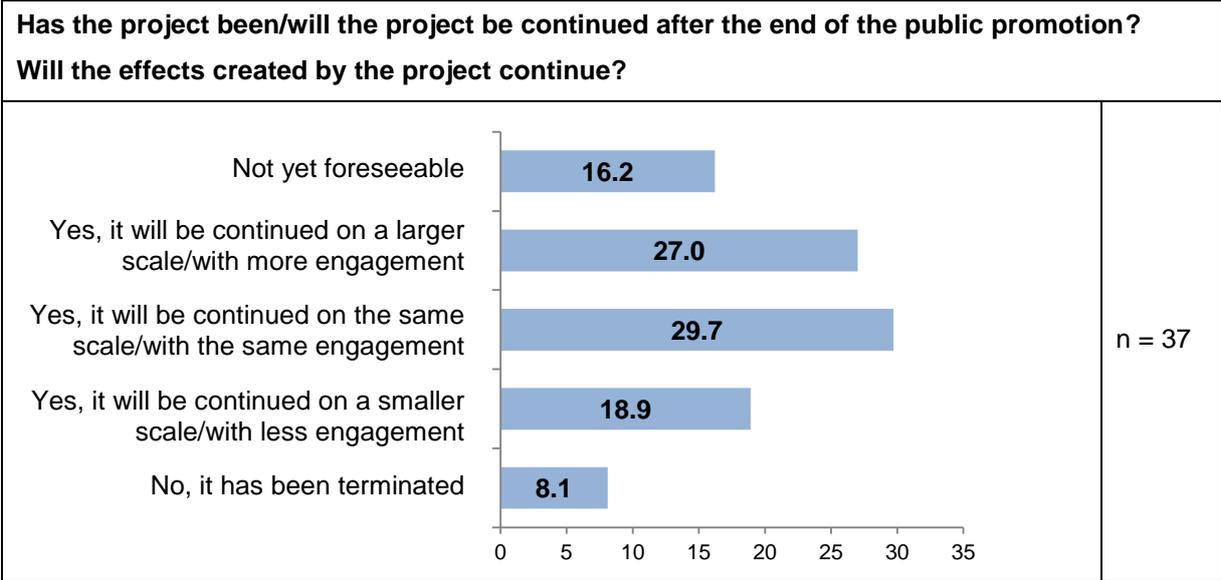
Figure 5.25 Project impact on the 8 Millennium Development Goals (%)



| | | |
|--|-------------|----|
| 2. Achieve universal primary education | Do not know | n |
|  | 7.1 | 28 |
| 3. Promote gender equality and empower women | Do not know | n |
|  | 3.6 | 28 |
| 4. Reduce child mortality | Do not know | n |
|  | 3.6 | 28 |
| 5. Improve maternal health | Do not know | n |
|  | 3.6 | 28 |
| 6. Combat HIV/AIDS, malaria and other diseases | Do not know | n |
|  | 7.1 | 28 |
| 7. Ensure environmental sustainability | Do not know | n |
|  | 3.3 | 30 |
| 8. Develop a global partnership for development | Do not know | n |
|  | 3.4 | 29 |
|  | | |

The sustainability of project results was analysed by asking whether the project (or what the project created) would be continued after the end of the formal project runtime, i.e. the end of the public subsidy. 75.6 % of respondents stated that the project will be continued. Only 8.1 % stated that the project was terminated. This can be regarded as a rather strong positive indicator in regards to the sustainability of projects.

Figure 5.26 Continuation of the project after the end of the public promotion (%)



Furthermore, it was of interest whether companies have been communicating externally about their participation in the PPP project(s). With the exception of one respondent, every company answered this question positively. This clear result indicates that the external communication/presentation of project involvement is of great interest for companies.

Finally, respondents were asked if a comparable involvement of their companies in the developing country would have existed without the PPP programme. 70.3 % of respondents answered No. Only 18.9 % of respondents stated Yes. This result indicates that the PPP programme in deed has the function of a vehicle to trigger private involvement for development purposes which otherwise would not have existed.

Figure 5.27 External communication of project participation by the company (%)

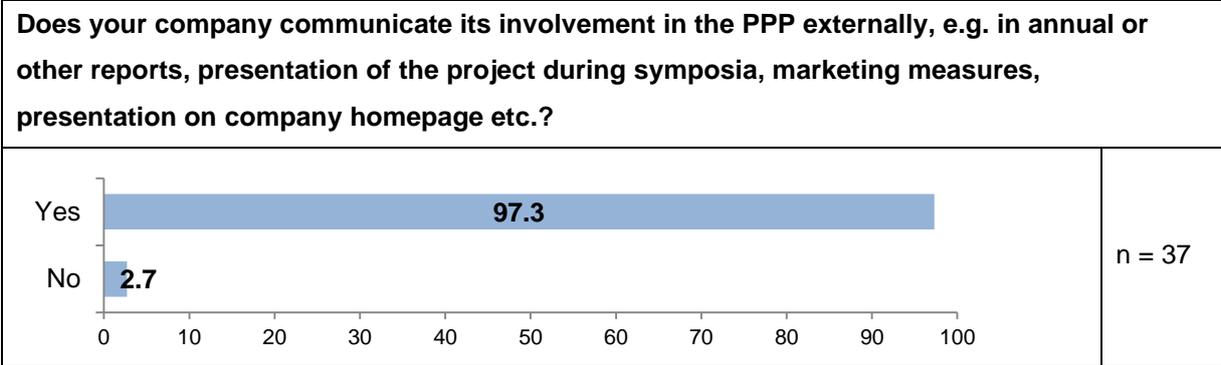
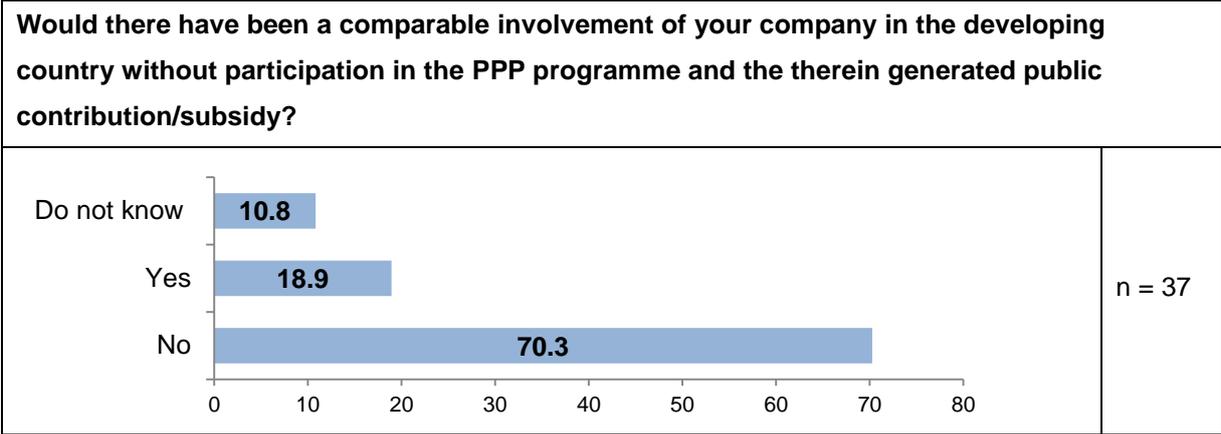


Figure 5.28 Expectations concerning a comparable involvement of the company (%)



5.3.3 CSR AND OTHER ASPECTS

In secondary literature, Corporate Social Responsibility (CSR) is frequently named as an important driving force for companies to participate in PPPs (see chapter 3.3). Hence, CSR aspects were integrated into the survey and possible relations between CSR and the participation in PPPs were tested.

Asked about the general importance of CSR in their company, about half of respondents (51.3 %), agreed or strongly agreed that CSR plays an important role in their company.

Only 40.5 % of respondents agreed or strongly agreed that their company has particularly qualified employees working on the topic.

70.2 % of respondents agreed or strongly agreed that the PPP participation can be regarded as CSR involvement by their company. Only 5.4 % disagreed or strongly disagreed.

Asked about the external CSR communication of their companies, 45.9 % of respondents stated that no external communication of their company about CSR exists. Not even 1/3 of the responding companies communicated about the topic during events or on their homepage. Only 16.2 % of respondents published a specific CSR reporting.

Relationships between the evaluation of the importance of CSR in the company and several other variables were tested. A significant relationship between a high evaluation of CSR and the existence or absence of commercial activity in developing countries, the volume of PPP experience and finally the willingness to get involved in development policy could not be found.

Applying the Fisher exact test, a significant relationship between the evaluation of the importance of CSR with commercial activity in developing countries (measured by the existence of subsidiaries in developing countries) could be found ($p = 0.027$ with $\alpha = 0.05$).

Companies in which, according to the evaluation of respondents, CSR was of higher importance, tended to have subsidiaries in developing countries significantly more often than those with a lower evaluation of the importance of CSR in the company.

Furthermore, a relationship of CSR competence (measured by the existence of specifically qualified employees) with the volume of PPP experience could not be found.

However, a Spearman rank correlation test for CSR competence and overall project success showed a low to medium correlation on a significant level between the two variables ($r = 0.362$, $p = 0.028$). This means that companies with a higher evaluation of the importance of CSR tended to have a higher evaluation of overall project success.

Finally, companies were asked about CSR responsibilities. Only 24.3 % of respondents had distinctively responsible employees.

Figure 5.29 Rating of statements concerning CSR (%)

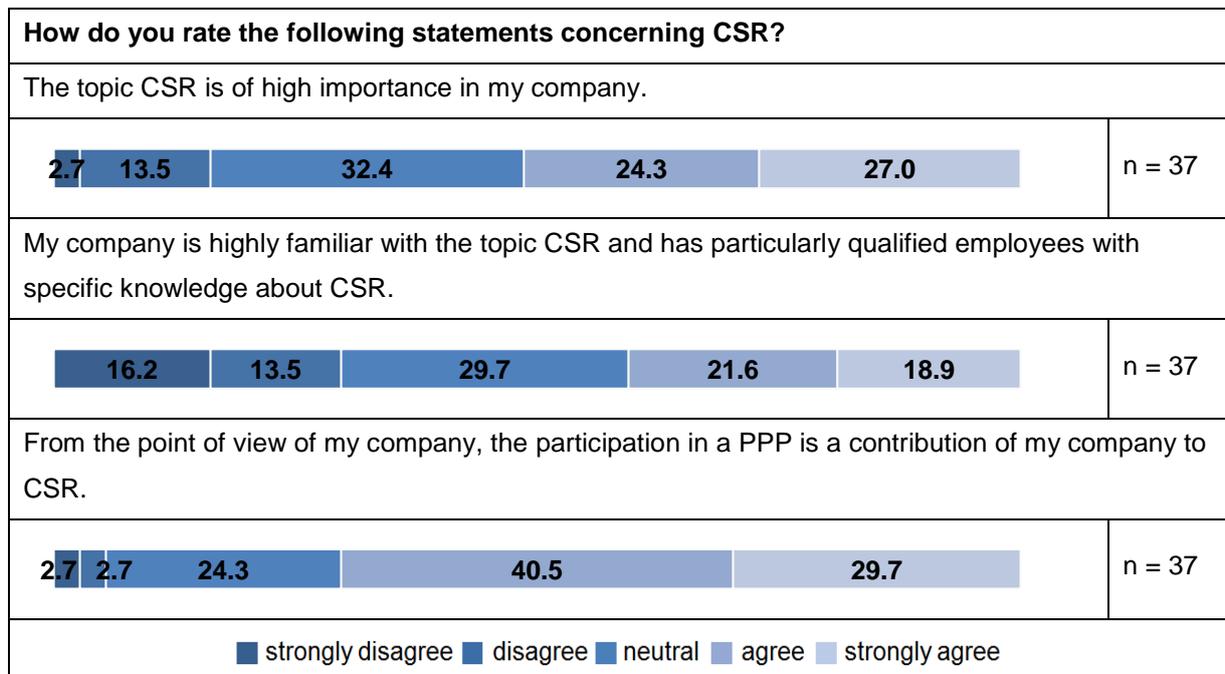


Figure 5.30 External CSR communication by companies (%)

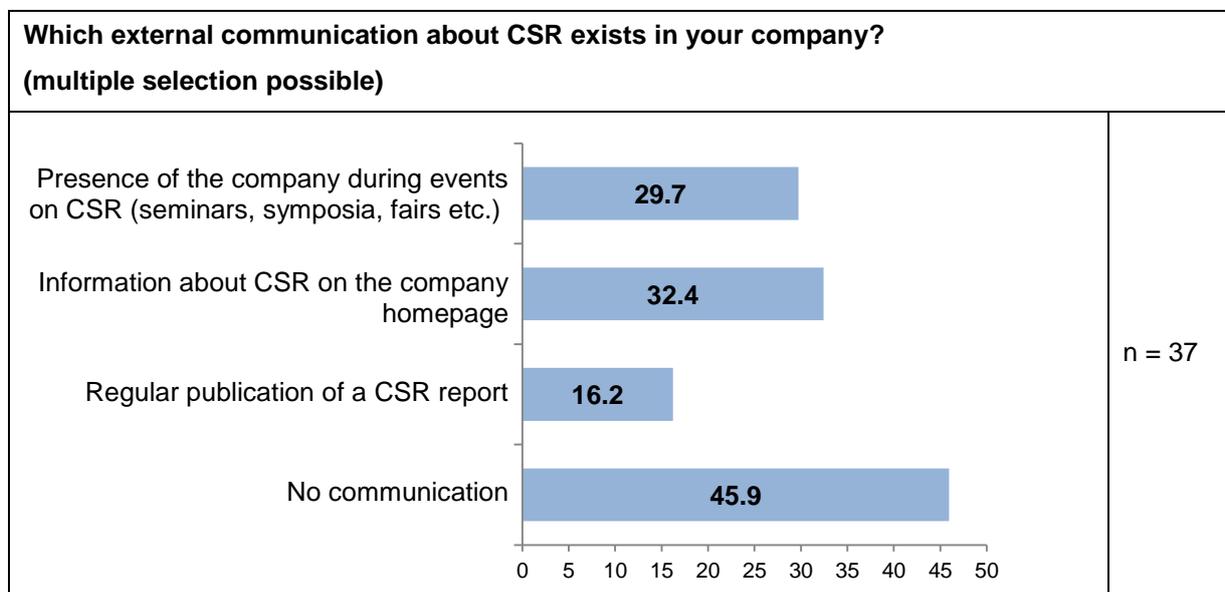
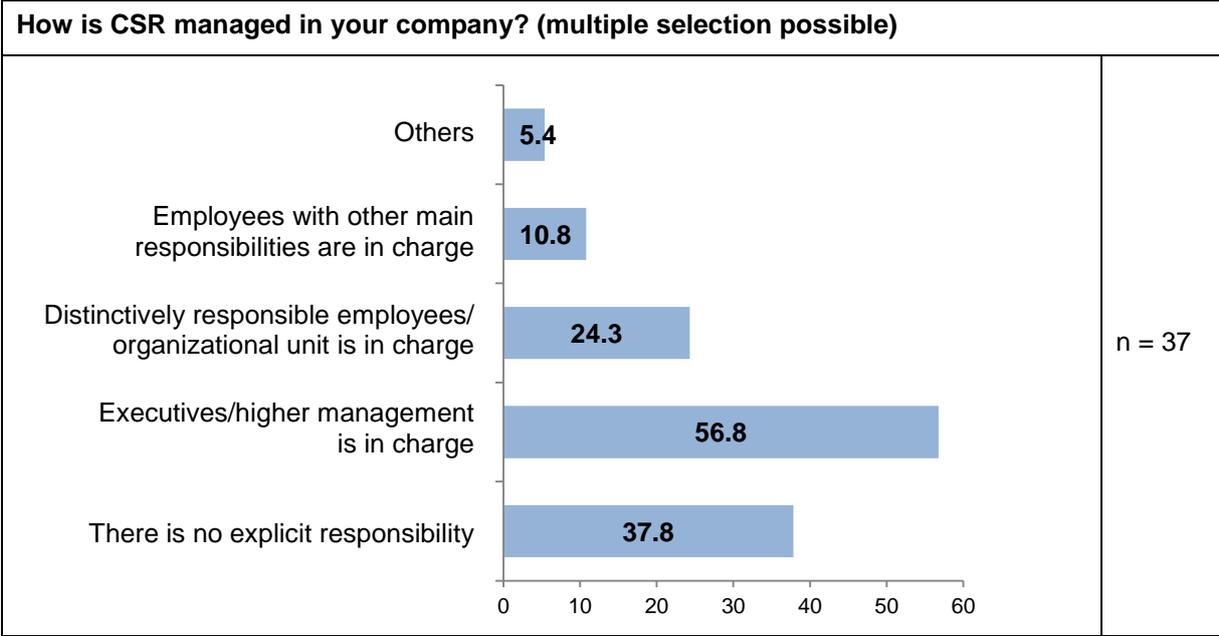


Figure 5.31 Way of managing CSR in the company (%)



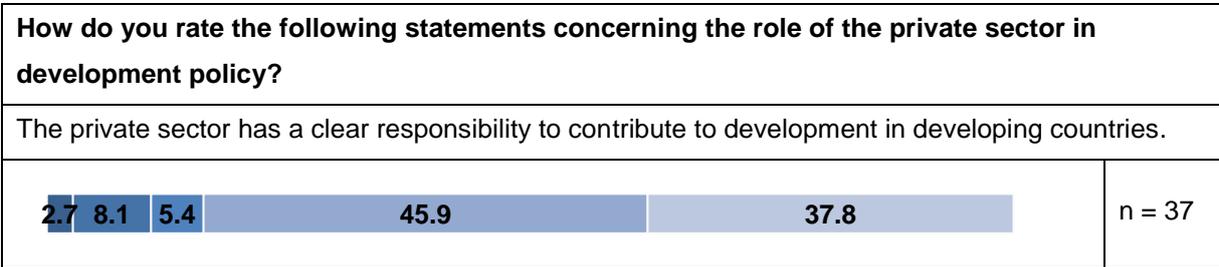
Apart from the role of CSR in the companies, general attitudes towards the role of the private sector in development cooperation were analysed.

A large majority of respondents (83.7 %) agreed or strongly agreed that the private sector has a responsibility to contribute to development in developing countries. Only 10.8 % of respondents disagreed or strongly disagreed. What’s more, a strong majority of respondents (89.2 %) agreed or strongly agreed that the implementing organisation (GTZ, DEG, Sequa) or the BMZ should increase efforts to integrate the private sector in development policy measures.

More ambivalent responses were given concerning a statement about commercial interests in this context. 45.7 % of respondents agreed or strongly agreed that incentives to get involved in development policy measures for private companies only exist if companies can therein generate profits. 35.1 % of respondents disagreed or strongly disagreed.

Almost all respondents (91.9 %) stated that their company would be willing to participate in measures (others than PPPs) that focus on the integration of private companies in development policy measures (e.g. round tables, dialog measures, initiatives etc.) in terms of content. Asked for a financial contribution in such measures, only 35.1 % confirmed, while the same share of respondents was not able to answer the question.

Figure 5.32 Rating of statements concerning the role of the private sector in development policy (%)



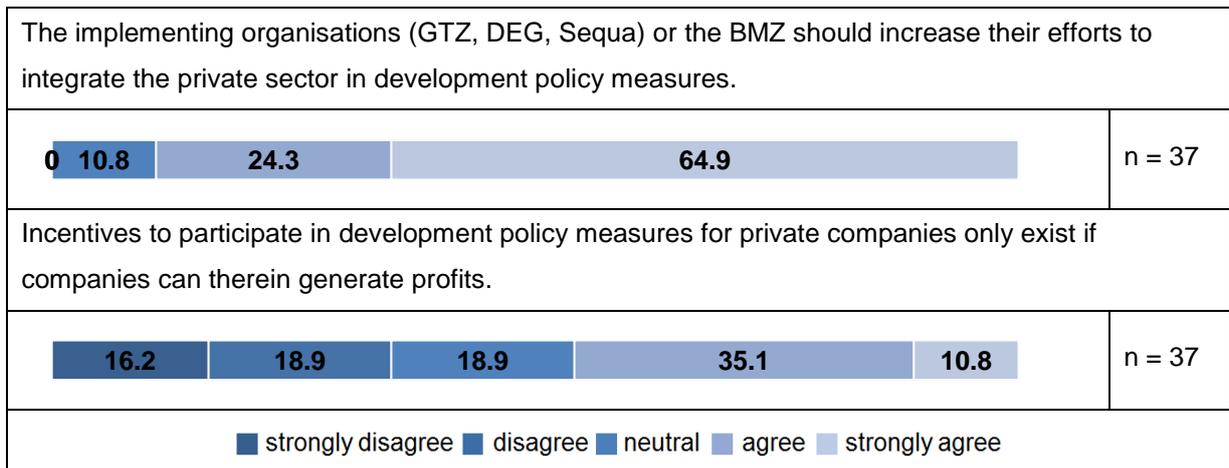


Figure 5.33 Willingness of a company to participate in development measures – as regards content (%)

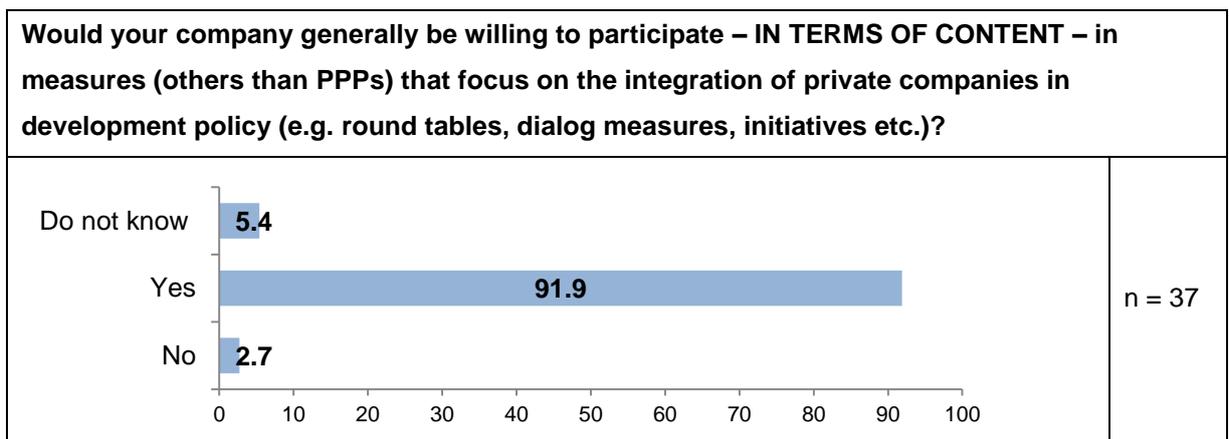
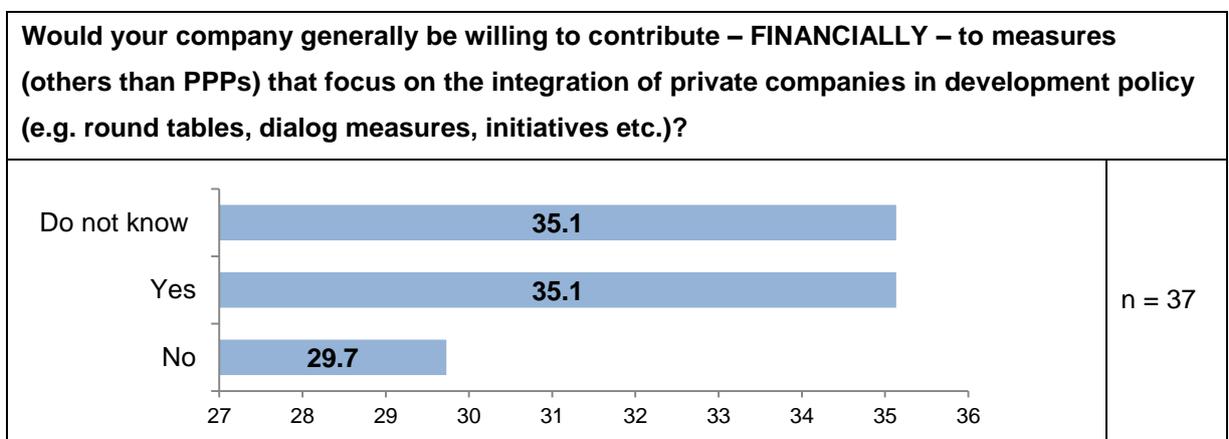


Figure 5.34 Willingness of a company to participate in development measures – as regards finance (%)



5.4 RELATION TO CASE STUDY ANALYSES

In chapter 4, a cross-case analysis of three projects was conducted in the framework of the BMZ PPP facility. The analysis was guided by research items previously identified by theoretical considerations, review of secondary literature as well as interviews.

In the following subchapter, a selection of the main findings from the case study analysis will be discussed against the background of the results from the survey. In order to avoid complexity in the questionnaire and since the case studies and the survey were partly conducted in parallel, not all research items were fully operationalised and incorporated into the survey. Nevertheless, results from the survey allow drawing further conclusions concerning the validity of several findings from the case study analyses.

Table 5.2 Relationships between survey and case study analyses

| | |
|--|---|
| <p>R 1 Previous experience with the partners involved</p> | <p>In all three cases, personal or working relationships between representatives of the private partner and the implementing organisation existed prior to the PPP project.</p> <p>As stated above, 40.5 % of respondents from companies had prior working experience with the implementing organisation (24.3 % in a PPP, 16.2 % in another way), 59.5 % had no previous experience. A relationship between previous working experience with the implementing organisation and the evaluation of project outcomes could not be found.</p> <p>Hence, the survey confirmed that the existence of previous working experience should not be regarded as a success factor for a PPP.</p> |
| <p>R 2 Coordination of project processing; control and sanction mechanisms; decision-making processes</p> | <p>In all three cases, the implementing organisation played only a limited role during project processing. Nevertheless, decision-making between the partners was made in a cooperative way.</p> <p>Survey results confirmed this picture: 75.7 % of respondents agreed or strongly agreed with this statement.</p> |
| <p>R 3 Number of partners in the PPP</p> | <p>In the case analyses, interviewees were asked whether the appropriate number of partners participated in the respective project. This question was regarded in all three cases as rather hypothetical. Thus, this research item was not operationalised in the questionnaire.</p> |
| <p>R 4 Implications of the micro and macro environment of the PPP in the developing country</p> | <p>In all three cases, interviewees expressed awareness that shortcomings in the project environment could have a negative impact on project results. Although shortcomings did exist in all three cases, they could generally be overcome without significantly preventing project progress – except in case 3 (Vocational Training Centre).</p> <p>In the questionnaire, the project environment was assessed in three</p> |

| | |
|--|--|
| | <p>dimensions.</p> <p>First, respondents were asked whether the interaction with public institutions in the project country proceeded smoothly. 64.8 % of respondents agreed or strongly agreed, while only 13.5 % disagreed. This result confirms that – as in the case studies – the interaction with public institutions was not a major impediment to project progress or success.</p> <p>Second, respondents were asked whether shortcomings in infrastructure negatively influenced project outcomes. 51.3 % of respondents disagreed and strongly disagreed, further 32.4 % gave a neutral statement concerning this question. Only 16.2 % agreed, no one strongly agreed.</p> <p>This result confirmed the picture gathered in case studies. Infrastructural shortcomings in project countries – if existent at all – were overcome.</p> <p>The final indicator for a negative project environment is corruption. In none of the three cases were serious issues concerning corruption identified. This picture is strongly confirmed by the survey results. 86.5 % of respondents strongly disagreed or disagreed on the question of whether corruption negatively influenced project outcomes. No one agreed or strongly agreed.</p> |
| <p>R 5 Quality of resources pooled in the PPP/services delivered in the PPP (match of expectations with actual performance)</p> | <p>A low level of active participation by the public partner in operational project work was identified. While the private partners did not necessarily rate this as a negative factor, the private partner at least in one case expected a higher degree of operational contribution from the public partner. Hence, the option of evaluating the actual performance of the public partner remained limited.</p> <p>In the survey, respondents were asked directly about their satisfaction with the performance of the public partner, i.e. the perceived quality of their contributed resources. The results were generally rather positive. 86.5 % of respondents agreed or strongly agreed on the question of whether they are generally satisfied with the public partner's performance (see figure 5.20).</p> |
| <p>R 6 Character, motivation and objectives of the partners</p> | <p>As a result of the case study analysis, it became clear that business interests (concrete short term interests as well as long term interests) constituted a major motivation of the private partner for participating in the projects. Public relation effects and a general CSR background were also mentioned as relevant motivations. Results from the survey confirmed this picture.</p> <p>Business related factors (generation of market information, preparation of market entry) were confirmed as motivation by high shares of respondents (see figure 5.15). The relevance of the project country as a potential sales</p> |

| | |
|---|--|
| | <p>market was confirmed as a motivation by 70.3 % of respondents.</p> <p>Furthermore, 59.3 % of respondents regarded the PPP project as part of the company's CSR involvement. The opportunity to use the PPP project for public relations purposes was rated as a relevant or highly relevant motivation by 45.9 % of respondents only. Nevertheless, only 21.6 % of respondents regarded this factor of little or very little relevance (see figure 5.15).</p> |
| R 7 Interest of the partners towards a long-term relationship, extending beyond the end of the PPP | <p>Due to the complexity of this question, it was not incorporated into the survey.</p> |
| R 8 Outcomes and effects of the PPP project | <p>In the case study analyses, the (planned) outcomes and effects of the projects were analysed in detail. Amongst other things, the likelihood of the creation of sustainable project effects was assessed with specific results for each project.</p> <p>In the survey, companies were asked about their expectations of the sustainability of project outcomes. The results were positive. 75.6 % of respondents expected project effects to remain in place or project content to be continued after the end of the subsidy period.</p> <p>However, this positive perception could only be finally validated in detail with follow-up research. However, such steps were out of the scope of this thesis.</p> |
| R 9 Regulations about the distribution of partnership gains | <p>Due to its uncritical role in case studies, this factor was not analysed in the survey.</p> |
| R 10 Resources in focus of the partners | <p>As stated earlier, the main contribution of the public partner in the case study projects was in the form of financial contributions. Operational contributions were limited. Nevertheless, the private partners focused on the local network as well as on knowledge about the specific project environment in the developing country.</p> <p>Companies were asked about the role of these factors in the survey as well. A positive picture on the existence of these factors was stated by respondents. 67.5 % of respondents agreed or strongly agreed that the public partners had detailed knowledge about the local project environment. 70.4 % of respondents agreed or strongly agreed that the public partner had a strong local network (see figure 5.20). Thus, it can be</p> |

| | |
|-------------------------------------|--|
| | <p>assumed that knowledge about local conditions as well as a sound local network on the part of the public partner constituted highly focused resources from the point of view of the private partner.</p> |
| R 11 Financial capital | <p>The overall private contributions to projects in the framework of the BMZ PPP facility mainly consisted of contributions in kind. This was illustrated in the three cases analysed.</p> <p>In the survey, private partners were asked to quantify the value of their contributions. The median value of the private contribution was € 200,000, the overall project volume (private + public contribution) was € 400,000 (based on a classification. see figure 5.14). The financial volumes of the surveyed projects thus were in line with the financial range of case study projects and illustrated the small-scale character of projects in the framework of the BMZ PPP facility.</p> |
| R 12 Human capital/knowledge | <p>In one of the three case study projects, the formation of human capital, i.e. the transfer of knowledge, constituted a main objective. In the other two projects, knowledge transfer played an important role amongst other objectives.</p> <p>In the survey, 77.8 % of respondents stated that their project caused an improvement of the educational qualifications of the local population. Further, 73.0 % of respondents stated that local jobs were created (see figure 5.24).</p> <p>These results illustrate that human capital formation did, from the point of view of respondents, take place in the majority of projects.</p> |
| R 13 Technology | <p>The transfer of technology played a central role in two of the three cases analysed and a minor role in the third case.</p> <p>In the survey, 69.7 % of respondents stated that a transfer of technology to the developing country took place in the project framework (see figure 5.24).</p> <p>This result illustrated, that, as in the case study analysis, technology transfer is a frequent effect in the type of projects surveyed.</p> |

Source: own illustration

5.5 SUMMARY OF STATISTICAL FINDINGS

In table 5.1, dependent and independent variables were listed and presumed statistical relationships were marked. These relationships were tested by various statistical methods. Results were outlined in chapter 5.3 and are summarised in table 5.3.

Table 5.3 Summary of statistical findings

| Dependent variables | Independent variables | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | PPP experience | | | | | | | | | |
| | Experience with implementing organisation | | | | | | | | | |
| | Company size | | | | | | | | | |
| | Commercial activity abroad | | | | | | | | | |
| | Commercial activity in developing country | | | | | | | | | |
| | Experience in project developing country | | | | | | | | | |
| | Project environment infrastructure | | | | | | | | | |
| | Project environment institutions | | | | | | | | | |
| | Importance of CSR in company | | | | | | | | | |
| CSR competence in company | | | | | | | | | | |
| Satisfaction with implement. org. | | x | | | | | x | x | | |
| Private financial project contribution | | | x | | x | | | | x | |
| Deviation from budget | x | x | | | | | x | x | | |
| Deviation from schedule | x | x | | | | | x | x | | |
| Sustainability of project results | x | | x | | | x | x | x | | |
| Overall project success | x | x | x | x | ✓ | x | x | x | | ✓ |
| Volume of PPP experience | | | x | | x | | | | x | x |
| Commercial activity in developing country | | | | | | | | | ✓ | |
| Willingness to get involved in development policy | | | | | x | | | | x | |

X = no relationship ✓ = relationship

Source: own illustration

Three assumed interconnections have been confirmed:

1. Commercial activity in developing country – Overall project success

By applying the Mann-Whitney U-test, it was found that companies with commercial activity (defined as the existence of subsidiaries in developing countries) significantly differ with regards to the evaluation of project success from companies without commercial activity in developing countries. Furthermore, a higher median rank illustrates that those companies with commercial activity in developing countries tend to give a higher evaluation of project success. The Median rank of the index to measure project success in companies with subsidiaries in developing countries is 24.34. The Median rank of the same index in case of companies without subsidiaries in developing countries is 14.93.

2. Importance of CSR in company – Commercial activity in developing country

Companies who ranked the importance of CSR as high, tend to be significantly more often commercially active in developing countries (measured by the existence of subsidiaries in developing countries) than those companies with a longer evaluation of the importance of CSR. This relationship has been confirmed by applying the Fisher exact test (p = 0.027).

3. CSR competence – Overall project success

A low to medium correlation between the evaluation of CSR competence in companies and the evaluation of overall project success was identified. This result was identified by applying a Spearman rank correlation test to the two variables ($r = 0.362$, $p = 0.028$).

5.6 CHAPTER CONCLUSION

The survey analysed in this chapter aimed at collecting data on the experience in and general view of private companies on PPPs in the framework of the BMZ PPP facility.

General aspects about participating companies, their experience in the PPP projects, their perceptions about outcomes and effects of projects as well as their view on CSR and other development related aspects have been collected.

Results have been outlined descriptively. Perceived relations between dependent and independent variables incorporated in the survey were tested statistically. Three statistical correlations have been found:

1. Commercial activity in developing country – Overall project success

This result might indicate that those companies who already have general experience in developing countries might be more familiar with the characteristic environment in this kind of country and thereby be better prepared to successfully implement a project in a developing country.

2. Importance of CSR in company – Commercial activity in developing country

This result might indicate that developing countries as potential location of activity and/or potential target market might be stronger in focus of CSR-aware companies. However, the opposite causality might just as well be the case, i.e. companies which are actually present in developing countries might be more aware of the need to get involved in CSR activities.

3. CSR competence – Overall project success

This interrelation might illustrate that CSR-aware companies might possess a skill set enabling a more successful project implementation in developing countries.

Finally, a selection of results was put in relation to the results of the case study analysis in chapter four, i.e. findings concerning selected research were discussed based on both empirical parts. The survey confirmed:

- that the existence of previous working experience should not be regarded as a key success factor for a PPP, i.e. a necessary condition for project success (research Item 1).
- that the implementing organisation played only a limited role during project processing (research item 2) but generally delivered a satisfactory performance (research item 5).
- that in the majority of cases, PPPs in the framework of the BMZ PPP facility could be designed in a way that allowed to overcome challenges in the micro and macro environment (research item 4).

- that business objectives were the main focus of private partners, complemented by objectives related to CSR and public relations (research item 6).
- that there was a rather high likelihood that project activities will be continued after official project end (research item 8).
- that a majority of private partners positively recognised the strong local network and knowledge about local conditions provided by the public partner (research item 10).
- that direct financial capital transferred via projects in the framework of the BMZ PPP facility was limited (research item 11), but a good share of PPP projects fostered the formation of human capital/knowledge transfer (research item 12) as well as the transfer of technology (research item 13).

As a concluding remark, one finding from the survey should be stressed in particular: 70.3 % of respondents stated that there would be no comparable activity by their company in the respective developing country without the existence of the BMZ PPP facility and the public subsidy. Only 18.9 % of respondents estimated that their company would have conducted comparable activities even without the BMZ PPP facility.

These figures illustrate that the main objective of the BMZ PPP facility has been reached, that is: private sector involvement in developing countries that otherwise would not have taken place was triggered by the means of public subsidies.

Several limitations apply when interpreting the results of the survey and the analysis of data.

First, the validity of data is limited due to the relatively low number of 37 respondents and further missing responses to some of the questions. Nevertheless, 37 responses equal an answer rate of about 15 % of all companies approached (250 companies in the GTZ database).

All conclusions drawn from the survey are theoretically limited to projects in the framework of the BMZ PPP facility. Due to the individual character of PPPs in this framework, generalisation of conclusions with regards to other types of PPPs is not possible.

Finally, a major limitation of the validity of results is the fact that the survey represents the view of the participating company, i.e. the private project partner, only. In contrast, the case study analysis in chapter four reflected the point of view of all partners involved. This was not the case in the survey. A direct and more detailed analysis of further PPP cases would enhance the validity of findings.

Generally, multiple sources of error might occur if an analysis is based on personal responses (e.g. a subjective distortion of reality).

6 CONCLUSION

In this thesis, PPPs in development cooperation were analysed from different angles. First, the framework was set by outlining development cooperation targets and tools in general. PPPs were positioned in this framework. Second, success mechanisms in partnerships were identified based on theoretical considerations.

Outcomes of both steps were taken into account in the two-fold empirical part. The first part comprised the study of three PPP cases conducted in the framework of the BMZ PPP facility. The second part comprised a survey amongst partners with direct experience from participating in a PPP project conducted in the framework of the BMZ PPP facility.

Key findings are summarised along three a priori formulated research questions. These questions build upon each other. They broaden the understanding of the subject step by step, from a positioning in the relevant framework to understanding functional mechanisms to finally approaching general conclusions concerning the overall performance of PPPs in development cooperation.

- **Research question 1: positioning of PPPs within development cooperation**

How can cooperative/private sector involving approaches in development cooperation be positioned in the framework of implementation channels in development cooperation?

PPPs are a tool to trigger and enable the interaction between public and private actors with convergent objectives in order to create “Win-Win” situations. Key targets of PPPs in development cooperation are the raising of private sector financial sources for development cooperation measures and the usage of skills and know-how of the private sector. PPPs are applied in various fields and on various scales. Frameworks for small-scale project level PPPs are dominant in the field of development cooperation, i.e. financial means leveraged by PPPs are by design limited. This is in particular relevant since FDI is a crucial factor for developing countries. In spite of limited volumes, PPPs can be regarded as a specific vehicle for FDI.

Callan and Davis (2013) summarised “[...] that the considerable potential of public-private partnerships for development is still largely unrealised” (Callan and Davis 2013: 53). Nevertheless, there is strong indication that PPP frameworks will remain on the agenda of development cooperation policy makers.

For example, in the OECD Paris Declaration on Aid Effectiveness 2005, five targets were formulated in order to increase aid effectiveness: ownership, alignment, harmonisation, managing for development results and mutual accountability (Klingebiel 2013: 59, OECD 2008b). In the subsequent forum in Busan 2011, the signing participating partners agreed, according to the OECD (2011), to “enable the participation of the private sector in the design and implementation of development policies and strategies to foster sustainable growth and poverty reduction“ (OECD 2011: 10).

A high level panel reviewing the effects of the Millennium Development Goals and their achievements formulated their vision on the Post-2015 development agenda. One aspect listed in the final report is

the objective to foster more precisely targeted financial flows from the private sector, generally using FDI as a replacement of aid and in particular to form “in country hubs of Public Private Partnerships” (UN 2013: 64).

Development cooperation policy makers seem to focus on PPPs due to:

- the actual positive performance of PPPs in delivering the targeted outcomes (as supported by the empirical findings of this thesis).
- the very mixed performance of “more traditional” development cooperation measures and the subsequent search for alternative and/or additional measures (see chapter 2.6.9).

The increasing number of PPP-focused initiatives (see chapter 3.3.5) further supports the outlook that PPPs have already become a fixed part of development cooperation policy. The PPP framework set up by the German BMZ is a particular long standing example.

Although several years of experience with PPPs in development cooperation exists, knowledge based on empirical research in the field is still limited. Furthermore, there is no specifically designed evaluation tool in place which can reliably address the question whether a partnership is the most effective way of implementing a certain project content or reach certain project objectives (Binder et al. 2007: 46).

To sum up, PPPs in development cooperation can be regarded as a fixed part of the development cooperation toolbox. The portfolio of existing PPP frameworks is diverse and likely to continue to evolve. In case of the BMZ PPP facility, the originally defined framework, i.e. eligibility criteria and the limited financial volumes, remained mostly unchanged since its establishment.

- **Research question 2: mechanisms within PPPs**

What characterises the PPP approach and which success factors are inherent?

Generally, the IOB (2013) summarised that “[...] systematic analysis of PPP performance could provide more insights in the success and failure factors underlying PPP effectiveness” (IOB 2013: 13).

This dissertation contributed to fill this research gap by focusing on the analysis of success factors in both empirical parts. Closely linked is the question about the reasoning behind establishing PPPs.

Reasoning for a public partner to get involved in PPPs or for establishing a framework to channel public resources to PPPs is, as mentioned above, the attempt to overcome known shortcomings of more traditional development cooperation measures and trigger (economic) development bottom-up.

Individual reasoning for a private partner to get involved is more complex. Likely, it comprises the search for additional funding, i.e. financial risk reduction, to follow commercial objectives in a rather risk prone local environment and/or with a complex project content.

The three case studies illustrated the complexity of projects. Proprietary (technical) know-how or skills played a key role. Furthermore, the organisational setting was complex. For example, even one level beyond the “official” contractual PPP arrangement between the public and the private partner, additional partners were integrated on the second level. Against the background of the complexity of the analysed cases (referring to e.g. content, organisation, contractual setup), the framework of the

BMZ PPP facility offered a rather “simple” setup. This means that there are for example no additional elements incorporated to take into account the specific subject of the PPP or there is no explicit option promoted to include further sub-contract partners besides the “official” PPP partner.

However, this “one fits all” setup seems not necessarily to be a disadvantage. The relatively large number of PPPs funded by the BMZ PPP facility might in fact illustrate that a less specific framework can trigger positive results by attracting a very diverse range of partners with very diverse project objectives.

The survey covered a snapshot on this diverse project landscape and delivered indications for key factors influencing a smooth project processing and/or a successful accomplishment of project objectives. As outlined in chapter five, they comprise:

- The existence of previous working experience amongst the partners is not a necessary condition for project success. This fact illustrates that the BMZ PPP facility obviously succeeded in acquiring new actors to get involved in development cooperation projects.
- The implementing organisation played only a limited role during project processing but generally delivered a satisfactory performance from the private partners’ point of view. In particular, a majority of private partners recognised the strong local network and knowledge about local conditions provided by the public partner.

The question could be raised if implementing organisations should make more use of the opportunity to generate valuable know-how by stronger operational involvement in projects. Since a key objective to integrate private partners in development cooperation projects is their efficiency, implementing organisations could benefit. They could themselves strengthen step by step their core competency in development cooperation project processing within the PPP framework and beyond. Even other development cooperation instruments hosted by the implementing organisations could benefit if the gained know-how would be shared internally.

- In the majority of cases, PPPs in the framework of the BMZ PPP facility could be designed in a way that allowed overcoming challenges in the micro and macro environment. Regarding the very diverse content and regional settings of the broad variety of PPPs, this finding can be rated very positively since challenging environments in developing countries seem, as an a priori assumption, likely to jeopardise project success as a whole. It might be interpreted that private partners/companies apply a thought through project design and are flexible to react on environmental challenges. An alternative interpretation might be that the dominating commercial interest of the involved companies serves as a “filter”, i.e. projects with little or no potential to overcome local environmental challenges (as far as known a priori) would not be established at all.

In spite of the commercial focus inherent in most projects, empirical findings in this thesis did not identify questions about revenue distribution as a particular issue. This finding has to be stressed since a comprehensive literature review of PPPs in development cooperation by IOB (2013) concluded that empirical studies in deed had a strong focus on resource sharing while at the same time showing a lagging focus on revenue distribution (IOB 2013: 3).

- Business objectives were the main focus of private partners, complemented by objectives related to CSR and public relations. Furthermore, the survey showed a correlation between CSR competency at private partners' side and the overall rating of the project success. This points out a potential key learning. It could be interpreted that the BMZ PPP facility does not attract just "any type of company" but might rather trigger the "next" step of involvement of companies/organisations in which a sense of social responsibility beyond pure business interests already exists.
- There was a rather high likelihood that project activities would be continued after official project end. Although this conclusion was based on the assumption of the survey respondents only, it is nevertheless a positive indicator concerning the sustainability of PPP projects, a key factor for evaluating their performance.
- The financial capital transferred via projects in the framework of the BMZ PPP facility was limited while at the same time, a good share of PPP projects fostered the formation of human capital/knowledge transfer as well as the transfer of technology.

These findings are highly relevant to draw conclusion about the actual performance of PPPs, i.e. research question 3.

- **Research question 3: practical performance of PPPs in development cooperation**
How does the PPP approach perform as an implementation tool for development cooperation and how do stakeholders profit from this approach?

As briefly outlined in chapter 2.6., "efficiency is a powerful concept." (BMZ 2011: 22). When approaching the question of a PPP's efficiency, it might be helpful to reduce the scope of analysis of PPPs to a cost benefit analysis of a PPP in comparison to a development cooperation intervention without private involvement.

As opposed to the analysis of other factors (e.g. sustainability), a solid efficiency analysis (at least in theory) shows indisputable facts (BMZ 2011: 22-23).

The first question to answer would be if the alternative situation, the delivery of comparable output without the specific PPP setup, would have been a feasible alternative at all. One key outcome of the survey is the confirmation (by 70.3 % of respondents, see figure 5.28) that the framework of the BMZ PPP facility triggered private sector involvement that would in the absolute majority of cases not have happened without the existence of the BMZ PPP facility.

The second question to answer would be if the alternative would have shown a more positive cost-benefit ratio in terms of welfare gain. This can only be indirectly answered. The aspects sustainability and relevance seem suitable to deliver information concerning the likelihood of an intervention performing efficiently (BMZ 2011: 23). As already outlined in the conclusion to research question two, a majority (75.0 %) of survey respondents stated that the project has been/will be continued after the end of the public promotion. This would be a positive outcome in terms of project sustainability, i.e. the creation of sustainable output and impact, having in mind that this is a subjective estimation by

respondents. However, again, due to a lack of directly comparable scenarios, no cost-benefit comparison can be done.

Third, the question of relevance should be addressed. Here, relevance could be understood as

A.) the fit of a PPP to a company in general and the mutual fit of the partners to the common objectives.

B.) the fact that the specific desired outcome has to be relevant to have a positive impact in the developing country.

Concerning A.), private partners gave a positive evaluation of the public partners' performance (see figure 5.20). About three quarters of respondents have observed synergies from the cooperation with the public partner and a majority confirmed a high fit of the PPPs objectives to the companies' objectives (see figure 5.23). In short, the tool PPP seems to be leading to the desired output and outcome.

Concerning B.), three quarters of the surveyed companies already conveyed commercial activities in the specific developing country prior to the PPP (see figure 5.10). This might be regarded as a factor increasing the likelihood of success of a measure due to regional knowledge etc. It might be postulated that the targeted outputs and outcomes, as precondition for positive impact, are likely to be achieved. As stated in chapter 2.6, the analysis of impact is in particular limited, amongst others since no direct participating observation has been conducted.

The final key aspects to analyse besides efficiency and relevance, in order to assess the overall potential of PPPs in development cooperation are volume and scalability.

Case studies, survey outcomes as well as official figures about the BMZ PPP facility illustrate that the overall volume of financial resources triggered is indeed limited. In short, PPPs in the specific setup of the BMZ PPP facility rather focus on the "quality of FDI" than on its quantity. With a median overall project value of € 400.000 (see figure 5.14) and a median private contribution of € 200.000 (see figure 5.12), the PPPs analysed in this thesis show – by design – a distinctly small-scale character. Having in mind the rather positive indications concerning relevance and sustainability of projects, it can be argued that PPPs at this point in time obtain a complementary character. The high specificity of content, as illustrated by the cases analysed in chapter 4, makes it seem unlikely that a rapid upscaling of the number of PPP projects occurs. More promising would rather be an upscaling of the financial volume of PPPs, which is presently still restricted. After having the PPP programme in place since 1999, the positive experience should be a motivation for public development policy decision makers, in particular the BMZ, to take larger and quicker steps to implement more and in particular financially more comprehensive projects.

Any kind of conclusions about what PPPs deliver for host countries on a macro level seem obsolete regarding the low levels of overall volumes. Measureable macro level impact is up to now unlikely.

The potential of PPPs on the micro level is clearly positive. As outlined further above in this conclusion, the "freedom" which the BMZ PPP facility provides to private partners to design projects in the most suitable way, incentivised by a commercial interest, can indeed give PPPs an advantage from the start. This is particular true for complex objectives, such as knowledge transfer or R&D. This is in line with outcomes of a meta-study by IOB (2013). It identified evidence on impact in particular in

activities “related to training and professional development, R&D support, knowledge sharing and leverage of technical and managerial expertise [...]” (IOB 2013: 13).

Attempts to measure the impact in the mid to long run are as complex as with all development cooperation measures. There is no evidence that the fact alone that a private company is involved guarantees per se that PPPs are more efficient in generating (sustainable) impact locally.

The conclusions drawn above are in line with other empirical research on PPPs. For example, the IOB (2013) summarised: “Since PPPs cannot be universally defined and they can include a variety of different organisational features, their selection finally depends in particular on a judgment regarding appropriateness and expected results that can be reached in any particular situation” (IOB 2013: 14).

All of the above illustrates that there is sufficient interest by the private sector concerning the offer by development agencies to set action in developing countries with a reduced level of (financial) risk. How big the potential overall volume of this type of arrangement is, remains open. There is however evidence that it is more than pure business interest triggering the involvement of private companies. It could be concluded that the scalability of programmes such as the BMZ PPP facility is limited not only by financial and organisational resources of the development agencies, but also by the number of companies willing and capable to get involved.

To sum up, PPPs in development cooperation seem a highly valuable complement to the existing range of development cooperation tools. The potential of PPPs in development cooperation has been realised in particular by European development policy makers as shown by the growing range of offered programmes. It is not the triggering of additional financial resources from the private sector only which determines PPP projects’ success – defined as the efficient delivery of project outcomes with the potential of mid to long term, sustainable positive impact – but rather a more complex set of factors. Typical PPP projects of the type analysed in the empirical parts deal with complex content in a rather challenging local environment. What might make PPP projects more likely to succeed on the levels of output and potentially impact is the existing commercial interest of the participating companies, be it direct (i.e. deriving from the project output) or indirect (e.g. deriving from reputational gains). The commercial interest represents a “filter” concerning the feasibility of projects. It applies since it can be assumed that companies following commercial interests would not get involved in projects that seem unlikely to generate the desired outputs, even if the commercial risk is reduced by cost sharing with a public partner. At the same time, the final impact of PPP projects is not per se higher, more sustainable or more congruent with development policy objectives, compared to non-PPP development cooperation projects.

Fields of further research

The latter mentioned statement triggers a point for further research. It might be argued that it is the role of the public development cooperation agency to extend the framework (within or outside of PPPs) in a way that the project output and outcomes specifically of PPP projects are transferred into more sustainable impact. As mentioned above, the “one fits all” character of the BMZ PPP facility does not specifically address this objective. Thus, further research could focus on an appropriate design of such an extended PPP framework. This could include in particular a combination with other existing developing measures, frameworks and channels of ODA. Incentives to involve the private partners beyond a strictly limited project time frame could be another factor. Further empirical research involving private companies and institutions with PPP experience seem to be a promising starting point to address these questions. Further empirical work to generate a better understanding of success and failure mechanisms within PPPs, similar to the type conducted in this thesis, seem to be a precondition.

7.1 STATISTICAL RESULTS IN DETAIL

7.1.1 TEST RESULTS

Table 7.1 Test results survey

| No. | Independent variable | Dependent variable | Test applied | Test result | Interpretation |
|-----|---|--|--------------------------------|--------------------------------|---|
| 1. | Company size | Private financial contribution | Spearman rank correlation test | $r = 0.227$ ($p = 0.246$) | No significant correlation between variables |
| 2. | Company size | Sustainability of project results | Spearman rank correlation test | $r = 0.114$ ($p = 0.543$) | No significant correlation between variables |
| 3. | Company size | Overall project success | Spearman rank correlation test | $r = 0.104$ ($p = 0.540$) | No significant correlation between variables |
| 4. | Company size | Volume PPP experience | Spearman rank correlation test | $r = 0.201$ ($p = 0.216$) | No significant correlation between variables |
| 5. | Experience with implementing organisation | Satisfaction with implementing organisation (unweighted index) | Mann-Whitney U-test | $p = 0.35$ | No statistically significant difference between the underlying distributions of variables |
| 6. | Experience with implementing organisation | Deviation from schedule | Fisher exact test | $p = 1.00$ | No statistically significant relationship between the variables |
| 7. | Experience with implementing organisation | Deviation from budget | Fisher exact test | $p = 0.103$ (one-sided) | No statistically significant relationship between the variables |
| 8. | Experience with implementing organisation | Overall project success (unweighted index) | Mann-Whitney U-test | $p = 0.937$ | No statistically significant difference between the underlying distributions of variables |

| | | | | | |
|-----|---|--|---------------------|--|--|
| 9. | Commercial activity abroad | Overall project success (unweighted index) | Mann-Whitney U-test | p = 0.528 | No statistically significant difference between the underlying distributions of variables |
| 10. | Commercial activity in developing countries (defined as subsidiary in developing country) | Private financial project contribution (classes) | Mann-Whitney U-test | p = 0.286 | No statistically significant difference between the underlying distributions of variables |
| 11. | Commercial activity in developing countries (defined as subsidiary in developing country) | Overall project success (unweighted index) | Mann-Whitney U-test | p = 0.007 <ul style="list-style-type: none"> • Median rank WITH subsidiary in dev. country: 24.34 • Median rank WITHOUT subsidiary in dev. country: 14.93 | H0 rejected: statistically significant difference between the underlying distributions of variables |
| 12. | Commercial activity in developing countries (defined as subsidiary in developing country) | Volume PPP experience (classes) | Mann-Whitney U-test | p = 0.14 | No statistically significant difference between the underlying distributions of variables |

| | | | | | |
|-----|---|--|--------------------------------|--|--|
| 13. | Commercial activity in developing countries (defined as subsidiary in developing country) | Willingness to get involved in development policy (1. Content-wise, 2. Finance-Wise) | Fisher exact test | 1. Content: p = 0.429 2. Finance: p = 0.697 | No statistically significant difference between the underlying distributions of variables |
| 14. | Experience in project-developing country | Sustainability of project results | Mann-Whitney U-test | p = 0.921 | No statistically significant difference between the underlying distributions of variables |
| 15. | Experience in project-developing country | Overall project success (unweighted index) | Mann-Whitney U-test | p = 0.095 | No statistically significant difference between the underlying distributions of variables |
| 16. | PPP experience | Deviation from budget | Fisher exact test | p = 0.869 | No statistically significant difference between the underlying distributions of variables (since p > 0,05) |
| 17. | PPP experience | Deviation from schedule | Fisher exact test | p = 1.000 | No statistically significant difference between the underlying distributions of variables (since p > 0,05) |
| 18. | PPP experience | Sustainability of project results | Spearman rank correlation test | r = 0.020 (p = 0.915) | No significant correlation between variables |
| 19. | PPP experience | Overall project success | Spearman rank correlation test | r = 0.030 (p = 0.862) | No significant correlation between variables |
| 20. | Project environment infrastructure | Satisfaction with IO (unweighted index) | Spearman rank correlation test | r = 0.142 (p = 0.993) | No significant correlation between variables |
| 21. | Project environ. infrastructure | Sustainability of project results | Spearman rank cor. test | r = 0.183 (p = 0.323) | No significant correlation between variables |

| | | | | | |
|-----|------------------------------------|--|---|--|---|
| 22. | Project environment infrastructure | Overall project success (unweighted index) | Spearman rank correlation test | $r = 0.117$ ($p = 0.293$) | No significant correlation between variables |
| 23. | Project environment infrastructure | Deviation from budget | Fisher exact test Spearman rank correlation test | $p = 0.075$ $r = -0.206$ ($p = 0.293$) | No statistically significant difference between the underlying distributions of variables No significant correlation between variables |
| 24. | Project environment infrastructure | Deviation from schedule | Fisher exact test | $p = 0.773$ | No statistically significant difference between the underlying distributions of variables |
| 25. | Project environment institutions | Satisfaction with IO (unweighted index) | Spearman rank correlation test | $r = 0.142$ ($p = 0.401$) | No significant correlation between variables |
| 26. | Project environment institutions | Sustainability of project results | Spearman rank correlation test | $r = 0.112$ ($p = 0.547$) | No significant correlation between variables |
| 27. | Project environment institutions | Overall project success (unweighted index) | Spearman rank correlation test | $r = 0.290$ ($p = 0.081$) | No significant correlation between variables |
| 28. | Project environment institutions | Deviation from budget | Fisher exact test | $p = 0.854$ | No statistically significant difference between the underlying distributions of variables |
| 29. | Project environment institutions | Deviation from schedule | Fisher exact test | $p = 0.947$ | No statistically significant difference between the underlying distributions of variables |
| 30. | Importance of CSR in company | Private financial project contribution | Spearman rank correlation test | $r = 0.314$ ($p = 0.104$) | No significant correlation between variables |

| | | | | | |
|-----|------------------------------|--|--------------------------------|--|---|
| 31. | Importance of CSR in company | Volume PPP experience | Spearman rank correlation test | $r = 0.037$ ($p = 0.893$) | No significant correlation between variables |
| 32. | Importance of CSR in company | Commercial activity in developing countries (defined as subsidiary in developing country) | Fisher exact test | $p = 0.027$ | H0 rejected: statistically significant relationship between variables |
| 33. | Importance of CSR in company | Willingness to get involved in development policy (1. as regards content, 2. as regards finance) | Fisher exact test | 1. Content: Test obsolete 2. Finance: $p = 1.000$ | 1. Content: Test obsolete, since answer "Yes" almost 100 % 2. Finance: No statistically significant difference between the underlying distributions of variables |
| 34. | CSR competence in company | Overall project success (unweighted index) | Spearman rank correlation test | $r = 0.362$ ($p = 0.028$) | Low correlation at significant level |
| 35. | CSR competence in company | Volume of PPP experience | Spearman rank correlation test | $r = 0.084$ ($p = 0.715$) | No significant correlation between variables |

Source: own illustration

7.1.2 CONSTRUCTION OF INDICES

To conduct statistical tests concerning the overall evaluation of project success as well as the overall satisfaction of private companies with the implementing organisation, indices have been constructed. Their construction is outlined below.

OVERALL PROJECT SUCCESS (Based on items outlined in figure 5.23)

The 3 indicators (OBJECTIVE; OBJECTIVE COMPANY; SUCCESS) have been combined to a new variable OVERALL PROJECT SUCCESS. These indicators have been tested for linear correlation with the sum of the remaining indicators by calculating the correlation coefficient Pearson's r . This correlation coefficient is suitable for quantitative scales (Mayer 2008: 119).

The value of Pearson's r ranges from -1 to +1. +1 indicates a strong positive correlation. Further, r^2 indicates to which degree the variance in the dependent variable is explained by the linear prediction from an independent variable (Mayer 2008: 120, Weisberg et al. 1996: 300).

Pearson's r larger than 0.4 is regarded as sufficient for applying an indicator for the formation of a new variable (Mayer 2008: 111).

As can be seen in table 7.2, Pearson's r for the selected indicators qualifies those indicators for the construction of a new variable OVERALL PROJECT SUCCESS.

Table 7.2 Items of new index OVERALL PROJECT SUCCESS, correlation of values

| Indicator | Based on item | r | r^2 |
|----------------------|---|--|-------|
| | | (corrected, i.e. correlation with the sum of the remaining 2 indicators) | |
| OBJECTIVE | The project objectives have been reached completely | 0.785 | 0.617 |
| OBJECTIVE COMPANY | The project objectives of my company have been reached completely | 0.872 | 0.760 |
| SUCCESS | Altogether, the PPP has been a success from the point of view of my company | 0.704 | 0.490 |

Source: own illustration

The new variable OVERALL PROJECT SUCCESS is constructed by summing up the values of the 3 variables listed above (see also figure 5.23). Since all three variables obtain the same amount of values, it is possible to form a new variable by simple summation to a new index.

SATISFACTION WITH IO (i.e. with performance of the implementing organisation/public partner)

(Based on items outlined in figure 5.20)

Similar to the test above, several items have been tested for correlation with the sum of the remaining items. The results in table 7.3 show that the item NETWORK indicates a Pearson's r smaller than 0.4. Therefore it is not included in the new index SATISFACTION WITH IO. The remaining 7 items are included in this index.

Table 7.3 Items of new index SATISFACTION WITH IO, correlation of values

| Indicator | Based on item | <i>r</i> | <i>r</i> ² |
|--|--|--|-----------------------|
| | | (corrected, i.e. correlation with the sum of the remaining 7 indicators) | |
| INFO IO | Prior to the project/in the planning phase of the project, the implementing organisation offered sufficient information about the preconditions of a PPP in general. | 0.456 | 0.208 |
| SUPPORT IO | The implementing organisation offered extensive support in the development/further development of the project idea. | 0.426 | 0.181 |
| DECISION IO | Decision making concerning operative and strategic questions in the PPP has been made in a cooperative manner together with the implementing organisation. | 0.733 | 0.537 |
| CONTACT IO | A contact person in the implementing organisation was available at any time. | 0.604 | 0.364 |
| BUREAUCRACY IO (reversed) | The way of working of the implementing organisation was bureaucratic. This impeded the cooperation. | 0.540 | 0.291 |
| KNOWLEDGE IO | The implementing organisation had detailed/extensive knowledge about the country the PPP took place in (e.g. concerning the respective sector, local legal system etc.). | 0.423 | 0.179 |
| GENERAL PERFORMANCE IO | Altogether, the performance of the implementing organization in the project was satisfying. | 0.661 | 0.437 |
| Not included in the new index SATISFACTION WITH IO: | | | |
| NETWORK IO | The implementing organisation has an extensive local network in the country the PPP took place in. | 0.290 | 0.084 |

Source: own illustration

7.2 LIST OF EXISTING DEVELOPMENT COOPERATION PPP PROGRAMMES

Examples for structured Public Private Partnership mechanisms

(Source: own research and Heinrich 2013)

Multi-donor funded mechanisms

- African Enterprise Challenge Fund
- <http://www.aecfafrica.org/>

Austrian Development Agency

- Business Partnership Programme
- <http://www.entwicklung.at/funding-and-tenders/business-partnerships/en/>

Australian Agency for International Development

- Enterprise Challenge Fund
- <http://www.enterprisechallengefund.org/>

Canadian Department of Foreign Affairs and International Trade

- Investment Cooperation Programme
- <http://www.tradecommissioner.gc.ca/eng/funding/investment-cooperation-program/home.jsp>

German Federal Ministry for Economic Cooperation and Development (BMZ)/ German International Cooperation (GIZ)

- DeveloPPP.de
- <http://www.developpp.de/>
- Africa Facility
- <http://www.giz.de/Themen/en/32712.htm>

Danish International Development Agency (Danida)

- Business Partnerships Programmes
- <http://um.dk/en/danida-en/activities/business/partnerships/>

Finland Ministry of Foreign Affairs

- Finnpartnership
- <http://www.finnpartnership.fi/www/en/index.php>

Netherlands Ministry of Foreign Affairs

- PPP Facility for Sustainable Entrepreneurship and Food Security
- <http://www.agentschapnl.nl/en/node/449190>
- Private Sector Investment Programme
- http://www.evd.nl/business/programmes/programmaint_psi.asp?land=psi

Norwegian Agency for Development Cooperation

- Matchmaking Facility
- <http://www.norad.no/en/attachment/106219/binary/5802?download=true>

Swedish International Development Agency (Sida)

- Business for Development: Innovations against Poverty
- <http://www.sida.se/English/Partners/Private-sector/Collaboration-opportunities/>

UK Department for International Development

- Business Innovation Facility
- <http://businessinnovationfacility.org/>
- Responsible and Accountable Garment Sector Challenge Fund
- <http://www.dfid.gov.uk/Working-with-DFID/Funding-opportunities/Business/Responsible-and-Accountable-Garment-Sector-RAGS-Challenge-Fund-/>
- Food Retail Industry Challenge Fund
- <http://www.dfid.gov.uk/work-with-us/funding-opportunities/business/frich/>

7.3 LIST OF INTERVIEWS

| Interviewee | Organisation | Topic | Date |
|------------------------|---|--------------|------------------|
| Ralph Greiner | Project Lead Daimler AG, Stuttgart | PPP Abaca | 13 December 2007 |
| Prof. Werner Mühlbauer | (at that time) Director of Institute for Agricultural Engineering in the Tropics and Subtropics, University of Hohenheim, Stuttgart | PPP Abaca | 24 January 2008 |
| Claus-Peter Hutter | Academy for Nature Preservation and Environmental Protection, Stuttgart | PPP Abaca | 10 December 2007 |
| Winfried Degen | Fuel Research Daimler AG, Stuttgart | PPP Jatropha | 10 June 2008 |
| Prof. Klaus Becker | (at that time) Director, Centre for Agriculture in the Tropics and Subtropics University of Hohenheim, Stuttgart | PPP Jatropha | 16 November 2007 |

| | | | |
|--------------------|--|---------------------------------------|------------------------------------|
| Arregasch Asfaw | Project Manager East and South Africa GTZ, Eschborn | PPP Vocational Training Centre | 11 July 2008 |
| Fabio Bela | International Training Consultant Daimler AG, Stuttgart | PPP Vocational Training Centre | 23 January 2008 2 November 2008 |
| Anita Duscha | DEG, Köln | PPPs in general / BMZ PPP facility | 26 February 2008 |
| Peter Peters | DEG, Köln | PPPs in general / BMZ PPP facility | 26 February 2008 |
| Jörg Hartmann | Head of PPP Office GTZ, Eschborn | PPPs in general / BMZ PPP facility | 27 June 2008 |
| Susanne Sattlegger | sequa GmbH, Bonn | PPPs in general / BMZ PPP facility | 19 May 2008 |

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7.6 ABBREVIATIONS

BMZ: German Federal Ministry for Economic Cooperation and Development

BOO: Build-own-operate

BOOT: Build-own-operate-transfer

BOT: Build-operate-transfer

CSMCRI: Central Salt & Marine Chemicals Research Institute

CSR: Corporate Social Responsibility

DAC: Development Assistance Committee

DCED: Donor Committee for Enterprise Development

FDI: Foreign Direct Investment

GDP: Gross Domestic Product

GNI: Gross National Income

HDI: Human Development Index

IBRD: International Bank for Reconstruction and Development

IMF: International Monetary Fund

IO: Implementing Organisation

LDC: Least Developed Country

MDG: Millennium Development Goal

MNC: Multinational Corporation

NIE: New Institutional Economics (NIE)

ODA: Official Development Assistance

OECD: Organisation for Economic Co-operation and Development

PFI: Private Finance Initiative

PPP: Public Private Partnership

R&D: Research and Development

UN: United Nations

UNDP: United Nations Development Programme

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