Differing opinions do not spoil friendships:
Managing Public Private Partnership (PPP) infrastructure projects in Jordan

Summary
This research investigates the approaches, strategies and challenges facing the management of the implementation phase of public-private partnership (PPP) projects in Jordan. Jordan is a newer, but common user of PPPs in the Middle Eastern region, where PPPs are of economic strategic importance, but also entail significant investment risk given resource scarcity. This research involves semi-structured interviews with senior managers representing different partnering organizations in two case study organizations in Jordan. The research finds that, despite the management difficulties confronting them, strategies adopted by PPP managers limit the impact of these challenges. The research makes an important theoretical contribution in providing a detailed analysis of effective PPP management approaches in response to difficulties at the implementation phase; which had not been systematically explored in extant PPP research, and broadens PPP research to the Jordanian context. Moreover, the research contributes greater understanding of how partnerships should be effectively managed.

Key words: implementation phase, Jordan, management, public private partnerships
Introduction

Public Private Partnerships (PPPs) have been utilised in a number of countries in recent years and have become important alternatives to the traditional approaches of public service production and delivery. Internationally, during the years between 1985 and 2008, over 1,100 projects worth 450 billion USD were built using different forms of PPPs (Siemiatycki, 2010). PPP literature has been described as fragmented as established theories do not yet exist to assist scholars and practitioners understand and address the complexities of PPP management in the implementation (construction and service delivery) phase. However, it is evident from the extant PPP literature that PPP arrangements face challenges and difficulties during their implementation. PPP scholars have argued that most of these challenges by nature are managerial problems in the first instance (Noble and Jones, 2006; Weihe, 2008). The current research aims to analyse management challenges that partnerships experience in the implementation phase of two case study projects in Jordan. Jordan is one of the newer but most common users of PPPs within Middle East and North African (MENA) countries, where PPPs are of economic strategic importance despite entailing significant investment risk (El-Khatib, 2008) as resources are scarce, and failure of such projects may substantially affect national developmental processes. Research has suggested that there is a critical need to review the experience of PPPs internationally by gathering evidence from different countries to better grasp what a PPP is and how it should be understood and managed (Hodge and Greve 2007). However, very little research has been conducted on PPPs in the MENA region. As PPPs have been newly introduced to the Jordanian market, this paper speaks to the theoretical and practical need to understand how the implementation phase of a PPP project is (and should be) managed in Jordan, in order to improve
researchers’ knowledge and practitioners’ skills in managing PPP projects more effectively internationally. In examining this significant issue, this paper responds to Van Gestel and Voets’ (2012) assertion that it is important to examine factors that matter about PPPs, namely management, and addresses a call by Steijn, Klijn and Edelenbos (2011) that scholars and practitioners of PPPs should focus greater attention on managerial efforts required to develop and implement PPPs.

The following section of the paper reviews relevant literature and includes reference to: the rationale for PPPs; managing PPP projects; managing PPP difficulties and challenges; and the specific challenges of PPPs relative to non-PPP arrangements. The next section provides an overview of PPPs in Jordan. This is followed by a review of the research methods and the case studies. The findings are then presented and focus on: difficulties and challenges facing the management of PPPs; effective PPP management practices, approaches and strategies; and managing institutional differences between partners. A discussion of the findings is then presented. The paper concludes with research contributions, implications for PPP managers and policy makers, and limitations and issues for future research.

**Literature Review**

Vining and Boardam (2008) argued that “projects with partnership characteristics began to emerge in the 1980s [and] it was not until the mid-1990s that P3s really began to take hold” (p. 200). Yet, early reports of the ‘modern’ concept of PPPs appeared thirty years ago (Rohatyn and Blodgett, 1979) and were developed by a group of public and private sector representatives working on an energy project in the United States (US) who sought to run that project like a private business but still be publicly accountable.
Further, the concept was offered as a practical solution to the then US government’s financial difficulties in carrying out too large or too risky projects.

As a phenomenon, PPPs have been described as problematic and complex (Klijn and Teisman, 2003; Mann, Pier and Yasin, 2007) with the design and the management of the implementation phase of a PPP arrangement usually being very complicated and potentially fraught with difficulties (Teisman and Klijn, 2002). The institutional fragmentation of PPP projects can also “create enormous barriers, enhance the complexity of decision-making and calls for a huge managerial effort” (Klijn and Teisman, 2003, p. 142). Scholars have variously attempted to define PPPs by characteristics and underlying assumptions (Vining and Boardam, 2008) and the nature of the relationship itself (Kaul and Conceicao, 2006; Schaeffer and Loveridge, 2002). There has been a fairly wide consensus that a PPP arrangement involves some sort of collaboration between one or more public actors and one or more private actors; who share resources, opportunities, rewards, revenues, benefits and joint rights and decision making, as well as risks, responsibilities and costs.

The Rationale for PPPs

For the public sector, there are strengths in the private sector from which governments can benefit and explain their rationale for entering into PPPs, such as: improving service quality; creating strong customer service and high management standards; efficient material-based systems; reduction of the project’s construction costs; value for money; and risk sharing and/or transfer. For the private sector, there are a number of internal and external triggers to establish partnership arrangements which include: ensuring the survival of the firm; increased profitability potential; lack of resources;
limited essential expertise and knowledge in markets and cultures; government incentives in the form of grants and allowances; and spreading business risks. PPP scholars have offered perspectives on why organizations enter into partnering relationships, including: the theory of cooperation (Teisman and Klijn, 2002; Schaeffer and Loveridge, 2002); the theory of enforced cooperation (McQuaid, 2000); game theory (McQuaid, 2000); the logic of partnership synergy (Lasker Weiss and Miller, 2001) or maintaining synergistic momentum (Noble and Jones, 2006). PPP development models may also provide insights into questions of how organizations enter into partnering relationships and the details of these relationships, such as Griffith’s four-stage typology for partnership working (as described in Fox and Butler, 2004) (see also Noble and Jones, 2006). It has been argued that an enduring concern for PPPs is achieving balance between public and private partner benefits (Brinkerhoff and Brinkerhoff, 2011).

Managing PPP Projects

Difficulties and Challenges in PPP Management

Researchers have suggested that a successful plan to manage a PPP can only be achieved by identifying obstacles that may hinder the successful application of a PPP and developing solutions. Fox and Butler (2004) investigated the obstacles that face partnerships in their implementation in achieving ‘effective partnership working’ which included: poor level of partners’ engagement and representation; competing partners’ ideologies; partners’ conflicts; and poor decision making; lack of clarity on roles; lack of trust and the inability to manage the ‘people issues’; and finally, poor performance management. Siemiatycki (2010) agreed that PPPs are often inflexible arrangements as
they involve long-term contracts and in a large number of cases, prolonged conflicts arise between partners, which end the partnership before a contract finishes.

### Institutional Differences between Partnering Organizations

Attention has been given to the institutional differences between partners with reference to impact on effective performance and management of PPP projects (Klijn and Teisman, 2000; Ramiah and Reich, 2006; Tierney et al, 2010; Mann, Pier and Yasin, 2007). One such institutional difference is the phenomenon of the ‘classical division’ between public and private sectors which has substantial implications for PPPs in theory and practice (Klijn and Teisman, 2000) as it has been suggested that existing government organizations are not capable of developing partnership schemes because the public sector is based on hierarchical demand mechanisms and is “unwilling to abandon its formal superior position” (Teisman and Klijn, 2002, p. 199). This argument is also consistent with Tierney et al. (2010) having confirmed the presence of partners’ differences in cultural and geographical settings as well as partners’ miscommunication and misunderstanding. Also, Mann, Pier and Yasin (2007, p.5) argued that “the public sector is apprehensive about the private sector’s fast track and feels misunderstood in terms of its processes. Private sector representatives complain about government’s slowness in action and bureaucracy”. Further, it has been said that prolonged conflicts and tensions could also arise during the implementation phase due to the interdependency and competing self-interests of the partners themselves (Siemiatycki, 2010). Yet, Brinkerhoff and Brinkerhoff (2011) have cautioned that, though dominance by the public sector, partners may undermine expected benefits of partnerships, if the public value of PPPs is to be achieved, neither should private interests dominate the
joint relationship – and achieving the right balance among heterogeneous partners is challenging.

Managing PPP Difficulties and Challenges

Within the PPP research very little is known about difficulties and challenges in PPPs but PPP scholars have attempted to describe management approaches, prerequisite requirements, practices and/or factors that are important to the effective management of PPPs. Schmieg and Climko (1998) suggested ‘critical’ steps in developing a strategic plan for modern PPPs, that can be organized under two main management process categories: prerequisite procedures (maintaining flexibility and pacing, developing shared solutions, delegating trust, creating empowerment); and ongoing practices (establishing the partner’s mission, identifying a common language, establishing a Ulysees contract, determining expectations). Fox and Butler (2004) suggested that a partnership should be established based on: a local needs analysis; involving service users and communities in the partnership process; having a well-established governance framework that clarifies partners’ responsibilities and accountabilities, and; having performance measures ensuring the partnership makes a difference. Abdel Aziz (2007) identified a number of principles as important characteristics for PPP implementation at the program level with the availability of PPP institutional / legal framework and policy and implementation units, and perception of PPP objectives and performance and method specifications being among these factors. Jacobson and Choi (2008) suggested the value of: partners’ unified specific vision and commitment as the first step for partnering; open communication between partners and their willingness to compromise; and respect, clear roles and responsibilities. To help bridge the institutional gaps
between partners, Ramiah and Reich (2006), Tierney et al. (2010) and Choi (2008) stressed the importance of partners’ willingness to develop formal and informal communication channels to promote regular information-sharing. Lasker, Weiss and Miller (2001, p.194) argued that the proper management of these aspects together acts as “the ‘glue’ that makes it possible for multiple, independent people and organizations to work together”.

**Specific challenges of PPPs relative to non-PPP arrangements**

While research has consistently highlighted management challenges which occur in mergers and acquisitions, and management and cross-cultural challenges in international operations, particularly joint ventures, we suggest that PPPs present some specific challenges which differentiate them from non-PPP arrangements. In particular, while the majority of international projects are formed from private and/or public/not-for-profit only organizations, PPPs suffer from institutional differences between partner organizations which result from ‘classical division’ (see Klijn & Teisman, 2000; Teisman and Klijn, 2002), or ‘cultural distance’ (see Noble & Jones, 2006) between public and private sector organizations which create challenges for management and present numerous situations in which mis-understandings of the other partner’s position may occur; with the public-private partner divide adding to any national cultural differences which may present in international operations. In the case of the implementation phase of PPPs especially, Fox and Butler (2004) suggested that obstacles include: poor levels of partners’ engagement and representation; competing partners’ ideologies; partners’ conflicts and poor decision making; lack of clarity on roles; lack of trust and the inability to manage the ‘people issues’; and finally, poor
performance management – again these are likely to be greater than in operations which comprise only private sector organizations or public/not-for-profit organizations working independently. Hodge and Greve (2007) suggested difficulties in assessing PPPs and argued that a comprehensive evaluation of the PPP phenomenon would require assessment of all PPP types that cover a host of operations including financing, design and development, operation and ownership. While we argue that it is too early in the life of PPP projects internationally to have agreed upon measures to assess the success of a PPP project, it is important to examine the management difficulties experienced (particularly where international organizations enter into partnership with national organizations) and to highlight what partnering organizations may do to work more effectively together both organizationally and cross-culturally for the ultimate success of projects which are often critical to national development efforts.

**PPPs in Jordan**

Jordan (The Hashemite Kingdom of Jordan) is located in western Asia in the heart of the Middle East. Jordan has developed from a largely agricultural society and is rapidly expanding in the fields of education, information technology and e-government, but has scarce natural resources. Jordan’s major economic and environmental challenges include: a high external debt, unemployment, reducing dependence on foreign grants, deforestation, desertification, and limited natural fresh water resources (see Al-Jaghoub & Westrup, 2003; Loewe, Blume, & Speer, 2008).

PPPs were only recently introduced to Jordan. Like in other MENA countries, PPPs have the advantage of being the least publicly-resisted option of public service delivery, compared to the other alternatives like total privatisation, for example, in
which permanent transfer of asset ownership from the public to the private sector is seen as loss of ownership and control over national assets (Al-Nasa’a, 2007). The earliest preliminary feasibility studies for some of the proposed PPP infrastructure pilot projects (e.g. Samra Waste Water Treatment Plant) started in 1995 and in mid 2003 the first Jordanian PPP project (the Jordan Education Initiative) entered its implementation phase. Institutionally, the legal and institutional frameworks had not existed before 2007, when the PPP policy was accomplished by the Executive Privatisation Commission (EPC), which was assigned the role of establishing the required legal and institutional frameworks for PPPs in Jordan. Though PPPs in Jordan lack practical experience and legal and institutional development, Jordan is described as one of the prolific users of PPPs in the MENA countries. Strategically, PPPs in Jordan are considered as a key component of the country’s economic development strategy (El-Khatib, 2008) and Al-Jaghoub and Westrup (2003, p. 93) emphasised that “Jordan exhibits many of the characteristics of a ‘competition state’ in terms of the promotion of mixtures of public and private partnerships”. In a period of more than ten years since the year 2000 the government of Jordan has proposed over 35 PPPs to be undertaken until 2015, which have been estimated to cost in the vicinity of $US 750 million to $US 1.1 billion a year (El-Khatib, 2008).

Different types of projects have been identified as targeted for implementation, including: energy, transport, municipal services, education, health, tourism and water sanitation, recycling and management. The BOT (build, operate, transfer) model of PPPs is the most preferred form of partnership in Jordan. Only one project (the Medical and Industrial Waste Treatment Plant (MIWTP) was planned to use the BOOT (build, own, operate, transfer) form of partnership, and required a series of sessions between
the government and the investor to negotiate this form of partnership. In Jordan the infrastructure sector, rather than the services sector, has mostly been the focus of PPP projects.

PPP investment entails significant risk for a developing country with a small economy such as Jordan. PPP projects, if poorly managed, are more likely to result in potential failure and consequent waste of huge investments. Where resources are scarce, failure of such projects can substantially affect the whole developmental process and waste precious resources that could have been utilised in other areas of development in the country; thus knowing how to effectively manage such projects, particularly in the implementation phase, is critical in terms of effective use of public funds and development of much-needed public infrastructure. In Jordan, managing the implementation phase of PPPs remains largely under-explored with research that does exist having been directed towards documenting experiences of PPP initiatives (McKinsey & Company, 2005) and/or assessing the environmental conditions for their potential success (Al-Jayyousi, 2003). Therefore, the current research is significant in answering a key research question, namely: How effectively managed is the implementation of PPP infrastructure projects in Jordan? The research is significant in exploring both the management of PPPs in the implementation phase generally, and broadening research on the management of PPPs to the Jordanian context.

**Research Methods**

Jordan was selected as a research site because it has increasing experience with PPPs and it is politically- and socially-open relative to other countries in the region where research permits are required and difficult to obtain (Loewe, Blume and Speer, 2008). A case study approach was selected because it allowed for the detailing of in-depth
knowledge through individual perceptions, perspectives and experiences by the study informants. Both case study PPPs involve infrastructure projects, allowing for a more valid, relevant and reasonable comparison between them as being ‘externally homogeneous’ and ‘internally heterogeneous’ (given they are in different stages of their implementation phase). The two case study PPPs are Queen Alia International Airport (QAIA) and Samra Waste Water Treatment Plant (SWWTP).

Once access had been granted to the participating organizations, interviews were requested with senior managers. These individuals were deemed most appropriate to interview as they are in the most knowledgeable position to provide accurate, focused and informative perspectives about the progress of their projects and management practices – and such an approach has been used by other researchers such as Wondolleck and Yaffee (2000) and Mandell and Keast (2008). All senior managerial level employees in the partnering organizations in each PPP project were targeted as study informants. Of 24 potential interviewees, 21 participated in the research, representing 10 interviews in case study 1 and 11 interviews in case study 2. The face-to-face semi-structured interviews averaged 62 minutes in duration and were conducted in English and Arabic (depending on the nationality of the interviewee). The study informants were senior managers in their organizations; responsible for day-to-day managerial, technical, operational and financial aspects of the project. While the organizations’ names are identified in this research, a coding system is utilised for individual informants, relating interviewees to the case and sector. For example, the code S2.5/Pc represents participant number five (5), in case study two (S2), in a public sector organization (Pc).
In designing the research, consideration was given to seeking the views of other stakeholders such as the Ministry of Environment, Consumer Protection Agency, and the Farmers Union. Yet, initial enquiries suggested that their involvement in the projects was very minimal and hence interviews with such organizations/parties would have resulted in limited usable/valuable data. We did not have access to copy internal organizational documentation in the partnering organizations due to confidentiality considerations nor did we have access to undertake observations given that the studied case studies were at the point of infrastructure development and we were not permitted access to move around the facilities. In order to provide some triangulation of the interview data we do include reference to publicly available insights into the management of the PPPs in the form of newspaper reports and other organizational analysis on the development of the projects, including some reference to commentary on the projects post-data collection.

**Case Study One: Queen Alia International Airport (QAIA)**

The expansion of QAIA was originally planned to meet projected traffic volumes and enhance and develop its position as a regional hub to serve increasing demands on the airport regionally. The QAIA project involves the rehabilitation and modernisation of the existing airport facilities, and, engineering, construction, operation and maintenance of a new terminal building using the BOT form of PPP. The project was planned in two main phases. In the first phase, the expansion works provides a total capacity for up to 5.5 million annual passengers (MAP), over the capacity of the existing airport which was 4.77 MAP. The second phase includes expansion for a capacity of up to 12
MAP. The estimated cost of the project was US$ 750 million (although it is now estimated to have cost closer to US$ 800 million) with a concession period of 25 years.

QAIA involves a number of main partners, ‘parent-partners’ and participants in the project (see Figure 1). The term ‘partner’ refers to organizations that are directly involved in the management of the PPP project, whereas the term ‘participant’ refers to organizations that have contributed to the PPP project but are not involved in its management. ‘Parent-partner’ refers to organizations that are considered partners, but are indirectly involved in the management of the PPP project. In January 2008, the Ministry of Transport (MoT) established the Jordanian Airports Establishment (JAE) as a government body, assigned the role of managing projects that were particularly related to renovating or expanding any of the existing airports or establishing new airports across the country. The Project Management Unit (PMU), which was previously established within the organizational structure of the MoT, represents the public partner in the management of the expansion process. After the establishment of the JAE, the PMU became part of the JAE and was assigned the role of overseeing and managing the new QAIA project. The PMU is a separate entity, with a semi-independent organizational structure, but is institutionally related directly to JAE and indirectly to the MoT.

[Insert Figure 1 about here]

Following a competitive bidding process, the Aerports de Paris Consortium was announced as the winning bidder in April 2007. Seven months later, this consortium formed a private company, named the Airport International Group (AIG), to handle the
managerial, financial and operational aspects of the project. AIG is a Jordanian company with multi-local, regional and international shareholders. A project agreement was signed between the government of Jordan and the AIG in May 2007 to start construction. Aerports de Paris was assigned responsibility for day-to-day operation and management of the airport. The PMU was given the role of managing the project, representing the public partners. Phase one has now been completed and the opening occurred during the first week of April, 2013.

**Study Two: Samra Waste Water Treatment Plant (SWWTP)**

Jordan suffers from a severe water scarcity problem with an increasing demand for water resulting from escalating population growth and economic development. The SWWTP was originally planned to provide significant quantities of irrigation water to farmers in the Jordan Valley to free fresh water resources of the Valley for domestic users in the Amman and Balqa regions. In addition, the plant was designed to improve environmental and health conditions in the surrounding areas to serve approximately two million residents in Amman and Zarqa. The SWWTP had a budget of US$169 million, with financial participation from USAID (US$ 78 million) as a grant, the government of Jordan (US$ 14 million) and the Samra Plant Consortium (US$ 17 million). The remaining amount (US$ 60 million) was provided from a bank consortium led by the Arab Bank. The SWWTP involved construction of new wastewater treatment facilities, and modification and expansion of the Ain Ghazal pre-treatment facility. It also involved the maintenance of the main pipeline which collects wastewater from Amman, the capital city, and surrounding suburbs. The SWWTP is considered the biggest environmental project of its nature in Jordan, and the first PPP wastewater
treatment facility in the Middle East. It is also the first USAID-financed PPP project worldwide.

Infilco Degremont and Morgantti were announced as the successful bidders for the project in 2003. Representing the private parties in the project, they formed a consortium joint venture, the Samra Procurement and Construction Company (or Samra Plant Consortium) (SPC) to take the role of design, construction, operation and maintenance of a new wastewater treatment plant under a 25-year agreement, using a BOT form of PPP. The construction started in February 2004, and in August 2008, the project was officially launched. On the public side of the partnership, the MWI and the Programme Management Unit (PMU) in the MWI were the main parties. The PMU was assigned the role of overseeing and managing this project. Figure 2 shows the main partners and participants involved in the SWWTP project.

[Insert Figure 2 about here]

**Research Findings**

**Difficulties and Challenges Facing the Management of PPPs**

A number of difficulties that faced the management of PPP implementation in Jordan emerged from the research, and are organized under two categories: internal and external management difficulties (see Table 1).

[Insert Table 1 about here]

**Internal management difficulties**
With the exception of the private partner managers of the QAIA, difficulties in managing certain PPP issues were reported by the PPP managers as a common problem. These difficulties were related to: issues in human resource management; knowledge and experience in PPP management; and, internal organizational and adaptability difficulties.

Both the public and private partner managers confirmed that certain issues related to human resources were difficult to manage, including: staff shortages in quantity and quality, especially at the beginning of the project; and being able to source sufficient numbers of employees from the local labour market who had the appropriate qualifications, training and experience to start working immediately in the PPP projects. Even employees who had relevant qualifications still needed experience and extensive training to be able to cope with the PPP work environment relative to a less sophisticated environment. Two of the managers commented as follows:

We could hardly find people working in the project who were well-prepared and oriented to the new ways of doing things from the traditional single-owned projects to multi–partner projects like this one. Definitely, managing this type of projects is completely different from the traditional-type projects (S2.4/Pc).

Additionally, managers experienced difficulties in creating awareness, amongst the local staff, of health and safety issues which they considered a necessity for work in such a technologically sophisticated working environment. One private partner manager confirmed:
The unavailability of the qualified and trained staff to work for the project from the local market, and the absolute lacking of Health and Safety awareness within the local staff were two difficult problems we faced at the start of the project (S1.6/Pt).

The interviewees agreed that attention should be given to the management of human resources before the commencement of a PPP project. The public partner managers, particularly, described managing multi-partner projects as a new way of management with many area of sophistication associated with project design and construction, technically and managerially. It is noted that the private partner managers did not view lack of knowledge and experience with the same level of importance as their public partner counterparts - which likely reflects public sector partners having had fewer years of prior experience (5.6) relative to their private sector counterparts (10.4).

Further, as Jordan is relatively new to PPPs, greater management challenges were presented than would have occurred in traditional single-owned projects. As one manager noted:

Our main problem was how to manage such sophisticated construction processes of the project. Frankly, at the beginning we felt like paranoid on how to run this sort of projects as it is the biggest and the first investment of its kind in the country. The risk of potential failure made us work day and night to overcome any problem. By time and accumulated experience we could manage such project with this level of sophistication (S1.2/Pc).

**External management difficulties**

The PPP managers frequently reported certain PPP management difficulties that emerged from external sources. These difficulties were related to: changing
circumstances; external pressures; and, coordination and communication difficulties between partner managers.

Public and private partner managers across the two cases confirmed that they were challenged, on frequent occasions, by unexpected circumstances instigated by external forces outside their organizations that necessitated changes to the original design and construction processes of the project (e.g. the increasing demand on services due to large numbers of people fleeing their own home countries to Jordan as a result of regional wars). Issuing a Request of Variation Order (RVO) by one partner to make further extensions in the project design, for example, required approval from the other partner. The problem was that most of these RVOs had technical, financial, legal and managerial consequences that required adjustments to the project’s agreement and design plans that required obtaining approvals from many parties. The public partners seemed to be less flexible in obtaining such approvals. Managers of both public and private partners confirmed that complying with governmental red-tape and complicated procedures to obtain approvals to these changes was time-consuming and resulted in delays in construction. One manager explained:

Our private partner issued us with an RVO suggesting that the space of land granted to do the construction is not sufficient enough to accommodate the commercial facilities such as restaurants, shops, etc. Although, in this specific case, the consortium ended up paying an extra of US$50 million for this expansion in an exchange of our agreement to delay the construction of the project up to 8 months, this took a hell of our and their time and effort (S1.3/Pc).
Management disagreements arising from changes to project design, because of absence of agreed-upon plans or mechanisms to address such changing circumstances, was also highlighted in Al Ghad newspaper which referred to construction cracks in some parts of the Queen Alia International Airport project in columns carrying the domes, which resulted from inappropriate design. It is noteworthy that some of the financing organizations had previously raised objections to the costs and difficulties of the intended design (Al Ghad, 2011 – translated from Arabic by the researchers).

Another problem associated with the changes to project design was absence of agreed-upon mechanisms to address and handle these changing situations and consequently the ROVs. All the same, issuing an RVO was not limited to one partner. These RVOs required obtaining approvals from the other partner, which was usually difficult to secure in many situations.

Yet, interviewees indicated that other pressures caused by external sources had substantial impact on the PPP managers across the two PPPs. Examples of these pressures included: lack of understanding of the PPP processes and the need to induct others outside the partnership about the concept of partnership (reflective of Jordan’s new experience with PPPs); dealing with too many stakeholders who had different interests in the project; and, being exposed to the public through publicity about these projects nationally and regionally.

PPP managers experienced coordination and communication difficulties in their external relationships, mainly due to different views and interests of the partners about what was the right course of action to take. On occasions, these difficulties resulted in delays to the construction works of the project. One manager explained:
Communication difficulties are common daily problems: the project designer is situated in France, the construction company is based in America, our head office is in Athens [Greece] and the project and our public partners are based in Jordan. The least is the differences in the timing zones (S2.8/Pt).

Coordinating the construction works seemed to be a prominent problem for PPP managers in both projects. For example, the construction for QAIA was taking place at the same time as operation of the existing airport. Coordinating these activities was viewed differently by those who had a stake in the process. Despite speculation that AIG would end its concession, in early 2013 AIG’s CEO, Kjeld Binger, advised media that “AIG takes note of certain claims made in the press that we are in the process of disposing of our interest in Queen Alia International Airport. I wish to stress that such allegations are unfounded, and emphasise that AIG has no plans of disposing of any part of its investment in QAIA, which is considered the most important Public Private Partnership (PPP) in the history of Jordan. Since 2007, AIG has had a vested interest in Jordan’s long-term development, and works closely with the Jordanian government to manage and redevelop Jordan’s premier gateway, QAIA, under a 25-year Build-Operate-Transfer (BOT) concession” (Bates, 2013).

Effective PPP Management Practices, Approaches and Strategies

Five practices had substantial positive impacts on effective management of PPPs in Jordan, including: issues related to the management of human resources; working closely with the other partner; the project agreement; monitoring the progress of the project; and prior experience in managing PPPs (see Table 2).
Effective human resource management (HRM) practices in managing PPPs

The development and training of staff was mentioned by interviewees as amongst the most effective human resource management practices in managing PPPs. This was pursued through strategies such as: recruiting experts from overseas to train local staff; arranging meetings with them; sending employees overseas to receive training; providing them with extensive training internally; and, conducting orientation programs for the new employees. Staff development practices were more frequently cited within the private partner organizations than within the public partner organizations and it was a more frequent practice in the SWWTP than in the QAIA.

Other human resource management practices that were found to be effective, although less commonly cited by the interviewees, were: recruiting employees locally; improving employees’ working conditions and improving local staff awareness of health and safety issues; and, promoting qualified nationals to prominent positions (to ensure that locals felt greater control over the outcomes of the projects and to minimise concerns that foreign private sector partners were taking ownership of national assets and resources). The SWWTP is regarded as a successful PPP and although having complex interrelationships between parties, focus has been placed on long term benefits for both private and public partners (Waterworld, 2013). Significantly the international to local staff ratio has changed dramatically from initial small numbers of local staff with three years into operation there being only two expatriates of 170 employees, although the team has backup available from Degrémont experts where required (Waterworld, 2013)
The importance of developing the skills of the local workforce and offering them effective training about the very different practices and working environment of PPP projects was perceived by managers as a key factor to the successful implementation and management of these projects. One manager commented:

For a PPP to be successful, especially those involving foreign investors, it is imperative that the private sector partners are not perceived to be ‘stealing’ national assets. One of the most effective methods to accomplish this is developing the skills of the local talent within the new concession company, promoting qualified nationals to prominent positions and managing/minimising expat dependence by time (S1.11/Pt).

**Working closely with the other partner**

Both public and private partner managers agreed that regular interaction with the other partner to discuss progress and coordinate activities was a successful practice to effectively manage PPP projects. Working closely with the other partner entailed coordinating activities for a certain course of action which was mostly achieved through establishing coordination committees. One manager commented:

In the Coordination Committee meetings, you verify, discuss and address everything in details..., and you work with them closely, anytime if needed, so that you minimise any possible disputes and you don’t leave things for chance of later misunderstanding (S2.2/Pc).

**The project contract / agreement**

It was found that a well-established project agreement that included a detailed description of roles and responsibilities for each partner worked effectively in the
absence of PPP institutional/legal framework and helped them clarify misunderstandings. One interviewee commented:

One of the lessons that we learnt out of previous projects, and has proven the most successful way of management, is to stick to the scope of work that is given to you as per the project’s contract/agreement (S2.4/Pc).

**Monitoring the progress of the PPP project**

Methods and techniques to monitor the progress of the project were perceived as an effective management practice by both public and private partners. These monitoring techniques included: employing independent engineers (IEs) to monitor and report any obstacles to the progress of the project as well as legal, technical and financial consultants and advisors to help assess the project’s progress; well-established documentation; well-established monitoring, reporting and controlling systems (such as advanced programming techniques, detailed, continuously updated project plans, establishing internal project management plans, quality assurance, and quality control plans); and having staff on site to monitor and report on the progress of the project.

As construction works were technically sophisticated, employing experts in the field of engineering and construction was an essential but challenging requirement. Employing IEs was common practice for both sides of the partnership. The IEs had technical experience and expertise in certain fields of construction works and were able to offer specialised engineering consultation and services.

Additionally, having a well-established data-base, monitoring mechanisms and staff on the construction site were necessary requirements for management of the projects. They worked as preventive mechanisms against possible disputes between
partners, and assisted in the effective management of the PPP project. A manager explained:

This BOT is a multi-partner, long-term project that lasts for more than 25 years and you get to have a very well-set documentation and data-record system. We’ve got a system server that stores every piece of paper with more than 80 Gigabytes of data related to this project (S1.2/Pc).

Prior knowledge/experience in handling PPP issues

Although all managers had only minimal prior experience in managing similar projects in the past (an average of 7.6 years) with only an average of 4.1 years in the current projects, one third of the managers amongst both public and private partners confirmed that previous experience in working in similar projects, particularly overseas, was important in providing them with good knowledge and skills in managing their current PPP projects. One manager said:

Most of our managers had been selected carefully based on their prior experience with similar, and sometimes more sophisticated mega projects overseas. This helped us a lot and will add up to our knowledge on how to manage similar local, regional and international projects in future (S2.10/Pt).

It is acknowledged that while such generalist knowledge is valuable, it is also important to have an understanding of the specifics of the Jordanian business culture.
Managing the institutional differences between partners

The interviewees identified a number of issues where institutional differences between partners impacted on the management of PPPs and posed challenges for managers including: the internal decision-making processes; institutional orientation; degree of flexibility; and, views. Here we specifically address the set of strategies PPP managers developed to deal with their institutional differences including safeguards to keep the differences minimal and approaches they adopted to manage differences when they presented obstacles. The safeguards that limited the institutional differences were: awareness of the institutional differences; having mutual objectives and ends; the role of the project agreement; and, having a positive attitude. The strategies that the PPP managers adopted to address their differences were: establishing effective communication; compromising; and learning by experience (see Table 3).

[Insert Table 3 about here]

Across the two cases both public and private partner managers viewed the institutional differences as a normal occurrence, that they assumed to have improved their performance and said they had one common goal - to have a successful partnership through to project accomplishment. Differences were primarily associated with the characteristics and internal processes of each partner that the other partner had to accept. One interviewee said:

Look! Differences in views between partners is a normal thing to happen when different worlds get to work together. As the saying: “Differing opinions do not spoil friendship” [an Arabic proverb]. It is all about improving the quality of the work to be done. The
thing is not to let these differences put you down. You just have to get used to them and keep them down to the minimal. It is like the salt to the food! But, of course, too much salt spoils your dish! (S1.2/Pc).

The role that the project agreement played in the differences between partners was also another important factor that the interviewees thought of as one of the regulators for having a steady partnering relationship. Project agreements specified the broader aspects of the roles and responsibilities for each partner, and therefore, minimised the impact of the institutional differences between partners. Associated with this, at a World Bank Public-Private Partnership in Infrastructure gathering of PPP agencies from around the world in 2007, a participant discussed success factors about the Queen Alia International Airport project and noted the need for the Jordanian government to establish sound contract management teams for such PPPs (World Bank, 2007).

The managers confirmed that acknowledging the principal institutional differences between partners and working closely and cooperatively to minimise impacts of differences were examples of acting positively against differences. Establishing constant, assiduous and direct communication with the other partner was an imperative approach that PPP managers found useful in managing institutional differences as well as promoting understanding of differences in business practices on a cultural level. One manager said:

.....Whenever such differences arose, we sat together, addressed the matter and found out ways to sort out those differences. Regular interface, coordination and lobbying at the senior governmental levels have proven good strategies to ensure conflicts of interest are
closely and timely addressed and resolved and.....objectives/interests of the private and public partners remain aligned (S1.10/Pt).

Being ready to negotiate and compromise was another approach that the PPP partners believed to have been useful on occasions where they anticipated that such differences would have substantial impact on the progress of their project. Seeking third party help was also another tactic to manage the impact of institutional differences between organizations. No less important was that the PPP partners adapted themselves to certain procedures where they learnt by experience how to go around institutional obstacles to get things done. One manager said:

[...] I then realised that we have to do something about that [the government’s red-tape].
First, for urgent matters, I go there myself and set on people’s heads to get my thing done.
Second, I started building up a network of social relations. Believe you me; people are more willing to cooperate if they get to know you (S2.1/Pc).

Finally, through continuity in communication between partners, readiness to compromise in situations where such differences were anticipated to have influence on the progress of the project and learning from their experience, PPP managers were able to manage the institutional differences more effectively.

The managers adapted to differences by acknowledging the importance that mutual goals, project agreement, and awareness of own their rights and obligations played in regulating their relationships and management performance. Further, they established informal networks and developed alternative plans to deal with the differences in their internal systems and procedures.
Discussion

Internal and external PPP management difficulties

The research highlighted difficulties beyond those identified by the PPP literature. Lack of adequate quantity and quality of the local labour force and lack of sufficient experience, were examples of such difficulties that had substantial impact on the way PPPs were managed, especially at the beginning of the PPP project. Unique management and technical competence and experience were needed to effectively manage these inter-sectoral, multi-partnered, cross-cultural projects. Additionally, managers were frequently confronted with situations where unexpected circumstances emerged that necessitated changes to the original design and construction processes of the project. This was due to the increasing demand on services (in the case of the SWWTP), or due to an emergent need (in the case of the QAIA), that urged one partner to issue an RVO.

The findings of the current research did not confirm the existence of all of the difficulties reported by other PPP researchers. The current research does suggest that the existence and interplay between the internal and external management difficulties can result in negativity between partners such as distrust, one-sidedness, split purposes and distanced relationships (Weihe, 2008) but in these case studies partners invested in practices designed to minimise such issues. Other examples of these negative attributes were poor levels of partners’ involvement, conflicts, poor decision making, lack of clarity of roles, trust and inability to manage the ‘people issues’ that Fox and Butler (2004) specified. For Jordan particularly, these projects would come under heavy scrutiny by stakeholders; thus posing more challenges to the management of such projects, as a result of Jordan’s constitution mandating that “every concession given for
granting any right related to the exploitation of mines, minerals or public utilities should be sanctioned by a law” (Article 117) (The Constitution of the Hashemite Kingdom of Jordan, 2011). Such scrutiny increased following the data collection of this research as a result of the Arab Spring in which trust in government drastically declined and deteriorated, alongside severe deficits in budgets resulting in the removal of government-subsidised commodities and services; which generated suspicion of PPP arrangements as people questioned the extent to which the public sector was capable of managing such projects to save public assets and taxpayer funds. Resultant management difficulties created delays to projects, namely the QAIA, due to be completed by spring 2012, finalised in March 2013.

**Effective PPP management practices, approaches and strategies**

*Effective human resource management (HRM) practices*

Managing human resource management issues proved to be one of the factors that had a substantive positive impact on the effective management of PPPs as perceived by the interviewees. Yet, developing human resources, particularly amongst the local labour force, was found to be more evident in the SWWTP than it was in the QAIA. This might be explained by the SWWTP being established earlier and in a more advanced stage of development. Further, effective human resource management practices were referred to significantly less often by the public partner managers than their private partner counterparts. In addition, managing the construction and operational stages of a PPP project was the main responsibility of the private partner, and therefore, a specialised and well-trained labour force was needed to operate such mega projects with significant technological sophistication. It could also be said that the private sector is
usually more flexible in mobilising and allocating funds to the development and training of human resources, given the limited financial resources available in a developing country like Jordan. The importance of developing local human resources to take management responsibilities more effectively in the long-run has added to Schmieg and Climko’s (1998) suggested ‘critical steps’ and what Abdel Aziz (2007) referred to as critical success factors for PPPs. The current research did not support the importance of having a PPP institutional/legal framework for PPPs to be effective – this may be explained by the institutional and legal framework for PPPs in Jordan being not yet fully established.

Other effective human resource management (HRM) practices
The current research supports Jacobson and Choi’s (2008) identification of several important factors that contribute to the successful implementation of PPPs including open communication between partners and their willingness to compromise along with having clear roles and responsibilities (as highlighted by Schmieg and Climko, 1998). Effective monitoring techniques emerged in the current research as one of the important effective practices in managing PPPs. The current research added to extant literature in highlighting that knowledge and prior experience in managing similar PPP projects was found to be one of the important factors that improved the abilities of the PPP managers to effectively manage their PPPs. For the private sector managers, prior experience, although important, was not an issue of concern as most of the managers had previously worked on similar regional and international PPP projects. The public partner managers were also aware of the importance of having prior PPP management experience but
compensated for the lack of experience of some managers by providing them with training locally and internationally.

**Managing the institutional differences**

While some researchers have argued that PPPs can be successful arrangements even with the existence of institutional differences between partners, others raised concerns about the negative effect that these differences might pose for the management of PPPs (Klijn and Teisman, 2003; Tierney et al. 2010; Vining and Boardam, 2008) and the importance of communication between partners as having a substantial impact on the performance of PPPs (Jacobson and Choi, 2008; Tierney et al. 2010). Ramiah and Reich (2006) suggested accepting partnership as a learning process – and partners in the PPPs in this research had developed practical and efficient approaches through which they learnt by experience to minimise the effect of their institutional differences. Establishing informal networks, starting the work plans and processes early and developing alternative plans to apply in different situational scenarios, were examples of these approaches. The current research concluded that the extent to which the institutional differences impacted on the performance of the case study PPPs was limited in most of the areas where these differences prevailed. Effective management of these differences, built-in safeguards, effective approaches in managing differences and a positive working environment in the case study PPPs facilitated working together more effectively.
Conclusions and implications

Research contributions

This research makes a significant contribution in being a) one of the few scholarly efforts to specifically explore the management of PPPs in the implementation phase, and b) broadening research to the Jordanian context. Thus far, much of the research on PPPs internationally has focused on evaluating policy aspects of establishing PPPs in early stages of development and managing the implementation phase has received scant attention and it has been suggested that international PPP research lacks a substantive view of the content and context in which partners interact (Klijn & Teisman, 2000). Moreover, prior research has not well documented how interaction between public and private partners can lead to or increase the gap between partners. This research is important in having highlighted a number of areas in which institutional differences between partners existed.

While previous research on PPPs has focused on the internal management difficulties and external pressures and difficulties of managing PPPs, the current research is important in that it also suggests the need for PPP management researchers to revise their assumptions about institutional differences between partnering organizations as impacting adversely on PPP performance and outcomes. This research suggests the need to move beyond previously-held assumptions within the PPP literature that management difficulties create fragmentation and unorganised patterns of work to appreciate more systematic cause-effect relationships which can provide a basis for developing more effective management and communication strategies. The current research highlights the need for researchers to re-think assumptions about the necessarily negative effects of institutional differences in that, for these case study
organizations, differences between partners being accepted as normal created positive partnership outcomes in drawing on comparative advantages which stem from differences. The partners recognised the need to develop workable solutions to the differences between partners and put in place built-in safeguards to assist partners to deal with their institutional differences and as such it is evident that these partnerships in Jordan have been effectively managed. Moreover, in developing countries like Jordan, PPPs are likely to comprise local government partners and foreign multinational private partners. This research illustrates that the Jordanian PPPs have recognised the need to effectively utilise local staff for achieving long-term PPP sustainable objectives through investing in developing the skills of locals to work as conduits between local government partners and foreign private partners, and to serve in senior management roles into the future. The experience of these Jordanian PPPs clearly illustrates that a positive partnership can create conditions for developing workable solutions to differences between partners.

Arguably knowledge of how to effectively manage PPPs at the critical stage of partnership development in project implementation is even more essential in developing countries in the MENA region, such as Jordan, than it may be in the developed world, because of resource scarcity and that investment in PPP projects tends to be for provision of much-need public infrastructure resources/facilities for future sustainability. Though newly introduced to the Jordanian market, the government of Jordan is utilising PPPs as a key component of economic development but this research is one of the first to investigate how effectively PPPs are being managed in Jordan.
Implications for PPP managers and policy makers

It is expected that this research will improve understanding of PPP managers internationally about how well partnerships are (and should be) managed in suggesting a need for a shift in thinking and doing in that public and private partners should adopt effective practical approaches to working with institutional differences such as tailoring built-in safeguards to effectively deal with differences during the implementation phase of projects. PPP managers need to be more flexible and effective in responding to unexpected changes in the environment that are more common in inter-sectoral, multi-partnered PPPs which other researchers (Hodge & Greve, 2007; Mandell & Keast, 2008; Teisman & Klijn, 2002) and the interviewees have suggested have more technical, managerial and financial sophistication than in traditional unilaterally-owned organizations and hence require unique management competence and experience to manage. This research highlights that a well-designed, comprehensive project agreement fully detailing expected outcomes of a PPP project - agreed upon by partners before commencement - is one of the most effective practices for management of PPP projects. Further, when establishing PPP projects, policy makers and managers need to create the conditions to facilitate institutionalising these features.

The findings also suggest that PPPs in Jordan, specifically, need to recognise the nature of the difficulties in managing PPPs. In particular, the institutional differences between partners and the management skills and competencies required when the partnering organizations include Jordanian public partners who have limited experience in working in PPPs and foreign private partners who may have limited knowledge of Jordan’s business culture and administrative procedures. The research also highlights some specific issues in relation to management of PPPs in Jordan, namely that:
management difficulties arose from limited prior experience of the partner organizations with PPPs; there was increasing demand on services as a result of people moving to the country to flee regional wars; and the Arab Spring resulted in increasing distrust of people in the Jordanian government and its ability to effectively manage public assets. Changing circumstantial conditions in Jordan, coupled with coordination and communication difficulties and differences in internal management processes such as reported bureaucratic procedures and inflexibility of the public sector partners, resulted in delays in making decisions, yet the partnering organizations did have strategies to address such challenges. Response to the management difficulties included: development of local staff to address concerns about ‘stealing’ national assets; and the partners working effectively together in developing safeguards despite an absence of a fully developed legal and institutional framework in Jordan.

Limitations and issues for future research

While the research is significant in extending knowledge of management of PPPs in the implementation phase in a developing country in the Middle East in which resource scarcity means that effective implementation of infrastructure projects is critical, we do acknowledge that a limitation of the research is that we interviewed only managers in the partnering organizations and that future research might also include interviews with other stakeholders to gain insights into their perspectives on the public-private management of the organizations. Future research on PPPs in developing economies, and the MENA region particularly, should endeavour to explore a range of stakeholder perspectives which might also include government departments, employees/uni ons and parent representatives from the private and public partners - although it should be noted
that interviewing other stakeholders would be most valuable before the implementation phase at the point at which there is support and input into, or opposition to, such projects. It is also suggested that research be triangulated with documentary evidence, where possible, in the form of internal organizational communications and media releases. Further comparative research on other PPP arrangements in MENA countries could also investigate the impact of unique political and cultural contextual factors on effectiveness of partnering arrangements.
References


<table>
<thead>
<tr>
<th>TABLE 1 Difficulties in Managing PPPs in Jordan</th>
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<tbody>
<tr>
<td><strong>Frequency (%)</strong></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Internal management difficulties</strong></td>
</tr>
<tr>
<td>1 Human resource management difficulties</td>
</tr>
<tr>
<td>2 Lack of knowledge and experience in managing PPPs</td>
</tr>
<tr>
<td><strong>External management difficulties</strong></td>
</tr>
<tr>
<td>1 Changing circumstances</td>
</tr>
<tr>
<td>2 External pressures</td>
</tr>
<tr>
<td>3 Coordination and communication</td>
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</table>

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<tr>
<th>TABLE 2 Effective PPP Management Practices</th>
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<tr>
<td><strong>Frequency (%)</strong></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>Human resource management practices</strong></td>
</tr>
<tr>
<td>1   Developing and training employees</td>
</tr>
<tr>
<td>1.1 Recruiting employees locally</td>
</tr>
<tr>
<td>1.2 Improving employees’ working conditions</td>
</tr>
<tr>
<td>1.3 Promoting qualified nationals to prominent positions</td>
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<tr>
<td><strong>Prior knowledge/experience in handling PPP issues</strong></td>
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### TABLE 3 Strategies for Managing Institutional Differences

<table>
<thead>
<tr>
<th>Safeguards in limiting the impact of the institutional differences</th>
<th>Frequency (%)</th>
<th>Total % of interviewees mentioning the issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Awareness of differences</td>
<td>19 19 24 19 43 38 81</td>
<td></td>
</tr>
<tr>
<td>2. Having mutual objectives and ends</td>
<td>19 19 14 19 33 38 71</td>
<td></td>
</tr>
<tr>
<td>3. Role of project agreement</td>
<td>14 24 14 10 28 34 62</td>
<td></td>
</tr>
<tr>
<td>4. Having a positive attitude</td>
<td>10 14 10 10 20 24 44</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategies adopted to manage the differences</th>
<th>Frequency (%)</th>
<th>Total % of interviewees mentioning the issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Establishing effective communication</td>
<td>19 14 24 19 43 33 76</td>
<td></td>
</tr>
<tr>
<td>2. Compromising</td>
<td>19 24 14 14 33 38 71</td>
<td></td>
</tr>
<tr>
<td>3. Learning by experience</td>
<td>24 14 10 5 34 19 53</td>
<td></td>
</tr>
</tbody>
</table>