The role of organisational capacity in the knowledge-based transformation of Brisbane, Australia

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Structured Abstract

Purpose – The cumulative impacts of the knowledge economy together with the emerging dominance of knowledge-intensive sectors, have led to an unprecedented period of socio-economic and spatial restructuring. As a result, the paradigm of knowledge-based urban development (KBUD) has emerged as a development strategy to guide knowledge-based economic transformation (Knight, 1995; Yigitcanlar, 2007). Notwithstanding widespread government commitment and financial investment, in many cases providing the enabling circumstances for KBUD has proven a complicated task as institutional barriers remain. Researchers and practitioners advocate that the way organisations work and their institutional relationships, policies and programs, will have a significant impact on a region’s capacity to achieve KBUD (Savitch, 1998; Savitch and Kantor, 2002; Keast and Mandell, 2009). In this context, building organisational capacity is critical to achieving institutional change and bring together all of the key actors and sources, for the successful development, adoption, and implementation of knowledge-based development of a city (Yigitcanlar, 2009).
Design/methodology/approach - There is a growing need to determine the complex inter-institutional arrangements and intra-organisational interactions required to advance urban development within the knowledge economy. In order to design organisational capacity-building strategies, the associated attributes of good capacity must first be identified. This paper, with its appraisal of knowledge-based urban development, scrutinises organisational capacity and institutional change in Brisbane. As part of the discussion of the case study findings, the paper describes the institutional relationships, policies, programs and funding streams, which are supporting KBUD in the region.

Originality/value – In consideration that there has been limited investigation into the institutional lineaments required to provide the enabling circumstances for KBUD, the broad aim of this paper is to discover some good organisational capacity attributes, achieved through a case study of Brisbane.

Practical implications – It is anticipated that the findings of the case study will contribute to moving the discussion on the complex inter-institutional arrangements and intra-organisational interactions required for KBUD, beyond a position of rhetoric.

Keywords – organisational capacity; institutional arrangements; knowledge-based urban development; Brisbane, Queensland

Paper type – Academic Research Paper

1 Introduction

Globalisation, rapid urbanisation, and the escalating use of advanced technologies have led to a growing dependence upon knowledge-intensive sectors, and accordingly the world has entered the ‘knowledge era’. In response to these challenges, dedicated knowledge-based urban development reform has become an important policy priority. This often occurs at the local and metropolitan levels as cities have proven to be enormously effective platforms for knowledge-based economic transformation (Florida, 2004). Across all tiers of government, from the supranational and national to the regional and local levels, the changing nature of the economy and urban development, presents significant challenges. Consequently the need for a re-evaluation of traditional approaches to urban development has been widely lamented (Baum et al., 2007; Plummer and Taylor, 2003, Yigitcanlar and Martinez-Fernandez, 2009). As knowledge, information, and innovation become critical factors in local and regional growth, knowledge-based urban development (KBUD) provides a purposefully designed and inimitable strategy for development. As a result, there has been widespread support and financial commitment to KBUD mechanisms that promise to foster the elements of the knowledge economy. However, in many cases, providing the enabling circumstances for KBUD has proven a complicated task. Research suggests that barriers to the successful implementation of KBUD, are predominantly administrative and systemic and there exist few proposed strategies to overcome them.

In addition to economic, socio-cultural, and urban development components, progress towards knowledge-based urban development requires the consideration of institutional processes. Researchers and practitioners advocate building organisational capacity as a strategy for overcoming institutional impediments and achieving sustained institutional change. Organisational capacity refers to the ability of the whole institution, from individuals through to organisations and the legislative and policy instruments used, to undertake a task, in this case, KBUD. Recently, organisational capacity has been recognised as critical to uniting the key actors and sources, for the successful
development, adoption, and implementation of knowledge-based development of a city (Yigitcanlar, 2009). In economic terms, the way organisations work and their programs and funding streams, have a significant impact on creating a supportive institutional environment for investment, innovation, and trade (Keast and Mandell, 2009). In this context, there is a need for urban development agencies to ascertain the complex inter-institutional arrangements and intra-organisational interactions that can advance urban development for the knowledge economy. In Brisbane, the capital city of the state of Queensland, Australia, fostering KBUD mechanisms has become a key strategy for metropolitan development. However, research into the institutional linements required to support the enabling circumstances for KBUD, has largely not moved from the position of rhetoric. Therefore the current challenge to the design of capacity building strategies for achieving KBUD is that the associated characteristics of good organisational capacity are yet to be identified. As part of the discussion of the case study findings, the paper describes the institutional relationships, policies, programs and funding streams, which are supporting KBUD in the region. Specifically, this paper investigates the organisational attributes contributing to Brisbane’s knowledge-based development.

2 Knowledge-based urban development mechanisms

KBUD promises a secure economy within a human setting, delivered through institutional, economic, socio-cultural, and urban development. The following knowledge-based urban development assessment framework (Figure 1), shows these four development domains in detail: economy; society; institutional; built and natural environments. For the successful knowledge-based development of a city, organisational capacity is central to these four development domains. Institutional development processes are essential to orchestrate KBUD and bring together all of the key actors and sources, in order to organize and facilitate necessary knowledge-intensive activities and plan strategically KBUD (Yigitcanlar, 2009). Economic development codifies technical knowledge for the innovation of products and services, market knowledge for understanding changes in consumer choices, financial knowledge to measure the inputs and outputs of production and development processes, and human knowledge in the form of skills and creativity, within an economic model (Lever, 2002). Socio-cultural development indicates the intention to increase the skills and knowledge of residents as a means for individual and community development (Gonzalez et. al., 2005). Urban development builds a strong spatial network relationship between urban development clusters, and in this sense, knowledge precincts play a significant role in the spatial formation and delivery of citywide KBUD strategies (Yigitcanlar et al., 2008d). This paper scrutinizes Brisbane’s transformation to KC by examining the city’s institutional strengths and weaknesses in light of this combined framework.
Figure 1. Development domains of KBUD

3 Brisbane’s organisational capacity attributes

With a reasonably strong knowledge and technological development; growth in competitive industries and efficiencies in the services sector; rapid processes of adjustment to ICT’s; and the increasing implementation potential of KBUD; Australia rates above the OECD average for most of the indicators of success for knowledge-driven economies (McKeon and Lee, 2001; Yigitcanlar 2008c). Brisbane is the capital city of the state of Queensland, in which economic growth has exceeded that for Australia over most of the last decade, and Australia itself, has been acclaimed as one of the fastest growing economies in the OECD. By standard economic measures, Brisbane is an outstanding performer, driven by strong population growth and high export performance (Andrews, 2006). The city has emerging strengths in a number of dynamic new sectors that will drive the city’s capacity to sustain and advance growth into the future. Biotechnology and biosciences, aviation and aerospace and information and communications technologies (ICT) are examples of development opportunities, which have the potential to diversify Brisbane’s economy into the higher value activities required to be competitive in the global marketplace (Andrews, 2006). The following sections investigate organisational capacity attributes and institutional change in Brisbane. The discussion focuses on the institutional relationships, policies, programs and funding streams, which are supporting KBUD in the region.

3.1 Institutional policies and programs

Rapid population growth and urban development in Brisbane over the last decade, led the state and local governments to develop KBUD strategies in order to achieve more sustainable urban and economic development of the region. In Queensland, the Smart State Council was established to remove the institutional barriers that stand in the way of knowledge-based reform in the region. Together with the Department of Infrastructure
and Planning, they formed a collaborative network of development agencies, to create the strategic synergies required to achieve KBUD. Their working relationship enables coordinated KBUD and ensures there is adequate and consistent availability of technical and financial resources. As a result of this collaboration, the ‘Smart State Strategy’ was developed and comprises a vision of knowledge-based transformation and numerous KBUD policies for the region. The strategy ensures that policy is coordinated and consistent across administrative boundaries. These policies identify investments in research, development, technology diffusion and commercialization of ideas to achieve a KBUD and an improved quality of life (Smart State Council, 2007). The political imperative of the Queensland ‘Smart State Strategy’ was developed to drive growth and economic development across the state and particularly in the Brisbane Metropolitan area (Rayner, 2006). The strategy, later implemented in 2003, attempts to reposition the economy as a knowledge economy; recognizing knowledge, science, technology, research, education, and innovation as key drivers of economic growth. The strategy outlines government’s commitment to achieving the ‘Smart State’ vision of using knowledge to drive sustainable economic growth across the region, and charter future directions and new initiatives (Queensland Government, 2004). Under the guidance of the Smart State strategy, local government policies for KBUD, are consistent across administrative boundaries. However, this policy framework enables local governments in the region, such as in Brisbane city, to adapt these policies to suit local conditions.

In line with the ‘Smart State Strategy’, Brisbane adopted a ten year ‘Smart City Strategy’ (2007) to support KBUD with an aim to transform the city into a knowledge city. The strategy focuses on the local level of KBUD activities including; economic development (economic fundamentals of; industry efficiency, capital infrastructure, fiscal environment, innovation), human and social development (education and training, knowledge society skills, culturally diversification), and sustainable urban development (formation of knowledge clusters, networked infrastructures). In contrast to a relatively mature ‘Smart State Strategy’ (1998) the ‘Smart City Strategy’ (2007) has a much more intense urban development focused knowledge-based development perspective. The ‘Smart City Strategy’ develops KBUD policies that address and promote the following: information access, lifelong learning, digital divide, social inclusion, quality of life, and economic development within the Brisbane City and its hinterland. Specifically, the strategy aims to achieve KBUD through developing capital systems by obtaining a positive value balance among all stakeholders and interest groups into the decision-making process as active actors. With regard to intra-organisational capacity attributes, Brisbane benefits from a strong history of community participation and willing engagement, which contributes to effective organisational leadership. In recent years, effective collaboration amongst stakeholders have led to a better understanding of the organisational and operational limitations of stakeholders, which has assisted in the formulation of policy initiatives and capacity building programs.

Although some economists argue that strategic planning instruments offer little guidance to the success of KBUD; the geography of knowledge producers and users has been an important factor in Brisbane’s knowledge-based development, and contributed to the city’s attraction of talent and investment. Furthermore, a Van Winden et al. (2007) suggest Brisbane’s organising capacity and good governance, at both the regional and metropolitan levels, have had a significant influence on the KBUD efforts of the city. Therefore, KBUD benefits from not just the implementation of management practices in local administrative practices, but also strategic planning and growth management at the
regional level. In this regard, good organisational capacity attributes include linking regional knowledge strategies to the development and planning priorities of local areas so that support policies can be more effectively designed and implemented. Further to this, collaborative working arrangements have ensured there is an open and transparent communication between state and local level organisations, which is essential to advancing the KBUD of Brisbane.

3.2 Institutional relationships

Brisbane’s efforts in building the organisational capacity of KBUD are based around quadruple-helix model partnerships, for the overall integration of various local and state wide KBUD initiatives (Odendaal, 2003). Research suggests that whilst participation by all sectors of society in government processes, is effective in developing new productive capacity within the knowledge economy, the formality and practice of traditional organisations restricts widespread involvement (Putnam, 1993;1995). Consequently, Putnam (1993) argues that there is a need to remove the limitations of conventional government processes, reinvent institutional structures and increase the scope of public responsibility in decision-making. In Brisbane this has been achieved through greater privatisation with more specialised, less hierarchal arrangements, such as public-private partnerships and matrix organizations. In terms of organisational attributes, both formal and informal relationships, between different types of organisations are acknowledged and actively maintained. The advantages of public–private–academic partnerships can be seen through numerous cooperation’s, for example Brisbane City Council works with: State Government in providing training in schools; with universities in providing training, and skill development; with the information technology businesses in providing infrastructure; and with knowledge-intensive industry providing services and employment. In addition Brisbane City Council networks with other state agencies such as State Education in providing various initiatives and online training, and works with Federal and State government in the development of local e-government (Odendaal, 2003).

In terms of good inter-organisational capacity attributes, there is a strong emphasis on information sharing across the local and regional government levels and collaborative inter-organisational relationships. Local Government incentives for knowledge sharing in the form of budget allocations for the creation of communities of practice (Brisbane City Council, 2009), facilitate the creation of formal and informal networks for knowledge sharing amongst various knowledge agents, specifically innovative businesses, organizations, universities and research centres. Local e-governance initiatives aim to achieve KBUD through developing capital systems to obtain a positive value balance among all stakeholders and involve interest groups in the decision-making process as active actors. As the literature suggests, communication, forms the basis for collaborative relationships, and information sharing helps create positive relationships between stakeholders (Healey,1998). Further to this, information sharing amongst development agencies is beneficial to KBUD at the local level, as it addresses knowledge gaps and promotes individual, organisational and institutional learning (Brown, 2005).

With regard to urban development processes, there has been a deliberate departure from neutral administration, to a more streamlined process in which institutions define frameworks, create policies, and transmit values through strategy implementation. The operation of ‘Smart State’ and ‘Smart City’ initiatives from one administrative centre for
each, promotes overall integration of various local and state wide initiatives, and promotes capital systems management and community engagement practices. Within the framework of a more flexible institutional structure, Brisbane’s local government is benefitting from an increased capacity to respond to the pro-active and dynamic nature of the knowledge economy for KBUD. The development of KBUD strategies in concert with the relevant authorities is important in providing for knowledge production and the augmentation of the knowledge economy; which requires relevant governing institutions capable of orchestrating KBUD and equipped to handle the planning and the creation of the necessary spatial arrangements for the development of the knowledge economy and the concomitant KBUDs. Queensland’s ‘Smart State Strategy’ and ‘South-East Queensland Regional Plan’, together with Brisbane’s ‘Cityplan’ and ‘Smart City Strategy’, are the major statutory driving forces behind the KBUD of Brisbane, and when combined the KBUD initiatives have strong pushing power in positioning Queensland’s economy as a knowledge economy. Notwithstanding, the city and the state are still lacking an institution similar to Melbourne’s ‘Office of Knowledge Capital’ or Manchester’s old ‘Manchester: Knowledge Capital’ and new ‘Manchester Innovation Group’ to bring the key actors and sources together to organize and facilitate necessary knowledge intensive activities and plan strategically for the city’s knowledge-based transformation. For example, more effort is required to support the establishment of networking, interactions and partnerships with other Knowledge cities or the continuous adaptation and integration of best practice examples for the improvement of policies, processes and services offered by Brisbane City Council.

3.3 Funding sources

In the late 1990s, Queensland started to develop extensive innovation engines; these centred on nine universities and research agencies, the majority of which are located in metropolitan Brisbane and South-East Queensland region. However, and until the release of the ‘Smart State Strategy’, there was a lack of coordination of development and insufficient recognition of these sectors’ potential to generate wealth for the region. In addition, there was an absence of an appropriate level of public leadership and investment to boost the necessary knowledge infrastructure required for the transformation to knowledge economy. Consequently the ‘Smart State Strategy’ comprises a number of initiatives to provide a stimulus for boosting industry innovation and commercial capacity for greater global export and trade gains. A mix of regulatory and incentive based approaches are used to target the mobilization of the innovation process by providing support in converting ideas into tangible results and include funding of: innovation building, research facilities, innovation skills, and innovation projects, particularly in Brisbane.

As KBUD requires an economic model to regulate the advancement of technical, market, financial and human knowledge required for knowledge city formation. In a knowledge-based economy, private and the public sectors value knowledge, spend money on supporting its discovery and dissemination, and ultimately, harness it to create goods and services (Carrillo, 2006). A strong financial support is fundamental for a successful KBUD and from various government resources Brisbane provides financial support for research, innovative business and entrepreneurship, through various programmes for the promotion of new ideas. Consequently, Brisbane has seen improvements in the city’s performance in knowledge intensive sectors; the rate of labour force employed in
knowledge intensive sectors has increased and they comprise a growing share of the city’s annual turnover (Brisbane City Council, 2009) Furthermore there are an increasing number of research centres and institutes, and companies with a research and development (R&D) component operating in Brisbane and it is expected that this will contribute to a higher quality degree of diffusion and research results, and increase in hi-tech and knowledge intensive exports, in the future.

Within Brisbane, the active involvement of the private sector in the organization of knowledge production is essential. A positive business climate is the breeding ground for the development of entrepreneurial spirit and competitiveness. Furthermore, the positive promotion of knowledge entrepreneurship is a vital aspect of successful KBUD strategies. Brisbane’s KBUD strategy is improving to be able to handle administrative environment hand-in hand with sound business environment to create an exemplary entrepreneurial climate and an open, flexible interface between government and business. For example, Brisbane’s ‘Green Heart’ program administered through Council’s website, provides a high quality of information and knowledge, in addition to a number of actions and measures to support environmental sustainability, and offers financial and venture capital for investments in Green Industry sectors. Brisbane’s KBUD strategy declares its orientation towards achieving flexibility in any sense allowing responsiveness to changing needs and demands, while providing the basic capital infrastructure and sound fiscal environment that enables future needs and demands to be accommodated. Nevertheless, in the current state of Australian cities only Sydney enjoys the proliferation of multinational regional headquarters in the city, which translates into knowledge-based employment growth (Searle and Pritchard, 2008). Brisbane is still investing on its business environment to become a globally vibrant city.

4 Conclusion

As advanced economies transition to knowledge-based economies; the benefits of strategizing new ways to foster activities in knowledge-intensive sectors has evoked much interest and investment from a broad range of urban development agencies. Notwithstanding, there is growing evidence to suggest that whilst the knowledge economy offers cities and metropolitan regions prospects for sustainable economic growth and the prevention of social exclusion; failure to appropriately shape and adapt urban development processes will ultimately preclude local administrations and regional governments from capitalising on these opportunities. In this regard, the way, urban development agencies work to create a knowledge-based economy and their programs and funding streams, have a significant impact on creating a supportive institutional environment for investment, innovation, and trade. Consequently, there a definite need to ascertain the complex institutional arrangements and inter-organisational interactions that can advance urban development for the knowledge economy.

Within the broad topic of KBUD, this paper has specifically addressed the organisational capacity attributes that are advancing Brisbane’s urban development for the knowledge economy. Overall, Brisbane’s KBUD experience is supported by a mix of regulatory and incentive based approaches to support appropriate urban development in line with strategic intent. Decision making is underpinned by stakeholder engagement, which helps to ascertain widespread support for development. With regard to strategic policy making and planning, Brisbane benefits from various collaborative relationships, across different levels of government and types of development agencies. As a result
organisations roles and responsibilities are more transparent and coordinated policy is consistent across administrative boundaries. Government’s commitments to KBUD have also resulted in an adequate and consistent availability of technical and financial resources. Overall, Brisbane’s experience promises a successful transformation to knowledge-based development. However, as in many cases some institutional barriers remain. In general, organisational attributes are inhibited by: lack of trust between organisations; a lack of empathy of the constraints, drivers and operational limitations of organisations, a lack of vision and understanding how their organisation fits into this objective. In this context, building institutional capacity as a means to overcome the systemic and administrative barriers and lack of progress in KBUD will require the identification of capacity deficits that can then be used to inform future policy and reform initiatives.

References


