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This Week...

Student Performance
Population Trends
Household Spending
R&D Spending

Student Performance



By Doug Elliott, Editor

The Program for International Student Assessment (PISA) is a collaborative effort among the member countries of

the Organization for Economic Cooperation and Development (OECD) to measure the skills and knowledge of 15-year old students around the world. In 2009, 23,000 Canadian students took the tests on reading, mathematics, and science. Students in western Canada do well compared with those in other provinces but the downward trend in the average scores should be cause for alarm.

The performance of students in reading, that is, accessing, retrieving, and understanding written documents is above the national average in Alberta (the highest in Canada in fact) and B.C. Students in Manitoba and Saskatchewan don't do nearly as well and, in fact, Manitoba students are below the OECD average of 500. About one in six 15-year olds in Manitoba and Saskatchewan are below the level "considered as a baseline ... to enable them to participate effectively and productively in life" meaning that they are functionally illiterate. The proportion has increased from one in ten in 2000.

The same pattern appears in science and mathematics. B.C. and Alberta students outperformed those in Manitoba and Saskatchewan but the scores are lower than in previous years in all four western provinces.

There are significant differences between the sexes in reading. Across the four western provinces, women outperformed men with

average scores 32 to 37 points higher for reading. Average scores in the science tests were about the same for men and women; in mathematics average scores for women were lower than for men.

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Population Trends

The population in each of the four western provinces is still growing strongly. From October 2009 to October 2010, the population in the West increased from 10.43 million to 10.58 million, a 1.5% increase. The growth rate is a bit higher in B.C. and Saskatchewan and a bit lower in Manitoba and Alberta. The overall 1.5% increase in the West combines with 1.0% increase in the rest of Canada to yield a national growth rate of 1.2%.

International migration continues to play an important role in the population growth. It accounted for 59% of the growth in the West and 83% of the increase in Manitoba. With slower growth from interprovincial migration, natural growth (births less deaths) is becoming a more important factor in Alberta, accounting for 60% of the population growth. In some respects, Saskatchewan has the most balanced

Figure 1: Student Achievement in Reading (OECD avg = 500)

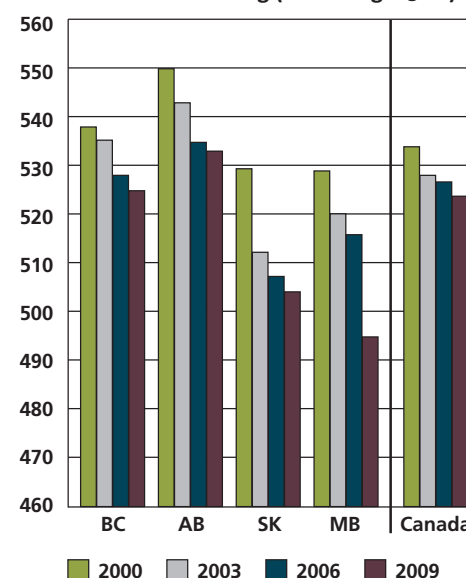
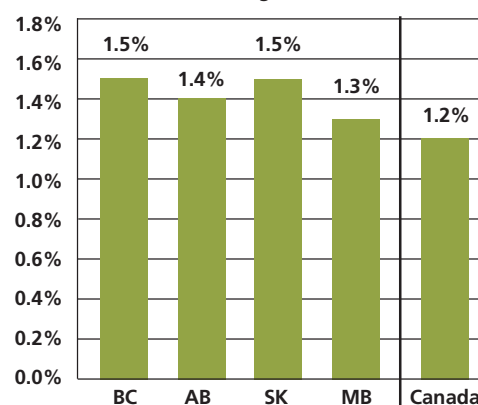


Figure 2: Population Growth, Oct 2009 to Oct 2010



growth with 20% from interprovincial migration, 30% from natural growth, and 49% from international migration.

Household Spending Patterns

Newly released data shows household spending patterns in 2009, the year when the world economy was reeling from the banking crisis. The figures show that Albertans still spend more than other westerners but, after adjusting for inflation, have curtailed their spending from the peak in 2006. Spending in the other three western provinces continues on an upward trend with average spending in Manitoba and Saskatchewan now near the national average.

The survey sample size is large enough to show spending in major urban centres as well. Households in Calgary have the highest average with spending 11% higher than Edmonton households. Households in Saskatoon spend 14% more than households in Regina.

Everyone accepts the fact that the cost of living in Vancouver and Calgary is higher than in Saskatoon or Brandon but no actual statistics are available to measure that fact. This survey is the closest we can come but even so, there is no way to know if the higher spending in Alberta is because of a higher "cost of living" or the simple fact that Albertans have more money to spend. Undoubtedly it is a bit of both.

The differences in spending patterns between the provinces tend to be consistent across different categories of spending which suggests that the expenditures are driven by differences in income rather than differences in the cost of living. For example, average spending in Alberta is 19% higher than in Saskatchewan and this is reflected in higher spending on shelter (30%) and transportation (8%) but also in other categories such as groceries (23%), clothing (28%), alcohol (22%), and recreation (16%).

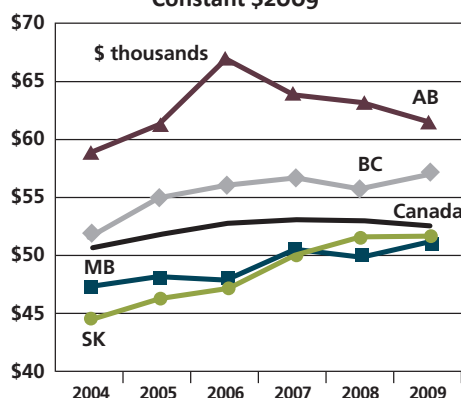
The exceptions to this pattern are almost as interesting as the rule. Alberta has the highest spending on tobacco, B.C. on alcohol. Saskatchewanians are the most honest about how much they lose gambling. Manitoba has by far the lowest spending on tuition fees and textbooks.

Research and Development Expenditures

Data on spending on research and development (R&D) at the provincial level are badly out of date with 2008 data just being released. The figures are interesting, nonetheless.

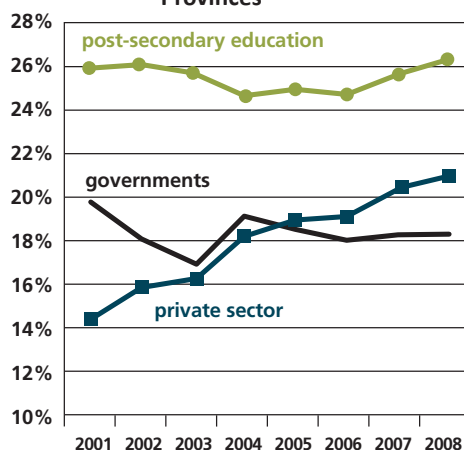
R&D spending in the four western provinces was estimated at \$6.8 billion in 2008. Spending increased by an average of 7% per year from 2003 to 2008 which means it is growing faster than the rate of inflation or the growth in the economy. In spite of this, R&D spending in the West is lower than it might be according to some measures. With a third

Figure 3: Discretionary Spending*, average per household, Constant \$2009



* Gross income after taxes, pension contributions, and insurance

Figure 4: Share of National R&D Expenditures, Four Western Provinces



of the population or a third of economic output, one might expect R&D spending to be a third of the national total. In fact, the proportion is below 25%. The figure shows that R&D spending by the private sector is gradually moving west but is still only 21% of the national total. Spending by the provincial and federal governments is also relatively low in the West compared with other parts of Canada.

Upcoming Releases

In the next two weeks we will see releases from Statistics Canada describing:

- December employment and labour force data on January 7;
- the value of November building permits on January 10; and
- new motor vehicle sales for November on January 14.

Sources: The figures are adapted from the following sources:

Student Performance: Statistics Canada, *Measuring up: Canadian Results of the OECD PISA Study, 81-590-XPE*

Population Trends: Statistics Canada, *Quarterly Demographic Estimates 91-002-X*

Household Spending: Statistics Canada, *Spending Patterns in Canada 62-202-XWE*

R & D Expenditures: Statistics Canada, *CANSIM Table 358-0001*

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