



Risk Management in Transport PPPs in the Islamic Countries

**Conceptual Framework for Risk Management in Transport PPP Projects
and Global Trends**

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Methodology of the study

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| | | |
|--------|--|--|
| Task 1 | Conceptual Framework | <ul style="list-style-type: none">Literature review |
| Task 2 | Global Trends and the Successful Risk Management Practices of Transport PPP Projects outside the OIC Geography | <ul style="list-style-type: none">Literature reviewInterviews to representatives of multilateral institutions |
| Task 3 | In-depth Assessment of Risk Management in Transport PPP Projects in Selected Countries | <ul style="list-style-type: none">Literature review with a focus on the World Bank PPP Infrastructure Resource Centre Database on PPPDesk research on 3 case studies, including phone or mail-based questionnairesField visits for 3 case studies, including interviews and joint meetings |
| Task 4 | Policy Recommendations | <ul style="list-style-type: none">Horizontal reading of case studies' findingsLiterature review |

Risk management in transport PPPs: a framework *tplan*

- To ensure **theoretical soundness, consistency and comparability**, the same conceptual framework is used to structure:
 - ✓ The analysis of risk management principles in transport PPPs and of global trends
 - ✓ The 6 in-depth case studies on OIC countries
- What is the framework based on?
 - Terms of Reference questions
 - **Vast literature review** (International Organis., academic literature, best practices, etc.)
- The developed framework combines **project cycle phases** and **risk governance dimensions**



The conceptual framework

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| Investment phases \ Risk governance dimensions | Risk Identification | Risk Assessment | Risk Allocation/ Sharing | Risk Monitoring | Risk Treatment/ Remedies |
|--|---------------------|-----------------|--------------------------|-----------------|--------------------------|
| | | | | | |
| 1. Strategy and policy | +++ | ++ | ++ | + | + |
| 2. Pre-tendering decision process | +++ | +++ | + | | |
| 3. Procurement and contracting | | | +++ | ++ | ++ |
| 4. Construction and asset delivery | | | | +++ | +++ |
| 5. Operation | | | | +++ | +++ |
| 6. End of contract | + | + | + | + | + |

Evidence from the literature

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Practical risk management strategies tend to be project- and context-specific and standardization is difficult

- **The nature of PPP risks is dynamic** → varies over the project cycle and over time
- **Decisions** by a stakeholder to retain, reduce or transfer certain risks **in one phase** of the project cycle **will affect risk exposures and risk management options in successive phases**
- The technical and economic features of transportation investment are subject to **considerable variation**, so the patterns of risks for e.g. an airport, a port terminal, a road concession etc. can be quite dissimilar

Evidence from the literature (cont.)

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- Risk management provisions can be **very specific and deeply embedded in contract** documentation, spelling out triggering conditions which may or may not become applicable depending on events and may be difficult to observe for external parties
- Empirical support for evidence-based risk management decisions is **fragmented**

1. Strategy and policy

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4 elements for the analysis:

Political support and strategies
Legal provisions
Institutional arrangements
Investment attraction

- Policy and strategic framework **affect risk exposure and risk governance** throughout the PPP investment cycle
- Not only individual projects but the **whole portfolio** of investments in the transport sector
- Legal provisions have a significant influence over the identification, assessment and allocation of risks
- Good **risk identification and assessment** rely on institutional structures enabling specialized staff to perform these tasks

1. Strategy and policy

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TAKE-AWAY POINTS



- Pressing ahead without an adequate strategic and institutional framework **increases risks**
- Adequate attention to the strategic framework allows **better understanding of trade-offs**, e.g. release of current budget constraints vs. future fiscal unbalances
- Identifying **barriers in public sector capacity** is a priority

2. Pre-tendering decision process

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2 elements for the analysis:

Screening for PPP suitability
Special arrangements for PPPs

- A **PPP suitability test** is crucial to ascertain if the project is appropriate as a PPP, but also for **risk identification**
- The **in-depth appraisal of the PPP project** covers the assessment of:
 - technical requirements
 - financial model
 - risk identification (risk register) + risk assessment (ranking of risks)
 - PPP contract's preliminary structure (incl. risk allocation)

2. Pre-tendering decision process

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TAKE-AWAY POINTS



- Under a PPP procurement route the assessment of certain risks may become more critical and the **emphasis of the studies** may reflect this (e.g. traffic studies, travel behaviour modelling).
- **Feasibility studies** and **Value-for-Money assessments** are essential in the pre-tender phase for the preparation of robust PPP tender procedures.
- **Soft market testing** can be an essential step to prepare tender design and pre-identify stakeholders likely to play a role in successive phases

3. Procurement and contracting


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4 elements for the analysis:

Procurement strategies
PPP contractual arrangements
Performance metrics
Remuneration


- The **quality of tender documentation** reduces overall risk vulnerability for the public sector
- Preparing PPP contracts revolves mainly around **risk allocation**, i.e. defining which party is expected to assume each risk → **risk matrix**
- Performance metrics are directly linked to ongoing activity of **risk monitoring** during construction and operation

Usual risk matrix in transport PPPs (1)

| | Risk category | Usual allocation of risks (public/private/shared) |
|--|----------------------------------|---|
| Context-related risks  | Political and legal risks | Mostly on the <u>public sector</u> . Exception: <ul style="list-style-type: none">for changes in law affecting the market equally (e.g. taxation), the private party may not be compensated (there can be some risk sharing) |
| | Macroeconomic risks | Mostly <u>shared</u> <ul style="list-style-type: none">risks during construction are typically borne by the private partner, while risks during the concession term typically by the public authority |

Usual risk matrix in transport PPPs (2)

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| | Risk category | Usual allocation of risks (public/private/shared) |
|---|--|---|
| Project-related risks  | Financial credit risks | On the <u>private sector</u> |
| | Design, construction and operation risks | On the <u>private sector</u> . Exceptions: <ul style="list-style-type: none"> • risk of damage to the environment, generally shared • land purchase and site risks, generally borne by the public sector |
| | Financial sustainability risks | Mostly on the <u>private sector</u> . Exception for toll roads: <ul style="list-style-type: none"> • it has become common for public authorities to retain demand and toll revenue risk in the absence of in-depth traffic analysis |
| | Other risks (force majeure and early termination) | <u>Shared</u> |

3. Procurement and contracting

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TAKE-AWAY POINTS



- Need to build on Value for Money considerations
- **Fine-tuning of payment mechanisms** is essential in preparing a robust tender documentation
- Beware of legal and technical **asymmetry in public sector vs. private sector skills**
- Essential to establish at project level a **skilled tender management team** to direct tender preparation, publishing and award

4. Construction and asset delivery

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2 elements for the analysis:



Management of risks during design
Management of risks during construction

- **Design risk** consists in defects in design resulting in:
 - requested service standards not met
 - an increase in operation costs
- **Construction risks** can be caused by:
 - internal factors (defects in methods used, negligence by private party, inadequate cost management, etc.)
 - external factors (weather, protests, permits, changes in labor costs, etc.)
- **Heavily affected by risk management strategies applied in previous phases**
 - Exhaustive feasibility and technical studies
 - Contract structure between the concession company and the construction company

4. Construction and asset delivery

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TAKE-AWAY POINTS



- **Awareness of residual risk and worst case impact** are an important concern for public sector (depends on risk mitigation strategy identified in previous phases)
- Establishing within the public sector a contract management team with **skills in monitoring construction phase** is crucial
- A tool for **risk monitoring during construction** are construction milestones reliant on completion of agreed sections, subject to quality requirements

5. Operation

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3 elements for the analysis:

Management of risks during operation
Bonus/malus schemes
Contract renegotiation

- **Demand, maintenance, revenue** and **technology risks** are among the most relevant operation risks
- Linking remuneration to performance can translate in **penalties or bonus payments**
- Unforeseen events (e.g. financial crisis) may require a new **risk sharing (renegotiation)**
- **Renegotiation due to opportunistic behaviour** can be minimised by effective political and regulatory framework

5. Operation

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TAKE-AWAY POINTS



- Risk during operation may emerge **despite a successful** performance in the **construction phase**
- Key concerns for the public sector depend on
 - the **specific form of contract**
 - how the private party **net cash-flow vulnerability** is affected by traffic/demand trends
- **Trade-off** between close monitoring and leaving concessionaire free to find best way to deliver services under the PPP contract
- Mitigation measure against renegotiation: **system of reputation tracking** for contractors

6. End of contract

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2 elements for the
analysis:

Contract return
Follow up

- **Termination at contract expiry vs early termination** (compensation payments)
- **Transfer risk**, i.e. a risk that the conditions of the assets are not compliant with contract's maintenance standards
- **Take the asset back vs re-tendering**
- **Continuity** needs to be ensured
- **Internal capacity and tools**, as well as **ex-post evaluation** (learn from experience) are key

6. End of contract

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TAKE-AWAY POINTS



- Despite differences in risks between early termination and closure at maturity, in both cases the **lack of preparedness by the public party may lead to excessive risk-taking**
- For closure at maturity, preparedness requires decisions to be made with **reasonable anticipation**
- Adequate preparation to termination requires **institutional memory**

Global trends

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LEARNING FROM THE GREAT RECESSION

- A recession in a globalized economy is likely to affect the performance of PPPs throughout the investment life-cycle.
- **These events are usually not addressed in contracts**
- Are governments prepared to face this events? Do they know the cost of various alleviating measures?

LEARNING BY DOING

- Likelihood of PPP cancellation decreases rapidly with the cumulative number of transactions within a jurisdiction
- **Cancellation risk decreases to 5-7% after 15-20 transactions**
- Benefit of experience can be further pushed by building parallel management capacity

CONTROVERSY REIGNS

- Evidence and opinion on the merit of PPPs remain controversial
- Risk governance represents a key component to build resilient PPP delivery systems
- Inappropriate risk management implies higher cost and failure to achieve Value for Money
- **Emphasis on risk transfer can be misleading**

GROWING ROLE OF ISLAMIC FINANCE

- Islamic financial market has been growing rapidly across the globe (double-digit annual growth)
- During the 2008 financial crisis, Shariah-compliant financial institutions performed better
- IF suitable for PPP transactions
- **IF is a flexible tool which can be used in combination with conventional finance (blended)**

Conclusions

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The **structured framework** developed on the basis of international best practices and academic literature:

- ✓ Ensures **methodological rigour and a solid and consistent analysis**
- ✓ Presents each project cycle phase (from strategy preparation to the end of the PPP contract) in the **perspective of risk management**
- ✓ Offers a sort of **checklist for analysts and policy makers** to identify gaps in risk management systems for transport PPPs at national level and follow up on them
- ✓ Combined with the discussion of global trends, provides the reader with necessary **context for approaching the six case studies and overall recommendations**

Risk Management in Transport PPPs in the Islamic Countries



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Annexes

Guiding questions – Phase 1

| Elements of the conceptual framework | Guiding questions identified by COMCEC | Topics of analysis under the elements of the conceptual framework |
|---|---|---|
| <p>1. <u>Strategy and policy</u></p> <ul style="list-style-type: none"> • Political support and strategies • Legal provisions • Institutional arrangements • Investment attraction | <ul style="list-style-type: none"> • Evaluate the degree of political support for PPP projects i.e. how national plans, programs, sectoral strategies, economic policy papers, etc. address infrastructure privatizations in general and transport PPP projects • Explore the division of duties and responsibilities among relevant governmental agencies to reduce the risks and uncertainties regarding the PPP projects • Evaluate the legal framework regarding transport PPP projects • Identify facilitators and barriers to involve and attract private investors and receive support from multilateral and national banks • Understand the extent of the foreign participation in the projects, and examine the use of Islamic finance in the transport PPP projects in particular in OIC Member Countries • Address how the private sector evaluates the current state and perspectives of PPP projects in a specific context | <ul style="list-style-type: none"> • <u>Political support and strategies</u>: What is the degree of political support for infrastructure privatization in general and transport PPP projects in terms of national plans, programs, sectoral strategies, economic policy papers, etc.? • <u>Legal provisions</u>: What are the pros and cons of the legal framework regarding risk management of transport PPP projects? Which specific regulations are needed to make private sector participation possible and effective? • <u>Institutional arrangements</u>: Which administration units/agencies are tasked with risk identification and assessment in transport PPPs? What are their main activities to address risks and uncertainties regarding transport PPPs? • <u>Investment attraction</u>: What are the main drivers and barriers for the attraction of public investment and to receive the support of multilateral and national banks? What is the degree of foreign participation in PPP transport projects? What is the contribution of Islamic finance in transport PPPs? |

Guiding questions – Phase 2

| Elements of the conceptual framework | Guiding questions identified by COMCEC | Topics of analysis under the elements of the conceptual framework |
|--|---|---|
| <p>2. Pre-tendering decision process</p> <ul style="list-style-type: none"> • Screening for PPP suitability • Special arrangements for PPPs | <ul style="list-style-type: none"> • Describe the use and types of PPPs pre-tender studies performed before the launch of the PPP transport projects, such as WTP surveys • Analyze the governance of the preparation of the pre-tender studies and describe roles and responsibilities of such analysis, including the role of the private sector to propose initiatives • Examine scientific approaches to forecast future demand (traffic) • Analyze the way scenario analyses are incorporated into feasibility studies of PPP projects and sensitivity analyses implemented • Confirm use of public sector comparators to support decision-making process to launch PPP transport projects • Describe the approaches adopted to involve the transport and financing industries in PPPs, i.e. the degree of participation of stakeholders such as private parties, local governments, and sector organizations in the transport PPP projects • Describe the approaches adopted to promote PPPs to the public when implementing the PPP transport projects e.g. public campaigns • Examine the criteria adopted to assess risks (e.g. their likelihood and possible impact of their consequences) and/or prioritize them | <ul style="list-style-type: none"> • Screening for PPP suitability: What does the choice between PPP or traditional public procurement base upon? Is there evidence of the use of public sector comparators to support the decision-making process to launch PPP transport projects? What are the roles and responsibilities in the process of preparation of the pre-tender studies (including the role of the private sector in proposing initiatives)? • Special arrangements for PPPs: What types of PPPs pre-tender studies (such as willingness to pay surveys) are performed before the launch of the PPP transport projects? How are they incorporated in the project design? How are the scenario analyses incorporated into feasibility studies of PPP projects? Which approaches are adopted to promote PPPs to the public when implementing the PPP transport projects (e.g. public campaigns to persuade/ communicate with the citizens/residents regarding the need for a PPP project, and/or realization of public inquiries and debates? What are the criteria adopted to assess risks (e.g. their likelihood and possible impact of their consequences)? |

Guiding questions – Phase 3

| Elements of the conceptual framework | Guiding questions identified by COMCEC | Topics of analysis under the elements of the conceptual framework |
|---|---|---|
| 3. Procurement and contracting <ul style="list-style-type: none"> • Procurement strategies • PPP contractual arrangements • Performance metrics • Remuneration | <ul style="list-style-type: none"> • Provide an overview of the procurement strategies and routes adopted to develop and implement projects up to finalization of their construction/rehabilitation and where applicable further to their operation and maintenance, including financial aspects • Describe rationale behind choice of procurement routes • Review risk sharing matrices for PPP transport projects, specifying which project risks were assumed by whom • Discuss their pros and cons from risk management point of view • Explore the financing schemes adopted for PPP transport projects, including details on debt/equity ratios • Discuss the pros and cons of the selected PPP methods, with a focus on risk allocation and management • Examine the typical concession/contract periods of transport PPP projects and the rationale behind its definition • Describe type of risks identified and allocated to parties involved in PPPs for different options of PPP arrangements, including the ones that may be external to the project • Etc. | <ul style="list-style-type: none"> • Procurement strategies: What are the main the procurement strategies adopted to develop and implement projects? What are the main drivers behind the identification and choice of the procurement different routes? • PPP contractual arrangements: According to the risk sharing matrices for the PPP transport projects, which project risks are allocated to public and private party? Which types of project risks are shared? What are the pros and cons from the risk management point of view? What type of financing schemes are adopted for PPP transport projects? What are the main features of each type of financing scheme? What are the pros and cons of the selected PPP methods, from a risk allocation and management point of view? What is the typical concession/contract period of transport PPP projects? What is the rationale behind? What are the types of risks (including the ones that may be external to the project, i.e. environmental risks) identified and allocated to the parties involved in PPPs for the different options of PPP arrangements? What is the rationale underpinning risk allocation (or risk transfer) strategies? • Performance metrics: How do the foreseen values of the main performance parameters (traffic, revenue, tariff ...) compare with the actual ones? What is the rationale, the structure and content of output and performance measurement of PPPs? • Remuneration: How is performance metrics linked with payment to the private party or compensation to the public? |

Guiding questions – Phase 4

| Elements of the conceptual framework | Guiding questions identified by COMCEC | Topics of analysis under the elements of the conceptual framework |
|---|---|--|
| <p>4. Construction and asset delivery</p> <ul style="list-style-type: none"> • Management of risks during design phase • Management of risks during construction | <ul style="list-style-type: none"> • Analyze provisions and practices for the management of unforeseen risks and events during project implementation and operation • Explore special methods/institutions for PPPs risks monitoring purposes • Discuss the need to adopt new statistical indicators and/or dedicated agencies or offices for the monitoring of the delivery and performance of the PPPs | <ul style="list-style-type: none"> • <u>Management of risks during design phase:</u> Which specifically dedicated methods or institutions are in place for PPPs risks monitoring purposes? Is there any evidence of the need to adopt new statistical indicators and/or dedicated agencies or offices for the monitoring of the delivery and performance of the PPPs? • <u>Management of risks during construction:</u> What type of methods/institutions have been designed for PPPs risks monitoring purposes? Is there any evidence of the need to adopt new statistical indicators and/or dedicated agencies or offices for the monitoring of the delivery and performance of the PPPs? Which practices are adopted for the management of unforeseen risks and events during project implementation? |

Guiding questions – Phase 5

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| Elements of the conceptual framework | Guiding questions identified by COMCEC | Topics of analysis under the elements of the conceptual framework |
|---|---|---|
| <p>5. Operation</p> <ul style="list-style-type: none"> • Management of risks during operation • Bonus/malus schemes • Contract renegotiation | <ul style="list-style-type: none"> • Analyze provisions and practices for the management of unforeseen risks and events during project implementation and operation • Explore special methods/institutions for PPPs risks monitoring purposes • Discuss the need to adopt new statistical indicators and/or dedicated agencies or offices for the monitoring of the delivery and performance of the PPPs | <ul style="list-style-type: none"> • <u>Management of risks during operation</u>: Which practices are adopted for the management of unforeseen risks during project operation? Which methods or institutions are in place for risk monitoring? Is there any evidence of a need to adopt new statistical indicators and/or dedicated agencies or offices for the monitoring of the performance of PPPs? • <u>Bonus/malus schemes</u>: Which bonus payments or penalties for the private party are foreseen during operation? • <u>Contract renegotiation</u>: What are the causes that lead to contract renegotiations? What are the successful methods and practice to approach contract renegotiations? Which are the conditions in the contract that can be changed without inducing opportunistic behavior, and might therefore legitimately be renegotiated, if any? What are the main costs and benefits, if any, to renegotiate the contract? |

Guiding questions – Phase 6

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| Elements of the conceptual framework | Guiding questions identified by COMCEC | Topics of analysis under the elements of the conceptual framework |
|---|---|---|
| <p>6. End of contract</p> <ul style="list-style-type: none"> • Contract return • Follow up | <ul style="list-style-type: none"> • Examine the mechanisms to systematically follow up on risk management practices and learn from experience, including practices for contract renegotiation • Explore the success factors for better transport PPP implementations | <ul style="list-style-type: none"> • <u>Contract return</u>: What are the main cost and benefit of the different PPP solutions with respect to the transfer/concession of the public asset implemented? • <u>Follow up</u>: Which mechanisms enable to systematically follow up on risk management practices and learn from experience? What are the main success factors for better transport PPP implementations? |