

## Abstract

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The aim of this research is to understand the socio-economic development of a metropolitan region in Sydney through an analysis of regional innovative activity. South West Sydney, a major growth region within Sydney, includes the Local Government Areas (LGAs) of Liverpool, Campbelltown, Camden and Wollondilly. This region has absorbed 25% of Sydney's population growth in the period from 1991-2001. Although South West Sydney has experienced rapid population growth, this has not been matched by associated employment growth. In some sectors such as business services employment growth has been minimal in the previous decade, this is particularly the case in Liverpool, the regional centre of South West Sydney. Population growth is estimated to continue at the current rate (in excess of 5% per annum) for at least the next fifteen years. In this environment, local government authorities in the region are seeking ways in which to develop the regional economy of South West Sydney and increase the amount of sustainable employment commensurably with current population and labour force increases.

The role of innovative activity has a central place in economic development. This thesis uses a 'systems of innovation' (SI) approach to examine innovative activity in the South West Sydney region. SI understands innovation as a socially embedded process of transforming ideas and knowledge into novel products, processes and services through the processes of learning and searching. The approach recognises that innovative activity is determined by various actors (firms and institutions) and the interactivity between these actors and the cumulative base of knowledge in which they operate. The Regional Innovations Systems (RIS) framework develops from an acknowledgement that innovation is primarily a geographically bounded phenomenon. The RIS approach sees that specific local resources are important in determining and encouraging the innovative activities carried out by local firms and hence, the competitiveness of these areas.

The RIS literature provides two fields of understanding of what constitutes a regional innovation system. The first takes the global examples of highly innovative regions such as Silicon Valley and Route 128 in the United States of America (Saxenian 1994), South West England (Cooke and Morgan 1998), Baden Wurttemberg in Germany (Cooke 2001; Braczyk, Cooke et al. 2004), Northern Italy (Piore and Sabel 1984) and in Australia, the North Ryde corridor (Searle and Pritchard 2005). These regions represent 'ideal' or 'star' RIS, with highly specialised and networked clusters of firms, many

forms of supporting regional infrastructure, and high levels of interactivity. The second and emerging field understands RIS to be in existence in all regions and individual RIS are identified on a scale from weak to strong (Wiig and Wood 1995; Cooke and Morgan 1998; Cooke 2001). This second stream includes the analysis of regions seeking to encourage innovative activity by using the RIS approach to examine their local resources and connectedness. It seeks to determine how not only local resources but also their connectedness could be enhanced to increase firm competitiveness.

The innovation systems represented in the 'ideal' regions are largely a world away from what is available and what is necessary in the encouragement of RIS in most other regions. However, the conceptual framework for examining and interpreting RIS is derived from the analysis of these 'ideal' regions. This framework does not provide for measurement and effective interpretation of a range of activities that may be present in less exceptional regions.

This research contributes to this endeavour by providing a method that allows for interpretation of a wider range of innovation activities through the analysis of knowledge intensive services activities (KISA). The focus on knowledge gathering, particularly through the KISA analysis, provides an examination of the relationship between innovation, learning and knowledge, much more so than more traditional measures of innovative activity e.g. patents and research and development (R&D) expenditure. KISA analysis is an emerging field of innovation research. KISA are closely linked to firm innovative activity (OECD 2006) and through an analysis of regional KISA usage, an understanding of innovation and knowledge activities within the region can be constructed. This analysis applies equally across various regions and provides an opportunity to guide regional economic development policy intervention at the local government level in South West Sydney.