Patenting
Saskatoon

The number of patents per calendar year generated by inventors in saskatoon roughly tripled 1975 and 1997 from typically 10 patents per year to nearly 30 patents per year (see Figure 1). In the late 1990s and early 2000s there was a boom in patenting activity with a peak of over 50 in 2001.

The industrial mix of patents also changed significantly between 1975 and 2007. The combination of pharmaceuticals (24.8%) and agricultural machinery (27.9%) accounted for over half of all patents between 1998 and 2007. This is twice the proportion of the previous two decades.

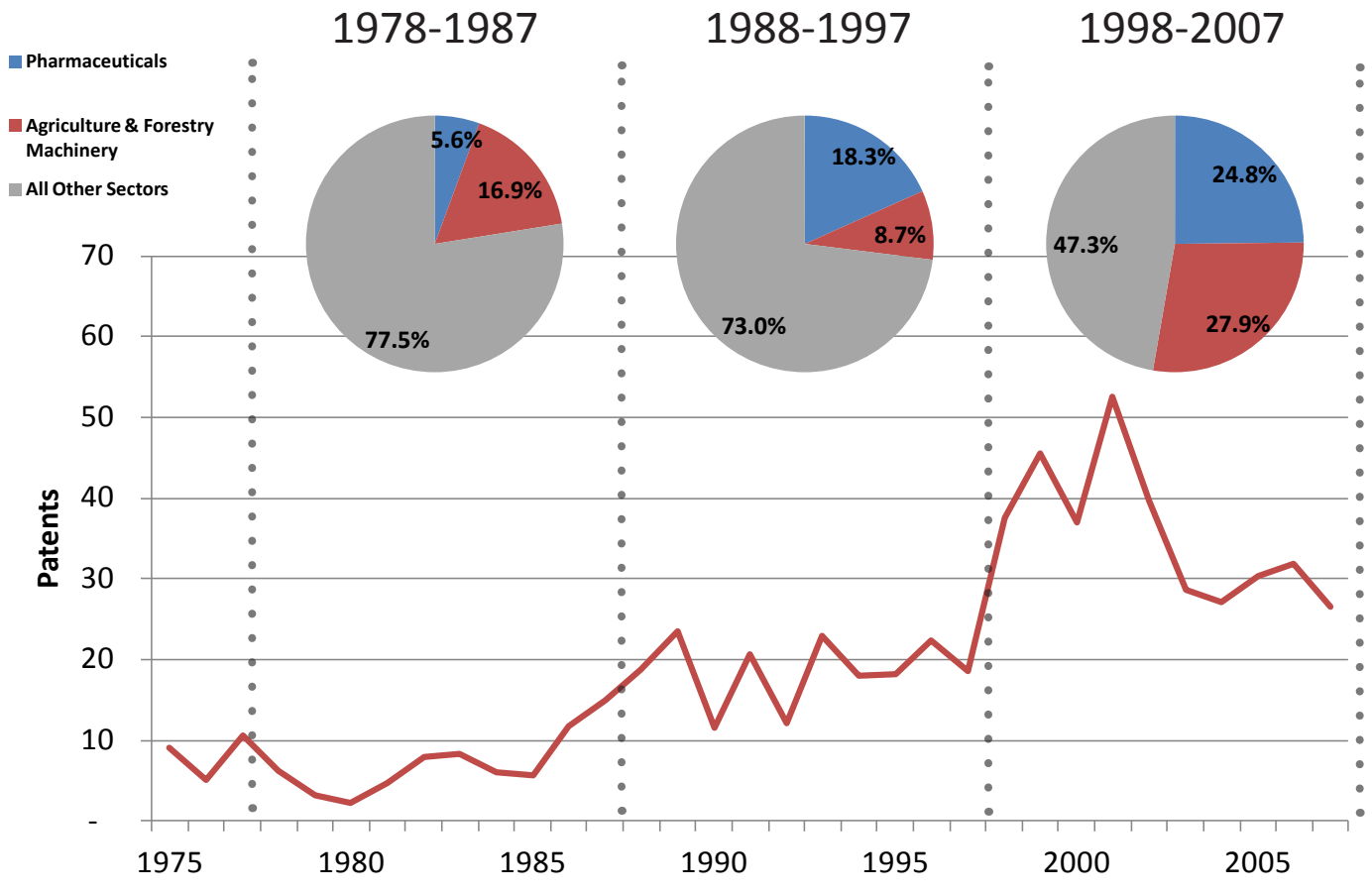
The industrial mix of patents is reflected in the list of the top patenting enterprises (see Table 1). Flexi-coil, an agricultural machinery manufacturer, is the most prolific generator of patents with 67 patents between 1998 and 2007. A similar company, CNH CanadaIt, is second with 27 patents.

Table 1 - Top 10 Patenting Enterprises 1998-2007

Enterprise	Patents
Flexi-Coil	67
CNH Canada	27
National Research Council	18
DM Technologies	7
Pharmaderm Laboratories	7
Telecom. Research Lab.	7
Biostar	6
International Road Dynamics	6
Highline Manufacturing	5
Depart. Of Agriculture (Can.)	4

Data notes:
- Source: USPTO
- All data has been cleaned and geocoded by Prof. Dieter Kogler University College Dublin
- Patents counts are proportional to number of inventors

Figure 1 - Number of patents by year and key industries



Inventor Connections

Saskatoon

An analysis of patents that involved collaboration between inventors based in Saskatoon and inventors elsewhere show that many of these relationships exist with other large cities in Canada. Specifically, connections to Edmonton (32) (see Figure 2) are the most common with 32 instances of an Edmonton-based inventor collaborating with an inventor in Saskatoon. Connections with Vancouver (28) and Ottawa-Gatineau (24) are also strong.

Most instances of international collaboration occur with US-based inventors. The top five US states (see Figure 3) are New York (18), California (16), Florida (7), Iowa (7) and Tennessee (6).

Beyond the United States (101) the top countries for inventor collaboration with Saskatoon are Great Britain (29), France (18), Australia (6), and Germany (6) (see Figure 4).

Figure 2 - Top ten Canadian city-regions by number of co-inventors, 1975-2007

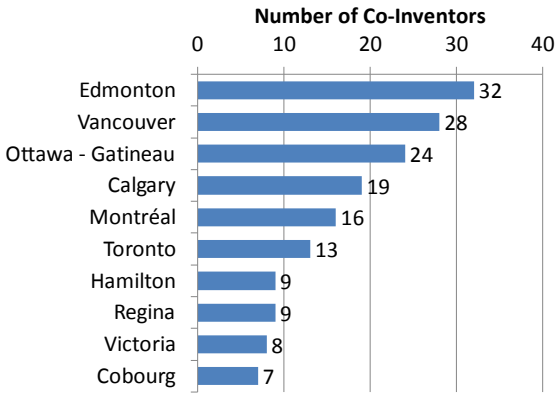


Figure 3 - Top five US states by number of co-inventors, 1975-2007

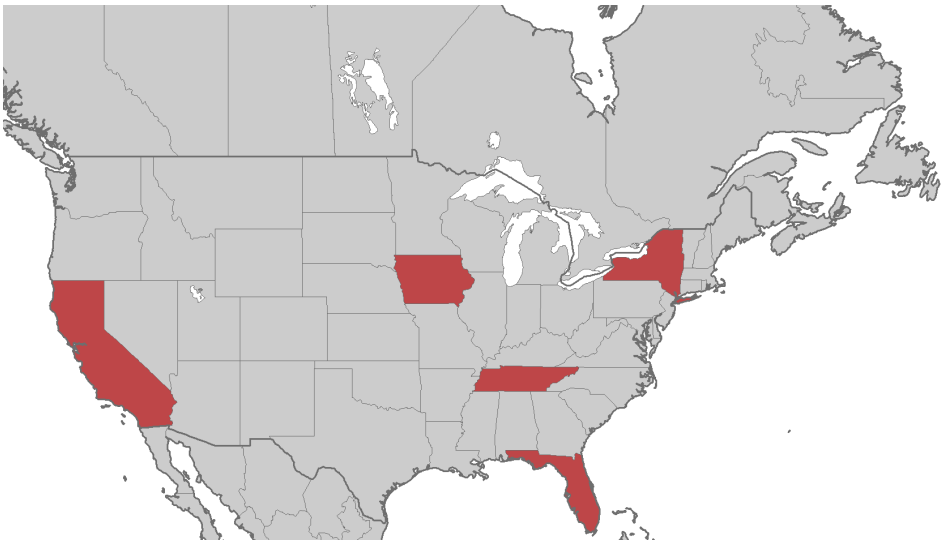
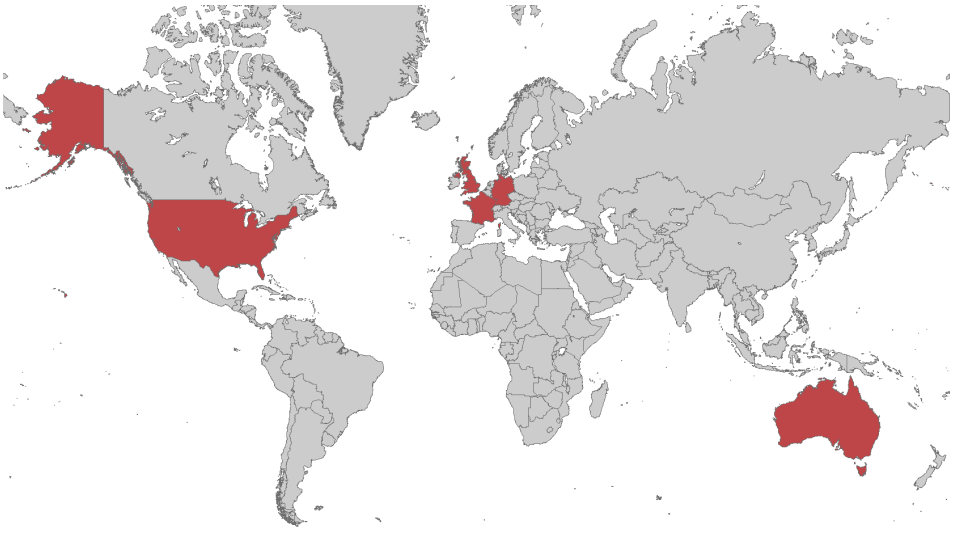


Figure 4 - Top five countries by number of co-inventors, 1975-2007



Data notes:
- Source: USPTO
- All data has been cleaned and geocoded by Prof. Dieter Kogler University College Dublin
- Each co-inventor counts as one and is not dependent on the total number of co-inventors on each patent

Business Expenditure on R&D
Saskatoon

Business spending on R&D in Saskatoon increased steadily between 2005 and 2009 from just over $30 million to nearly $50 million (see Figure 5). Expenditures per R&D employee declined however from roughly $120,000 to nearly $90,000 over the same time period.

There were almost 130 business in Saskatoon reporting significant R&D activity in 2008 (see Figure 6). This was up by approximately 30 firms over a four year period. R&D spending per firm remained fairly steady and averaged roughly $350,000 between 2005 and 2008.

Figure 5 - Business enterprise R&D (BERD) 2005-2009 (constant dollars)

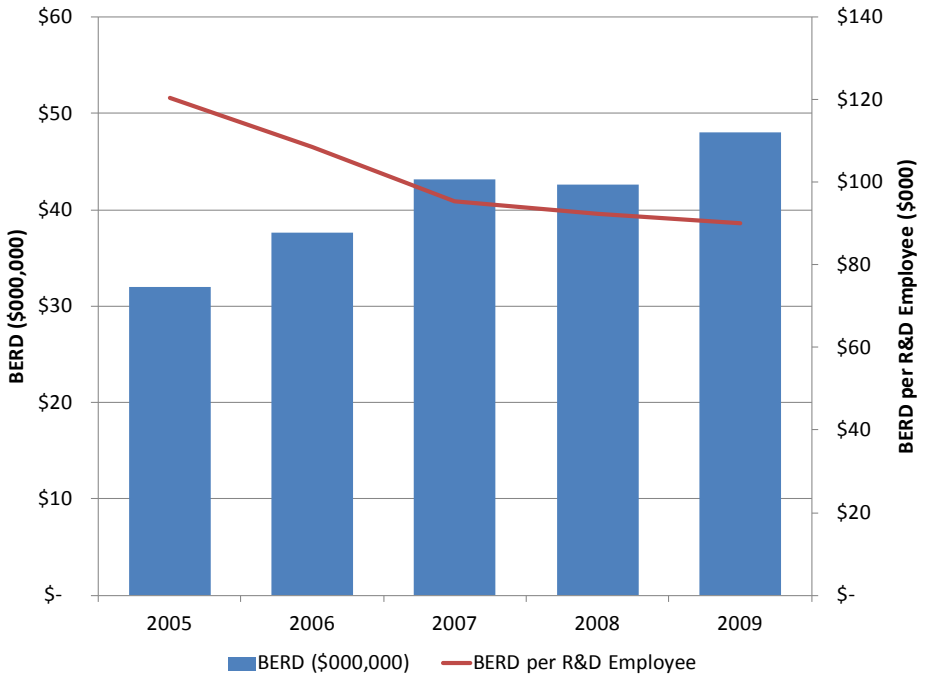
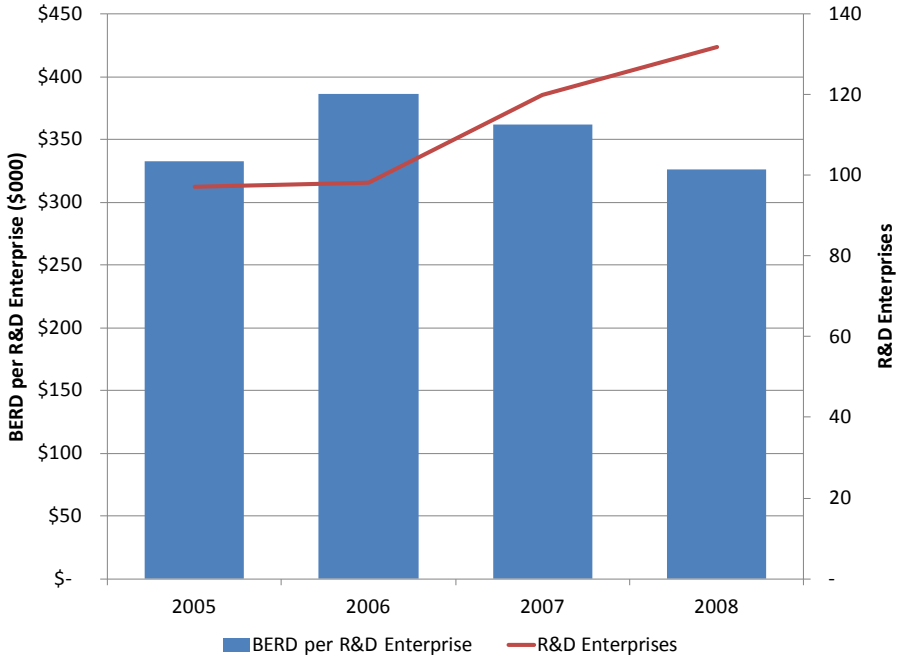


Figure 6 - BERD per R&D enterprise 2005-2008 (constant dollars)



Data notes:
- Source: Statistics Canada via The Impact Group
- Exact figures cannot be disclosed for proprietary reasons
- Dollar amounts have been standardized to constant 2008 or 2009 dollars by Local IDEAs
- The figures represent the most recent data available

Post-Secondary Research Funding
Saskatoon

Research funding to public institutions such as universities and research hospitals increased significantly between 1999 and 2007 in Saskatoon. 2007 was the most bountiful year for public research funding with over $200 million in spending up from less than $100 million in 1999.

General government funding accounted for over half (53.0%) of all sources in 2008 (see Figure 8). The Natural Sciences and Engineering Research Council was the largest of the tri-council sources of research funding in 2008 accounting for 11.2% of the total for Saskatoon.

Figure 7 - Public research funding 1999-2008 (constant dollars)

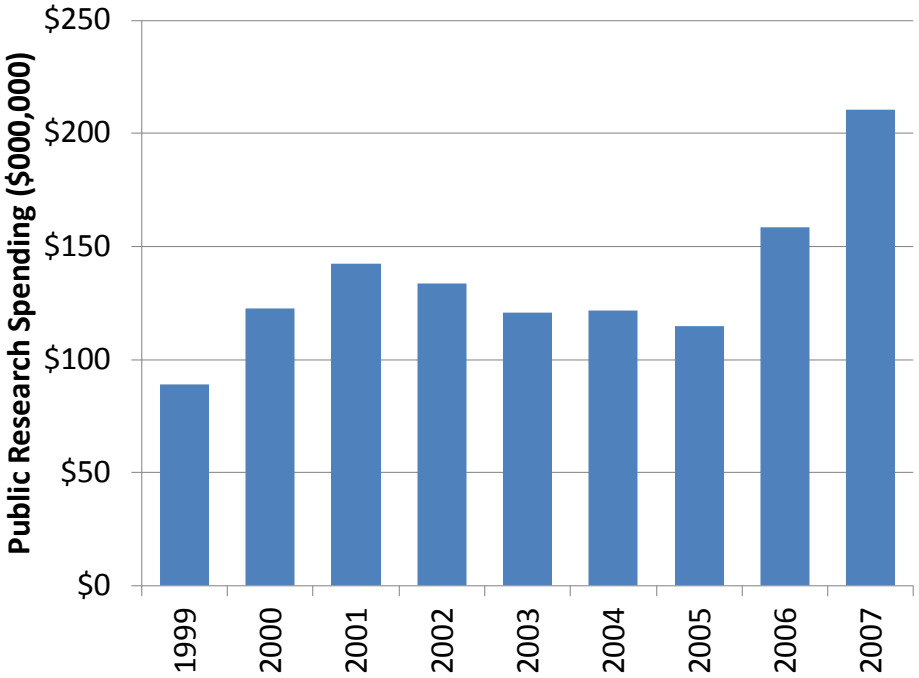
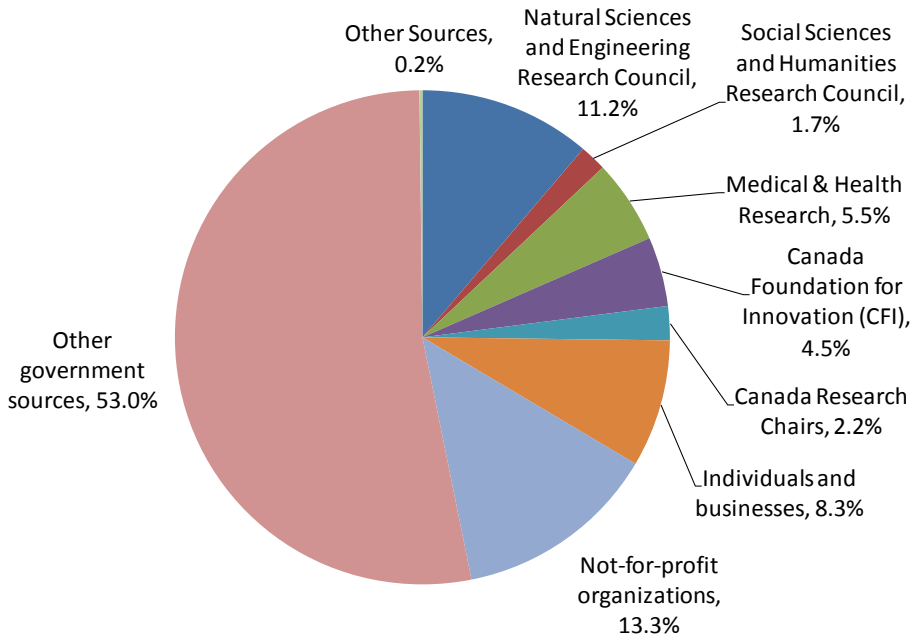


Figure 8 - Share of public research funding by major sources (2008)



Data notes:
- Source: Canadian Association of University Business Officers (CAUBO)
- Dollar amounts have been standardized to constant 2008 dollars by Local IDEAs

Venture Capital
Saskatoon

Venture capital activity in Saskatoon has fluctuated between 1996 and 2011 (see Figure 9). The strongest year was 2004 when there were 11 VC deals worth and estimated $26 million in total.

Bio-pharma represented the largest industry grouping with 27.4% of all VC deals between 1996 and 2011 (see Figure 10). Software and ICT services (22.6%) and ICT manufacturing (8.3%) were other notable recipients of venture capital in Saskatoon.

Figure 9 - Venture capital deals and estimated total value (constant $)

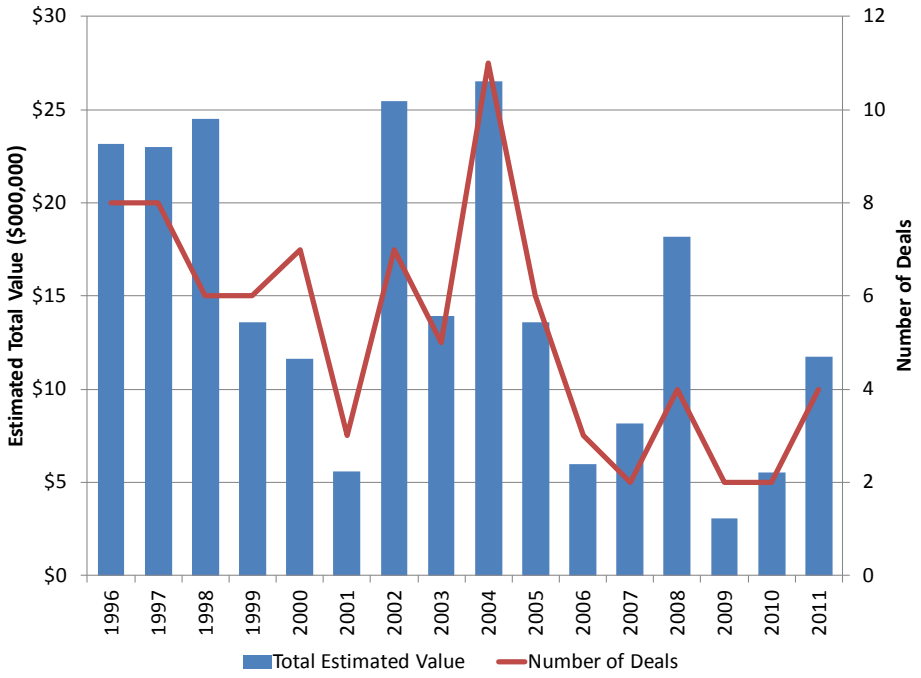
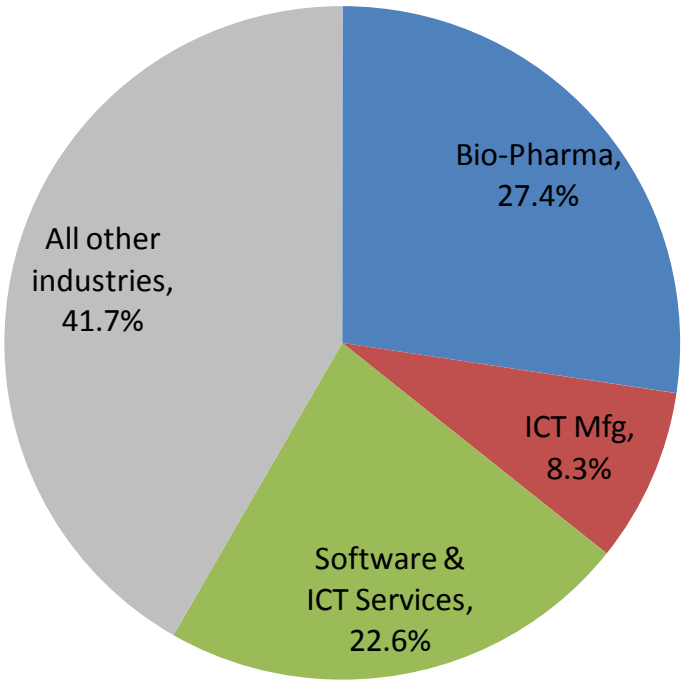


Figure 10 - Share of venture capital deals by industry, 1996-2011



Data notes:
- Source: Thomson-Reuters
- Annual values are estimated due to undisclosed values on certain deals (annual averages are applied)
- Dollar amounts have been standardized to constant 2011 dollars by Local IDEAs

University Spin-Offs
Saskatoon

Since 1970 there have been 42 companies started by either local university professors or based on technology produced at a local university. Of these companies 12 have been high growth firms all of which remained locally-based (see Figure 11). Roughly one third of these were biomedical/pharma companies (18) while there were a dozen agricultural firms started from Saskatoon-based universities.

Figure 11 - University spin-off firms by growth and location

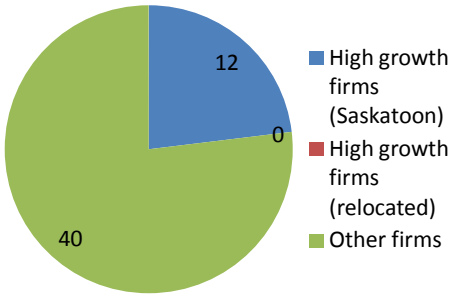
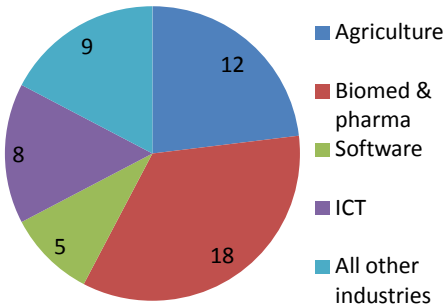


Figure 12 - University spin-off firms by industry



Data notes:
- Source: Denys Cooper USO/USSO database
- Individual firms cannot be disclosed due for reasons of confidentiality
- High growth firms defined as doubling of employees within five years to at least 20 employees or doubling in sales within five years to at least $10 million