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Toward the betterment of risk allocation: Investigating risk perceptions of Australian stakeholder groups to public–private-partnership tollroad projects

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A B S T R A C T

This paper presents a qualitative assessment of the risk perceptions held by key Australian stakeholder groups in the context of tollroads operated under the public–private-partnership model. The findings confirm that experience accumulated in recent years has contributed toward the betterment of risk-sharing optimisation amongst the contracting parties. The knowledge acquired through in-depth interviews supports the common view that equitable risk sharing is the vital ingredient of value for money. The proposition that the private sector is better equipped to manage commercial risks involving economic decision making whilst risks that have embedded unquantifiable social and public values and those in the domain of public governance are best left with government alone, appears to be replete with refutable implications. Public perception is a malleable concept and should be managed by both sectors.

1. Background

Public–private-partnership (PPP) tollroads are growing in popularity throughout the world. This is a response to the need to invest in road infrastructure as well as the constraints on public budgets that are increasingly focussing on sectors such as education, law and welfare where the private market is more ambivalent about its potential role. Roads in contrast have clear market returns and have attracted growing interest from the private sector at a time when governments are stretched in their ability and willingness to raise public debt. Hence PPPs have been broadly adopted by governments as a financial means to procure, including but not limited to, infrastructure-based road services. A specific rationale of such a procurement policy is that greater value for money (vfm) in the public interest can be obtained through transferring risk to the party that is least risk averse (HM Treasury, 2006; Partnerships Victoria, 2000; WWG, 2006) and that is best positioned to manage it (cf., NSW Treasury, 2005).

Numerous studies (cf., Ball, Heafey, & King, 2003; Corner, 2006; Grimsey & Lewis, 2005) have asserted that risk sharing is the *raison d' être* for vfm and risk transfer from the public sector to the private sector is prominent in PPPs (Li, Akintoye, Edwards, & Hardcastle, 2005a). On the other hand, the common concern shared amongst market players is that the ethos of optimal risk allocation that risk should be assigned to the party that is best able to manage it, has not been adhered to (see for example two studies that surveyed participants of PPPs: Grimsey & Lewis, 2005; NAO, 2001).

Road infrastructure is one of the most active markets of PPPs in Australia (cf., Ernst & Young, 2007), possibly because of its high levels of capital consumption and its relatively low political sensitivity.[1] The tollroads in Sydney and Melbourne are shown in Figs. 1 and 2. Private capital is primarily explored as a funding mechanism to solve a transport network problem, be it putting in a missing link or upgrading a vital arterial route. PPP road concessions resemble the nature of a sale-and-lease-back finance lease whereby a government sells to a private consortium[2] a *usus fructus*, i.e. the right to generate income from ownership (Buitelaar, Van der Heijden, & Argiolu, 2007), normally for a price named "upfront payment", to finance, construct and operate an infrastructure asset

[1] Roads are subject to political visibility at a much lesser degree compared to other modes of transport such as rail, bus and ferry where there is a strong presence of labor unions, and other public services like schools, public health services and prisons where service deliveries are mainly subsidised by taxpayers. This conception may have contributed to the mismanagement of public perception in various tollroad projects.

[2] The consortium is generally organised in the form of a separate legal entity called the Special Purpose Vehicle (SPV) to operate each stand-alone project (Kozarovski, 2006).

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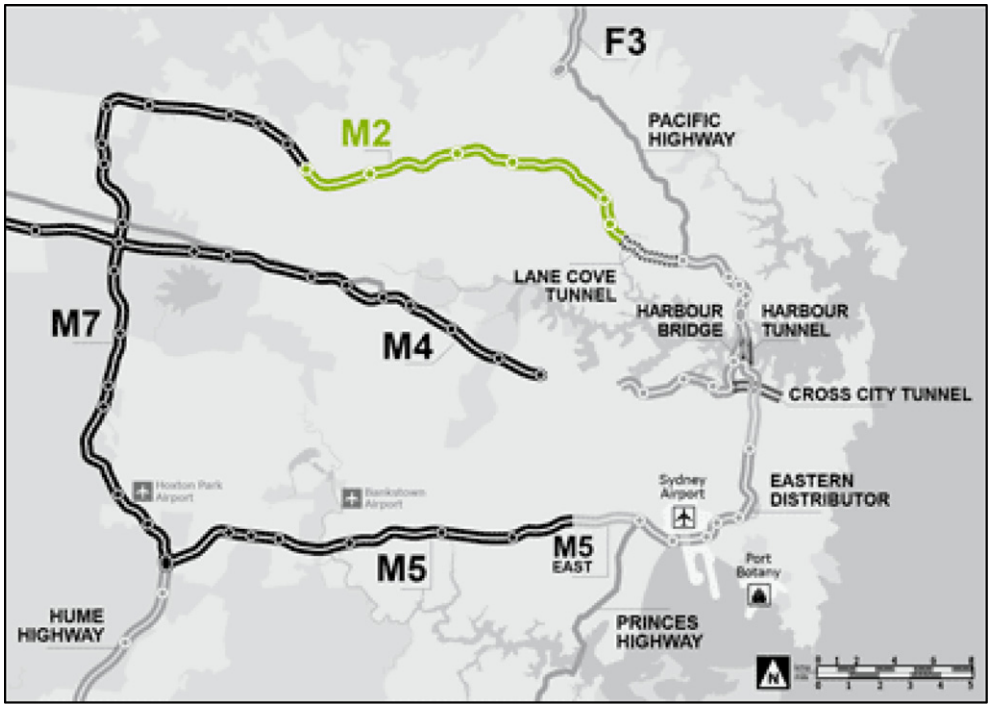

Fig. 1. Tollroads in Sydney.

and profit from the sale of ancillary services generated from that asset. The private operator is given the power to charge users directly,[3] but (generally) has no financial recourse to government. In this light, tollroads are unique in the way that financial risk is transferred to the private sector with the cost of risk transfer borne by road users, and in the way in which government separates the financier and provider roles from its roles as the central planner and regulator.

The PPP concession bundles the finance, creation, operation and maintenance of the asset into one single package. The bundling concept incentivises the private entity to apply innovation in the financing package and in design and construction, thus facilitating cost savings over the asset's whole-of-life operation and maintenance. The concession period ranges from 30 to 99 years in order to enable the private concessionaire to recoup the cost of capital and earn a required rate of return (Chung, 2008). In theory, these transport concessions should shield government from traffic risk, financial risk, and operation and maintenance risk, hence better *financial* vfm.

The extant literature suggests that the public sector and the private sector do not share a monolithic set of interests (Meyer & Miller, 2001), objectives (Li et al., 2005a), and expectations (Demirag & Khadaroo, 2008), with the implication being that different parties have different perceptions of risk and their capabilities of risk management differ. These (mis)perceptions can strongly influence the manner in which partners take on risks and price these risks (Ball et al., 2003; Blanc-Brude & Strange, 2007). A number of empirical studies confirmed that perceptions held by different partners about risks, about the motives and behaviours of their opposing partners create significant complication in the negotiations of risk allocation which would undermine the success of PPP projects (Arndt, 2000; Asenova & Beck, 2003; Li, Akintoye, Edwards, & Hardcastle, 2005b, Weihe, 2008). These observations raise an interesting question about the eventuality of equitable risk sharing between public and private sector partners. Despite the criticisms of the inequitable risk-sharing outcomes (cf., NSWAGO, 1994, 1997, 2000; Pollock, Price, & Player, 2007; Shaoul, Stafford, & Stapleton, 2006), PPPs are here to stay. Not only do they provide an additional source of funding, but they also extend efficiency gains from market competition to infrastructure-based public service deliveries. Therefore, if risks and expectations are managed properly with a true risk-sharing partnership spirit, the betterment of risk allocation is likely to eventuate.

Two as yet unanswered questions within the literature are: i) in PPP tollroad contracts, what are the risk attributes that concern the public sector the most and, the private sector the most? and, ii) to what extent is the outcome of risk allocation between the public and private sectors influenced by risk perceptions of different stakeholder groups? The findings herein are the outcomes of a series of unstructured in-depth interviews with stakeholders in Australia who have been either directly or indirectly engaging in PPP road projects. In this paper, the two research questions are explored in five sections. The next section discusses the extent to which value for money can be materialised through risk sharing in PPPs by examining the empirical findings in the extant literature. Section 3 explains the research methodology. Section 4 investigates the two sectors' capability of risk management and the role risk perceptions plays in allocating risks as perceived by the stakeholders being interviewed. Section 5 concludes with the findings and sets the scene for future inquiry.

2. Value for money through risk transfer: an empirical view

Discourses on achievement of vfm through risk transfer in PPPs are largely unsettled. Many empirical investigations in Australia and the UK show that vfm gains from risk transfer are concentrated in the following dimensions: cost savings to the public sector agency (AALSE, 2000; Allen Consulting, 2007; Ball et al., 2003; Hall,

[3] With the exception of shadow tollroads in the UK regarding which the Highways Agency pays the private operator(s) a fee based on the vehicle kilometres driven on these private roads (NAO, 1998).