Knowledge-Intensive Services in South Australia

Issues Paper

Prepared for industry and government consultation

May 2009

ACIL Tasman

Economics Policy Strategy

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1 Background

1.1 Introduction

The services sector is a key contributor to South Australia's (SA's) economy. In 2007-08, services contributed to $37.4 billion (57.7 per cent) of SA's Gross Value Added, and in the 12 months to February 2009, 69.2 per cent of the State's employment. Services exports from South Australia are estimated at around $1.9 billion a year. (DTED, 2009).

There is high potential in SA for services exports and import replacement to expand. In particular, SA has the opportunity to develop an internationally competitive *knowledge intensive* service sector, with a focus on industries such as professional, technical, business, education, cultural and recreational services, and specialist capabilities in agriculture, natural resources and environmental management, manufacturing, mining and defence.

South Australia has some comparative advantages for development of its knowledge-intensive services sector, including a strong existing R&D capability, and lifestyle and cost advantages. On the other hand, there are some inhibitors to KIS development, including comparatively low levels of innovation.

ACIL Tasman has been commissioned by the South Australian Department of Trade and Economic Development (DTED) to profile South Australia's knowledge intensive services (KIS) sector. The profile will document:

- The contribution of the KIS sector to the South Australian economy
- SA's capabilities/resource base in KIS
- The presence of innovative capabilities in SA's KIS sector
- The extent of the global nature of KIS businesses in SA.

Information to develop the profile will be collected through a survey of KIS businesses in SA. Data from the survey will be used to build a directory of businesses in the sector. The directory will assist DTED in developing marketing tools to promote SA's capabilities in the sector within Australia and overseas. To date, more than 300 KIS businesses (from a mail out of some 1,700) have responded to the survey. Additional email responses are being sought before a telephone survey is implemented to complete this profile of KIS businesses.

Case studies will be developed to showcase businesses in SA that have developed competitive strengths in the global market and/or have demonstrated areas of innovation in their industry.

In addition to profiling the sector, ACIL Tasman will identify and analyse opportunities and constraints associated with achieving global competitiveness and growth among KIS businesses, and with undertaking innovative activities. The analysis will inform recommendations to the Government and assist in developing initiatives to foster innovation and global competitiveness in the sector.

In addition to the survey, a series of consultation workshops have been organised to discuss the KIS sector, its opportunities and issues. These workshops are designed to engage with key stakeholders in business and government.

The main aim of the workshops is to identify issues relating to innovation, growth and global competitiveness among KIS businesses in South Australia. Box 1 outlines the main discussion points of the workshops. The remainder of this paper elaborates on these questions and issues.

Box 1 **Key workshop discussion questions**

This workshop aims to answer a number of key questions. These questions are fleshed out in the main text that follows.

Opportunities

- What are the main opportunities for growth of SA knowledge intensive services?
- What are examples of success to date?

Innovation

- Is the general business climate conducive to innovation by KIS businesses in SA?
- How are innovative activities supported or encouraged?
- What challenges face KIS businesses wanting to undertake innovation?
- How could the SA Government assist in overcoming these challenges?

Global competitiveness

- Are KIS businesses from SA less or more competitive in domestic and international markets as those from other Australian States or from overseas?
- Are there any industries with which SA businesses have a strong competitive advantage?
- If there are differences between competitiveness of SA KIS businesses and others, what are the reasons for this?

Growth inhibitors

- What factors hinder the growth of SA KIS businesses?
- Can the SA Government assist in overcoming these inhibitors?

1.2 What are knowledge intensive services?

KISs by no means comprise a new business sector, but they are growing in importance. KIS businesses have two features that distinguish them from more traditional service providers – knowledge and technology. KIS providers are also distinguished by undertaking more R&D, using higher technology, employing more highly skilled workers than general service providers, and engaging in more innovative activities.

This project adopts a definition that combines a number of other organisations' definitions, including OECD. A summary of the working definition of a KIS provider can be found in Box 2.

Box 2 **Characteristics of knowledge intensive services**

- KISs are provided by private sector businesses and commercial public sector organisations that use **knowledge and technology to drive their business**.
- These businesses engage in **more R&D**, use **higher technology** and employ **more highly skilled workers** compared to other types of service businesses.
- KISs are **tradeable** in that they are able to be **exported** to other countries and other states, and/or **can substitute for imports** from other countries and other states.
- KISs are recognised as providing a significant amount of **innovation** in modern developed economies

KISs include specialist education, specialist health, postal and telecommunications, digital content services, creative services, finance, insurance, business services (excluding property services), scientific research, computer, legal, accounting, architectural, engineering, marketing, mining, and operational leasing services.

Source: Queensland Government, 2007, adapted from QLD Government and OECD.

1.3 Discussion questions about SA KIS businesses in general

The definition of a KIS business used in this project is a combination of a number of definitions used by organisations in other jurisdictions, but these definitions are largely consistent.

Discussion question 1

Does the general definition of a KIS business in Box 2 adequately characterise or describe KIS businesses in SA?

- **Are there other characteristics exclusive to SA KIS businesses?**

Discussion question 2

What are examples of KIS companies in industries in which your organisation has an interest and what are the sectors they serve?

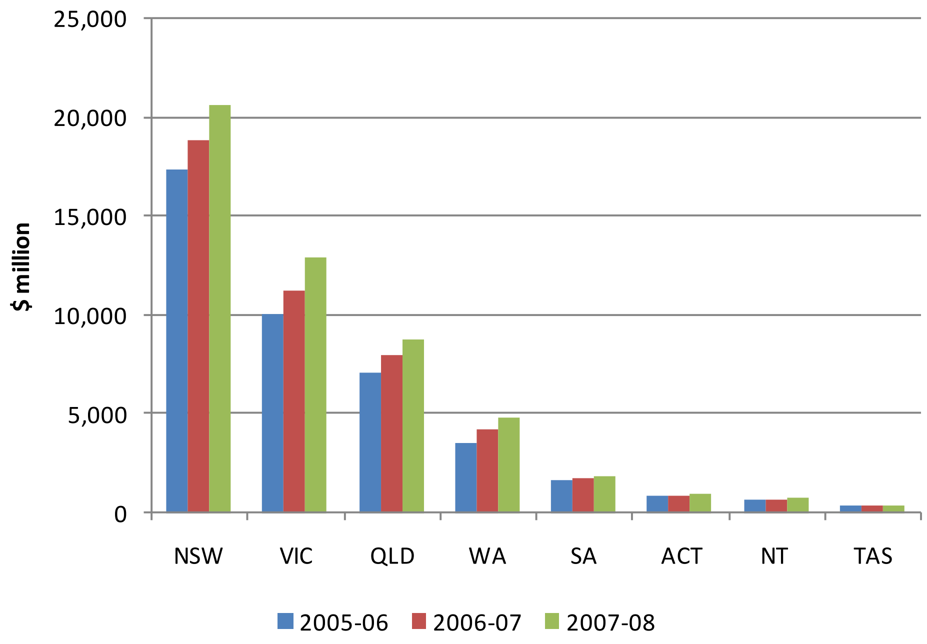
Discussion question 3

Aside from the current survey methodology, are there other ways that DTED can engage with industry to build and maintain a directory of KIS companies, and to identify inhibitors to sector development?

2 International competitiveness

South Australia exports low levels of services relative to the rest of Australia–less than four per cent of total Australian service exports in each of the years considered (see Chart 1).

Chart 1 **Exports of services, all states and territories**

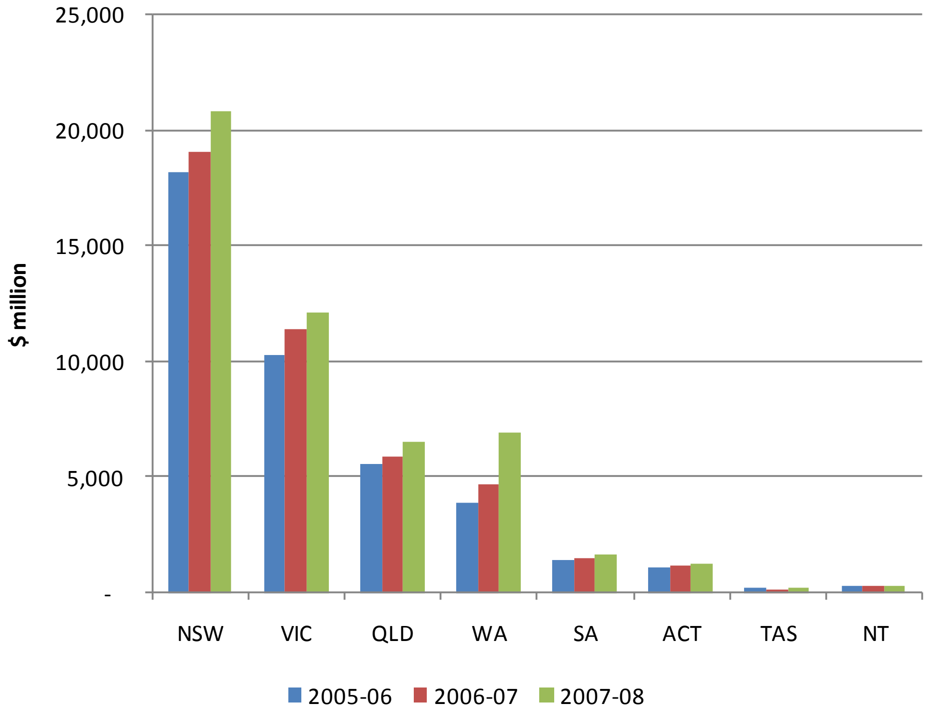


Data source: ABS, 2008.

In 2007-08, South Australia's Gross State Product (GSP) was approximately seven per cent of Australia's GDP. This indicates that the State is falling below its potential in terms of service exports.

While figures on interstate trade are not available, anecdotally South Australia also imports substantial amounts of knowledge-intensive services from interstate. However, South Australia has low levels of service imports from other countries relative to the rest of Australia – not exceeding 3.5 per cent in the years considered (see Chart 2)

Chart 2 **Imports of services, all states and territories**



Data source: ABS, 2008

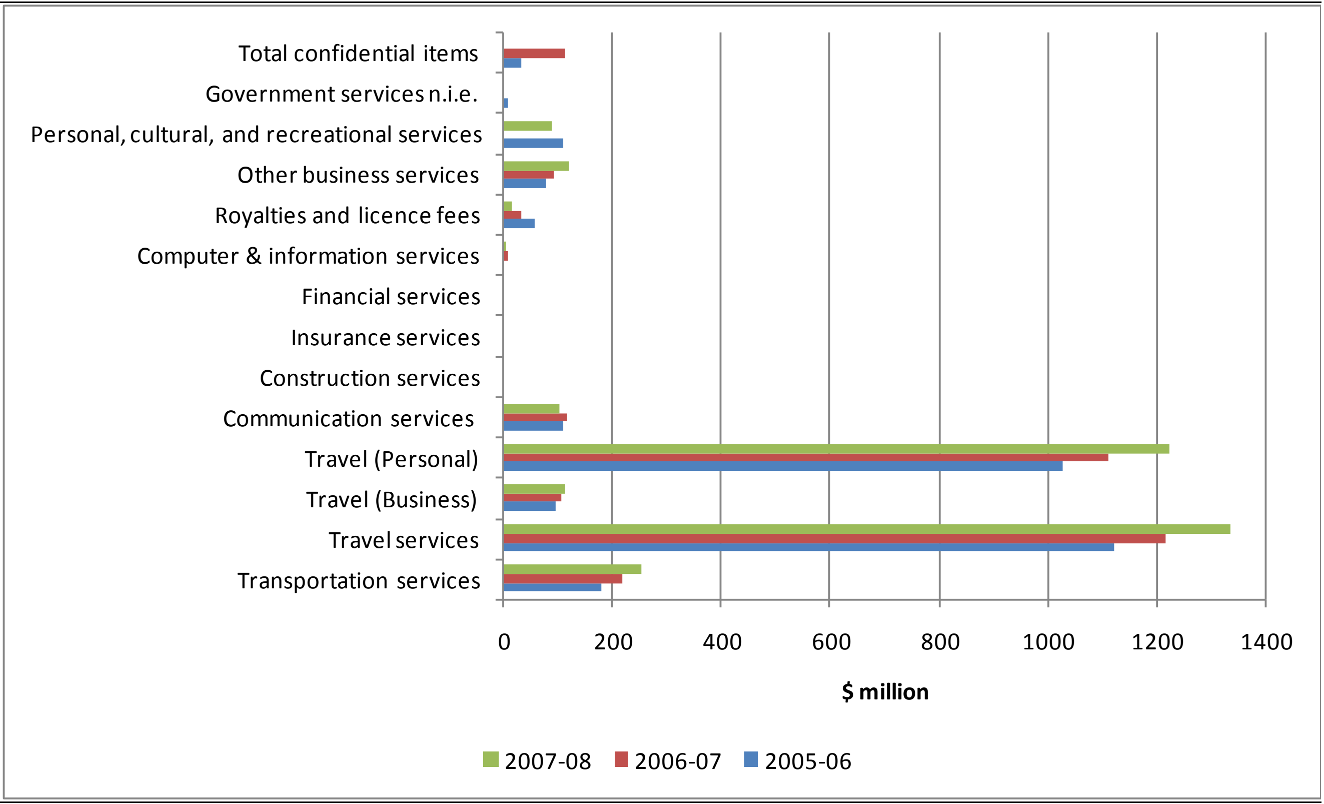
2.1 Service exports

The main service exports from SA are, for the most part, not knowledge intensive (see Chart 3). Travel services was the major export category. Similarly, transport services was second in terms of export value, but these are is not necessarily knowledge intensive.

Personal services includes education services, which are knowledge intensive, and the growth in exports of personal services has been driven by education. Personal services related to education grew by 35 per cent, from $549 million in 2005-06 to $741 million in 2007-08, while other personal services (the only other component of the personal services category) grew by only 1.3 per cent over the same period, from $476 million to $482 million (ABS, 2008).

There are only low levels of SA KIS exports as measured by ABS. The category 'Other business services' includes KISs such as professional services, R&D, architecture and engineering, and others. Other KIS categories such as computer and information services also have low representation, with financial services not measured as being exported in the years reported.

Chart 3 **Export of SA services**



Data source: ABS, 2008

The underrepresentation of KI services in export figures demonstrates that there could be an opportunity to expand the export potential of the KIS sector in SA. However, being able to improve SA's presence relies on there being limited, or at least manageable, barriers. According to a paper by Jim Redden at the Institute for International Trade:

> The services industry is a knowledge-intensive industry and our international competitiveness is not threatened by developing country exporters whose comparative advantage is in low cost manufacturing. Services exports also have nothing to do with tariffs and quotas at the border.
>
> The barriers are opaque behind-the-border industry and government regulations, such as special licenses or requirements for services firms to operate in another country. Here is another clear example of the importance of government and industry needing to work closely together on free trade agreements and on the Doha multilateral round of negotiations to ensure these barriers are reduced or eliminated in the future (Redden, 2008).

2.2 Discussion points pertaining to international competitiveness

While we have by no means conducted a complete analysis of the nature of SA's exports of KISs, our research provides a good indication that:

- SA does not export many services relative to other Australian States
- KISs comprise a very small component of exported services.

Discussion question 4

Are there KIS industries in which SA businesses have strong competitive advantages?

- **a) Does SA have competitive advantages over other States (or countries) in any KIS industries? What are these industries?**
- **b) Where do the competitive advantages lie?**
- **c) Are there any KIS sectors where SA has untapped potential?**

We need to determine the extent of international competitiveness of SA KIS providers, and the reasons for the relatively low level of exports.

Discussion question 5

Are KIS businesses from SA as competitive as those from other Australian States or from overseas?

- **a) What factors cause SA to lag behind other Australian States in KIS exports?**
- **b) What are the barriers to SA KIS providers being internationally competitive?**

3 Growth

Services contribute significantly to any economy, with SA being no exception:

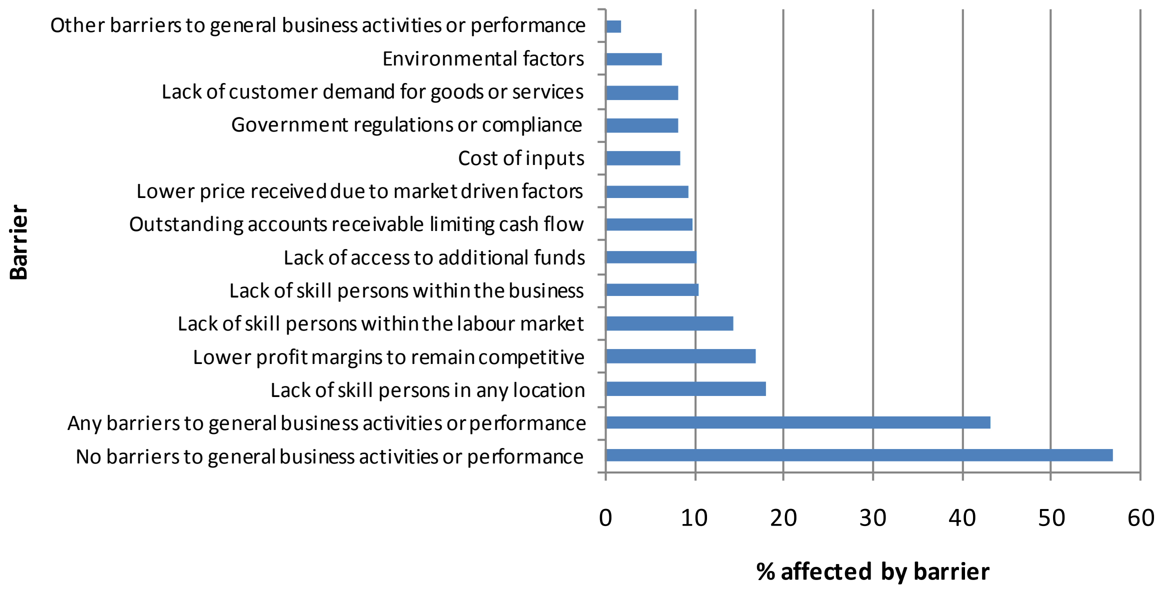
> South Australian overseas services exports were valued at $1.83 billion in 2006-07, up 8.5% from 2005-06 and equating to 16.9% of our total state overseas exports. Services [are] the way of our future for most Australians. The services sector accounts for 78 per cent of Australia's GDP and employs 85 out of every 100 Australians. However a major challenge for South Australia is to increase its services exports (Redden, 2008).

Education, transport and tourism are already recognised as the largest contributors to services exports from SA (see Chart 3). Redden also identifies potential for defence, particularly through the South Australian Government's Techport Australia facility, not for its export potential but for its economic multiplier effects (Redden, 2008). Growth in other KIS industries, driven by growth at the KIS provider level, is vital to the continuing expansion of the South Australian economy.

3.1 Barriers to growth

Just like international competitiveness, barriers can stand in the way of business growth. According to the results of a survey conducted by the ABS, 18 per cent of Australian businesses identified a lack of skilled persons as a barrier to general business and performance, with 17 per cent citing the need to lower profit margins to remain competitive as a barrier (see Chart 4). At the other end of the scale, only six per cent of businesses cited environmental factors as a barrier. Nearly 57 per cent of respondents did not identify any barriers to general business activities or performance.

Chart 4 **Barriers to general business activity or performance**



Data source: ABS, September 2008.

3.2 Discussion points pertaining to growth

Experiencing positive growth is not only important to the individual business, it is vital to the success of the South Australian economy as a whole.

Discussion question 6

Within SA's KIS sector, which sub-sectors or industries exhibit the strongest growth?

a) **Why are these sub-sectors doing well?**

b) **Why are other sub-sectors not doing as well?**

Improving rates of business growth naturally enhance economic growth.

Discussion question 7

Not taking current economic circumstances into consideration, what factors hinder the growth of SA KIS businesses?

a) **Are these factors demand- or supply-related?**

b) **What can businesses do to address the factors?**

The presence of a market failure may determine if there is a role for the South Australian Government in assisting KIS business growth. Of course, any State Government support would need to complement and not duplicate support from industry (through associations and service providers) and the Australian Government.

Discussion question 8

What initiatives from industry or government currently exist to foster business growth?

a) **Which initiatives work? What don't work?**

b) **What other initiatives could be introduced to overcome barriers and facilitate growth?**

c) **What can the South Australian Government assist in overcoming barriers to growth?**

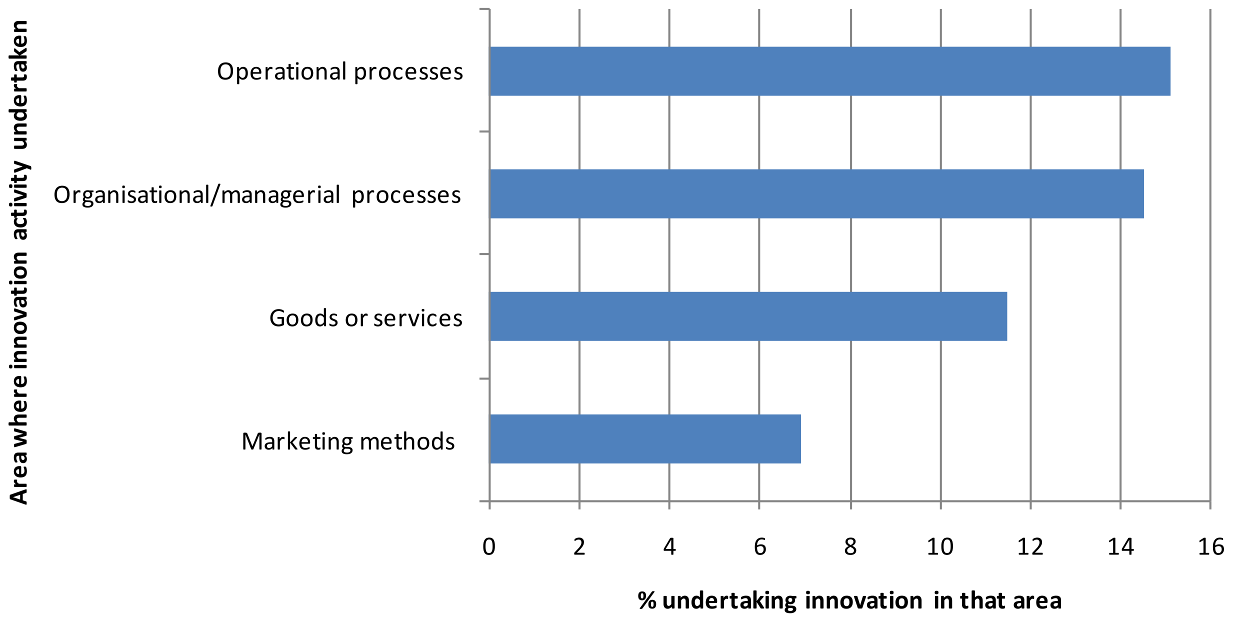
4 Innovation

Innovation is vital to the success of businesses, including those that provide KISs. The Review of the National Innovation System stated that:

> Innovation in business is important because it is the primary driver of competitiveness for firms differentiating their products and services from those of low-cost competitors in globalised and deregulated markets.
>
> That Australian businesses need to collectively improve innovation performance is well recognised. Continuous innovation, or the repeated successful introduction of novel products and services, is the only sustainable strategy for firm survival and progress in rapidly changing and turbulent technological and market circumstances (Cutler, 2008, p. 3.27).

In 2006-07, around 37 per cent of Australian businesses were reported as having undertaken some form of innovation, with the proportion of businesses increasing in line with the number of employees in the business. SA recorded the second lowest proportion of innovation active businesses in Australia (30 per cent), behind the ACT (27.6 per cent). With respect to the application of the innovations, in 2006-07, around 15 per cent of innovation-active business undertook activities to improve operational processes and nearly seven percent undertook activities to improve marketing methods (see Chart 5) (ABS, August 2008).

Chart 5 **Innovation activity by SA businesses, 2006-07**

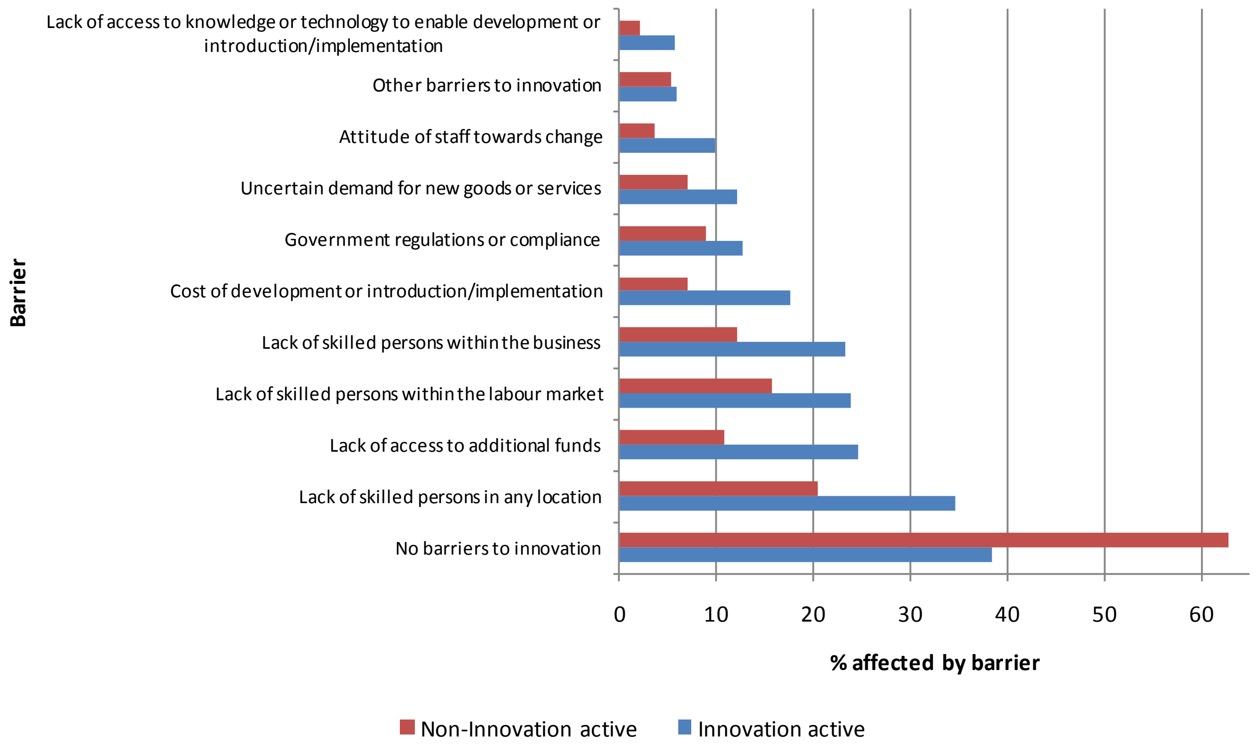


Data source: ABS, August 2008.

4.1 Barriers to innovation

Businesses often face barriers when attempting to undertake innovation. According to a survey conducted by the ABS, nearly 35 per cent of all innovation-active and 21 per cent of non innovation-active businesses cited a lack of skilled persons in any area as a barrier to innovation (see Chart 6). Interestingly, nearly 63 per cent of non innovation-active businesses stated there were no barriers to innovation, compared to 39 per cent of innovation-active businesses. For each barrier identified, a greater proportion of innovation-active businesses were affected as opposed to non innovation-active businesses.

Chart 6 **Barriers to innovation for businesses, 2006-07**



Data source: ABS, August 2008.

4.2 Discussion points pertaining to innovation

Unfortunately, work undertaken by the ABS does not separate South Australian businesses from those in other States and Territories, nor does it distinguish between KISs and other service providers or businesses providing goods.

We would like to consider issues affecting the ability to undertake innovative activities by KIS providers in SA.

Discussion question 9

Is the general business climate conducive to innovation by KIS businesses in SA?

a) **Not taking current economic circumstances into consideration, are KIS businesses in SA easily able to undertake innovative activities?**

b) **Are innovations from KIS businesses in SA giving them an edge over competitors?**

Discussion question 10

What inhibitors face KIS businesses wanting to undertake innovation?

a) What factors *within* the business hinder innovation?

b) What factors *external* to the business impede attempts to undertake innovation?

c) Are there any factors impeding innovation that are exclusive only to KIS businesses in SA?

If there are indeed impediments to innovation, it needs to be determined if there is a market failure that requires intervention by the SA Government.

Discussion question 11

How are innovative activities supported or encouraged?

a) What SA Government initiatives/tools support innovation for KIS businesses?

b) What Commonwealth Government initiatives/tools support innovation for KIS businesses?

c) What industry initiatives/tools support innovation for KIS businesses?

d) How effective are the initiatives from each of these parties?

Discussion question 112

How could the SA Government assist in overcoming impediments to innovation?

a) Can the SA Government provide assistance where there is currently no support provided by either industry of government?

b) In what form(s) should this assistance take?

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