



KENTUCKY TRANSPORTATION CENTER

**PRIVATIZING TRANSPORTATION THROUGH
PUBLIC-PRIVATE PARTNERSHIPS:
DEFINITIONS, MODELS, AND ISSUES**



UNIVERSITY OF KENTUCKY
College of Engineering



OUR MISSION

We provide services to the transportation community
through research, technology transfer and education.

We create and participate in partnerships
to promote safe and effective
transportation systems.

OUR VALUES

Teamwork

Listening and communicating along with
courtesy and respect for others.

Honesty and Ethical Behavior

Delivering the highest quality
products and services.

Continuous Improvement

In all that we do.

For more information or a complete publication list, contact us at:

KENTUCKY TRANSPORTATION CENTER

176 Raymond Building
University of Kentucky
Lexington, Kentucky 40506-0281

(859) 257-4513
(859) 257-1815 (FAX)
1-800-432-0719
www.ktc.uky.edu
ktc@engr.uky.edu

The University of Kentucky is an Equal Opportunity Organization

**Research Report
KTC-06-09/SPR302-05-2F**

**Privatizing Transportation through Public-Private Partnerships:
Definitions, Models, and Issues**

by

Juita-Elena (Wie) Yusuf
Candice Y. Wallace
Merl Hackbart

Kentucky Transportation Center
College of Engineering
University of Kentucky
Lexington, Kentucky

in Cooperation with
Transportation Cabinet
Commonwealth of Kentucky

The contents of this report reflect the views of the authors who are responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the views or policies of the University of Kentucky, the Kentucky Transportation Cabinet, nor the Federal Highway Administration.

May 2006

1. Report No. KTC-06-09/SPR302-05-2F	2. Government Accession No.	3. Recipient's Catalog No	
4. Title and Subtitle Privatizing Transportation through Public-Private Partnerships: Definitions, Models, and Issues		5. Report Date May 2006	
		6. Performing Organization Code	
7. Author(s) Juita-Elena (Wie) Yusuf, Candice Y. Wallace & Merl Hackbart		8. Performing Organization Report No. KTC-06-09/SPR302-05-2F	
9. Performing Organization Name and Address Kentucky Transportation Center College of Engineering University of Kentucky Lexington, KY 40506		10. Work Unit No. (TRAIS)	
		11. Contract or Grant No. SPR302	
12. Sponsoring Agency Name and Address Kentucky Transportation Cabinet State Office Building Frankfort, KY 40622		13. Type of Report and Period Covered Final Report	
		14. Sponsoring Agency Code	
15. Supplementary Notes Prepared in cooperation with the Kentucky Transportation Cabinet			
16. Abstract <p>There has been greater emphasis in recent times on using public-private partnerships (PPPs or P3s) to provide and deliver transportation infrastructure and services. These public-private partnerships differ from contracting out, being applicable to a broader range of projects and requiring different contract management and accountability. In the transportation arena the focus on public-private partnerships has resulted from both the need for greater reliance on private capital to fund critical infrastructure and services and the need to tap private sector expertise to ensure delivery of high quality infrastructure and services on time and on budget. This report serves as a primer on public-private partnerships for the delivery of transportation infrastructure and services. It provides an overview of the concept of public-private partnerships, presenting a broad definition of the privatization approach, comparing it to contracting out, and discussing a theoretical framework for understanding why, when and how partnerships are appropriate as a privatization strategy. The report also reviews six public-private partnership models – design bid build, private contract fee services, design build, design build operate maintain or build operate transfer, design build finance operate, and build own operate – identified by the Federal Highway Administration as available for use by transportation agencies considering privatizing transportation projects. Adopting a public-private partnership involves two important decisions – (1) the decision to privatize via a public-private partnership; and (2) the decision on which partnership model to adopt – which are also addressed. This report also discusses key issues and factors necessary for successful transportation public-private partnerships and provides a glossary of terms as a reference for understanding the terminology and language of privatization and public-private partnerships.</p>			
17. Key Words Privatization, public-private partnerships, transportation infrastructure		18. Distribution Statement Unlimited	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 55	22. Price

Table of Contents

List of Figures	2
List of Tables	2
Executive Summary	3
Chapter 1: Introduction and Background.....	8
1.1 Introduction.....	8
1.2 Public and Private Goods and Services	9
1.3 Privatizing the Delivery of Public Goods and Services.....	9
1.4 Public-Private Partnerships as a Privatization Approach.....	13
1.5 Project Overview	14
Chapter 2: Understanding PPP	17
2.1 Defining the Public-Private Partnership	17
2.2 Public-Private Partnerships and Contracting Out	18
2.3 Advantages and Disadvantages of Public-Private Partnerships.....	20
2.4 Theoretical Framework for Understanding Public-Private Partnerships	21
Chapter 3: Public-Private Partnership Models.....	24
3.1 FHWA Public-Private Partnership Models.....	24
3.2 Design Bid Build (DBB).....	25
3.3 Private Contract Fee Services (PCFS)	28
3.4 Design Build (DB)	29
3.5 Build Operate Transfer (BOT).....	30
3.6 Design Build Operate Maintain (DBOM).....	31
3.7 Design Build Finance Operate (DBFO).....	32
3.8 Build Own Operate (BOO)	33
Chapter 4: Public-Private Partnership Decision Factors.....	35
4.1 Deciding to Privatize.....	35
4.2 Deciding on the Public-Private Partnership Approach	38
Chapter 5: Key Issues and Critical Success Factors	40
5.1 Challenges for Successful Privatization through Public-Private Partnerships .	41
5.2 Process Factors.....	42
5.3 Partner Factors	43
5.4 Structural Factors	44
Chapter 6: Summary and Conclusion	49
References.....	51
Appendix A: Glossary of Terms	55

List of Figures

Figure 1.1. Continuum of Goods and Services.....	9
Figure 1.2. The Extent of Privatization in State Departments of Transportation.....	11
Figure 1.3. Cost Savings from Privatization of Transportation Infrastructure and Services.....	12
Figure 1.4. Methods Used to Privatize State Programs and Services.....	14
Figure 1.5. Public-Private Partnership Process and Critical Decision Points.....	15
Figure 2.1. Contracting Out as a Subset of Public-Private Partnership.....	18
Figure 2.2. Accountability as an Increasing Function of Project Specificity	22
Figure 3.1. FHWA Public-Private Partnership Models	24
Figure 3.2. Design Bid Build Model	28
Figure 3.3. Private Contract Fee Services Model.....	29
Figure 3.4. Design Build Model.....	29
Figure 3.5. Build Operate Transfer Model	30
Figure 3.6. Design Build Operate Mountain Model.....	31
Figure 3.7. Design Build Finance Operate Model.....	32
Figure 3.8. Build Own Operate Model.....	33

List of Tables

Table 2.1. Key Differences between Public-Private Partnership and Contracting Out.....	19
Table 2.2. Summary of Advantages and Disadvantages of Public-Private Partnerships	20
Table 2.3. Characteristics of a Typical Public-Private Partnership	21
Table 2.4. Characteristics of Competitive Bidding and Negotiated Contracts.....	23
Table 3.1. Summary of Public-Private Partnership Models for Delivery of Transportation Projects	26
Table 3.2. Summary of Characteristics of the Public-Private Partnership Models	27
Table 4.1. Strategic Framework for the Privatization Decision	37
Table 4.2. Summary of Decision Factors and Appropriate Public-Private Partnership Models ..	39
Table 5.1. Summary of Key Issues and Critical Success Factors for Partnerships	42
Table 5.2. Key Elements of Performance Contracts	47

Executive Summary

Introduction and Background

While contracting out has been the predominant method of privatization, there has been greater emphasis in recent times on using public-private partnerships (sometimes referred to as PPPs or P3s) instead. These public-private partnerships differ from contracting out, as they are characterized more by “a commitment between public and private actors ... in which partners develop products together and share risks, costs, and revenues” (Klijn & Teisman 2000, p. 85).

In the transportation arena the focus on public-private partnerships has resulted from both the need for greater reliance on private capital to fund critical infrastructure and services and the need to tap private sector expertise to ensure delivery of high quality infrastructure and services on time and on budget. Public-private partnerships have been increasingly used to expand private sector involvement in the provision and delivery of transportation projects. Privately-operated, and sometimes privately-built and privately-owned, airport and rail terminals, tollroads, and bridges or tunnels have become more and more common.

This report serves as a primer on public-private partnerships for the delivery of transportation infrastructure and services. Chapter 2 provides an overview of the concept of PPPs, providing a broad definition of the concepts, comparing it to contracting out, and discussing a theoretical framework for understanding why, when and how public-private partnerships are appropriate as a privatization strategy. Chapter 3 reviews six public-private partnership models – design bid build, private contract fee services, design build, design build operate maintain or build operate transfer, design build finance operate, and build own operate – identified by the Federal Highway Administration as available for use by transportation agencies considering privatizing transportation projects. Adopting a public-private partnership involves two important decisions which are addressed in Chapter 4. These decisions are: (1) the decision to privatize via a public-private partnership; and (2) the decision on which partnership model to adopt. Chapter 5 concludes by discussing key issues and factors necessary for successful transportation public-private partnerships. This report also provides a glossary of terms (Appendix A) as a reference for understanding the terminology and language of privatization and public-private partnerships.

Understanding Public-Private Partnerships

In this report, public-private partnerships are defined as collaborations involving actors and/or funding from business, nonprofit, and government organizations, where costs, risks, resources and skills are shared in jointly-developed projects that mutually benefit the partners and the community being served. Public-private partnerships are more

encompassing than contracting out. While contracting out can be thought of as a subset or subcategory of public-private partnerships, it represents one extreme of public-private partnership options, in which private sector involvement is more limited and the government agency has greater decision-making authority. The next table summarizes the key differences between public-private partnerships and contracting out.

Key Differences between Public-Private Partnerships and Contracting Out

Characteristics	Public-Private Partnership Options with Greater Private Sector Participation	Contracting Out
Decision-making and production/ delivery responsibility	<input type="checkbox"/> Government and private agencies are involved in joint decision-making and joint production and delivery.	<input type="checkbox"/> Government agency defines the problem, decides on level of service or production, specifies the solution and selects a private company to produce results. <input type="checkbox"/> Private sector decides on how to produce results in most efficient manner given constraints imposed by the government agency.
Primary benefits	<input type="checkbox"/> Benefits of partnership arrangements principally involve increasing effectiveness (synergy, expertise and enrichment of output).	<input type="checkbox"/> Benefits of contractual agreements principally involve quicker and cheaper production or delivery of output.
Management structure	<input type="checkbox"/> Based on the principles of process management because of joint goals, decision-making, financing, and production.	<input type="checkbox"/> Based on the principles of project management because there are clear goals and well-defined project specifications.
Public-private interactions	<input type="checkbox"/> Mutual trust is crucial for a lasting relationship between partners that maintain their own interests, work styles, accountability and financing principles.	<input type="checkbox"/> Contractual transparency regarding the rules of tendering, selection and delivery, and rules of inspection and monitoring is crucial for a good working relationship.

There are two fundamental issues inherent in privatization and public-private partnerships. The first is the problem of adverse selection or selecting the wrong private partner. The second is the problem of moral hazard, which, because of the government’s inability to observe at all times the behavior of the private partner, poses the possibility of the private partner shirking its responsibilities. Both problems are related to three important aspects of public-private partnerships: (1) project specificity; (2) desired accountability; and (3) private partner selection. Four components of the project – input, output, outcome, and payment – dictate the extent to which the project can be specified and the appropriateness of privatization and public-private partnership approaches. Accountability, in turn, is a function of project specificity. As the degree of specificity increases, the government agency can hold its private partner to greater accountability standards. Unlike contracting out, some partnership projects require that partner selection be based on negotiation, with the partnership arising more as a negotiated contract than from competitive bidding or tendering.

Public-Private Partnership Models

The Federal Highway Administration defines seven partnership models that can be organized along a spectrum from greater public responsibility to greater private responsibility. These models, ranging from greater public responsibility to greater private responsibility, are: (1) design bid build; (2) private contract fee services; (3) design build; (4) build operate transfer; (5) design build operate maintain; (6) design build finance operate; and (7) build own operate. The important characteristics of these partnership models are summarized in the next three tables.

Private Partner Responsibilities

Partnership Model	Private Partner Responsibilities			
	Design	Construction	Operations	Maintenance
Design Bid Build	X	X		
Private Contract Fee Services	X	X		
Design Build	X	X		
Build Operate Transfer or Design Build Operate Maintain	X	X	X	X
Design Build Finance Operate	X	X	X	X
Build Own Operate	X	X	X	X

Note: In all models, the government agency is responsible for right-of-way and eminent domain issues.

Government Partner Responsibilities

Partnership Model	Government Agency Responsibilities			
	Operations	Maintenance	Fiscal/ Payment	Monitoring
Design Bid Build	X	X	X	Low
Private Contract Fee Services			X	Low
Design Build	X	X	X	Low
Build Operate Transfer or Design Build Operate Maintain			X	Medium
Design Build Finance Operate				High
Build Own Operate				Low

Note: In all models, the government agency is responsible for right-of-way and eminent domain issues.

Infrastructure Ownership and Financing Sources

Partnership Model	Infrastructure Ownership	Financing Source
Design Bid Build	Government	Government
Private Contract Fee Services	Government	Government
Design Build	Government	Government
Build Operate Transfer or Design Build Operate Maintain	Private ownership for duration of contract, then reverts to the government	Primarily government financing with some private financing
Design Build Finance Operate	Private ownership for duration of contract, then reverts to the government	Primarily private financing with some government financing
Build Own Operate	Private	Private

Public-Private Partnership Decision Factors

This report provides a strategic framework, in the form of a set of questions, for government agencies to decide if privatization via a public-private partnership is appropriate. This framework is presented in the next table.

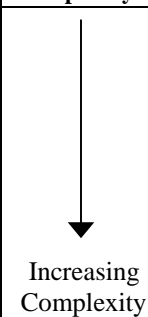




Strategic Framework for the Privatization and Public-Private Partnership Decision

Key Question	Impact on Decision to Privatize
1. What are the goals and constraints of the privatization initiative being considered?	<input type="checkbox"/> Privatization is more appropriate if goal is improved and/or innovative goods and services. <input type="checkbox"/> Political, social or cultural constraints complicate but do not preclude privatization.
2. To what extent must the government agency be involved in the tasks or activities?	<input type="checkbox"/> Privatization should be considered if ends matter to the exclusion of means. <input type="checkbox"/> If extensive government input is continuously required, privatization becomes less viable.
3. Does the government agency have the capacity to perform the tasks?	<input type="checkbox"/> Having the government capacity to produce some of the goods or services makes privatization a viable solution.
4. How measurable are the outputs and outcomes of the proposed privatization initiative?	<input type="checkbox"/> If objective and measurable output and outcomes can be easily identified and collected, privatization should be considered.
5. How capital intensive are the project's activities?	<input type="checkbox"/> As the costs and up-front capital needs increases, privatization becomes less feasible. <input type="checkbox"/> If the government agency seeks private financing, privatization via a public-private partnership may be a good solution. <input type="checkbox"/> Privatization is easier when the activity or service approximately covers its costs.
6. What is the impact if the task or activity is performed poorly?	<input type="checkbox"/> If the impact of poor performance is irreversible or reversible at a high cost, privatization should not be considered. <input type="checkbox"/> If there are serious political, social, economic, or environmental impacts of service failure, privatization should not be considered.

Once the decision has been made to pursue privatization via a public-private partnership, the government agency faces the difficult problem of deciding on which public-private partnership approach to adopt.

The decision on which partnership model to adopt should be made based on several criteria, including: (1) the source of financing; (2) the complexity of tasks involved; (3) the degree of project specificity; and (4) the basis for private partner selection. These decision criteria and the appropriate public-private partnership models given these criteria are summarized in the next table.

Public-Private Partnership Model Decision Criteria

Public-Private Partnership Model	Source of Financing ^(a)	Task Complexity	Relative Project Specificity			Private Partner Selection
			Inputs	Outputs	Outcomes	
<input type="checkbox"/> Design Bid Build	G	 Increasing Complexity	High	 Easily identified & measured	Simple & quantitative	 Competitive Tendering
<input type="checkbox"/> Private Contract Fee Services	G		 Low		 Complex & qualitative	
<input type="checkbox"/> Design Build	G					
<input type="checkbox"/> Build Operate Transfer or Design Build Operate Maintain	G/P					
<input type="checkbox"/> Design Build Finance Operate	P/G					
<input type="checkbox"/> Build Own Operate	P					

- (a) G – purely government financing;
 P – purely private financing;
 G/P – primarily government financing with some private financing;
 P/G – primarily private with some public financing.

Key Issues and Critical Success Factors

Public-private partnership initiatives involve a range of skills, experiences, and resources to deliver the required infrastructure or service. Successful partnerships require a shift in the roles of the government agency. Rather than being the independent and only provider of the public goods and services, government agencies become partners who must be smart and prudent in their dealings with the private partner that ultimately provides the goods and services. Government agencies must adopt what Fossett et al. (2000) refer to as “prudent purchasing” or what Kettl (1993) calls “smart buying.”

This report discusses key issues and critical success factors for effective and successful privatization through public-private partnerships. These can be organized into three categories: (1) process factors, which must be addressed and considered before structuring a partnership; (2) partner factors, which are the relevant factors for selecting the right partner(s) and developing a relationship with these partner(s); and (3) structural factors which are related to how the partnership is structured, put together, and managed. The next table summarizes the three categories.

Three Categories of Success Factors

Process Factors	Partner Factors	Structural Factors
<input type="checkbox"/> Provide economic rationale for private sector involvement. <input type="checkbox"/> Create institutional support and infrastructure for collaborative efforts.	<input type="checkbox"/> Carefully design and consistently implement the partner selection process. <input type="checkbox"/> Develop the necessary relationships to pursue the agreed-on common goal.	<input type="checkbox"/> Clearly delineate roles and responsibilities <input type="checkbox"/> Adopt performance-based contracting. <input type="checkbox"/> Enforce effective contract accountability.

Chapter 1: Introduction and Background

1.1 Introduction

Privatization via public-private partnerships (sometimes referred to as PPPs or P3s) has increasingly become a policy option for government agencies struggling to provide public goods and services to expanding service populations with dwindling resources. Public-private partnerships are seen more and more as viable solutions to this problem of increasing service needs in the face of what Osborne and Hutchinson (2004) term a “permanent fiscal crisis.” In the transportation arena, the popularity of public-private partnerships can be attributed to many factors, including innovation and new technology, the need for private sector expertise, and the potential for private funding.

In this study, public-private partnerships are defined as collaborations involving actors and/or funding from business, non-profit and government organizations where the costs, risks, resources and skills are shared in jointly-developed projects that mutually benefit the partners and the community being served. However, the collaborative nature of the partnerships, coupled with joint decision-making and joint production, make them appear complex and confusing. Many government agencies that have been considering public-private partnerships may have turned away from using partnerships for reasons such as lack of understanding of public-private partnerships, confusion over the many partnership options available, and inability to make the distinction between public-private partnerships and other privatization methods.

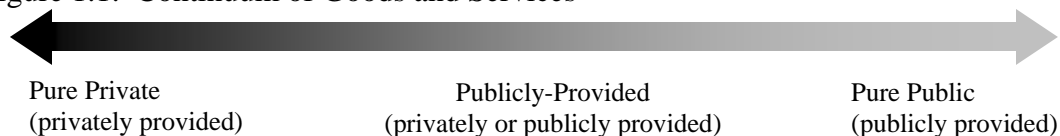
This study is intended to provide an overview of public-private partnerships as a tool for delivering transportation infrastructure and services. This report summarizes the findings of this study, providing a primer on public-private partnerships and how they can be effectively and successfully utilized. There are many issues, at several levels, that are addressed in this discussion of public-private partnerships. Broad conceptual issues particularly relate to the distinction between public and private goods. Specifically, which goods should be provided by the public sector, by the private sector, and under what circumstances can the delivery of public goods be undertaken by the private sector? In contrast, narrower policy issues pertain to the reasons behind privatization or the goals of privatization and the subsequent decision to adopt public-private partnerships as a policy solution. At the micro level, project-specific issues involve factors and elements critical for the successful implementation and execution of public-private partnerships.

This introductory chapter addresses the broad conceptual issues associated with privatization and public-private partnerships. Chapter 2 provides a theoretical discussion of public-private partnerships as a tool for achieving privatization policy goals and Chapter 3 reviews partnership options available given these policy goals. Chapters 4 and 5 examine the micro issues, analyzing the privatization and public-private partnership decisions and identifying critical factors for successful partnerships.

1.2 Public and Private Goods and Services

Goods and services can be defined along a spectrum or continuum, with three broad categories: (1) private, (2) public, and (3) publicly-provided (see Figure 1.1). At one end of the spectrum are pure private goods that are excludable and rivalrous in consumption. Because of these two characteristics, the private market does a good job of adjusting the supply to the demand, and there is virtually no rationale for public intervention. At the other end are pure public goods and services, the use of which is strongly nonexcludable and nonrivalrous. The supply or provision of such goods and services are typically through collective nonmarket action. Although it is possible to conceive of ways in which the private sector may provide pure public goods and services (Coase 1960), the transaction costs of creating sufficient excludability to ensure the feasibility of private supply and the absence of free ridership are higher than the costs of direct public provision for all users (Sclar 2000). Somewhere in the center of the spectrum are publicly-provided goods and services. These publicly-provided goods and services are often sufficiently excludable and rivalrous that they can be provided, to some degree, by both public and private means. However, these types of goods and services often generate externalities, either in the form of external costs or benefits not directly quantifiable for the single user. Public intervention is often warranted in the case of externality-generating goods and services as these externalities occur outside the marketplace and do not play a role in private market calculations. Public subsidies, for example, can ensure that the more beneficial goods and services (those generating external benefit) are sufficiently produced and those generating external costs produced less frequently or not at all. In this report, the term “public goods and services” will refer both to purely public and publicly-provided goods and services. However, a publicly-provided good does not necessarily have to be directly provided by the public sector. In fact, when a good or service falls in this middle category, the issue of how it is provided is not a simple matter. It is for this reason that publicly-provided goods are more often the principal focus of privatization efforts than are purely public goods.

Figure 1.1. Continuum of Goods and Services



1.3 Privatizing the Delivery of Public Goods and Services

Over the past two decades there has been a worldwide movement away from government provision to government procurement of public goods and service. Economic theory suggests that clear profit motives drive the private sector to be more efficient in the provision of goods and services, compared to the public sector. However, the private sector, because of this profit maximizing constraint, may underproduce or underprovide public goods and services. In the case of the privatization of public goods and services

delivery, the challenge for government agencies is to define the optimal level of good or service provision – which many times is not the market-driven level – and given this production level determine the extent to which the private sector can provide the goods and services with greater efficiency or effectiveness than the public sector. The primary question that must be addressed by policymakers and public managers are: (1) how much public goods and services to provide? and (2) how to provide these public goods and services?

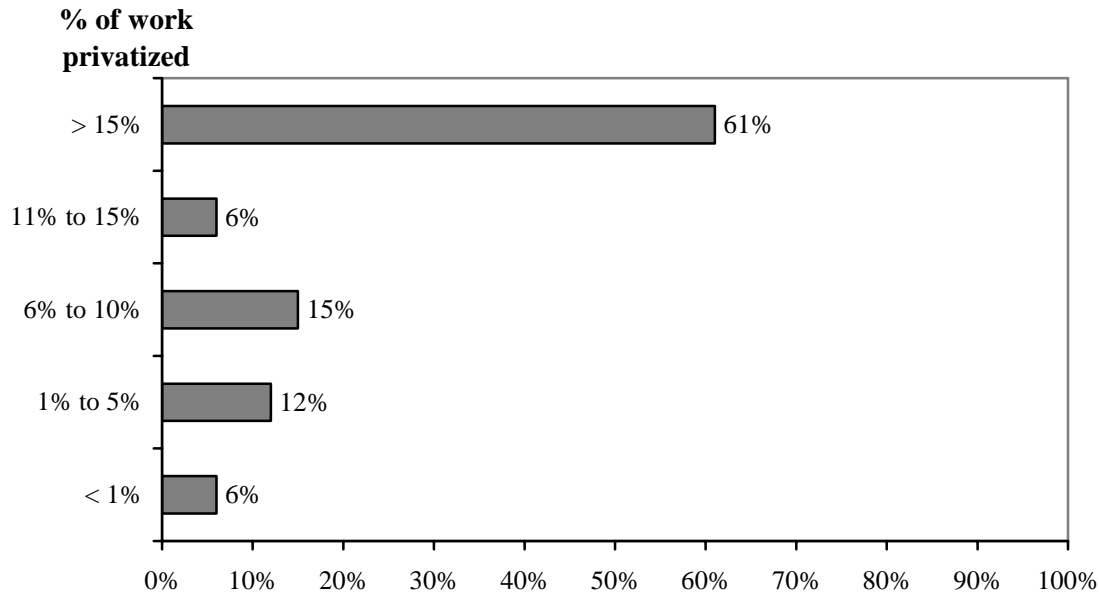
The decision regarding the optimal level of public goods and services often results from negotiations between elected officials, public administrators and, sometimes, the private sector. Within the transportation arena, this determination occurs in different ways. Air travel, for example, while part of a government-regulated industry, is determined by the privately-owned airlines who define their own service capacity. Optimal levels of road and highway infrastructure, in contrast, is determined by the federal and state departments of transportation without much input from the private sector. Both public and private entities are involved in determining optimal rail capacity and utilization. For the purpose of this report, it is sufficient to note that defining how much public goods and services to provide is, in itself, a complex process, but one that is beyond the scope of this study.

There are three streams of literature that explain the movement by government agencies toward privatizing the delivery of public goods and services. The public choice literature argues that the production by the private sector tends to be more efficient than production by the government sector. The absence of the competitive marketplace and the subsequent lack of a profit motive and bottom line cause government bureaucracy to be less efficient than the private sector. This “inefficiency is an inherent characteristic of municipal bureaucracies because of the incentive structures that encourage empire building and overproduction” (Greene 1996, p. 633). The stream of literature on the “the competition prescription” (Kettle 1993; Osborne & Gaebler 1992), on the other hand, suggests that competition – for market share, functions, or resources – inspires efficiency. The monopolistic habits of government agencies, therefore, introduce organizational waste and subsequently results in inefficient production and delivery of goods and services. Donahue (1989, p. 78), for example, argues that “[p]ublic versus private matters, but *competitive versus noncompetitive* usually matters more.” For both the public choice and competition literature, private delivery of public goods and services, therefore, can result in more efficient provision of such goods and services.

Cohen (2001) argues for “functional matching,” which assumes that in “the absence of monopoly, certain functions are most efficiently and *effectively* performed by the private sector, others by the nonprofit sector, and others by government... where accountability is a critical value in the execution of a program, that program tends to be best implemented directly by government” (p. 434). This approach describes privatization of public goods and services delivery as being more appropriate – from efficiency and effectiveness perspectives – under certain circumstances than the public delivery of these goods and services by government agencies.

Research by the Council of State Governments show that privatization has become widespread among state agencies in the U.S. A survey of state departments of transportation (DOTs), for example, found that close to two-thirds of participating DOTs privatized 15% or more of their work; other government agencies reported similar use of privatization (Chi et al. 2004).

Figure 1.2. The Extent of Privatization in State Departments of Transportation



Source: Created by Research Team from data in Chi et al. (2004), Table C p. 480.

Contracting out has been the predominant approach to the privatization of public goods and services in the U.S. Brudney et al. (2005) report that more than 70% of state agencies engage in contracting out. More than 30% contract for work equivalent to less than 5% of their budget; 55% contract for 10% or less of their budget; and 17% contract for 40% or more of their budget.

Why have government agencies pursued privatization? The chief motivation for contracting out has been the desire by state and local officials to enhance the efficiency of the delivery of traditionally publicly-provided goods and services (Greene 2002). Privatization was seen as an option to increase efficiency by reducing the cost of delivering public goods and services and improving the quality of delivery and provision of these goods and services. For example, a 1995 survey of privatization of municipal services in 100 of the largest U.S. cities found that reducing costs and improving services were the two most important factors in the decision to privatize (Dilger et al. 1997).

Cost Savings

Dilger et al. (1997) found that estimated cost savings from privatization range from a low of 16% for municipal support functions to a high of 21% for public works and

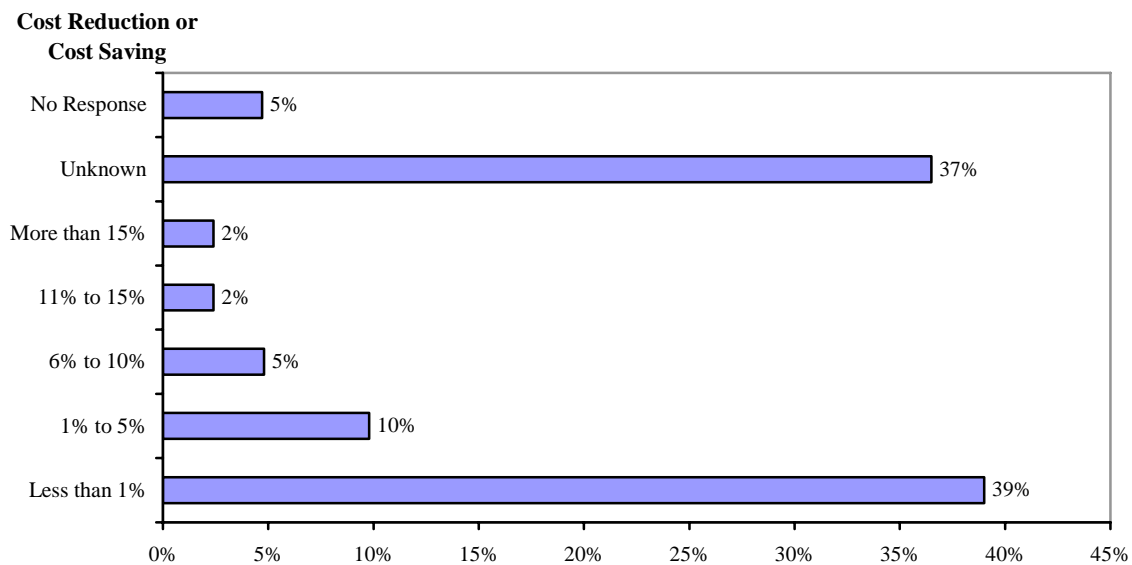
transportation. Consistent levels of cost savings were found by a Council of State Governments survey (Chi & Jasper 1998) which reported that:

- More than 60% of responding agencies reported cost savings between 6% and 10%;
- 4% or respondents reported savings in the 11% to 15% range; and
- 15% reported cost savings greater than 15%.

Hodge (2000) estimated the average cost savings from outsourcing to be between 6% and 12%. A more recent study (Brudney et al. 2005) found that close to 35% of agencies reported that contracting out had decreased the costs of delivering services; 29% reported that contracting had resulted in higher costs and 30% found that it had had no effect on costs. Rehfuss (1989) found that experiences with privatization resulted in actual cost differences (between contracting out and direct public provision) that have typically measured in single-digit percentages.

For transportation infrastructure and services, the Council of State Governments survey found average cost savings to be in-line with the findings by Rehfuss (1989). Cost savings of less than 1% were the most common (see Figure 1.3). Cost savings in excess of 10% were less likely, being reported by less than 5% of responding state DOTs.

Figure 1.3. Cost Savings from Privatization of Transportation Infrastructure and Services



Source: Chi et al. (2004), Figure M on p. 471.

Enhanced Delivery

In terms of improvements to service delivery, the study by Dilger et al. (1997) found that the average city or municipality observed improved service delivery that ranged from 24% (for public works and transportation) to 28% (for public safety). Contracting out experiences in social services, however, showed that cost savings came at the expense of reduced service levels, either in terms of a smaller customer base (Kammerman & Kahn

1989) or lower quality service (Bendick 1989). Brudney et al.'s 2005 study found that almost half of the state agencies that utilized contracting out found it improved service quality. In contrast, slightly under 10% reported that it resulted in decreased service quality and 35% felt that contracting had no effect on quality.

1.4 Public-Private Partnerships as a Privatization Approach

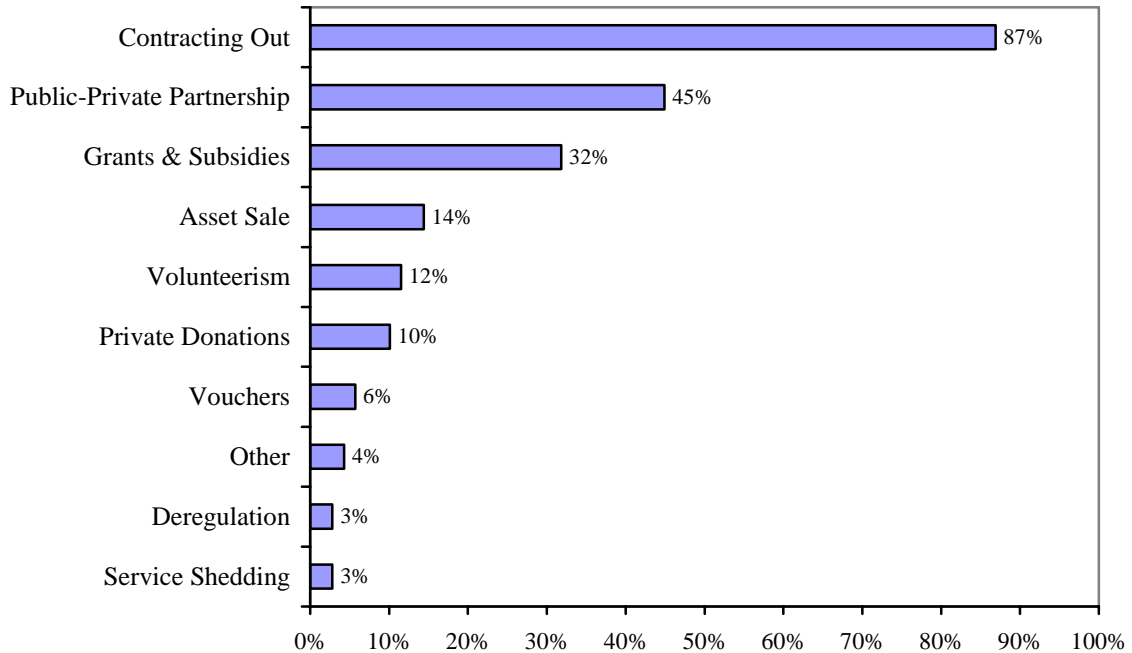
Privatization of government services has been organized in various ways, ranging from contracting out production and delivery to the private sector (but with public agencies retaining responsibility for the final product or service), to partnerships between private and public organizations for the joint production and delivery of government goods and services, to the creation of new public or private sector organizations.

While contracting out is the predominant method for privatization, there has been greater emphasis in recent times on using public-private partnerships (see Figure 1.4). As Kettl (1993) notes, “[e]very major policy initiative launched by the federal government since World War II – including Medicare and Medicaid, environmental cleanup and restoration, antipoverty programs and job training, interstate highways and sewage treatment plants – has been managed through public-private partnerships” (p. 4). This is especially true in transportation, where the focus on public-private partnerships has resulted from both the need for greater reliance on private capital to fund critical infrastructure and the need to tap private sector expertise to ensure delivery of high quality infrastructure and services on time and on budget.

Various forms of public-private partnerships have been used throughout American history. The Transcontinental Railroad, built in the 1860s, is a classic example of public-private partnership use for transportation in the U.S. (Norment 2002). The federal government owned the land that was then included as part of the assets upon which private company stocks were issued for the funding of the railroad. The government also deeded the adjoining parcels of land to the private developers involved in building the railroad, who then developed the land for farmland and towns, to create a customer base for the railroad. The land, which was previously an underutilized government asset, became the critical component in the private sector's ability to finance a major transportation infrastructure project.

In recent years, transportation projects have increasingly become an area of focus for the use of public-private partnerships, with the goal of expanding private sector involvement in the delivery of transportation projects. Privately-operated (and sometimes privately-built and privately-owned) airport and rail terminals, tollroads, bridges or tunnels have become increasingly common.

Figure 1.4. Methods Used to Privatize State Programs and Services



Source: Chi et al. (2004), Figure F on p. 468.

1.5 Project Overview

Privatization is often viewed as a tool that can be usefully employed by government agencies in certain environments to enhance the delivery and provision of public goods and services. However, government agencies need to exercise good judgment and caution in both making the decision to privatize, and choosing the methods for privatization, being careful not “to select a hammer when they really need a wrench” (Gormley 1994, p. 231).

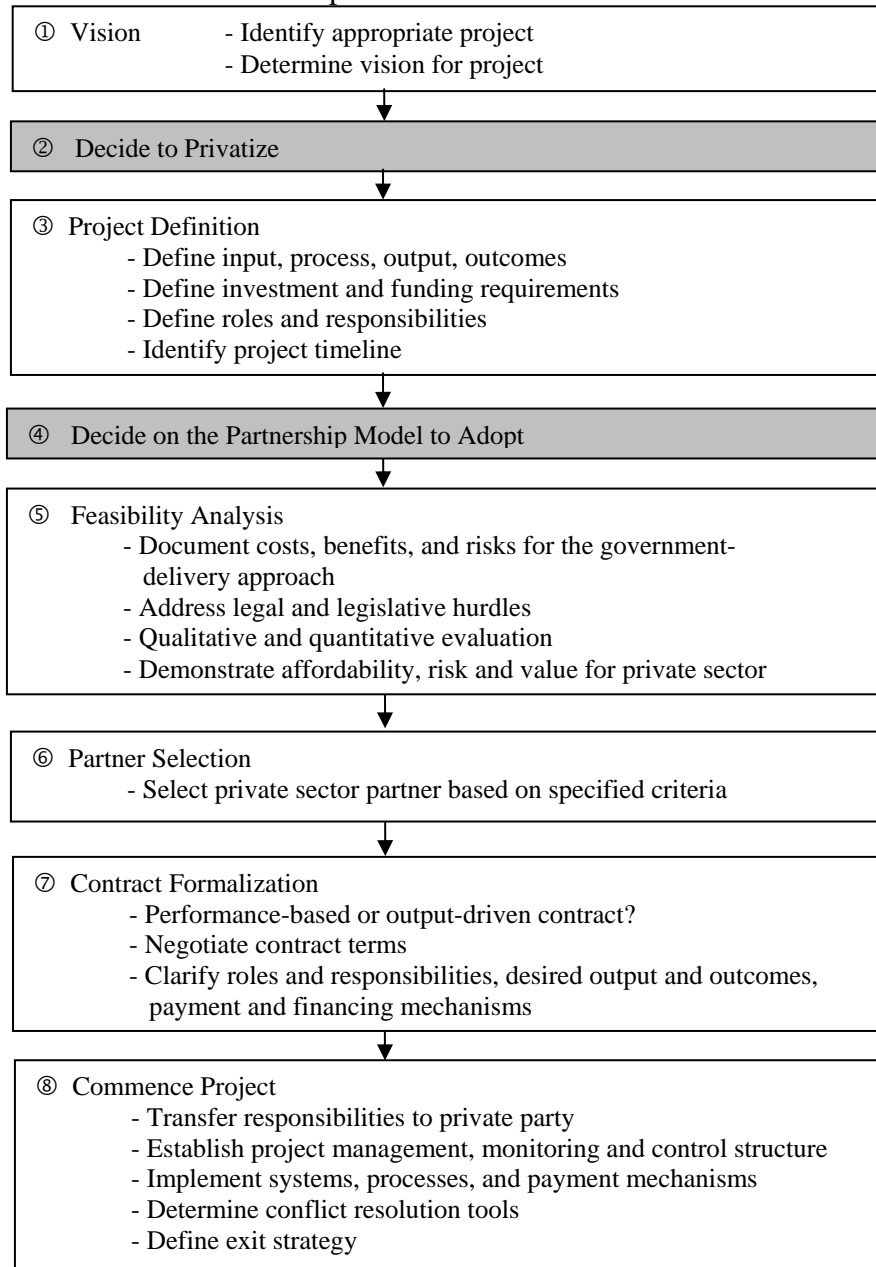
Many government agencies have adopted contracting out as their method for privatization. However, for many situations, contracting out may not be the appropriate privatization solution. For many government needs, public-private partnership may prove to be a more appropriate approach for privatizing public goods and services, especially for the delivery or provision of transportation infrastructure and services.

However, public-private partnerships as tools for privatization are not very well understood. This report, therefore, seeks to provide a primer on public-private partnerships for the delivery of transportation infrastructure and services. The report provides an overview of public-private partnership (Chapter 2), providing a broad definition of the concept, comparing public-private partnerships to contracting out, and discussing a theoretical framework for understanding why, when, and how they are

appropriate as a privatization strategy. Chapter 3 reviews seven public-private partnership models available for use by government agencies to privatize transportation projects.

Figure 1.5 summarizes the likely steps involved in launching a public-private partnership. This process involves two important decision points which will be discussed in this report. Chapter 4 addresses both the decision to privatize delivery of a transportation project and the decision on which partnership model to adopt to implement the project.

Figure 1.5. Public-Private Partnership Process and Critical Decision Points



Source: Adapted from KPMG (2002) public-private partnership process for e-government projects.

A major concern for government agencies as they contemplate privatization and public-private partnerships is how they can operate as “smart buyers” (Kettl 1993) or “prudent purchasers” (Fossett et al. 2000), rather than “direct producers.” This is an especially important issue for agencies, such as transportation agencies, where the public goods and services being provided are tangible and highly visible. Chapter 5 of this report addresses this concern by discussing key issues and factors for successful transportation-related public-private partnerships. The report also provides a glossary of terms (Appendix A) to serve as a reference for better understanding the terminology and language of privatization and public-private partnerships.

The specific research questions addressed in this report are:

- (1) When is privatization via public-private partnerships an appropriate solution for providing critical transportation infrastructure and services?
- (2) What public-private partnership models are suitable given the specific features of the transportation project, such as the need for private financing, the degree of project complexity and specificity, and public accountability?
- (3) What are critical success factors for public-private partnerships?

Chapter 2: Understanding PPP

2.1 Defining the Public-Private Partnership

A public-private partnerships can be broadly characterized as “a commitment between public and private actors of some durability, in which partners develop products together and share risks, costs, and revenues which are associated with these products” (Klijn & Teisman 2000, p. 85). McQuaid (2000) provides several definitions of public-private partnerships, each emphasizing different dimensions of the concept. For example, he cites Holland (1984) as defining a public-private partnership as cooperation between individuals or organizations in the public or private sectors for mutual benefit. Harding (1990) approaches public-private partnerships as “any action which relies on the agreement of actors in the public and private sectors and which also contributes in some way to improving the urban economic and the quality of life” (p. 110). In contrast, Sellgren (1990) views the public-private partnership as a scheme with involvement or funding from more than one agency in either the public or private sectors. The Commonwealth of Massachusetts approached public-private partnerships as collaborations among business firms, non-profit organizations, and government agencies, in which risks, resources and skills are shared in projects that benefit each partner as well as the community.

The consulting firm KPMG (2002) defines public-private partnerships as a form of government procurement involving the use of private sector capital to wholly or partly fund an asset, which is then used to deliver government outcomes. In essence, the public-private partnership is simply an agreement between the government and a private company (or private companies), to share in the risk and rewards of an initiative involving public services. The FHWA uses the term to refer to contractual agreements formed between a public agency and private sector entity that allow for greater private sector participation in the delivery of transportation projects.

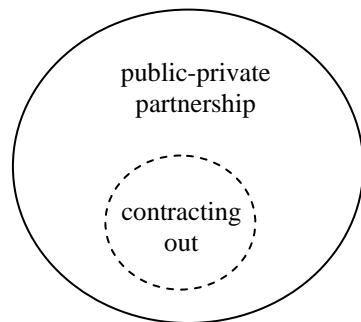
The definitions and perspectives previously discussed highlight the many dimensions of public-private partnerships, including cooperation, mutual benefits, involvement or funding from multiple agencies, collaboration, and shared risks, resources and skills. From these, we arrive at a multidimensional understanding of **public-private partnerships as collaborations involving actors and/or funding from business, non-profit, and government organizations, where costs, risks, resources and skills are shared in jointly-developed projects that mutually benefit the partners and the community being served.**

2.2 Public-Private Partnerships and Contracting Out

Section 1.3 illustrated how previous experiences with privatization have often not achieved the efficiency goals associated with privatization. This failure can be partly attributed to the extensive use of contracting out as a privatization approach. With contracting out, the public agency unilaterally defines the project, limiting the scope for delivery of the project's goods or services. The public agency acts as a commissioning party, defining the characteristics of the project, then contracting it out to a private or nonprofit organization on the basis of a clear cut and straightforward program of requirements. The product is a principal-agent relationship in which the public agency defines the problem and provides the specification of the solution. The result is an arrangement that is hardly suitable for mobilizing the market expertise, innovativeness and creativity of the private sector (Van Ham & Koppenjan 2002).

Public-private partnerships are more encompassing than contracting out (see Figure 2.1). The public-private partnership transforms the government's role from that of public financier to that of buyer, while at the same time being an equal partner in the production and/or delivery of the public goods and services. This partnership arrangement is based on joint decision-making and subsequent joint production or delivery by both partner groups.

Figure 2.1. Contracting Out as a Subset of Public-Private Partnership



Source: Developed by the research team.

While contracting out can be thought of as a subset or subcategory of public-private partnerships, it represents one extreme of partnership options, in which private sector involvement is more limited and the government agency has greater authority in making critical decisions regarding the project. Private sector funding is almost non-existent in contracting out; the private sector receives payment from the public sector for the services it provides during the life of the project. The different characteristics of contracting out versus other public-private partnership options with greater private sector participation (in terms of funding, decision-making, and production/delivery) are critical for the understanding of why partnerships are more viable options for privatization of public goods and services. Table 2.1 summarizes the key differences between public-private partnership and contracting out options for privatization.

Table 2.1. Key Differences between Public-Private Partnership and Contracting Out

Characteristics	Public-Private Partnership Options with Greater Private Sector Participation	Contracting Out
Decision-making and production responsibility	<input type="checkbox"/> Government and private agencies are involved in joint decision-making and joint production.	<input type="checkbox"/> Government agency defines the problem, decides on level of service or production, specifies the solution and selects a private company to produce results. <input type="checkbox"/> Private sector decides on how to produce results in most efficient manner given constraints imposed by the government agency.
Primary benefits	<input type="checkbox"/> Benefits of partnership arrangements principally involve increasing effectiveness (synergy, expertise and enrichment of output).	<input type="checkbox"/> Benefits of contractual agreements principally involve efficiency (quicker and cheaper production or delivery of output).
Management structure	<input type="checkbox"/> Based on the principles of process management because of joint goals, decision-making, financing, and production.	<input type="checkbox"/> Based on the principles of project management because there are clear goals and well-defined project specifications.
Public-private interactions	<input type="checkbox"/> Mutual trust is crucial for a lasting relationship between partners that maintain their own interests, work styles, accountability and financing principles.	<input type="checkbox"/> Contractual transparency regarding the rules of tendering, selection and delivery, and rules of inspection and monitoring is crucial for a good working relationship.
Keys to success	<input type="checkbox"/> Interweaving of goals, defining roles, establishing rules for ongoing interactions, and developing rules and tailor-made assignments for joint effort and production commitments.	<input type="checkbox"/> Unambiguous definitions of goals, rules of selection and rules of delivery.
Important issues	<input type="checkbox"/> How to balance accountability, autonomy, legitimacy, etc. to ensure that public-private partnerships tap the efficiency potential of the private sector while providing the non-market determined “optimal” production level for jointly-produced and delivered public goods and services?	<input type="checkbox"/> How to be a “prudent” or “value” purchaser of privately-produced and delivered public goods and services?

Source: Developed by the research team from information in Klijn and Teisman (2000) and other sources.

2.3 Advantages and Disadvantages of Public-Private Partnerships

One of the primary motivations for favoring the use of public-private partnerships has been to limit the government’s financial deficit by involving private investment in the delivery of public infrastructure and services (Van Ham & Koppenjan 2002). With the use of partnerships also comes the expectation that projects delivered through the partnership are qualitatively better than projects developed by private or public parties alone – the product resulting from the whole (through a partnership) is greater than the sum of the individual pieces (independently produced by each party). Private sector participation is desirable because private organizations may operate more efficiently, possessing the market experience and innovative creativity that public organizations often lack. On the other hand, public sector participation is essential given the long-term uncertainties, political risks, and public accountability involved with the project.

The often-cited benefits of public-private partnerships are generally that they provide the government agency with access to private sector design and innovation, project management skills, and private sector financing. Public-private partnerships are often used to access resources that may not be available in or to the public sector, thereby speeding up development and enhancing quality. If the partnership is appropriately structured, private sector resources and expertise will enhance the government agency’s ability to deliver new assets and infrastructure on time and on budget. This allows government agencies to economize their resources while continuing to provide the necessary level of public goods and services. Table 2.2 summarizes the advantages and disadvantages of privatization using public-private partnerships.

Table 2.2. Summary of Advantages and Disadvantages of Public-Private Partnerships

Advantages	Disadvantages
<ul style="list-style-type: none"> <input type="checkbox"/> Incorporates private sector resources and expertise, allowing for the on-time and on-budget delivery of high quality transportation infrastructure and services. <input type="checkbox"/> Ensures that higher risk and higher payoff projects are properly considered in the planning and budgeting process. <input type="checkbox"/> Provides an infusion of private capital. <input type="checkbox"/> Establishes a culture of cooperation between public and private sector. 	<ul style="list-style-type: none"> <input type="checkbox"/> May require enabling legislation before partnerships can be established. <input type="checkbox"/> Loss of direct government control and accountability for the provision and delivery of public goods and services. <input type="checkbox"/> Requires new institutional structures for partnership management and monitoring. <input type="checkbox"/> Increased vulnerability of public goods and services delivery to the whims of the private sector. <input type="checkbox"/> Requires significant effort to build trust and relationships.

Source: Developed by the research team.

2.4 Theoretical Framework for Understanding Public-Private Partnerships

Fundamentally, public-private partnerships represent an approach to problem solving where resources or capacities of different organizations are pooled for common purposes. Characteristics of a typical public-private partnership are summarized in Table 2.3.

Table 2.3. Characteristics of a Typical Public-Private Partnership

<ul style="list-style-type: none"><input type="checkbox"/> Private sector partner typically invests in a capital asset and is responsible for maintaining and operating it over the life of the contract.<input type="checkbox"/> The focus of the partnership is on the services provided (ends) and not on the assets used to provide the services (means).<input type="checkbox"/> Risk transfer is a key element of the partnership.<input type="checkbox"/> Government assets are often transferred or made available to the private partner.<input type="checkbox"/> The contractual arrangement specifies that the private partner will take responsibility for and assume the risks for all or part of the public sector function.<input type="checkbox"/> Value for money, which is critically dependent on the way risks are allocated between the parties, must be demonstrated to justify private sector involvement.

Source: KPMG (2002).

From a government agency's perspective, there are two fundamental problems inherent in privatization and public-private partnerships. The first is the problem of adverse selection, which results from selecting the wrong private sector partner. For example, the government agency may inadvertently select a private partner that is unable to produce the desired output or outcome. The second problem – the moral hazard problem – results from the government agency's inability to observe at all times the behavior of the private partner. It is possible that even the most capable organization will shirk its responsibilities and divert resources to other tasks or simply to profit (Donahue 1989). Addressing both problems requires emphasis on three important aspects: (1) project specificity; (2) desired accountability; and (3) private partner selection. These three aspects will be discussed next.

Project Specificity

The degree of project specificity relates to how well the project can be defined or specified. There are four important components of specificity which dictate the extent to which privatization can be undertaken and the partnership approach appropriate for the privatization effort. These are:

- Input – the material and labor needed to produce the output and the process to transform the input into output.
- Output – the project deliverables that each partner would be responsible for producing.
- Outcome – the goals of the project that will be achieved through the delivery of outputs.
- Payment – the financing mechanisms through which the project will be funded and/or the private partner compensated.

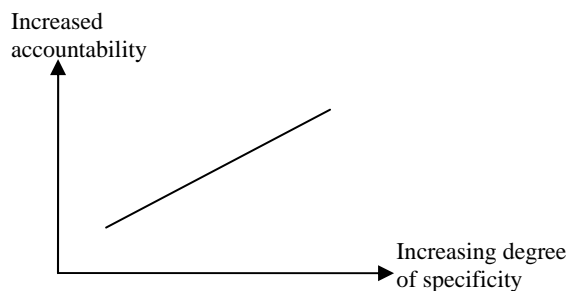
Accountability

“The main difference between the hollow state and direct government provision of services lies in the presence of a bureaucratic mechanism. The hollow state has very few command and control mechanisms; public managers find themselves involved in arranging networks that may enable them to gain the advantages of scope and scale without the negatives associated with bureaucracy (i.e., redundancy and rising costs)” (Milward & Provan 2000, p. 363).

The privatization of the provision and delivery of public goods and services, and the resulting delegation of authority to nongovernmental agents, can lead to the potential loss of legitimacy since the formerly government function is now accomplished at arms length. However, an important element of providing public goods and services is that “[p]olitical principals can transfer power to their agents, within limits set by law, but they cannot transfer legitimacy in the same way” (Majone 1997, p. 13). In fact, privatization only changes the venue within which production and delivery of public goods and services occur, but does not impact the government agency’s responsibility to the public. As Kuttner (1989) argues, “[i]f government pays the freight, government necessarily has to police the contractor. Yet the more reach contractors have under a privatized system, the less capacity government is likely to retain.”

Within the context of privatization, government accountability for public goods and services delivered through a public-private partnership can be defined as a function of the degree to which the production and delivery of these goods and services can be specified. Figure 2.2 summarizes this relationship. As the degree of specificity increases, the government agency can ensure it maintains its responsibility to the public by holding the private partner to greater accountability standards.

Figure 2.2. Accountability as an Increasing Function of Project Specificity



Source: Developed by the research team.

Partner Selection

The adverse selection problem primarily relates to the issue of selecting the right private partner for the privatization efforts. Many proponents of privatization argue that competition among private organizations is the driving force behind successful privatization. However, privatization efforts undertaken via partnerships usually require establishing a long-term relationship between the public agency and the outside partner. Because of the complex nature of most public services, contracts are typically written for

multiyear periods, thus foreclosing easy competitive access to substitute providers if the outputs are not up to par or the outcomes are not achieved. As a result of this long-term relationship and multi-year contract, it is the characteristics of the public-private relationship that determines the quality of the jointly provided public good or service and the cost savings resulting from private sector involvement, not the competitive marketplace (Sclar 2000).

Government agency’s method of selecting private partner(s) typically depends on the degree of task complexity, professionalization or required technical expertise. As task complexity increases, or as the need for professional or technical expertise increases, private partner selection more often needs to be based on negotiation, and the partnership arises more as a negotiated contract than from competitive bidding or tendering. The distinction to be made is between partner selection on the basis of the “lowest price” and selection on the basis of the “best value.”

Competitive bidding or tendering is based on delivering a public good or service for a fixed price, and the private agency with the lowest bid is selected as the private partner. This approach to privatization puts the private partner at risk to deliver the public goods and services within the cost constraints, which according to economic theory will force it to be more efficient and innovative in producing and delivering the goods and services. Negotiated contracts, in contrast, involves the government agency identifying a private agency it feels it can trust and work with, and making this private agency its partner in delivering public goods and services within the context to be specified in the contract. Negotiated contracts with these pre-identified partners often involve projects characterized by long-term partnerships; the need for flexibility; high degree of uncertainty; costly disruption in service; and information transparency. Table 2.4 highlights the project characteristics that make private partner selection via competitive bidding or negotiated contracts more appropriate.

Table 2.4. Characteristics of Competitive Bidding and Negotiated Contracts

Project Characteristics	Competitive Bidding	Negotiated Contract
Project or task certainty	<input type="checkbox"/> Preferred when requirements can be precisely specified in advance	<input type="checkbox"/> Preferred when the task at hand is more uncertain at the outset and prone to revision.
Output and outcome measurement	<input type="checkbox"/> The easier it is to measure results.	<input type="checkbox"/> The harder it is to measure the value of production.
Ease of private partner replacement	<input type="checkbox"/> The more readily incompetent private sector partners can be replaced.	<input type="checkbox"/> The more disruptive it is to switch partners in project mid-stream.
Emphasis on ends vs. means	<input type="checkbox"/> The more the government agency knows about the best means to accomplish the task.	<input type="checkbox"/> The more the government agency cares more about ends over means.

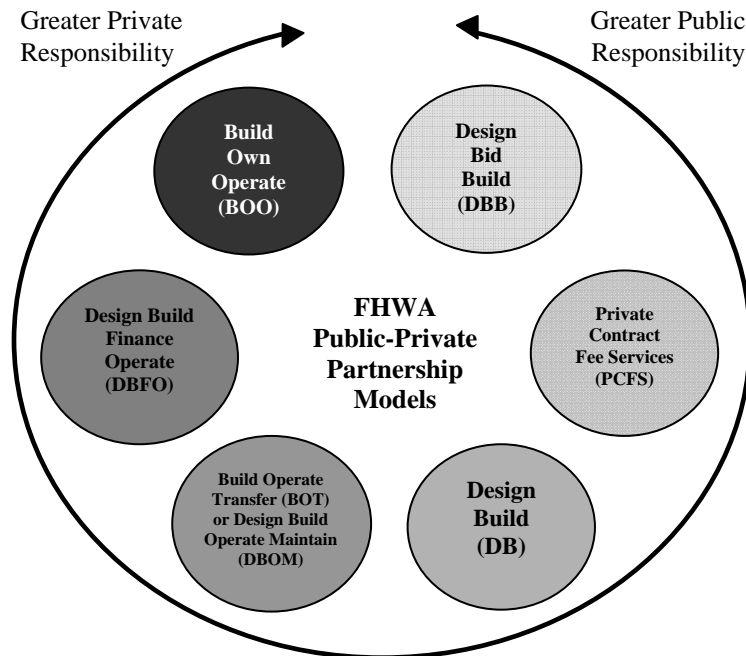
Source: Developed by the research team.

Chapter 3: Public-Private Partnership Models

3.1 FHWA Public-Private Partnership Models

There is an infinite range of public-private partnership models, or as Lyons and Hamlin (1991) suggest, “methods for carrying out such partnerships are limited only by the imagination” (p. 55). In the context of transportation infrastructure and services, the FHWA defines a range of options for public agencies to involve the private sector. The seven FHWA partnership models are presented in Figure 3.1. These models are organized along a spectrum from greater public responsibility to greater private responsibility. At one end of the spectrum are large-scale infrastructure projects such as the construction of a railway or tollway in which the private sectors undertakes design, construction, maintenance and operations (and possibly even ownership) and assumes a greater proportion of the risks, rewards, and responsibilities. Alternatively, limited private sector involvement in only parts of the initiative represents the other spectrum of public-private partnership models.

Figure 3.1. FHWA Public-Private Partnership Models



Source: Developed by the research team.

The public-private partnership models or arrangements discussed in this chapter highlight the ways in which private sector responsibilities can be expanded through the use of partnerships. Partnership options expand across a spectrum of varying degrees of public

and private responsibilities, and range from the more traditional separation of design and construction, to transferring tasks normally done-in house to the private sector, to combining typically separate services into a single procurement or having private sector partners assume owner-like roles.

The different models are defined in Table 3.1 and their key characteristics are summarized in Table 3.2. Each partnership model is further explained and discussed in the following sections. While this is not a comprehensive list of all public-private partnership models available for transportation infrastructure and services, it encompasses the models identified by the FHWA as appropriate mechanisms for private sector participation in the delivery of transportation infrastructure and services. For each option identified by the FHWA, this report discusses how the partnership is structured, including the responsibilities of the public and private parties, and identifies the opportunities and constraints associated with the partnership model.

3.2 Design Bid Build (DBB)

The design bid build model is a public-private partnership approach in which the government agency contracts with two separate private sector entities. An architectural or engineering firm receives a design contract for the design of the infrastructure or facility. This contract is typically awarded based on the contractor's work quality and experience. The contractor is usually responsible for providing detailed documentation of the design such as drawings, specifications, and other supporting documentation upon design completion. Once the design has been completed, private firms bid for the contract to construct the project. The public sector entity awards the contract to the lowest bidder, for a fixed fee, and is responsible for securing eminent domain and right-of-way, as well as oversight of the project during the construction phase. Once construction is completed, the government agency is responsible for operating and maintaining the facility. Ownership and financing of the project resides entirely within the public domain.

The DBB model has recently been utilized for the design and construction of two light rail tunnels running underneath the Minneapolis-St. Paul International Airport. These tunnels are an integral portion of the larger Hiawatha Light Rail Transit project in Minneapolis, Minnesota. Public officials decided to use the DBB model for this portion of the project because of the difficulty associated with tunneling below airport runways and buildings. For this specific portion of the project, a higher level of expertise than available in the public sector was necessary, necessitating the need for private sector involvement through the design bid build approach. Now complete, the Hiawatha Light Rail Transit links downtown Minneapolis with the Minneapolis-St. Paul International Airport and the Mall of America. In 2005, the line carried approximately 7.9 million riders, exceeding pre-construction estimates by 58 percent.

Table 3.1. Summary of Public-Private Partnership Models for Delivery of Transportation Projects

Partnership Model	Definition	Project Examples
Design-Bid-Build	Project delivery approach that separates design and construction responsibilities, awarding them to different private entities (i.e. design to an independent private engineer and construction to a different private contractor). The delivery process is separated into three linear phases: (1) design; (2) bid; and (3) construction. The public sector retains responsibility for financing, operating and maintaining the infrastructure.	Airport tunnels portion of the Hiawatha Light Rail Transit linking downtown Minneapolis with Minneapolis-St. Paul Airport and Mall of America
Private Contract Fee Services	This model expands the private sector's role to functions beyond planning, design or construction, on a fee for service basis. This is typically done by awarding competitively procured contracts to the bidder providing the best value. Two types of private contract fee services have typically been used: (1) operations and maintenance fee service contracts; and (2) program and financial management fee service contracts. Use of this partnership model has sometimes involved long-term maintenance and/or operations contracts for infrastructure facilities (asset management contracts).	Maintenance of city streets, tunnels, pavements, bridges, roadside features, pedestrian bridges, roadside vegetation, guardrails, barriers, impact attenuators and signs in Washington, D.C.
Design-Build	Project delivery approach that combines two, usually separate functions, into a single contract. The private sector assumes responsibility for the majority of the design work and all construction activities, together with the risks associated with providing these services for a fixed fee. The public sector provides financing, oversight, and operations and maintenance of the project upon completion of the design and construction.	New segments of Virginia Route 288 as well as the construction of a four lane highway from Powhite Parkway to I-64.
Build-Operate-Transfer (BOT) or Design-Build-Operate-Maintain (DBOM)	BOT: This model represents an integrated partnership combining design and construction with operations and maintenance. This involves transfer of design, construction, and operation to a private sector partner, through a competitive bidding process. The public agency secures financing and retains the operating revenue risk and surplus operating revenue. A time specific contract is used, where private sector partner retains ownership until the end of the contract term, at which point ownership returns to the public agency. DBOM: Similar to the BOT model, DBOM also involves the design, construction, and operation to a private sector partner, for a specific time period. Again, the private sector partner retains ownership until the end of the contract term, at which point ownership returns to the public agency.	Route 3 in the Northern Boston Metropolitan area
Design-Build-Finance-Operate (DBFO)	An extension of BOT/DBOM where the private sector partner is responsible for financing the project and assuming the risks of project financing during the contract term, in addition to the design and construction and operations and maintenance. During the length of time specific project, ownership of the project resides with the private sector, though at the end of the contract, ownership as well as operations and maintenance revert to the public sector.	California State Road 125, the South Bay Express Way.
Build-Own-Operate (BOO)	BOO is a project delivery method similar to BOT/DBOM, with the private sector partner owning and operating the facility. A private company is granted the right to develop, finance, design, build, own, operate, and maintain the project. The private sector partner owns the project outright and retains the operating revenue risk and all of the surplus operating revenue in perpetuity. The private sector is under no obligation for the government to purchase or take title to the facility.	Chicago Regional Environmental and Transportation Efficiency Project (CREATE), an integrated project to improve commuter/rail service, traffic fluidity, rail freight.

Source: Developed by the research team.

Table 3.2. Summary of Characteristics of the Public-Private Partnership Models

Partnership Model	Private/Non-Profit Agency Responsibilities				Government Agency Responsibilities ^(a)					Infrastructure Ownership ^(c)	Source of Financing ^(d)
	Design	Construction	Operations	Maintenance	Operations	Maintenance	Supplemental Infrastructure ^(b)	Fiscal/Payment	Monitoring		
Design Bid Build	X ^(e)	X ^(e)			X	X		X	Low	G	G
Private Contract Fee Services	X	X						X	Low	G	G
Design Build	X	X			X	X		X	Low	G	G
Build Operate Transfer or Design Build Operate Maintain	X	X	X	X				X	Medium	P/G	G/P
Design Build Finance Operate	X	X	X	X					High	P/G	P/G
Build Own Operate	X	X	X	X			X		Low	P	P

(a) In all models, the government agency is responsible for right-of-way and eminent domain issues.

(b) Includes responsibilities for all connecting infrastructure.

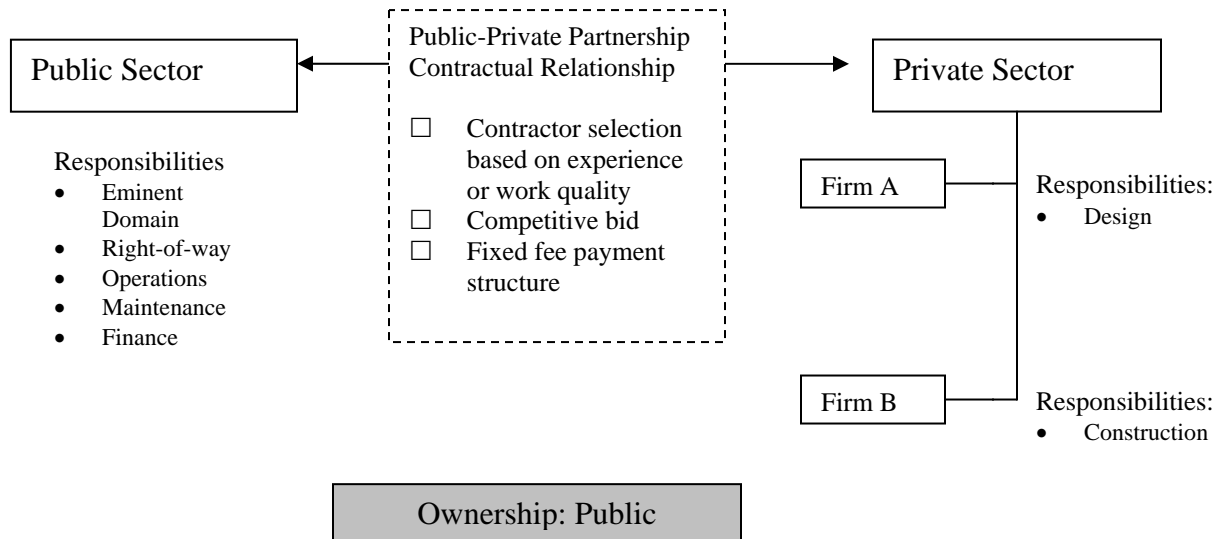
(c) G – government ownership; P – private sector ownership; G/P – private ownership for duration of the partnership contract then reverts to the public sector.

(d) G – government financing; P – private financing; G/P – primarily government with some private financing; P/G – primarily private with some public financing.

(e) These activities are typically undertaken by different private firms.

Source: Developed by the research team.

Figure 3.2. Design Bid Build Model



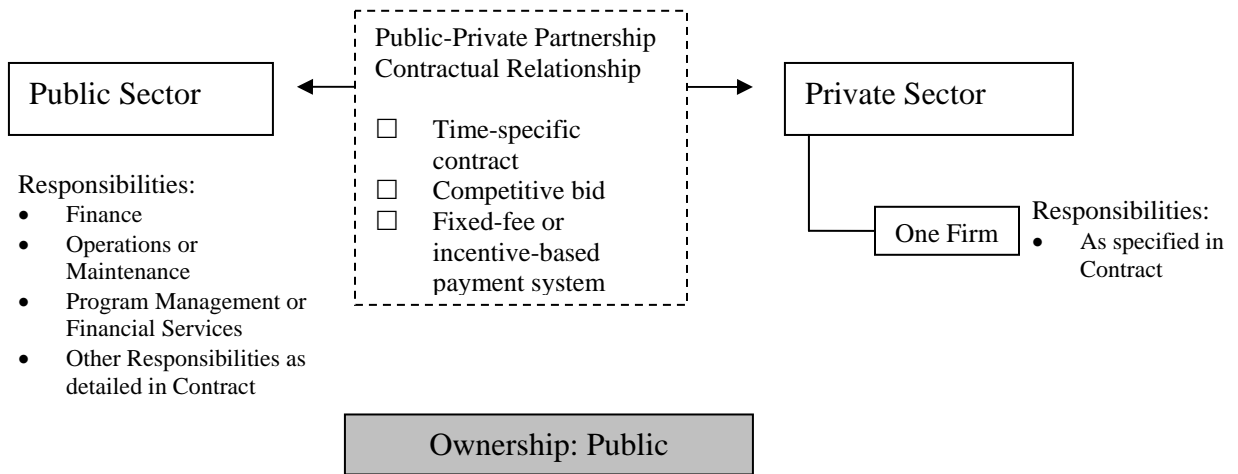
Source: Developed by the research team.

3.3 Private Contract Fee Services (PCFS)

Another option available to the public sector is contracting specific transportation services to the private sector. Essentially, the government agency enters into a contract with a private partner to either perform operation and/or maintenance services or program management and/or financial services. Partnership contracts are generally time specific for a fixed fee, though they can also be incentive based. These contracts are typically competitively bid and awarded to the lowest bidder. There are two categories of activities provided through private contract fee services. Public-private contracts for program management or financial services may involve the private sector providing cash management assistance, capital funds management, identification of informational needs, or simply coordinating public sector studies. Public-private contracts for operations or maintenance may involve major repairs and continual maintenance of the infrastructure under contract.

One recent example of the private contract fee services model is the management of local streets of Washington, DC. In June 2000, the District of Columbia Division of Transportation (DDOT) awarded a contract to VMS, Inc., to preserve and maintain approximately 75 miles of the major streets and highways in the District. The five-year contract cost approximately \$70 million and included the maintenance of tunnels, pavements, bridges, roadside features, roadside vegetation, traffic safety equipment, and snow and ice removal. Rather than providing specific preservation and maintenance instructions to the private corporation, the contract instead was performance-based, with the desired outcomes outlined and VMS given the discretion to decide how to achieve those goals.

Figure 3.3. Private Contract Fee Services Model

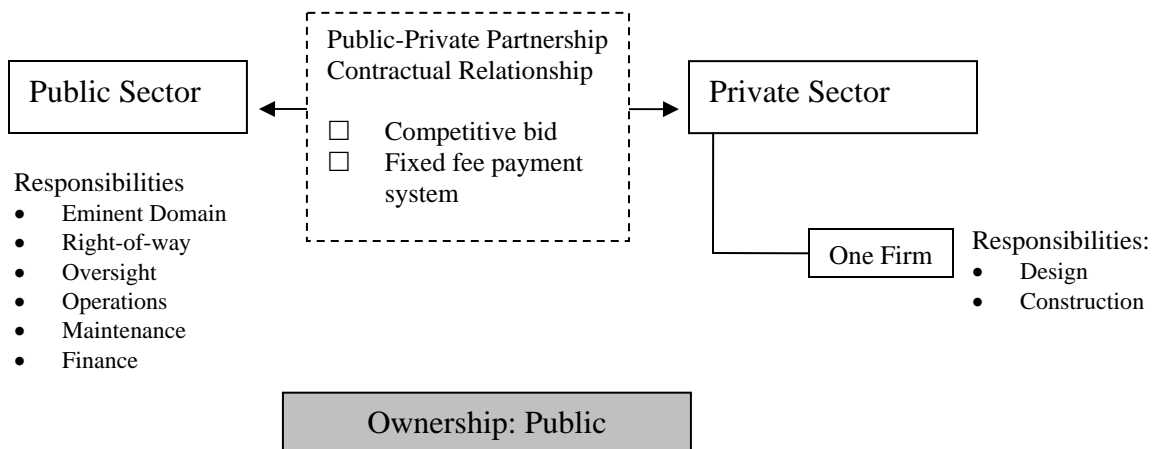


Source: Developed by the research team.

3.4 Design Build (DB)

The design build model is a public-private partnership approach in which the private partner designs and builds a facility for the government agency, generally within a specific timeframe for a fixed-fee. In addition to its general role of securing eminent domain and right-of-way, the public partner will provide oversight, operation and maintenance once construction is complete, as well as retain ownership of the infrastructure.

Figure 3.4. Design Build Model



Source: Developed by the research team.

When the public entity determines that a design build public-private partnership model is appropriate, the government agency enters into a contract with the private partner. The private firm will be responsible for both the design and construction of the facility as well as the risks associated with delivering these activities for a fixed fee. Once the facility is

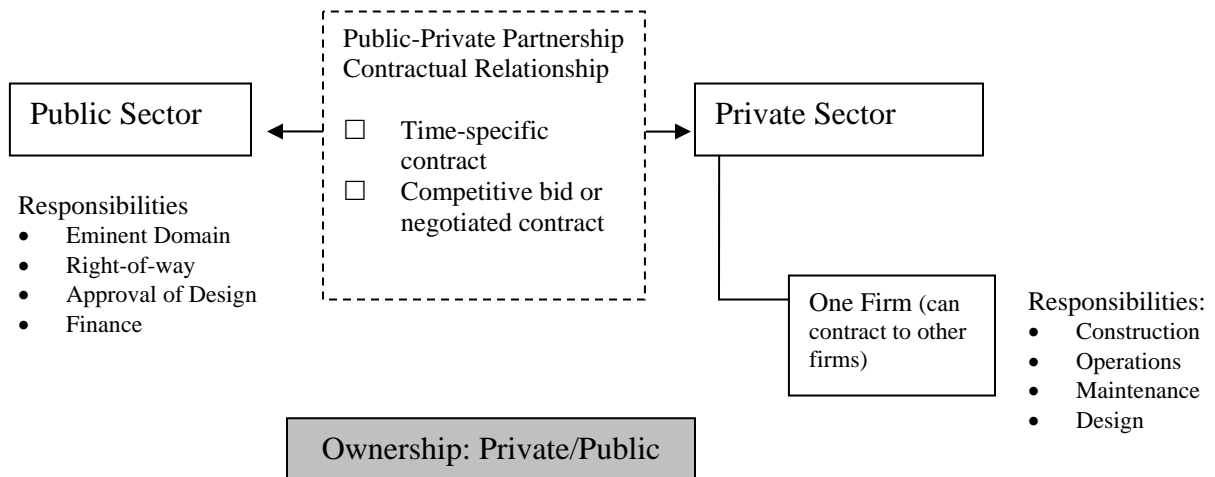
complete, the government agency operates and maintains the facility. The financing of the project lies entirely with the public sector.

Virginia’s Route 288 is one transportation project achieved using the design build model, which involved the construction of new segments of Route 288 as well as the construction of a four lane highway from the Powhite Parkway to Interstate 64 in Goochland County. Route 288 was intended to provide motorists in Goochland, Chesterfield and Powhatan counties a travel alternative that significantly decreased travel times throughout the region. The 17.5 mile four-lane highway opened to motorists in 2004. The Virginia Department of Transportation estimated that by contracting with a private sector partner using the design build model, the state saved an estimated \$47 million in costs and 7 months of construction time.

3.5 Build Operate Transfer (BOT)

The FHWA defines the build operate transfer model as a public-private partnership approach in which the public sector contracts with the private sector for the construction, operation, and maintenance of a facility or project.¹ The government agency is responsible for the financing and design of the project, in addition to the more traditional role in securing eminent domain and right-of-way. The private partner has ownership of the project throughout the length of the contract, with ownership reverting back to the government at the end of the contract.

Figure 3.5. Build Operate Transfer Model



Source: Developed by the research team.

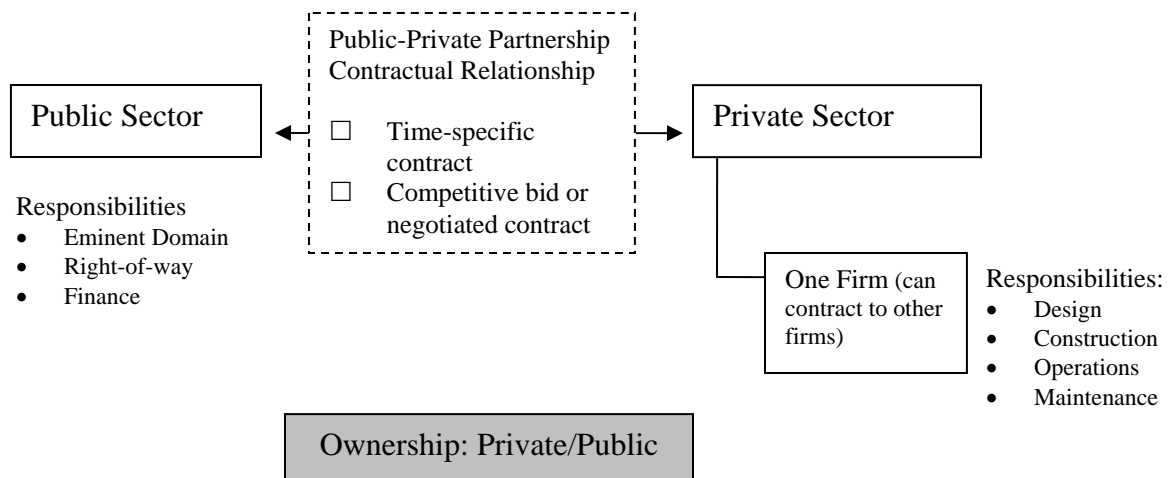
¹ Other definitions, such as that used by the National Council for Public Private Partnerships (NCPPT), include private sector financing for BOT projects. The FHWA states that the financing in BOT projects remains the responsibility of the public sector. This report uses the latter definition since states mostly follow FHWA guidelines when constructing highway and transportation infrastructure through public-private partnerships.

The BOT partnership contract is time specific. For a specified price and time period, the private partner will construct, operate and maintain the infrastructure for the government agency. When the contract ends, the private partner transfers these functions back to the public sector. According to the FHWA, there have not been any major projects in the U.S. that have taken the form of BOT partnerships with public financing.

3.6 Design Build Operate Maintain (DBOM)

The design build operate maintain model is a public-private partnership approach in which the public sector contracts with a private partner that will be responsible for the design, construction, operation and maintenance of a facility or project for a specified time period. Though much of the project responsibility is transferred to the private sector, ultimately the public sector is responsible for the financing of the project as well as securing eminent domain and right-of-way. Ownership of the project resides with the private sector during the length of the contract and upon completion, ownership reverts back to the public sector, as does the other responsibilities assigned to the private sector.

Figure 3.6. Design Build Operate Mountain Model



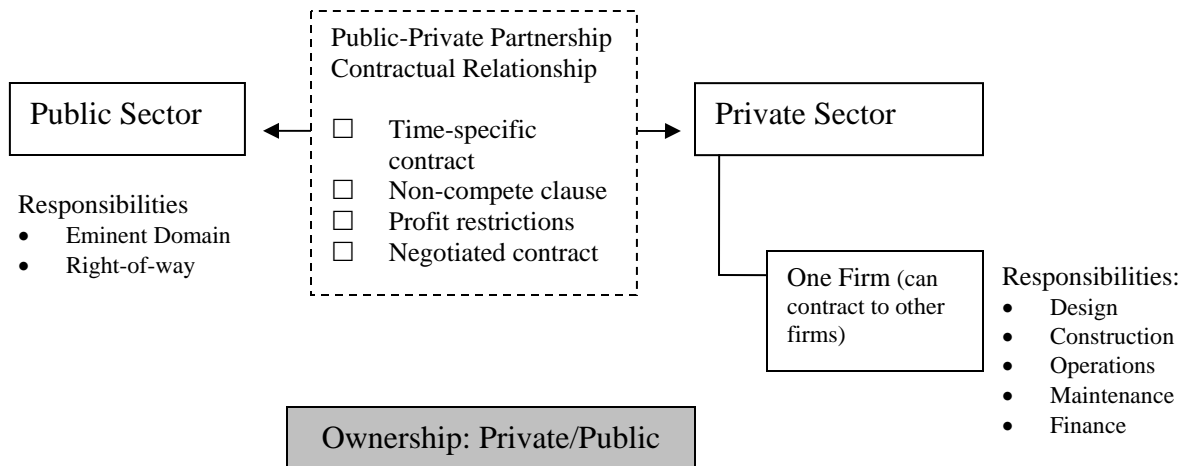
Source: Developed by the research team.

One example of a project using the DBOM model is the expansion of Route 3 in the Northern Boston Metropolitan area. Traffic counts on Route 3 had grown considerably, far surpassing acceptable capacity rates and approaching the limit for providing a safe level of operating conditions. The Massachusetts legislature created the Route 3 North Transportation Improvements Association, a non-profit corporation, to issue bonds to finance the reconstruction of Route 3. After proceeding through a bidding process, the Massachusetts Highway Department awarded the contract to Modern Continental, a private firm. Construction on Route 3 began in 2000 and is expected to be completed during summer 2006, during which 47 bridges will be replaced and 21 miles of highway will be reconstructed.

3.7 Design Build Finance Operate (DBFO)

The design build finance operate model is a public-private partnership approach that bundles most of the responsibilities for a project, and gives them to the private sector. A private firm is responsible for the design, construction, operation, maintenance, and financing of the project, and retains ownership throughout the life of the contract. Upon completion of the contract, ownership of the project reverts to the public sector. The government agency is also responsible for securing eminent domain and assuring right-of-way for the project.

Figure 3.7. Design Build Finance Operate Model



Source: Developed by the research team.

When the government agency has determined that a DBFO model is appropriate, it then enters into a concession or contract with the private partner. In general, these contracts outline the number of years the private partner will operate, maintain, and collect revenue after the completion of the design and construction of the project. Also typically included in the contract are non-compete clauses, through which the public sector assures the private partner that no “competing projects” near the contract project would be constructed that could potentially take away revenue from the private partner. In the case of a toll highway or bridge, the government agency is likely to set a toll limit and cap the amount of profit the private entity can accumulate in a given year. With regards to profit restrictions, the contract will generally also state the use of excess profits.

The state of California chose to utilize the DBFO model for the construction of SR 125 – the South Bay Express Way – a toll road in San Miguel, California. Though this stretch of highway was originally added to the state’s freeway system in 1959, funding issues prevented the road from being constructed. With the partnership between Caltrans (the government agency) and California Transportation Ventures (the private partner), the South Bay Expressway is being constructed many years ahead of schedule. The Expressway is a privately-financed express toll road connecting SR 54 in Spring Valley

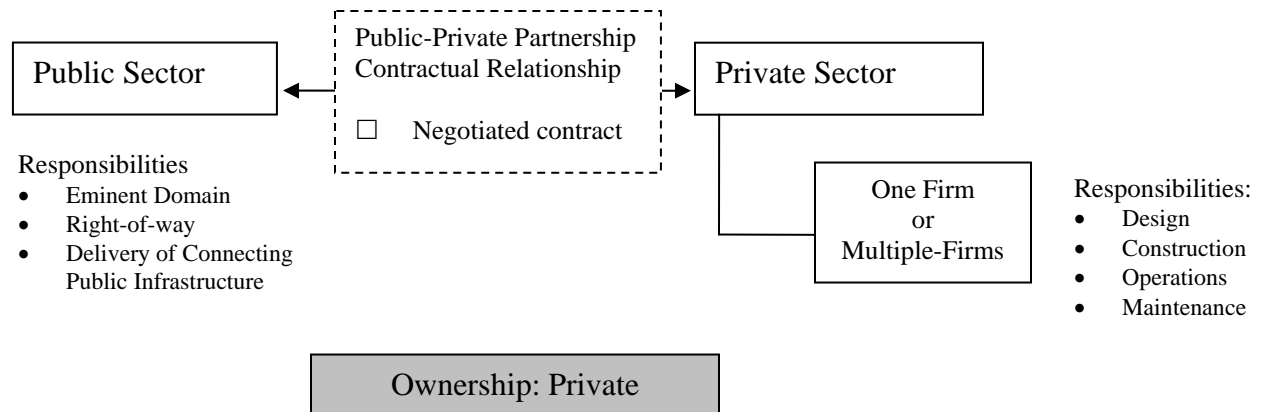
to SR 905 in Otay Mesa. The 10 mile section of the South Bay Expressway is set to open in the Fall of 2006.

Local public partners have also been integral to the completion of the project. The San Diego Association of Government is responsible for funding the interchange that links the South Bay Expressway to the existing freeway network, while the City of Chula Vista facilitated a land dedication program required for right-of-way.

3.8 Build Own Operate (BOO)

The build own operate model is a public-private partnership approach in which the private partner constructs, operates, maintains and retains ownership of the facility. The public sector forms a partnership with a private firm, and this private partner is responsible for the design, construction, operation, and maintenance of that facility. The public sector is responsible for eminent domain and securing right-of-way if necessary. In some cases, the public sector may also be responsible for the delivery of the connecting public infrastructure.

Figure 3.8. Build Own Operate Model



Source: Developed by the research team.

With the BOO model the government agency forms a partnership with a private firm that will then be responsible for all aspects of the project, including ownership. It is the ownership aspect of this model that significantly differentiates it from the other public-private partnership models, as the private sector retains ownership of the property and facilities constructed for the purposes of the project. Previously, the BOO model has been used in large projects that have many goals and various interested parties or in projects that may only serve a small portion of the population, where it is not feasible for the public sector to dedicate scarce resources. A BOO model can also potentially be used for the completion of only one portion of an overall larger project.

One project using the BOO model is the Chicago Regional Environmental and Transportation Efficiency Project (CREATE). The CREATE project has brought together members of the Association of American Railroads, the Chicago Department of Transportation (CDOT), the State of Illinois Department of Transportation (IDOT), and six private railroad companies. The CREATE public-private partnership was formed to restructure, modernize, and expand freight and passenger rail facilities and highway grade separations in the Chicago region to account for the estimated increases in the region's rail and highway traffic. Expanding rail capacity should remove the growth pressure on highway infrastructure as both freight and passenger service will be more reliable and efficient.

The participating private railroads will be responsible for the design, construction, and implementation of all railroad components; Chicago's Metropolitan Rail (Metra) will be responsible for the design, construction, and implementation of all Metra components; and IDOT or CDOT will be responsible for the design and construction of all public components. Once the project is completed, each component shall become the property of the party that owns the property on which the components were constructed or installed. Each owner is also responsible for continued maintenance, operation, and management on project components on its property.

Chapter 4: Public-Private Partnership Decision Factors

State departments of transportation and other government agencies considering privatizing the delivery of transportation infrastructure or services must make two important decisions. The first decision is whether or not to privatize transportation projects through a public-private partnership. If the decision is made to go ahead with privatization via a public-private partnership, the follow-up decision involves which partnership approach or model to adopt. This chapter discusses these important decisions and explains issues and criteria useful for decision-making.

4.1 Deciding to Privatize

When is privatization an appropriate solution for providing public goods and services? In general, Donahue (1989) argues that the case for privatization is stronger (1) the more precisely a task can be specified in advance and its performance evaluated after the fact; (2) the more certainly contractors can be made to compete; (3) the more readily disappointing contractors can be penalized or replaced; and (4) the more narrowly government cares about ends to the exclusion of means. Gomez-Ibanez and Meyer (1993) suggest that privatization is a feasible solution when, all else being equal, the private sector is for some reason or another inherently more efficient than the public sector.

Cohen (2001) suggests that the decision to privatize can be addressed using a “strategic framework ... developed in the form of a set of questions that should be asked by government organizations” (p. 437). This framework, to be discussed next, is based on questions and issues raised by Donahue (1989), Gomez-Ibanez and Meyer (1993), Milward and Provan (2000), Cohen (2001), and Rosetti (2002). The key questions of this strategic framework are discussed next and summarized in Table 4.1.

1. What are the goals and constraints of the privatization initiative being considered?

There can be several reasons and goals for privatization. While enhanced efficiency and cost savings are acceptable motivations for pursuing privatization, experience has shown that privatization efforts are rarely successful at either. Therefore, greater efficiency and cost savings may not be sufficient reasons to pursue privatization, especially in the form of partnerships. On the other hand, collaborative efforts through public-private partnerships do make it possible to pursue, through privatization, the goals of improved and/or innovative services.

Traditionally, if the privatization goals and the pursuit of privatization present any political, social, or cultural constraints, government agencies have shied away from pursuing privatization initiatives. However, with PPPs, privatization initiatives can be implemented even in the face of such constraints or conflicts, since this approach to privatization does not directly remove the government agency from the collaborative effort.

2. To what extent must the government agency be involved in the tasks or activities?

An important distinction must be made between ends and means. If the means are as important as the ends to be achieved, then it is unlikely that privatization will be appropriate. For example, if the individual parts involved in delivering a transportation infrastructure are as important as the infrastructure itself, the private firm will have less flexibility to be creative and innovative in delivering the overall project. As such, privatization will not provide the opportunities to tap private sector expertise and will not be a worthwhile pursuit as government dictates of specifications will limit the actions that can be taken by the private firm. Privatization through public-private partnerships and the subsequent private delivery of public infrastructure and services introduces concerns about the loss of accountability and transparency to the public. This is one reason why privatization is more appropriate for situations where the government agency is concerned more with ends than with means.

If the government agency must periodically provide input for program and task design once delivery has been transferred to the private sector, public-private partnership serves as an appropriate approach to privatization. Other privatization approaches would be appropriate if minimal post-transfer government input is required. If extensive government input is continuously required, privatization should not be seriously considered as a solution to providing public goods and services.

3. Does the government agency currently have the capacity to perform these tasks?

Government agencies that produce at least some services will be more effective at governing a privatization initiative. In a monopsony, where the government agency is the sole buyer of the private partner's goods and services, producing some of these goods and services is the only way for the government agency to learn about the costs of production. "No hidden hand pushes the providers toward efficient outcomes" (Milward & Provan 2000, p. 376). Producing as well as providing services also provides information for the government agency to deter the tendency of the few private firms to produce similar services so as to collude on pricing. If the government agency has some capacity to perform the tasks and plans to maintain some of this capacity, the government agency should seriously consider privatization.

4. How measurable are the outputs and outcomes of the proposed privatization initiative?

If objective and measurable output and outcomes can be easily identified, and data collection is feasible and simple, privatization is a feasible option. In addition, verifiability of the data is also a factor in deciding to privatize. The easier it is for the private partner to lie about the work performed, the outputs produced, and the outcomes achieved, the less willing the government agency should be to pursue privatization.

5. How capital intensive is the activity?

The costs and availability of capital is an important decision factor. If the proposed activity is highly capital intensive, only a select few private firms would be able to do the work, significantly limiting the candidate pool for private partners. The

availability of public sources of capital and the need for private capital to realize the privatization effort also impact the decision to privatize. The adequacy of public funding for the project will define the success of the privatization effort, and if sufficient funding cannot be allocated, privatization should not be pursued. If private capital is sought, then privatization should proceed via a public-private partnership. Privatization is easier when the activity or service approximately covers its costs, neither requiring significant government subsidy nor generating significant surplus. The need for subsidies does not bar privatization, but it does greatly complicate the effort to privatize by invariably extending the nature and scope of the political discussion. Large profits or surpluses do not necessarily prevent privatization, but they make the privatization issue more controversial with those paying users and arousing suspicions or fears of monopoly abuse.

6. What is the impact if the task or activity is performed poorly?

If the impact of poorly-performed tasks are irreversible or are reversible at a high cost, then the government agency should not consider them candidates for privatization. The potential political, social, and economic impacts of delivery failure should also be seriously considered. The importance of the task or activity also dictates whether or not it should be privatized. Critical or urgent services should not be left to the private sector for delivery of provision. If the tasks and activities to be privatized are critical to the government agency's organizational mission, privatization is less desirable because it poses the risk of possible disruption in the critical services.

Table 4.1. Strategic Framework for the Privatization Decision

Key Question	Impact on Decision to Privatize
1. What are the goals and constraints of the privatization initiative being considered?	<input type="checkbox"/> Privatization may be appropriate if the goal is improved and/or innovative services. <input type="checkbox"/> Political, social or cultural constraints complicate but do not preclude privatization.
2. To what extent must the government agency be involved in the tasks or activities?	<input type="checkbox"/> Privatization should be considered if ends matter to the exclusion of means. <input type="checkbox"/> Privatization is less viable if extensive government input is continuously required.
3. Does the government have the capacity to perform tasks?	<input type="checkbox"/> Having the government capacity to produce some of the services makes privatization a more viable solution.
4. How measurable are the outputs and outcomes?	<input type="checkbox"/> Privatization should be considered if objective and measurable output and outcomes can be identified and collected.
5. How capital intensive is the activity?	<input type="checkbox"/> As the costs and up-front capital needs are high, privatization becomes less feasible. <input type="checkbox"/> If the government agency seeks private financing, privatization via a partnership may be a good solution. <input type="checkbox"/> Privatization is easier when the activity or service approximately covers its costs.
6. What is the impact if the task or activity is performed poorly?	<input type="checkbox"/> Privatization should not be considered if there are serious environmental, political, social or economic impacts of service failure or if the impact of poor performance is irreversible or reversible at high cost.

Source: Developed by the research team.

4.2 Deciding on the Public-Private Partnership Approach

Once the decision has been made to pursue privatization via a partnership, the government agency then faces the difficult problem of deciding on which partnership approach to adopt. As Chapter 3 has illustrated, several partnership models exist with varying degrees of complexity, private sector selection and participation, project specificity, and project financing. Chapter 3 also highlights the fact that no single model fits all situations. For example, competition is highly desirable if privatization is to succeed in some instances. Competition is especially important in encouraging cost savings or efficiencies that sometimes motivate the privatization. Partnership models that involve private partner selection through competitive methods, therefore, would be highly appropriate. However, in many other situations, competition can create serious problems (as discussed by Gomez-Ibanez and Meyer (1993) in their review of the privatization of highway infrastructure). In these instances, models such as design build or private contract fee services that are based on competitive tendering may be less appropriate than other models such as design build operate maintain or build own operate which are based instead on negotiated contracts with a specific private partner.

The decision on which public-private partnership model to adopt should be made based on several criteria, including:

- The source of financing required
- The complexity of the tasks involved
- The degree of project specificity
- The basis for private partner selection.

These decision criteria and the appropriate public-private partnership models given these criteria are summarized in Table 4.2.

Table 4.2. Summary of Decision Factors and Appropriate Public-Private Partnership Models

Partnership Model	Source of Financing ^(a)	Task Complexity	Project Specificity			Private Partner Selection
			Inputs	Outputs	Outcomes	
<input type="checkbox"/> Design Bid Build	G		High		Simple & quantitative	
<input type="checkbox"/> Private Contract Fee Services	G					
<input type="checkbox"/> Design Build	G					
<input type="checkbox"/> Build Operate Transfer or Design Build Operate Maintain	G/P					
<input type="checkbox"/> Design Build Finance Operate	P/G					
<input type="checkbox"/> Build Own Operate	P		Low		Complex & quantitative	

- (a) G – purely government financing;
P – purely private financing;
G/P – primarily government financing with some private financing;
P/G – primarily private financing with some public financing.

Source: Developed by the research team.

Chapter 5: Key Issues and Critical Success Factors

Public-private partnership initiatives involve a range of skills, experience and resources to deliver the required infrastructure or service. Milward (1994) noted the irony of privatization – it is promoted as the solution to government inefficiency and mismanagement, but it can only work well if the government agency manages the process well. In child welfare services, for example, to the extent that privatization was successful, it generally applied only to those situations where the government agency developed strong management, monitoring, and quality assurance capabilities and appropriately structured the privatization initiative (Freundlich & Gerstenzang 2003).

Sclar (2000) uses the Massachusetts highway maintenance privatization experience to illustrate the importance of effective structuring and management of the privatization effort. In the early 1990s, Massachusetts' Governor Weld assembled a task force to consider privatization of different public goods and services. The task force concluded that highway maintenance was not a good candidate for privatization, because “road conditions among the state’s maintenance districts vary widely and no reliable historic information existed about comparative performance standards for either the potential contractors or the highway department’s own personnel ... departmental personnel take considerable pride in their work, whereas private contractors are bound only by the terms of their contracts, possibly making their performance inconsistent and difficult to verify” (Sclar 2000, p. 30).

Privatization efforts, however, proceeded despite the task force’s warnings, and highway maintenance privatization began in 1992, with a pilot experiment in Essex County, Massachusetts. This privatization effort involved a single contractor responsible for highway maintenance tasks, including the cleaning, repair, and maintenance of highways, bridges, signage, traffic control, and lighting systems; roadside mowing and tree trimming; and the operation of drawbridges. The contractual language of the request for proposal specified in detail the repair methods, material specifications, quality standards, and safety precautions; stipulated limitations on the value of subcontracts; included provisions for minority employees and subcontractors; and defined minimum training requirements for drawbridge operators.

However, the many detailed specifications in this contract were insufficient. The breadth and scope of the contract also significantly limited the pool of private contractors. The contract, won by the Middlesex Corporation, went into effect in October 1992. In May 1994, the House Post Audit and Oversight Bureau released an interim report on the first year of the Essex County privatization effort. The report identified problems in the areas of contract management and the determination of comparative costs. The contract management problems fell into three general categories: oversight, delegation, and actual performance. The terms of the contract made the nature of oversight vague. The contract allowed Middlesex Corporation to set its own internal working priorities (without much government oversight), and then be judged and receive payments based on the ultimate output and outcomes. Privatization efforts were also marked by a reduction in

maintenance activities and subsequent costs – which were in the private contractor’s realm of responsibility – with the costs being shifted toward capital costs to be paid for by the public agency at a later date.

In addition, the state had the right to order less work than described in the contract, thus having the ability to keep the final cost below the original price. The House Post Audit and Oversight Bureau report concluded that any reduction in the actual contract cost (due to reduced maintenance work) represented expense deferrals, not cost savings. A subsequent study by the State Auditor found that instead of delivering cost savings, the Essex County privatization experiment actually cost the state an additional \$1.1 million than what would have been spent by performing maintenance activities in-house. Sclar (2000) concluded that the primary problems with the Massachusetts highway maintenance privatization effort resulted from the lack of ground rules delineating the nature of the service set forth before the privatization and the lack of government oversight.

5.1 Challenges for Successful Privatization through Public-Private Partnerships

Privatization of the provision of public goods and services, even through a public-private partnership, requires a shift in the roles of the government agency. Rather than being the independent and only provider of the public goods and services, government agencies become partners who must be smart and prudent in their dealings with the private partner that ultimately provides the goods and services. As noted earlier, government agencies must adopt what Fossett et al. (2000) refer to as “prudent purchasing” or what Kettle (1993) calls “smart buying.”

Gormley (1994) argues that privatization efforts will only be successful if the government agencies bring four key skills to the privatization effort. These include the ability to (1) match partners (private firms or non-profit agencies) with the appropriate privatization program; (2) combine the public and private sectors in creative ways; (3) monitor to “avoid unfettered discretion;” and (4) evaluate to “ensure that [privatization] programs actually provide the desired results” (p. 231). Similarly, Sclar (2000) suggests that three important factors typically contribute to the successful outcomes of privatization. These are: (1) the process used to choose the private partner; (2) the technological constraints of the work; and (3) the relationship between the government agency and the private partner. Fossett et al. (2000) require that government agencies (1) specify performance requirements in measurable form; (2) acquire the ability to determine if and how private contractors are complying with the performance requirements; and (3) hold private firms accountable for meeting requirements and sanction them for failure to comply with the standards and requirements.

The literature suggests that a clear and strong relationship between the government and private agencies involved in the privatization effort is the cornerstone of success. This is even more true with regards to privatization through public-private partnerships, as the relationship between the two is that of partners, and not a clearly-defined principal-agent

relationship. This report concludes with key issues and critical success factors for the effective and successful privatization through public-private partnerships. These issues and success factors are based on theoretical and empirical research, and draw on findings from recent experiences with privatization and public-private partnerships both in the U.S. and in the international arena. In-depth review of these issues and factors can be found in Freundlich and Gerstenzang (2003), Frisch (2002); Goldsmith and Eggers (2004), Gomez-Ibanez and Meyer (1993), Grimsey and Lewis (2004), Klijn and Teisman (2000), Osborne and Murray (2000), Romzek and Johnston (2005), Rossetti (2002) and Sclar (2000).

The key issues and critical success factors are organized into three categories:

1. Process factors – factors that must be addressed and considered before structuring a partnership.
2. Partner factors – relevant factors for selecting the right partner(s) and structuring the relationship with these partner(s).
3. Structural factors – factors related to how the partnership is structured, put together and managed.

These issues and factors are summarized in Table 5.1.

Table 5.1. Summary of Key Issues and Critical Success Factors for Partnerships

Process Factors	Partner Factors	Structural Factors
<input type="checkbox"/> Provide economic rationale for private sector involvement. <input type="checkbox"/> Create institutional support and organizational infrastructure for collaborative efforts.	<input type="checkbox"/> Carefully design and consistently implement the partner selection process. <input type="checkbox"/> Develop the necessary relationships to pursue the agreed-on common goal.	<input type="checkbox"/> Clearly delineate roles and responsibilities <input type="checkbox"/> Adopt performance-based contracting. <input type="checkbox"/> Enforce effective contract accountability.

Source: Developed by the research team.

5.2 Process Factors

Process factors are those issues and factors that, when considered and addressed before structuring the partnership, build the strong foundation for successful privatization through a public-private partnership. The relevant foundational issues are: (1) provide economic rationale for private sector involvement; and (2) create institutional support and infrastructure for privatization through collaborative efforts.

Economic Rationale for Private Sector Involvement

Before a successful partnership can be structured, the government agency must first produce an economic rationale for why the private sector should be involved in the delivery of the public goods and services. This economic rationale should identify goals

of privatization, document the need for private sector involvement, and demonstrate the business case to entice the private sector to participate.

In terms of goals, the government agency must determine what it wants to achieve through privatization. For example, privatization goals may be cost savings, cost control, enhanced service delivery, private sector expertise, or access to private capital. When defining goals, the government agency should clearly specify (Freundlich & Gerstenzang 2003): (1) the population to be served by the partnership; (2) the partnership approach; (3) roles and responsibilities of the government agency and private firm(s); and (4) funding and payment mechanisms. Documenting the need for private sector involvement requires identifying what it is that the private sector contributes to the delivery of the public goods and services. In addition, the private sector must be able to profit from participating in the partnership. The government agency must highlight these profit opportunities by presenting the business case for the private sector

Institutional Support and Organizational Infrastructure

Creating institutional support and organizational infrastructure is also essential for successful collaboration during the partnership. Strong institutional support comes from having high-level, continuous leadership, achieving broad buy-in and having long-term organizational commitment to the privatization initiative and the collaborative efforts needed to achieve privatization goals. It is critical that key actors both within and outside the organization not only buy-in to the initiative, but also participate in getting the public-private partnership launched. Personal commitment and leadership are also vital for ensuring that collaborative efforts are developed and sustained. A strong infrastructure, in turn, is characterized by a shared vision of the initiative, adequate management and staffing, and adequate financial support for the initiative.

5.3 Partner Factors

Partner factors include two types of relevant issues: (1) issues pertaining to selecting the right partner(s); and (2) issues important for structuring the relationship with these partner(s).

Private Partner Selection

Pack (1991) argues that contracting out as a privatization approach will be most effective when meaningful competition is secured in the bidding process, especially through a competitive tendering process. For privatization through PPPs, however, meaningful competition is not as crucial. Grimsey and Lewis (2004) argue for rigorous and robust competitive tendering process as part of the establishment of successful partnerships. However, “experience has shown that establishing a competitive process does not necessarily result in real competition” (Freundlich & Gerstenzang 2003, p. 277). In fact,

it is not uncommon for competitively bid contracts to elicit responses from only one bidder (Schlesinger et al. 1986). For public-private partnerships, especially, competitive tendering may not be the most effective method for partner selection. Many of the more successful partnerships result from relationships with pre-existing or pre-identified partners, resulting in negotiated contracts. Bringing these partners to the table early has often resulted in a strong partnership capable of delivering on the promised goals.

The most important factor in selecting a private partner is that the selection process be carefully designed and consistently implemented. The process should clearly communicate the nature and scope of the program, the fiscal (funding or payment) methodology, and the requirements of the private agency in terms of service provision and accountability. The process – from seeking bids to finalizing the contract – should be implemented in a consistent, predictable manner and be designed to bear up under public scrutiny.

Partnering Relationship

The key requirement for successful partnership is that the government agency be prepared to relinquish some control and authority to the private partner. In developing a working relationship, the government agency should build on existing relationships whenever possible or allow more time to develop the necessary relationships before launching into the actual negotiations and the initial stages of collaborations. Successful relationship building requires agreement among partners on important common goals, with the acknowledgement that each partner may also have secondary goals that can be pursued if they do not interfere with the mutual goals. In addition to agreement on the relevant end goals, partners must also agree on the beneficiaries and/or customers of their collaborative efforts.

The long-term nature of many public-private partnerships also makes it necessary that both the government and private partners exhibit long-term commitment to the privatization effort. Flexibility is a crucial aspect of the partnership and must be maintained throughout the relationship. Both partners must accept that competitive tensions will continue to be a legitimate part of the partnership's collaborative efforts, which will need to be recognized and managed. A strong relationship also requires that a process be set-up early in the life of the partnership to identify and reconcile the diverging views, goals, and approaches of the multiple partners.

5.4 Structural Factors

The prevailing assumption behind the privatization of public goods and services delivery is that it ensures effective contractor performance, greater clarity and transparency regarding performance responsibilities, and easy recourse when contractor performance fails to meet expectations (Light 2000; Sclar 2000). However, studies of state privatization of social services have suggested that government agencies have found it

difficult to hold contractors accountable for their performance (Fossett et al. 2000; Romzek & Johnston 2002). Incorporating the necessary structural factors into the implementation of the public-private partnership is an important way to ensure performance and accountability of the private partner(s). The key structural factors that must be considered or addressed include: (1) clearly delineate roles and responsibilities; (2) adopt performance-based contracting; and (3) enforce effective contract accountability.

Roles and Responsibilities

The successful partnership hinges on a contract that is written in language that is understandable to all partners. Contracts should specifically state the services to be provided, to whom they are provided, and the results to be obtained. The obligations of both government and private partners and their respective roles and responsibilities should be clearly defined, especially with respect to key structural roles. It is not sufficient to only detail the private firm's roles and responsibilities in relation to service delivery and accountability. The government agency's obligations – such as timely payment, responsiveness to provider's questions, and monitoring of outcomes – should also be specified.

This detailed delineation of roles and responsibilities supports greater efficiency for the collaborative efforts and provides a framework for implementing and assessing the effect of the partnership's activities. However, most privatization contracts and arrangements do not explicitly define the division of roles and responsibilities. For example, only two of the contracts related to the privatization of child welfare services (as reviewed by Freundlich & Gerstenzang (2003)) contained clear language regarding the role and obligations of the public agencies. Michigan's contract had a paragraph titled "Family Independence Agency [FIA] Responsibilities, which, while specifying the government agency's roles and responsibilities, made no mention of its obligations to make timely payment to the private agencies or provide technical assistance in response to their needs.

Risk allocation must also be clearly specified. Risk shifting has become an increasingly common component of privatization contracts. In the risk-shifting scenario, the contractor is expected to bear some of the burden of identifying strategies that can reduce service costs (Sclar 2000), thus creating an incentive for administrative efficiency. As such, many proponents of privatization have approached it as an opportunity for the government agency "to export its uncertainties" (Milward 1994, p. 75). However, "[when] government sheds risk, the contractor may face incentives to "game" the system and subvert accountability" (Romzek & Johnston 2005, p. 439). Therefore, for risk shifting to be successful, the allocation of risk must be explained in the contract and the private partner must be compensated through a system that is adequate and timely.

Having an exit strategy is also important to ensure that the dissolution of the partnership is well-managed. The government agency, with input from the private partner, should develop plans for the disposition of assets, phase-out of service delivery or production,

and technical and technology transfer. These plans should clearly define the roles and responsibilities of each party in the dissolution stage of the partnership.

Performance-Based Contracting

Milward and Provan (2000) argue that “[w]hen a reasonable level of funding is combined with an institutional design that creates incentives for agents to perform as promised, all other things being equal, reasonable outcomes are likely to result” (p. 368). The contractual relationship between the government agency and private firms, therefore, should make it possible for the government to enforce standards for level and quality of infrastructure or service for which the private partner can be held accountable and sanctioned if the standards are not met. The process of developing and applying such standards is known as “prudent” or “value” purchasing (Fossett et al. 2000), and performance-based contracting is the best mechanism through which to achieve it. “[T]he prudent purchaser must define quality, measure it, seek to improve it, and exert market leadership... put into place the elements of a good quality management system – negotiated performance goals, member satisfaction surveys and focus groups, independent external reviews, continuous quality improvement systems, data reporting, and consequences for underachievers ... use these elements effectively, keeping in mind that the system should not be micro-managed, or made to respond to unrealistic expectations” (Bullen 1998).

In addition, states have a wide variety of contractual sanctions available to them, including, for example, requirements for corrective action plans, freezing payments, or actual contract termination. However, the government agencies “have been reluctant, frequently for sound political or market reasons, to use these sanctions, preferring to rely on more informal solutions” (Fossett et al. 2000, p. 45).

At the early stage of the privatization initiative, the government agency should use a few selected outputs and outcomes and their associated performance targets. These outputs and outcomes should represent clearly-defined concepts that are measurable in straightforward and simple terms. Both the government agency and the private firm should agree that these selected performance measures and deliverables are appropriate given the nature of the privatization effort and its goals. They should be based on pre-privatization data or on baseline data developed during the initial implementation stage, as opposed to being arbitrarily defined with no demonstrable relationship to actual performance. In the early phases of the performance contract, fiscal incentives should be tied to this limited number of key outputs and outcomes.

Most importantly, performance measures and deliverables must provide the government agency with the information it needs to determine whether and how well the private partner is performing. Accurate and timely performance data must be collected. Without good performance information, the government agency is simply unable to adequately assess contractor performance or make sound decisions about the allocation of resources to maximize effectiveness and achieve privatization goals. In addition, performance-

based contracting gives the government agency the right to exclude agencies that cannot produce acceptable quality services at the agreed upon price and also to exclude private partners that will not cooperate with the principal (Milward & Provan 2000). This ability to exclude partners decreases the needed level of government monitoring, as the threat of sanctions should serve to keep agencies in reasonable compliance with their contracts.

However, case studies of previous privatization initiatives have shown that most have struggled to measure outcomes and benchmarks that allow for the eventual assessment of actual performance. While outcomes associated with the privatization effort should be clearly defined, in most cases, they are not developed with the necessary specificity. Specific problems with outcomes and benchmarks include: (1) over-reliance on poorly defined “subjective” outcomes; (2) too many outcomes than could possibly be monitored or measured; (3) attenuated outcomes beyond the scope of the program; and (4) a large degree of variability in the outcomes used to assess performance. Even when outcomes are well-developed to incorporate clearly defined concepts, there can be difficulties connecting these outcomes to performance targets. These difficulties include: (1) failure to specify any performance targets or baselines; and (2) performance targets that lack validation with program data. If no baselines exist, the performance-based contract should specify that a baseline be established as the public-private partnership is developed and the private firm gains experience and information about the delivery of the public goods and services.

The key elements of performance-based contracting are summarized in Table 5.2.

Table 5.2. Key Elements of Performance Contracts

<ul style="list-style-type: none"><input type="checkbox"/> Clearly-defined and measurable outputs and outcomes.<input type="checkbox"/> Manageable number of key outputs and outcomes.<input type="checkbox"/> Baseline measures or performance targets for outputs and outcomes.<input type="checkbox"/> Sanctions for non-performance, and subsequent use of sanctions for non-performing private partners.<input type="checkbox"/> Fiscal incentives tied to key outputs and outcomes.<input type="checkbox"/> Provisions for accurate and timely performance data collection and reporting.

Source: Developed by the research team.

Effective Contract Accountability

Effective contracts can be defined as contracts that allow for monitoring to play a meaningful role. These contracts include clearly defined expectations regarding the services to be provided, the persons to whom they will be provided, and with what results (Gormley 1994). In contrast, ineffective contracts (1) contain vague service obligations; (2) poorly define outcomes and performance measures; (3) poorly specify roles and responsibilities; and (4) fail to clearly articulate the interventions to be provided. An evaluation of the privatization experiences in child welfare services found that “the dynamic in many of the programs was one of inexperienced purchasing agents (public agencies) attempting to develop at risk contracts with inexperienced sellers” (Freundlich & Gerstenzang 2003, p. 280).

“Effective contract accountability refers to a situation in which the state is able to design, implement, manage, and achieve accountability for its ... contract” (Romzek & Johnston 2005, p. 437). For effective contract accountability, an effective contract must be accompanied by monitoring mechanisms, including an adequate and suitable information system to produce key data for evaluation of progress in achieving privatization goals. Having strong monitoring capabilities allows the government agency to ensure effective government oversight, and assure contract compliance with standards of quality service provision and achievement of program outputs and outcomes.

The role of monitoring is critical but complex. Milward (1994) captures the complexities associated with monitoring: “Privatization occurs because severe capacity limitations force government to contract services it does not have the ability to provide ... How can government be expected to effectively fulfill these functions when limited capacities led to privatization in the first place?” (p. 79). However, the design of privatization policies, the implementation of privatization initiatives, and evaluation, typically remain within government control. Vigilance and follow-up are essential in contracting out, but “accountability continues to be the Achilles heel of many contracts” (Gormley 1994, p. 224). **The responsibility for monitoring and oversight requires that the government retain the legal authority to effectively provide oversight – that it have the capacity in terms of expertise, staff, and funding to oversee private sector performance, and once evaluative criteria have been defined, that it determine private agency compliance with contractual requirements** (General Accounting Office 1998). However, monitoring can become so extensive as to present serious programmatic issues and introduce significant monitoring costs. “Ownership” of the monitoring system by one partner may also pose major problems and introduce conflict into the partnership structure.

Effective monitoring involves the design of appropriate evaluation tools, including data collection and analysis. It requires the institutionalization of an information management system that produce data on costs, service levels, outputs, and outcomes, to create a critical reservoir of data and information that can be used to determine goal attainment, cost comparisons and other useful monitoring and feedback purposes. Experiences of privatization initiatives in child welfare services make clear that data are critical to determine the cost of services, calculate the cost benefits of the new approaches to service delivery, establish outcomes and performance standards, and assess the extent to which outcomes have been achieved. A study by the GAO (1998) found that the development of management information systems was the most difficult task faced by program officials as they implemented privatization initiatives.

Chapter 6: Summary and Conclusion

The goal of this report was to provide a primer on how public-private partnerships could be used to deliver transportation infrastructure and services. Given the increasing pressure to privatize the production and delivery of public goods and services, coupled with the growing popularity of partnership approaches, this report provided policymakers and government agencies, especially those in the transportation arena, with useful information and guidelines pertaining to:

- Understanding the reasoning behind the use of public-private partnerships;
- Differentiating partnerships from contracting out as a privatization approach;
- Delineating government agency and private firm roles in the different partnership models;
- Decision factors for public-private partnership adoption; and
- Implementing and managing successful partnerships.

In this study we defined public-private partnership as being a broad privatization approach that included contracting out (see section 2.2). This privatization approach calls for joint production and joint decision-making by multiple actors in both the public and private sectors. The FHWA defines seven partnership models for the privatization of the delivery of transportation infrastructure and services. These models can be organized along a continuum from greater public responsibility to greater private responsibility, and can be further differentiated along other dimensions, such as private and government responsibilities, ownership of the infrastructure, source of financing, contract type or specification, private partner selection process, and project specificity (see summary tables – Table 3.1, Table 3.2, and Table 4.2).

The decision to privatize via a public-private partnership, and subsequently the decision on which partnership model to adopt, were also addressed in this report. A strategic framework for the first decision was developed as a set of six key questions (summarized in Table 4.1) and four criteria were presented for the second decision. The decision criteria for partnership model selection were:

- The source of financing required;
- The complexity of the tasks involved;
- The degree of project specificity; and
- The basis for private partner selection.

Once the decision has been made both to privatize and to use public-private partnership, the government agency is left with the difficult task of successfully implementing and managing the partnership. In this study we borrowed from theoretical and empirical research on privatization and public-private partnerships to arrive at three sets of issues and critical success factors. These issues and factors, summarized in Table 5.1, are:

- Process factors that must be addressed before structuring the partnership. This involves providing an economic rationale for private sector involvement; and creating institutional support and organizational infrastructure for collaborative efforts.

- Partner factors relevant to the selection of the right partner(s) and the relationships with the partner(s). This involves carefully designing and consistently implementing the partner selection process; and developing the necessary relationships to pursue the common goal.
- Structural factors that are related to how the partnership is structured, put together, and managed. This involves clearly delineating roles and responsibilities; adopting performance-based contracting; and enforcing effective contract accountability.

As discussed in this report, public-private partnership has much potential as a tool for privatizing the delivery of transportation infrastructure and services. However, few transportation agencies have pursued partnerships, both because of the complexities involved and the lack of understanding of the partnership concept and the process involved in using partnerships. This report broadens our understanding of public-private partnerships and provides basic guidelines for those transportation agencies interested in harnessing the potential of such partnerships.

References

- Bendick, M., Jr. 1989. Privatizing the Delivery of Social Welfare Services: An Idea to be Taken Seriously. In S.B. Kamerman & A.J. Kahn (eds.) *Privatization and the Welfare State*. Princeton: Princeton University Press.
- Brudney, J.L.; S. Fernandez, J.E. Ryu & D.S. Wright. 2005. Exploring and Explaining Contracting Out: Patterns among the American States. *Journal of Public Administration Research and Theory* 15(3):393-419.
- Bullen, B. 1998. What is a Prudent Purchaser? Keynote speech presented to the NASMD/HCFR Medicaid Managed Care Meeting. February 1998. <http://www.nasmd.org/issues/bullenspeech.htm> (Accessed February 9, 2006).
- Chi, K.S.; K.A. Arnold & H.M. Perkins. 2004. Privatization in State Government: Trends and Issues. *The Book of the States 2004* (p. 465-481). Lexington, KY: Council of State Governments.
- Chi, K.S. & C. Jasper. 1998. *Private Practices: A Review of Privatization in State Government*. Lexington, KY: Council of State Governments.
- Coase, R.H. 1960. The Problem of Social Cost. *Journal of Law and Economic*. 3: 1-44.
- Cohen, S. 2001. A Strategic Framework for Devolving Responsibility and Functions from Government to the Private Sector. *Public Administration Review* 61(4):432-440.
- Dilger, R.J., R.R. Moffett & L. Struyk. 1997. Privatization of Municipal Services in America's Largest Cities. *Public Administration Review* 57(1): 21-26.
- Donahue, J.D. 1989. *The Privatization Decision: Public Ends, Private Means*. New York: Basic Books.
- Fossett, J.W.; M. Goggin; J.S. Hall; J.M. Johnston; R. Roper; L.C. Plein & C. Weissert. 2000. Managing Medicaid Managed Care: Are States Becoming Prudent Purchasers? *Health Affairs* 19(4): 36-49.
- Freundlich, M. & S. Gerstenzang. 2003. *An Assessment of the Privatization of Child Welfare Services: Challenges and Successes*. Washington, DC: CWLA Press.
- Frisch, K. 2002. Steps to Successful Public-Private Partnerships. *Government Procurement* (April):16-20.
- General Accounting Office. 1998. *Child Welfare: Early Experiences Implementing a Managed Care Approach*. HEHS-99-8. Washington, DC: Government Printing Office.

Goldsmith, S. & W.D. Eggers. 2004. *Governing by Network: The New Shape of the Public Sector*. Washington, DC: Brookings Institution Press.

Gomez-Ibanez, J.A. & J.R. Meyer. 1993. *Going Private: The International Experience with Transport Privatization*. Washington, DC: The Brookings Institution.

Gormley, W.T. 1994. Privatization Revisited. *Policy Studies Review* 13(3/4): 215-234.

Greene, J.D. 2002. *Cities and Privatization: Prospects for the New Century*. Upper Saddle River, New Jersey: Prentice Hall.

Greene, J.D. 1996. How Much Privatization? A Research Note Examining the Effect of Fiscal Stress, Location, and Wealth in Medium-sized Cities. *Policy Studies Journal* 24(4): 632-640.

Grimsey, D. & M.K. Lewis. 2004. The Governance of Contractual Relationships in Public-Private Partnerships. *Journal of Corporate Citizenship* 15: 91-109.

Harding, A. 1990. Public-private Partnerships in Urban Regeneration. In M. Campbell (ed.) *Local Economic Policy*. London: Cassell.

Hodge, G.A. 2000. *Privatization: An International Review of Performance*. Boulder, CO: Westview Press.

Holland, R.C. 1984. The New Era in Public-private Partnerships. In P.R. Porter & D.C. Sweets (eds.) *Rebuilding America's Cities: Roads to Recovery*. New Brunswick, NJ: Center for Urban Policy Research.

Kamerman, S.B. & A.J. Kahn. 1989. *Privatization and the Welfare State*. Princeton: Princeton University Press.

Kettl, D.F. 1993. *Sharing Power: Public Governance and Private Markets*. Washington, DC: Brookings Institution.

Klijn, E. & G.R. Teisman. 2000. Governing Public-Private Partnerships: Analysing and Managing the Processes and Institutional Characteristics of Public-Private Partnerships. In S.P. Osborne (ed.). *Public-Private Partnerships: Theory and Practice in International Perspective*. London: Routledge.

KPMG. 2002. Public Private Partnership Opportunities in E-Government. November 2002. http://www.agimo.gov.au/_data/assets/file/19014/PPP.pdf (Accessed April 26, 2006).

Kuttner, R. 1989. False Profit. *New Republic*. February 6.

Light, P.C. 2000. *Making Nonprofits Work: A Report on the Tides of Nonprofit Management Reform*. Washington, DC: Brookings Institution.

Lyons, S.T. & R.E. Hamlin. 1991. *Creating an Economic Development Action Plan*. New York: Praeger.

Majone, G. 1997. The Agency Model: The Growth of Regulation and Regulatory Institutions in the European Union. *EIPASCOPE: Journal of the European Institute of Public Administration* 3:9-14.

McQuaid, R.W. 2000. The Theory of Partnership: Why Have Partnerships? In S.P. Osborne (ed.). *Public-Private Partnerships: Theory and Practice in International Perspective*. London: Routledge.

Milward, H.B. & K.G. Provan. 2000. Governing the Hollow State. *Journal of Public Administration Research and Theory* 10(2):359-379.

Milward, H.B. 1994. Nonprofit Contracting and the Hollow State. *Public Administration Review* 54(1): 73-77.

Norment, R. 2002. PPPs – American Style. *The PFI Journal* 39: 26-27.

Osborne, D. & P. Hutchinson. 2004. *The Price of Government: Getting the Results We Need in an Age of Permanent Fiscal Crisis*. New York: Basic Books.

Osborne, D. & T. Gaebler. 1992. *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*. Reading, MA: Addison-Wesley.

Osborne, S.P. & V. Murray. 2000. Understanding the Process of Public-Private Partnerships. In S.P. Osborne (ed.). *Public-Private Partnerships: Theory and Practice in International Perspective*. London: Routledge.

Pack, J. 1991. The Opportunities and Constraints of Privatization. In W.T. Gormley, Jr. (ed). *Privatization and its Alternatives*. Madison, WI: University of Wisconsin Press.

Reh fuss, J. 1989. *Contracting Out in Government: A Guide to Working with Outside Contractors to Supply Public Services*. San Francisco: Jossey-Bass Publishers.

Romzek, B.S. & J.M. Johnston. 2005. State Social Services Contracting: Exploring the Determinants of Effective Contract Accountability. *Public Administration Review* 65(4): 436-449.

Rossetti, M.A. 2002. Public/Private Partnerships III: Implementing Successful Public/Private Partnerships in Transportation. Cambridge, MA: U.S. Department of Transportation. <http://www.volpe.dot.gov/infosrc/strtplns/nstc/ppp3/> (Accessed February 24 2006).

Schlesinger, M.; R.A. Dorwart & R.T. Pulice. 1986. Competitive Bidding and States' Purchase of Services: The Case of Mental Health Care in Massachusetts. *Journal of Policy Analysis and Management* 5(2): 245-263.

Sclar, E.D. 2000. *You Don't Always Get What You Pay For: The Economics of Privatization*. Ithaca, NY: Cornell University Press.

Sellgren, J. 1990. Local Economic Development Partnerships – An Assessment of Local Authority Economic Development Initiatives. *Local Government Studies* July/August: 57-78.

Van Ham, H. & J, Koppenjan. 2002. Building Public-Private Partnerships: Assessing and Managing Risks in Port Development. *Public Management Review* 4(1): 593-616.

Appendix A: Glossary of Terms

Asset Sale: The transfer of ownership of government assets to the private sector.

Concession: The principal agreement between the Public Partner and the private Partner governing the Project. This agreement may be referred to as the 'Contract' or 'Concession Agreement'.

Concession benefits: Rights to receive revenues or other benefits from a project for a fixed period of time.

Franchising: The government grants a concession or privilege to a private sector entity to conduct business in a particular market or geographical area. The government may regulate the service level or price, but users of the service pay the provider directly.

Ground Lease: A lease for the use and occupancy of land only, generally for an extended period of time.

Lease: Written agreement between a property owner and a tenant that stipulates the conditions under which the tenant may possess the real estate for a specified period of time and amount of rent.

Lease/Purchase: A lease/purchase is an installment purchase contract where the private sector finances and builds a new facility, which it then leases back to a public agency. The public agency makes scheduled lease payments to the private party, where the public agency accrues equity in the facility with each payment. At the end of the lease term, the public agency owns the facility or purchases it at the cost of any remaining unpaid balance in the lease.

Partnership: A legal relationship between two entities contractually associated as joint principles in business.

Public Purpose Debt: debt used to finance a project intended to be of value to the general public. Such debt can include ordinary government securities, such as general obligation or revenue bonds, as well as qualified private activity bonds.

Request for Proposals (RFP): An announcement by a government agency that demonstrates a willingness to consider proposals for the performance of a specified project or program component.

Request for Qualifications: A procurement tool used by both the public and private sector to select partners in major systems acquisitions. This approach places greater emphasis on the actual qualifications of the potential contractor, rather than how well the potential contractor responds to the detailed project specifications and requirements.

Special Experiment Project No. 15 (SEP-15): a new experimental process within the FHWA to identify, for trial evaluation, new public-private partnership approaches to project delivery.

Sublease: An arrangement where the lessee leases the property to a different end user while the lessor maintains ownership.

Transportation Infrastructure Finance and Innovation Act (TIFIA): Program that provides federal credit assistance to large-scale projects of regional or national significance. There are three forms of credit assistance available (1) secured loans, (2) loan guarantees, and (3) standby lines of credit. The goal of the TIFIA credit program is to leverage Federal funds by attracting substantial private and other non-federal co-investment in critical improvements to the nation's surface transportation system. In general, both public and private entities seeking to finance, design, construct, own or operate an eligible surface transport project are eligible for assistance.

Toll Credits: States may apply toll revenues used for capital expenditures on highways to earn toll credits, which can be used to satisfy the State's matching requirement for receipt of Federal-aid highway funding.

Turnkey: A generic term for when a public agency contracts with a private investor/vendor to design and build a complete facility in accordance with specified performance standards and criteria agreed to between the agency and the vendor. The private developer commits to build the facility for a fixed price and absorbs the construction risk of meeting that price commitment. The financing and ownership of the facility can rest with either the public or private partner.