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Timothy Donnet
Queensland University of Technology

Robyn L. Keast
Queensland University of Technology

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CITIES IN THE AIRPORTS' SHADOW: UNDERLYING INTERESTS AND DISCRETIONARY POWER IN AIRPORT-REGION DEVELOPMENT

DONNET, Timothy. Queensland University of Technology, Australia.

KEAST, Dr. Robyn. Queensland University of Technology, Australia.

ABSTRACT

The previously distinct boundary between airports and their cities has become increasingly blurred as new interests and actors are identified as important stakeholders in the decision making process. As a consequence airport entities are more than ever seeking an integrated existence with their surrounding regions. While current planning strategies provide insights on how to improve and leverage land use planning in and around airports, emerging challenges for implementing and protecting these planning ideals stem from the governance shadows of development decisions.

The thesis of this paper is that improving the identification, articulation and consideration of city and airport interests in the development approval process (between planning and implementation) can help avoid outcomes that hinder the ability of cities and their airports to meet their separate/mutual long-term objectives. By applying a network governance perspective to the pilot case study of Brisbane, analysis of overlapping and competing actor interests show how different governance arrangements facilitate (or impede) decision making that protects sustainable 'airport region' development.

Contributions are made to airport and city development decision makers through the identification and analysis of effective and ineffective decision making pathways, and to governance literature by way of forwarding empirically derived frameworks for showing how actors protect their interests in the 'crowded decision making domain' of airport region development. This work was carried out through the Airport Metropolis Research Project under the Australian Research Council's Linkage Projects funding scheme (LP0775225).

1. INTRODUCTION

Most airports were initially situated some distance from their cities. As the boundaries of cities have expanded, airports are no longer distinct and separate entities, but an integral feature of the urban environment. This growing spatial proximity means that decisions for land use and development on either city or airport land are likely to have impacts that affect one another in either or both the short- or long-term (Stevens, Baker and Freestone 2010). These overlapping impacts increase the demand for joint decision making processes and mechanisms to ensure that airport developments do not impede the sustainable growth of its city, and likewise that city developments do not impede the sustainable growth of its airport (Gillen 2006).

The separation of planning authority between Australia's airports and cities is not seamless or unambiguous. With the introduction of the *Airports Act 1996* and the subsequent leasing of the major airports to private corporations, the Commonwealth Government retained policy and planning rights over the properties, while passing onto the new owners operational rights as well as a range of development rights with no restrictions on land use (other than compliance with the *Airports Act 1996*). The *Airports Act 1996* required an Airport Master Plan with a twenty year indicative vision, replaced every five years and informed by public comment and approved by Government. Under the privatisation model, local and state government input into on-airport development was limited to consultative processes, as part of the Master Plan process. Similarly, there were few mechanisms for airport operator input into regional development (Baker and Freestone 2008; Koppenjan et al. 2009).

These essentially isolated processes for planning and approving developments within city and airport boundaries, were largely sufficient as long as their intersecting interests were complimentary of one another - be it spatially and/or strategically. Tensions arise when developments proposed within one domain are perceived to have foreseeable negative impacts on the interests held within a neighbouring domain. In the case of airport and city domains by example, tensions arise from developments close to flight paths and airport access corridors (i.e. Barcelona, Spain and Vantaa Airport, Finland), and developments that compete with existing urban infrastructures such as shopping centres and commercial office space (i.e. Sydney Airport, Australia and Zuidas and Schiphol Airport, Netherlands).

The structures that frame the governance of development decision making (planning and approval) for airports and cities are not perfect, nor are they unitary. Rules and regulations help to guide planners and developers to make appropriate decisions for what to build, where, when and how. However some situations are either too complex or are not adequately catered for in existing rules and regulations to easily make decisions.

Defining the problem

The disconnect of airport and regional planning can create an ambiguous decision making space – albeit a shrinking one – between airports and regions, stemming from the competing needs of urban and airport growth. On one hand airports will plan airside and landside development with the intention to meet their strategic goals, and likewise local cities and regions will plan for residential, commercial, industrial, transport and utility development to meet their public goals. Additionally, developers play an essential role as organisations that propose and implement projects that appreciate the needs of their clients within the planned urban environment.

In response to the growing intersection and tensions between airport and city growth, alternative governance arrangements, both formal and informal have been introduced to facilitate dialogue and joint action between airports and local/regional decision makers. Cast in the form of networks, these integrating arrangements are largely built on interaction among peers and are fortified by increasing trust between members and the understanding that joint effort delivers mutual gains. Network governance structures differ from the hierarchical structure of the airport firm or government department, in that unilateral power and authority are not present or exercised, instead integration is achieved through self organisation, flexibility and inclusion (Powell 1990; Kickert et al. 1997). In these new governance arrangements airport operators, city representative and other stakeholders including developers and, at times citizens, are all assumed to have equal power. However, while network models assume a high level of non-hierarchical process and control, the reality is that many of these new structures sit along-side hierarchical modes (Keast et al. 2006; McGuire 2006). Given the reliance on network governance approaches in addressing complex infrastructure decision making processes, including those for airports, it is important to know how far the institutional shadow of the hierarchy can be cast and when and how it influences the operation and impact of networks within its domain.

In order to explore the limits and influences of institutional shadows the paper has been organised to first provide a baseline understanding of network governance theory, highlighting the importance of the institutional shadow of the hierarchy. The next section provides brief descriptions of the different perspectives that airports, cities and developers appear to adhere to in debates surrounding developments in, bordering and close to airports. This is followed in Section 3 by a discussion of the pilot case of Brisbane on the governance arrangements that are in place (or espoused) as integrative mechanisms, and the potential impact of institutional anchorage on their design, purpose and functioning. Following the case description the research method is detailed in Section 4. Findings are presented in Section 5, unpacking the complexity of the decision making 'eclipse' presented in Figure 1. Section 6 elaborates on the findings' implications for theory and practice, and Section 7 concludes with the limitations of the pilot study and recommendations for future research.

2. LITERATURE

Network governance

Governance has become a critical consideration for airport operation, not only in terms of the correct ownership and operation forms for effective and efficient internal operation of airports (Oum, Adler and Yu 2006; Carney and Mew 2003) but also as a mechanism to better integrate the increasingly complex and crowded decision making and planning that needs to occur between airports and their local regions (Koppenjan et al. 2009; Keast et al. 2006). In relation to the latter, network governance describes the array of horizontally oriented modes of decision making that have emerged as a result of increasing need for cooperation and consensus between the multiplicity of actors engaged in airport operation and development. Advocates of network governance highlight the necessity of networked forms of decision making to manage uncertainty, resolve 'wicked' societal problems, access expertise and enable broader stakeholder participation in decision making (Keast 2001; Koppenjan and Klijn 2004). Indeed, significant claims have been made about the benefits of networked governance arrangements in assisting the integration of decisions for physical infrastructure in complex urban regions (Graham and Marvin 2001).

With its emphasis on interpersonal rather than authority relations and informal structures, network governance replaces hierarchical control and institutional fiat with a continuing process of negotiation and dialogue among interested parties (Klijn and Koppenjan 2000; Keast et al. 2006; Sorenson and Torfing 2007). The network governance perspective is underpinned by an awareness of a level interdependency between actors. That is, there is an understanding that issues can not be resolved by working alone, in silos. The interactive nature of networks, coupled with the alignment of members to interest positions and the need to establish a point of commonality for joint action leads to complex decision making processes. Nonetheless, the flexibility and inclusiveness of networks are argued to produce better outcomes in complex project environments (de Bruijn and ten Heuvelhof 2000; Koppenjan and Klijn 2004).

Networks under the Shadow of the Hierarchy

In some respects networked forms may be self regulating; they are still embedded in or sit along-side hierarchical structures and may be affected by the controls and signals that deliberately or accidentally flow over and shape the nature of the interactions. Thus assuming network properties and processes, many of the emergent alternative networked governance forms nonetheless, operate within the 'shadow of the hierarchy' (Scharpf 1994). The shadow that the firm (airport) or government department casts over other bodies within its domain is argued to be sufficient to influence the processes and outcomes of a horizontal/network mode.

Scharpf (1997, 197) however points out that there is a "difference between a hierarchical structure and the actual use of hierarchical direction in order to override the decision

preferences of other actors". That is, although there is no doubt that decision makers within hierarchically based firms or departments can influence or even over-rule the functioning of networks, they don't always seek to use this power over others (Scharpf 1994, 38). In its stead they can draw up on dialogue and other processes aimed at developing joint actor agreement. Thus, for Scharpf the institutional setting and the hierarchical structure are not fixed and there are different approaches depending on the context. He notes that interactions with the character of unilateral action 'mutual action' and negotiation (joint decision) are possible even though they make take place in or alongside a hierarchical setting. Hierarchical direction may be rarely used but an awareness of its presence is important for the way in which the actors within a hierarchical structure behave (1994, 40). In this way, the shadow of the hierarchy can either strengthen or constrain new cross agency integration arrangements and it seems that much depends on how deep or far the shadow is cast.

Multiple actors in airport-region development

Airport decision makers

While airports are increasingly divested from state ownership and control (Carney and Mew 2003, 2006), it is arguable that they still provide the same basic service as providers of access to aviation transport. So while (privatised) airports are increasingly responsible for their own revenue streams (often hedged through non-aviation development) the heavy regulation of airports leads us to consider privatised and state airports as similar in the public values they must consider. For the purpose of the presented study we define airport decision makers as the set of government representatives and agencies, private organisations and authorities that have legitimate influence over decisions to approve expanding, developing and maintaining airport infrastructures and capacities. These include airport controlling organisations such as airport authorities and private consortiums, and development approval bodies such as government ministers and oversight commissions.

The airport-region

The term 'airport-region' is used in this study to identify an area that includes an airport and the surrounding land that holds residents, businesses and infrastructures that influence and are influenced by airport operations and users. This includes areas that are effected by aircraft noise, areas with increased traffic density from airport users (transport corridors), and areas that attract businesses for the benefits of locating near airports. This loose definition fits closely to elements of Kasarda's (2001) aerotropolis model, Blanton's (2004) air front, and transport issues highlighted by Finavia's (2004) aviopolis, and tightens the focus from broad reaching economic benefits to more localised, substantive impacts that are experienced close to airport boundaries.

For this paper we consider the airports, cities and developers as the primary decision makers for developments in and around airports, illustrated in Figure 1 (below). Airports and cities provide plans for future directions in growth while proposals are forwarded by developers to

meet the demands of the region (or for opportunistic growth). Each actor has its own strategic interests, decision making structures and boundaries of authority, and each actor has a vested interest in decision outcomes for what to build, where, when and how. The strategic interests of each actor are not necessarily compatible with one another, and development within an airport-region provides a context where each actors' set of interests overlap and compete for defining what is acceptable for the outcome of a development. The following subsections provide background information and generalised perspectives that Australian airports, cities and developers appear to adhere to in debates surrounding developments in airport-regions.

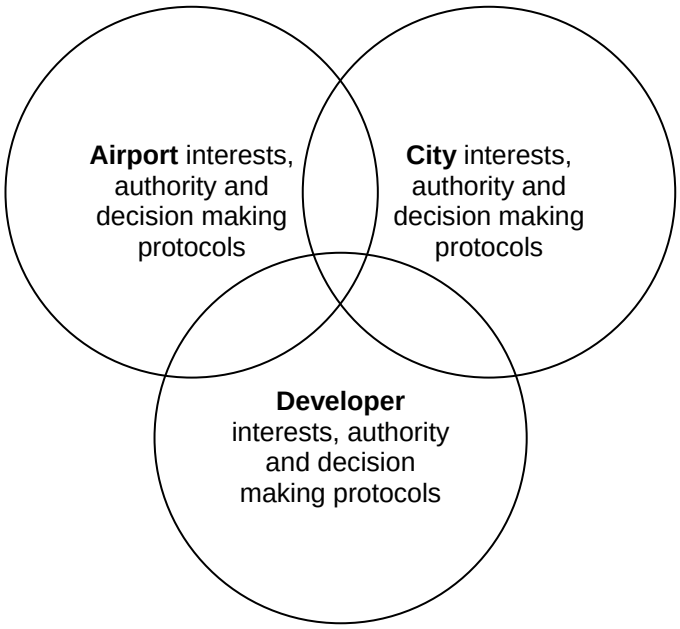

Figure 1. Overlapping interests and arrangements for airport-region development.

The airport perspective

Australia's major airports are built on Federal land and leased to private operators on long term lease agreements. These semi-privatised airports are not required to adhere to local planning laws as Master Plans and Major Development Plans (MDPs) are subject to Federal approval processes as per the Australian *Airports Act 1996*. The separation of planning and approval from local agencies allows Australia's major airports to focus on their primary role as gateways to regions. In doing so they provide regions with access to aviation based passenger and cargo transportation services in alignment with national interests focused towards economic development and regional growth (NAPWP 2009, 218).

Decisions for airport planning and development centre on the requirements needed to meet regional and airline demands for aviation capacity, embedded in forecasts and strategies. From an airport's perspective, planning decisions classically focus on what an airport needs to do to meet future (forecasted) demand (de Neufville and Odoni 2003) with processes aligned towards airport and aviation needs, or airport-centric decision making (as per Alexander 1998, and Goetz and Szyliowicz 1997). The airport-centric focus to planning is reinforced in Australian airport decision making frameworks as the requirements of airports to

show how they will meet their forecasted future aviation needs through airport Master Plans (*Airports Act 1996*). However the purely airport-centric focus has been tempered somewhat via the Federal Government's increasing encouragement (and requirement) to show how their plans appreciate local community stakeholder interests.

Airports are also loci of employment, and generally accepted as essential drivers for regional economic growth (Kasarda 2004; Charles et al. 2007). The concentration of national, regional and local value in airports makes their (service) sustainability a core concern across all tiers of government. From the airport perspective it appears prudent that planning for airport development be left to airports themselves. For airports to continue planning and developing to meet growing demand there must be sufficient capacity for the safe movement of aircraft in and out of airports. A number of technical aviation safety requirements, logistics requirements and social issues threaten the ability of airports to (enduringly) meet demands for growth.

Developments off airports, if left under-regulated, without effective enforcement, or without common sense could easily limit the future capacity of airports. Developments negatively effecting future airport capacity can include structures that reduce the safety of flight operations, developments that add to the congestion of existing access corridors to and from an airport, and developments that may negatively impact the curfew status of an airport. Examples of these include tall buildings penetrating controlled airspace, shopping malls located on airport feeder roads, and large residential developments directly under approach/takeoff flight paths. Unsurprisingly, when a development appears to threaten the future capacity of an airport, the airport typically makes their objections known immediately.

The city perspective

From a city perspective, development is about maintaining transparency and accountability while trying to meet the strategic objectives it has set in its City Master Plan, and appreciating agendas passed down by higher authorities (see Adams 1994 and Forster 2006). Local governments pursue these aims through zoning and building laws, and approval processes open to public comment. Smaller development applications, such as extensions to houses, face highly prescriptive guidelines for what can and cannot be built (such as Common Building Projects and Renovations guidelines). Large scale development on the other hand, typically attracts special interest from Councils to ensure fit to guidelines set in the City Master Plan and to meet the higher order objectives set by the State.

Facilitating growth, environment and lifestyle are key themes embedded in regional plans across Australia's State level planning agencies (see South East Queensland Regional Plan - QLD, Sydney-Canberra Corridor Regional Strategy - NSW, Growth Area Planning - VIC), which in turn provide City Councils with overarching targets and guidelines for developing their own Master Plans. Pressures from strong growth forecasts in Regional Plans therefore place considerable pressure on local planning agencies to encourage development within their jurisdictions, and finding ways to encourage growth while keeping disturbances to residents' lifestyles to a minimum. With respect to cities with airports in reasonably close

proximity of their central business districts (CBDs), flight paths and the disamenity of their associated noise footprints bring additional planning problems.

For a number of cities in Australia, approach and takeoff flight paths track over existing or attractive sites for high rise development. Cities want to protect development of their CBDs from aviation safety laws for the sake of economic development (see Munro 2009, 4), presenting three options for local development approval agencies; 1) cap high rise development to protect flight path clearances, 2) lobby to have the flight path moved away from CBDs, or 3) approve developments in the hope that obstacles will force flight paths to shift. The positioning of approach and takeoff flight paths and the laws regarding safe obstacle clearance are managed Federally by the Civil Aviation Safety Authority, and Air Services Australia. However several developments penetrating controlled airspace have gone (seemingly) unchallenged by Federal regulators, suggesting some level of ineffectiveness in the enforcement of existing laws (Banks 2009).

Overall, development is necessary for City Councils to meet population and economic growth concerns, and aviation operations add complexity to the tasks of city planning and evaluating development applications. Defining what is appropriate development is uncertain for development applications in areas that are close to airports and/or under flight paths, particularly when there is little enforcement - or acceptance (see Munro 2009) - of the rules that are designed to manage the interface of aviation operations and urban development.

The developer perspective

As private organisations, developers are foremost responsible to their shareholders and clients. Typically given the task to prepare, seek approval and implement development applications, developers often employ a suite of consultants to create development applications that meet City Council and/or State Government requirements, with the express interest of creating value for themselves and/or their clients. Developers are required to work within the limitations of zoning and building guidelines provided by both State and Local authorities. However limitations within formal guidelines allow for some level of interpretation and negotiation possible for development applications.

To make a successful development application, developers are tasked with coordinating assets (consultants, stakeholders, etc), providing authorities with necessary paperwork (business case documents, designs, impact assessments, etc.), and lobbying influential decision makers (owners, city planners, politicians, local interest groups). When there is uncertainty to what, where or how a development should take shape, deliberation with the approving authority (often Council level) is often sought to provide certainty.

Overt airport related limitations to developers are set in laws and guidelines provided by regulating authorities (Federal, State or Local). Less obvious limitations stem from political agendas and factors causing lower returns on investment, such as increased construction costs from noise insulation, or reduced floor space to sell from building height restrictions. The result is a decision making environment that relies heavily on the rule structures

governing what can and cannot be built, and the oversight of regulating bodies to ensure enforcement of building laws. However opportunities do exist for innovative development applications that may be negotiated towards approval via political and/or legal channels.

Perspective overview

The above perspectives provide generalised snapshots of how different decision makers approach development within areas substantively influenced by airports and their aviation operations. A development attracting interest from both airport and city results in positions being taken by each of the three major actors in airport-region development; developers rationalising their vision of what can be deemed appropriate development based on the needs of their clients and owners, and the needs of regulating authorities; cities rationalising their vision of what can be deemed appropriate development based on their development application guidelines, agendas set in City Master Plans, and political environment; and airports rationalising their vision of what can be deemed appropriate development based on the strategic needs of airport and aviation continuity.

Each of the aforementioned visions have the potential to compete with one another, particularly when one vision of what is beneficial negatively influences the ability of another actor to protect their interests. Each actors' vision of what they deem appropriate development is built upon a range of values. While some interests are likely to be universal to a type of actor (i.e. all airports have a vested interest in protecting safe aviation operating environments, shareholder profits and development), we envisage a number of interests as being contextually isolated. For example, the distance between a runway and local urban structures has a large influence on the urban area effected by aircraft noise, and runway orientation as compared to the layout of the city will influence whether or not high rise CBD development is influenced by airspace.

Despite contextually based issues that are likely to vary from one case to the next, the overarching need for airports and cities to integrate decisions for development remains. Not only are the interests of airports, cities and developers crowded into the one space for airport-regions, decision making structures and protocols intersect in the same space. Actors are required to (or choose to) engage with one another, bringing each actors' institutional shadows together. However explaining to what extent integration occurs when institutional interests and arrangements intersect in airport-regions is not well defined. To focus the investigation the following sub-questions have been added to our exploration of network governance in airport-region development:

1. How does an airport and Local Government Council currently work towards integrating decisions of what to build, where, when and how?
2. What needs to be done to better facilitate planning integration to ensure better development outcomes for both city and airport?

The next section describes the pilot case used for answering the above questions listed, and in turn informing the exploration of institutional shadows of the hierarchy. As the pilot case is

a live development, names of the developing organisation and associated stakeholders have been omitted to protect their commercial interests and to protect the identity of the key informants who contributed to the research. The case description provided in this study has been left purposefully broad and context driven, as providing concise descriptions of the type(s) of development and substantive issues arising from the case would possibly allow the identification of the organisations concerned. Enough detail has been excluded to protect the identity of the organisations involved, however the rich context provided clearly highlights how the actors come together (or don't) when making decisions on the development.

3. PILOT CASE

Case selection

The Brisbane Airport-Region was selected for its sizeable projected growth numbers for regional economy, regional population and airport passenger demand (Guhathakurta and Stimson 2007; BAC 2009). A current development project located between Brisbane Airport and the Brisbane CBD was selected as the pilot case for this study. Screening for case selection focused on selecting larger, publicly visible developments that were close to airport and city transport/access corridors, near approach/takeoff flight paths, and espoused (by developers, city and/or airport) to generate substantial economic benefits within the region. Five projects were identified as potential cases of airport-region development, however only one case is presented in this study to serve as a pilot for testing the concept put forth in Section 2.

Case background

Urban development strategies currently employed for the Brisbane and South East Queensland Region are debated for the apparent need for increased government intervention for achieving integrated city-region strategies for sustainable development (Gillen 2006). From the Brisbane Airport-Region a range of large infrastructure, residential and commercial developments were identified as important to the long-term interests of both Brisbane City and Brisbane Airport. Development goals and attributes are included below as a case description, with the explicit perspectives of the airport, the city, and the developer revealed in from the analysis (see Section 5).

A brief description of the Brisbane airport-region

Brisbane Airport serves as a passenger and freight transport hub with international and domestic passenger terminals, a cargo terminal and two run-ways. It is the third busiest airport in Australia, after Sydney and Melbourne. Brisbane Airport is operated by the Brisbane Airport Corporation (BAC) a consortium led by NV Luchthaven Schipol Group and a number of other government and non-government shareholders. BAC has adopted an 'airport city' development approach that has expanded the focus and orientation of the airport beyond that of solely a transport hub to include a wider array of development initiatives both

aeronautical and non-aeronautical. This transformation is well underway with approximately 320 businesses located within the precinct and the development of a shopping centre and office complex.

There has been a history of tension between BAC and Brisbane City Council (BCC) since the airport city approach was adopted post-privatisation (see BAC 2010). Airport decisions to build commercial developments close to the airport boundary led to a series of press releases issued from BCC and a large retail developer, eventually leading to a two year Federal Court case between the owner of a nearby shopping mall and BAC. In 2005 the Federal Court ruled in favour of BAC. Tensions between the airport and the BCC have eased over time; both parties acknowledge that while they may not agree on everything, they have a need to 'get along'.

The airport was initially located some distance from the Brisbane city precinct. Over time, however, the distance between the airport and the city has been reduced with urban planning strategies including housing and business developments now pressing on the airport boundary. The growing reliance on air travel, coupled with the interface between airport and the city region has also brought with it increased levels of traffic and congestion, noise concerns and other environmental considerations. Airport operation and planning previously occurred in a local planning vacuum (Baker and Freestone 2008) and local planning largely proceeded without airport input; better integration between the two decision making domains is now a dominant concern for sustaining long-term growth strategies (NAPWP 2009).

A number of forums now exist between BAC and BCC for facilitating the transfer of information at both operational and strategic organisational levels. These include the BAC-BCC Protocol and the Brisbane Airport Community Forum for engagement at regular intervals; additional consultation between airport and city also occurs through requirements set in creating Airport Master Plans, Major Development Plans and Neighbourhood Plans (BAC 2009; *Airports Act 1996*; BCC 2010), and both organisations' involvement in the Australia TradeCoast project (ATC 2008). Additionally, City Master Plans also provide a formal avenue for BCC to publicly communicate its strategic intentions. While the abovementioned mechanisms for city-airport interaction are in place, a number of developments within the Brisbane Airport-Region do not appear to appreciate the strategic interests of one, and sometimes all, of the organisations.

Possibly in response to the continuing disconnect of development outcomes and regional/local/airport interests, the National Aviation Policy White Paper (2009) has made the recommendation for new formal arrangements to improve communication between Australian airports and their local/regional stakeholders. Should the White Paper pass into legislation unchanged, there is no promise that increasing the number of communication pathways between airport-region actors will improve the outcomes of decisions for airport-region development. The Brisbane case presents itself as an airport-region decision making arena with the potential to inform the National Aviation Policy White Paper (2009) from existing benefits and/or problems faced by current mechanisms for airport-region integration.

4. RESEARCH METHOD

An exploratory case study approach has been selected to explain and understand how the governance of development decision making integration works towards identifying, articulating and considering the strategic interests of both airport and city. The case study approach is appropriate for answering the two primary research questions (see Section 1) for its utility in answering questions of 'how' and 'why' (Yin 1994). Documentary analysis and semi-structured open ended key informant interviews were selected for providing the rich data required to explore the pilot case's governance arrangement. Interviewing multiple respondents from organisations allowed for data triangulation, and added richness and depth of content from each decision making organisation. This was considered necessary to provide the researchers with confidence in reporting effective and ineffective governance arrangements currently used within the pilot case (Denzin 1978; Creswell 2003).

Documentary analysis provided the researcher's with an understanding of the systems and processes in place to facilitate development applications within the Brisbane City and Brisbane Airport areas. Documents including news media, formal communiqués and consultancy reports were also useful for identifying actors' espoused issues regarding development within the Brisbane Airport-Region. Ten key informant interviews were used to identify the different forums used for different types of development issues, and also to identify any underlying issues or interests that were not found from searching through documentation.

Interviews were transcribed and coded thematically, with emphasis on understanding each actors' perspective of how existing development application arrangements work, what interests each actor saw as important for the case, and identifying effective and ineffective pathways for facilitating integrative planning for the case development. The coded data was analysed for detailing the interests held by each actor versus the interests known by each actor, detailing the circumstances leading to why particular governance arrangements were used, and for gaining a sense of whether, why and to what extent particular arrangements were considered (in)effective for achieving mutually acceptable development outcomes.

The analysis (see Section 5) provided a range of different identified arrangements used for identifying, articulating and considering the interests of each airport-region actor. To protect the anonymity of the developer and individuals who contributed to the research an interpreted 'perspective' from each airport-region actor has been provided. The different actor perspectives clearly show a number of flaws that exist in current integration mechanisms for deciding on development applications in the Brisbane Airport-Region.

5. FINDINGS

Airports and development

To continue providing regions, in the long run, with access to affordable aviation services and to remain as prolific providers of employment within a region, Brisbane Airport requires that a number of interests be protected to ensure sustainable airport growth. These interests include (but are not necessarily limited to):

- sufficient land holdings to allow future infrastructure growth
- enduring access to airspace, particularly landing and take-off flight paths
- ground access to allow passengers and freight to enter and depart airports on time
- sufficient revenue streams to develop infrastructure and for shareholder profits

Compromise to any of these interests raises the probability that Brisbane Airport may not be able to meet future regional demands for aviation capacity growth, which may in turn either hinder the sustainability of regional economic growth, or place pressure on the building of a new airport. The National Aviation Policy White Paper (2009, 192) details alternate airport development as a very real option for Australian airports by identifying the need of a second airport for the Sydney area. As an example of potential impacts the Brisbane Airport should the above interests not be protected, Sydney Airport's capacity is limited by highly regulated and monitored curfews and capacity limits to approach and takeoff flight paths as a result of residents lobbying against aviation noise.

Curfew status is high on the list of concerns for BAC, and relates directly to the abovementioned airport interest of enduring access to airspace. The encroachment of residential developments towards airport boundaries and flight paths places pressure, over time, on governments to limit noise impacts on residents. From an airport's perspective the approval of residential developments close to its boundary and runway centreline represents a future increase of complaints about aircraft noise, which is likely to lead to increased pressure on limiting aircraft movements in and out of an airport. When asked about governments pursuing residential developments close to airports and underneath flight paths, an airport representative was quoted as saying:

> "… an airport represents billions of dollars of investment and ongoing value to a region, and to place all of that in jeopardy for the sake of a few million in profits right now is just senseless …"

Curfew status is not the only operations related issue BAC is keen to protect from developments close to its boundary. Airports in general require sufficient access for passengers and freight to move from the region to the airport and back again. Placing urban developments (not just residential) close to an airport boundary has the potential to reduce the ability of existing transport corridors to meet the ground accessibility needs of an airport. As Kasarda (2001) points out, for an airport to be truly successful it must have supporting

regional transport infrastructure that meets the logistics needs of its users. As one airport representative noted for a development close to an airport access corridors:

> "… we really don't mind that kind of development going ahead as long as it doesn't mean a threat to […] the ability of passengers to get to their flights on time."

For Brisbane Airport, development within the airport-region should include the consideration of their strategic interests to ensure the airport can meet the region's long-term aviation demands. Protection of aviation, now and in the future, will help to ensure the operating organisation BAC, can stay viable as a business. Currently the airport makes its interests known to Brisbane City Council via a range of different forums. BAC considers it needs to maintain transparency in its business dealings, particularly as it is a provider of public service (access to aviation). Because of this need for transparency BAC typically makes its interests formally known to developers through BCC processes. One respondent noted that BAC also has access to any number of alternative channels of communication including direct contact, press releases, legal avenues, however would only be tempted to use these less transparent channels if its interests were under duress.

In terms of BAC influencing decision making for developments outside of the airport boundary but within the airport-region, the organisation can extend its influence through a number of channels, both formal and informal. Unless a regulation is breached, BAC has no legitimate pathway for intervening in the development application process until late in the process. When BAC's interests are threatened, BAC casts its shadow into the airport-region via BCC channels as a means of maintaining transparency. However BAC also has its discretion in seeking alternative pathways to articulate its interests to developers, such as direct contact, press releases, legal channels, and the like.

Cities and development

Brisbane City Council (BCC) has a number of key interests for developments in and around Brisbane Airport. Foremost BCC is tasked with ensuring the residents of Brisbane are provided quality living conditions. In terms of development, the protection of local living conditions features heavily in the decision making arrangements for development applications. New development projects are encouraged to integrate with the local urban environment, for example new developments should fit with the existing style of the area, including building heights, design, and green space.

Developments within the planning and approval jurisdiction of BCC can best be managed for integration with the local urban environment if managed internally of BCC. This makes sense as dialogue between developers and BCC result in building conditions and/or modifications to preliminary plans that must be met before approval is gained by the developer. Some developments within the airport-region have been (and will continue to be) outside of BCC's planning and approval jurisdiction. For example the State has exercised its discretionary powers to take control of 'underutilised' land and rezoned and approved development under

a created Urban Land Development Authority (ULDA). Additionally, developments on airport land are not subject to BCC's approval as Brisbane Airport falls under the Federal Government's jurisdiction.

Development within the airport-region but not within BCC's planning and approval jurisdiction have often fallen short of what BCC would consider good outcomes, such as tall unit buildings in the ULDA North Shore, and a retail outlet at the main entrance to the airport and close to a local shopping centre (see 2004 Westfield Limited -v- Brisbane Airport Corporation Ltd.). The ability of the State Government to exercise its discretion for taking over development approvals power, therefore, provides a key disincentive for BCC to be seen as being slow or difficult to developer requests; particularly as there is a strong pro-housing State agenda. To lose planning and approval control for a development within any sensitive area of the city, including the airport-region, may have significant impacts on the ability of BCC to meet its own targets set in the City Plan, and as was noted from one respondent:

> "I think it is a big risk for [the] whole area, you know, an unelected body making decisions about development with no appeal rights."

While the disconnect between airport and city planning and approval regimes remain, BCC has engaged with BAC through a number of channels to foster dialogue and create an understanding between the two organisations, and is discussed further below in 'Mechanisms for governing development decisions'. Dialogue between the case developer and BCC appears more isolated than the 'regular' channels that have been created between BAC and BCC.

The developer appears well engaged with BCC through a number of simultaneous development applications throughout the Brisbane area, and feels its organisation 'knows how to talk' with BCC, be it through lobbying channels or formal development application processes. The developer "knows what [BCC] wants of [the developer's] development applications, and makes sure it meets those expectations", and likewise BCC recognises that they "do business with each other on a regular basis, so [both sides] know the rules of the game and what each other is trying to achieve". However for large scale projects that require considerable lobbying outside of formal development application processes, Council has identified the potential for development outcomes to depart from Council development agendas – where compromises between influential actors result in outcomes that fall short of 'optimal' for all parties involved.

For developments within the airport-region, development applications should meet the criteria BCC sets for integrating development with local urban environments. If this is difficult to achieve then early and thorough consultation between the developer and BCC is a preferred path for ensuring the fundamental interests of the city are appreciated within development applications. Developments that place the living conditions/standards of existing residents at risk are more likely to attract greater scrutiny within the development application process. However, there is a risk that if too great a scrutiny is applied that the State Government may exercise its discretionary power to take over the development

application process, which past experiences show can have negative impacts on coordinating development with existing urban environs (i.e. ULDA North Shore). Additionally, processes need to be kept transparent and accountable as a part of the good governance practices required of Australian government agencies.

Developers and development

Established development companies are politically savvy, and are aware that large scale development may become politically sensitive. Large scale developments often require the lobbying of local Councillors and decision makers for support before investing in a development application process. As noted in discussions with developers and Council representatives, developers submitting a large scale development application could surprise an influential Member of Parliament, Councillor or Mayor, and risks negative political backlash, "particularly if they are caught off guard or are seen as being left out of the process". As such, it is in developers' interests to become engaged with influential actors that have the capacity to influence the decision making process, particularly where they have a vested (be it political or direct) interest in development outcomes.

The developer within the pilot case is no different from the above, and has approached a range of influential politicians and decision makers to gauge support for or against the project. Additionally, the developer has identified the need to coordinate at least some aspects of its planning processes with the requirements of BCC, saying:

> "We want to make sure that any public consultation that we do coordinates appropriately with Brisbane City Council public consultation, and that it is always meaningful. [...] It will be done in a coordinated fashion with Council's requirements."

Dialogue for the developer has been dominantly focused towards the land owner, creating design briefs and concept plans for dual purpose of consulting with the owner, and providing a discussion tool for BCC and political interface. The developer identified the physical impacts of aviation on building and safety requirements, such as acoustic impacts from aircraft that aviation activities attract, and noted its understanding of the airport as an objector to development in the local area. However the impacts of the development on aviation or airport interests (such as airport access and sustainability) were not readily identified. This may be because dialogue between the developer and BAC has not been a priority for the developer, as the developer stated:

> "…we are aware that [BAC] is an organisation that at some point we will engage with. As to when, we are yet to make up our minds, but we are aware of who they are and what they do."

So for development within the airport-region, the developer appears aware of the building requirements imposed by aviation, and understands that the BAC has a vested interest in what happens outside of the airport boundary. However an understanding of the fundamental airport interests at stake do not appear well identified. For the developer, their responsibilities

lay in meeting the expectations of the land owner and meeting the requirements of the agency responsible for assessing development applications. If the airport's interests are left out of those requirements then the developer is likely to see little need to appreciate them, which has the potential of attracting more direct attention from BAC in an effort to protect the long-term interests of the airport.

In terms of the developer's influence on the decision making for the pilot case, the developer holds the majority of legitimate authority over what to develop, where and when, however these factors are guided by existing legislation set by government, particularly building and zoning laws. A number of interests between the developer and BCC are complimentary, for example, the city needs more housing and office space to facilitate growth, the developer proposes to contribute to meeting both of these needs. However the developer also has an interest in maximising profits and meeting the needs of the land owner, which may result in a development proposal that goes beyond what local residents and stakeholders find acceptable. If the developer's application meets resistance to aspects that are core to protecting the interests of the developer and/or the land owner, the developer may seek to extend its influence (cast its shadow) via lobbying or legal channels, or alternatively abandon the proposed development.

Mechanisms for governing development decisions

A suite of mechanisms in place for BAC-BCC dialogue were identified from the documentary analysis (as listed in Section 3). Of the identified mechanisms, findings revealed that four mechanisms appear dominant for identifying and articulating the interests of the BAC to BCC, and to some extent the developer:

- Submissions/formal comments made on development applications
- Neighbourhood Planning processes
- The BAC-BCC Protocol
- Airport Master Planning process

The Airport Master Plan and BAC-BCC Protocol appears most effective at articulating high order, strategic interests and concerns of BAC for the airport site and surrounding urban environment. Submissions made on development applications within the airport-region, and BCC driven Neighbourhood Planning processes appear to be effective for articulating the operational requirements of the airport, such as technical information regarding traffic flows, rainwater runoff and aviation noise.

The strategic interests of BCC appear best identified and articulated to BAC via the BAC-BCC Protocol and City Plan 2000, with Neighbourhood Planning processes also providing valuable feedback to BAC at the officer level. Information gained at the officer level appears well articulated to BAC decision makers via regular internal meetings that feed information both horizontally and vertically throughout the organisation.

Because the development is still in the early stages of the development application process, it is difficult to reveal whether any meaningful consideration of airport or city strategic interests has been made by the developer. While the developer was aware of a many airport and city issues, there was little evidence within drafted plans to show due consideration of the airport's interests. This is likely due to the developer's explicit acknowledgement that engagement with the airport was yet to happen, however it appears counterproductive to develop plans without comprehensive information of the operating environment.

City interests, insofar as policies and procedures, were well represented by the developer's adherence to design principles established by Council (i.e. green space and fit to local urban environment). However a direct challenge to BCC's perspective of appropriate land use for the development site (i.e. zoning restrictions) indicates the developer is expecting to negotiate for development approval via a combination of political channels and special agreements with BCC. The developer acknowledged that while the plan does not necessarily represent all of the interests of the airport or the city, it does represent the interests of the land owner and a number of State level interests. As the approving authority for the development, BCC may feel encouraged to use its discretion to enforce or change a number of development application requirements. This encouragement stems from political and airport pressures to meet regional housing targets but protect airspace and accessibility. If BCC fails to approve the development, or appears too slow in processing an application the State Government may intervene and take over the approval process – this has the potential to result in development outcomes that show no consideration of city or airport interests (i.e. similar to ULDA projects).

6. DISCUSSION

The pilot case is exemplary of a decision making space in which actors each have the potential to cast their own institutional shadows. Responding to sub-question one, analysis shows that while each actor has the potential to directly influence decision making processes via a range of informal and formal fora, they do not always exercise their discretionary powers for emphasising their individual positions of interest. At times actors appear conciliatory of each others' positions, however withholding their influence appears to be motivated by strategic concerns, such as monitoring each others' actions, minimising conflict or seeking information. The strategic nature of choosing when and how to cast institutional shadows, as demonstrated by the actors within the pilot case, corresponds with Scharpf's (1994) conclusions that institutional power is not always exercised; it remains a tool to be used strategically for influencing the actions of others.

While the actors in the case appeared highly strategic and adaptive in their chosen approaches to the decision making space, there also appeared to be authoritative or relational steps in place for moving past tensions. Network governance mechanisms between the airport and city, specifically the BAC-BCC Protocol and Neighbourhood Planning processes appear to foster mutual understanding of the strategic and operational needs of the airport, the city and the developer. BCC's working knowledge of BAC's interests has provided an informal mechanism, built in at the organisational level for BCC, for

informing and tempering preliminary planning by the developer. Airport interests were articulated via BCC to the developer throughout preliminary discussions and lobbying processes; often at the behest of BAC. This enabled the developer to identify a range of potential problems before plans had been decided on for application. However the range of airport interests and depth of understanding provided by BCC to the developer did not appear comprehensive. The developer's focus of what aviation means to the development, rather than adding consideration to what the development means to the airport is not unnatural as planning processes often take an 'internally centric' perspective (Alexander 1998).

With respect to sub-question two, each actor appears to acknowledge that there is a need to integrate but each actor tries to 'solve' the situation without really exploring each others' interests. By failing to invest appropriate time for identifying and understanding issues, and building relationships, network fora that may otherwise help to overcome development issues remain underutilised or ineffective. This is underlined by the need for decision making actors to have a mutual understanding of the 'problem' and of each others' concerns for network decision making structures to work effectively (see Parker 2007). An example of the lack of understanding between actors is the uncertainty as to how, when and why the developer should engage with Brisbane Airport. Without formal guidelines or informal relationships for transferring information between the developer and BAC, greater pressure is applied on the developer's relationships with BCC to provide sufficient information to avoid (or reduce) future conflict in the development application process. The actors know integration is a good thing, but answering the question of 'how to do it' now appears as a primary concern.

Discretion appears to be a key factor for each of the three actors in the study. The developer has the discretion to include or not include consideration for BCC and BAC interests in its development application, and can also choose to follow due process or manipulate the approval system via lobbying, and decisions appear tied to the interests of the land holder and the size of the project. BCC has the discretion to either enforce or modify zoning and/or development requirements, which appears closely tied to the influence of vertical political agendas. BAC has the discretion to choose the channel and level of attention given to the consideration of airport interests, which appears closely tied to the predicted impact of the development on the long-term sustainability of airport operations. Discretion within the decision making frameworks of each actor contributes uncertainty to the outcomes of the development application, and has the potential to either create or ease tensions between the three primary actors for the development.

While communicating horizontally between the three organisations may enhance the identification and articulation of each actors' strategic interests, discretion provides whether (and how) the identified interests are actually considered and acted upon. To relate this back to respond to the primary focus of the research and explain how institutional interests and arrangements intersect within an airport-region, Figure 2 shows the result of overlapping discretionary powers, highlighting a new space where the interests of both city and airport are at stake in developments in the airport-region. However, the overlap of interests does not mean a mandatory overlap of institutional arrangements. Discretionary enforcement allows

for each actor to be strategic in their interactions in the space of overlapping interests, particularly where existing arrangements do not clearly describe how developments should proceed to appreciate the needs of each actor. Essentially, each actors' domain has its own interests in what happens in the 'eclipsed' space, but there are no clear procedures or methods in place to ensure each domains' interests are identified, articulated, and considered by all relevant decision makers in that space.

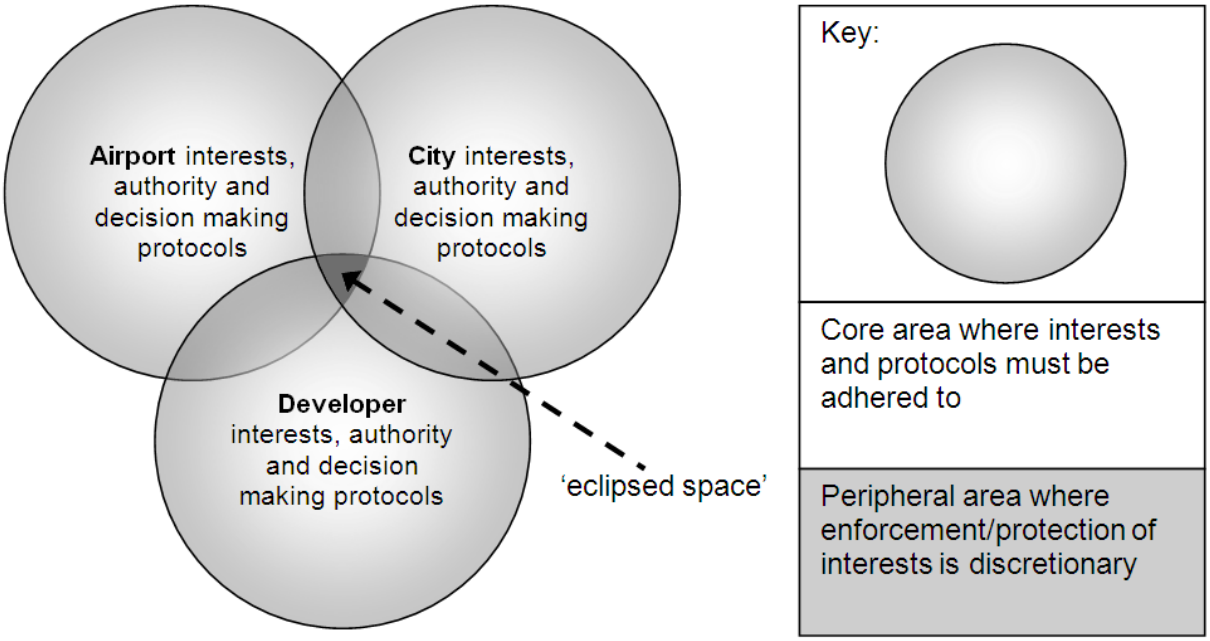

Figure 2. Mandated areas of influence and areas of discretionary influence

The high levels of ambiguity created by insufficient formal governance mechanisms in this space, challenges the ability of horizontal (network) structures to cope with 'filling the information gap' to produce outcomes that sufficiently address the needs of both city and airport. We theorise that the crowding of decision making domains, each staking their own claims on the same 'shadowed' decision making space has equal potential to provide productive, innovative outcomes as it does less productive, hostile outcomes between decision makers. For example, positive outcomes from overlapping airport, city and developer interests can be seen from deliberation within the AirportLink project resulting in an additional upgrade to the roundabout at the airport entrance. This outcome is expected (still under construction) to deliver improved airport accessibility and reduced traffic congestion in the neighbouring urban environment, and improve the attractiveness of the AirportLink project to consumers.

The pilot case clearly demonstrates that the airport, city and developer cast intersecting shadows from their institutional frameworks. However, discretion at the periphery of decision making structures allows for actors to choose whether their overlapping interests compete, integrate or appreciate one another. When formal protocols appear unable to articulate and/or consider identified interests, respondents point towards horizontal, network arrangements to foster more integrative and appreciative stances between actors. However if network mechanisms should fail to deliver outcomes that appreciate the fundamental, core

interests of one or more actors, respondents point towards formal, hierarchical mechanisms to arbitrate decision making processes (such as seeking State intervention in a development application, or a court injunction to halt development, etc.). So while network governance shows promise for improving the identification, articulation and consideration of airport, city and developer interests, network governance can only work so far as discretion does not lead to hostility. While this finding appears unsurprising, it is still a concept not well addressed in extant literature and deserves greater attention in future.

7. CONCLUSIONS

Both BAC and BCC have, at their individual discretion, the ability to seek the consideration of their strategic interests in airport-region developments. Both have avenues available through which they can inform and cooperate, engage and coordinate, or ideate and collaborate. The Brisbane case of development is not alone in the Australian context, nor the global context. Lessons from Appold et al. (2008) show gaps in airport-city integration throughout North America, Europe and broader Australasia with no clear solution evident. The presented pilot case highlights the disconnect between identifying external interests (such as the city's and airport's) and having them substantively considered in development processes.

A common theme raised by all actors in the pilot case was the need for more information of each others' intentions and motivations. This suggests that while a number of network arrangements exist (or have been created) for facilitating the identification of actors' interests, they are either underutilised or misaligned for transforming interest identification and articulation into 'real' consideration in developing the Brisbane airport-region. As alluded to in Section 1, the reliance on network governance to address complex decision making processes is not as sure-footed as previously thought. Decision making actors are unlikely to subscribe to the tenets of network governance when their fundamental interests are at stake. Instilling horizontal mechanisms between decision making actors may foster the mutual identification and understanding of each others concerns, however these mechanisms have the potential to be ineffective when institutional shadows overlap so far to include 'core' interests rather than just 'discretionary' interests.

The pilot study provides a (somewhat rare) empirical case of a contested decision making space, where the actors' interests overlap with the potential for conflict between organisations via the perspectives each actor brings to the decision making space. Each actor has the power to cast a shadow into the decision making processes for the development case, however the actors involved cast their shadows strategically, and only 'flex' their powers when potential outcomes impinge on core interests. Although the actors recognise the need to integrate (to some extent) to reduce the potential for conflict, what appears to be limiting them is their attention to the own agendas and interests rather than seeing the development as a joint problem. That is, the actors see the potential benefits of integrating, however fail to realise opportunities of integration as they remain independent rather than interdependent. Until the actors make the leap to approach development as a shared problem, they will likely remain focused towards following hierarchical decision

making processes rather than investing in more horizontal, network mechanisms of integration.

The mixing of governance modes to create hybrid arrangements is both common and natural, and is no different for the presented case of development (Black 2008; Keast et al. 2006). Network and hierarchical mechanisms are both evident within the pilot case, however particular mechanisms appear dominant over others based on the strategic motivations of individual actors. The inability of network mechanisms to overcome the shortfalls of existing hierarchical arrangements means that the developer is likely to continue down the planning path with incomplete information of the airport's interests, which fails to reduce potential conflict between actors. The underutilisation of network mechanisms in the pilot case is congruent to recent findings from Nyseth, who found that "networks operating in an institutional vacuum tend to fail in institutional capacity building" (2008, 497).

Limitations

Limitations of the pilot case stem from both contextual and methodological issues. The pilot case is located in a region experiencing growth above the national average, so there may be supernormal pressures placed on actors to perform, thus influencing the extent to which they protect their strategic interests. This could limit the extent to which actors exercised their discretion in protecting their individual interests, thus limiting the ability of network governance to perform, however this would only reinforce the thesis of our argument. If tensions were reduced for the actors we would expect existing horizontal mechanisms to provide more effective communication amongst the actors.

The pilot study's timeline, in terms of being an incomplete development, is a limiting factor to the findings and discussions provided above. No final outcome of development can be defined, so our findings may be limited to studying the integration of decision making during preliminary planning and approval processes; ongoing investigation of the development case will help to define this limitation further. Additionally, as an initial (pilot) study, the external validity of findings across types of development and to other airport regions is limited, and should be addressed via replicated studies across contexts.

Interviews were conducted with key informants from both senior and middle management levels of the actor organisations; however data may be biased towards BAC and BCC perspectives due to a skew in the number of respondents from each organisation. While triangulation of data sources (documentary evidence) has been used to counteract this bias, the possibility of skewed data can not be ignored. Further interviews and replication of the study is underway to build on the existing data set and create new data to compare findings.

Finally, differences in legislation and government should be considered when considering the pilot case. Australia's airports are highly privatised (long-term lease agreements), an attribute that is common to airports globally. The extent to which an airport is privatised, and the arrangements underpinning decision making authority (particularly for planning development and building long-term strategies) are likely to have considerable impacts on the way airport

and government actors approach issues of airport-region development. This makes the findings of the paper more appropriate for highly privatised airports that are responsible for their own strategy and development decisions.

Future research

Future research should focus on in-depth analysis of the limitations of different governance modes in competitive, crowded domains of decision making to improve academic and practical understandings of governance. The authors intend for the pilot study to pave the way for replicated studies for determining the effectiveness of network type arrangements across a range of development types and jurisdictions within the airport-region context. By comparing development cases from a range of settings and positions of interest the authors intend to develop a model of best practice for the governance of development decisions in airport-regions.

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