Creating Digital Opportunity
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Preliminary results from Vancouver

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The dark matter of the digital universe in Vancouver

- Digital industries divide (not easily) into those that manufacture physical products and those that produce IP (usually in the form of software)
- There are a number of Games/Animation/Visual effects/Software (GAVS) clusters in Canada. They include Vancouver, Montreal and Toronto, and have been studied previously by ISRN
- But there are also non-GAVS industries . How do we define them? What fosters the creation of these industries? What is the *ecology* of the digital cluster in Vancouver?

Research issues and questions

- Are Vancouver's digital industries competing only with other North American regions, or is Vancouver intrinsically part of the global economy?
- The GAV cluster appears to be intrinsically unstable / chaotic. Is the general business model one of creating a startup with the specific intention of selling the IP to a larger firm?
- What policies can any and all levels of government in Vancouver support and enhance its unique competitive advantages?
- Specific questions:
  - is there a specific "Pacific advantage"?
  - what is the role of culture and diversity in this regional ecology?

Initial observations

- The Vancouver digital cluster is basically software
- The cluster trades north-south (to the west coast of the US) and across the Pacific. There is little connection to eastern North America
- Vancouver is a good example of Florida's thoughts on "super-creatives". They move to where they want to live and then seek employment, even if it means taking a lower salary or higher housing costs
- The software industry employment pattern is no longer the conventional employment hierarchy. Everyone is a contractor

Initial observations II

- While we can draw initial conclusions from the interview results, we have yet to develop a consistent analytical framework
- The ground keeps changing faster than we can carry out the interviews. Rapid changes in the housing market and the recent changes in US immigration policy are creating major changes (hopefully for the better) in Vancouver’s global competitiveness

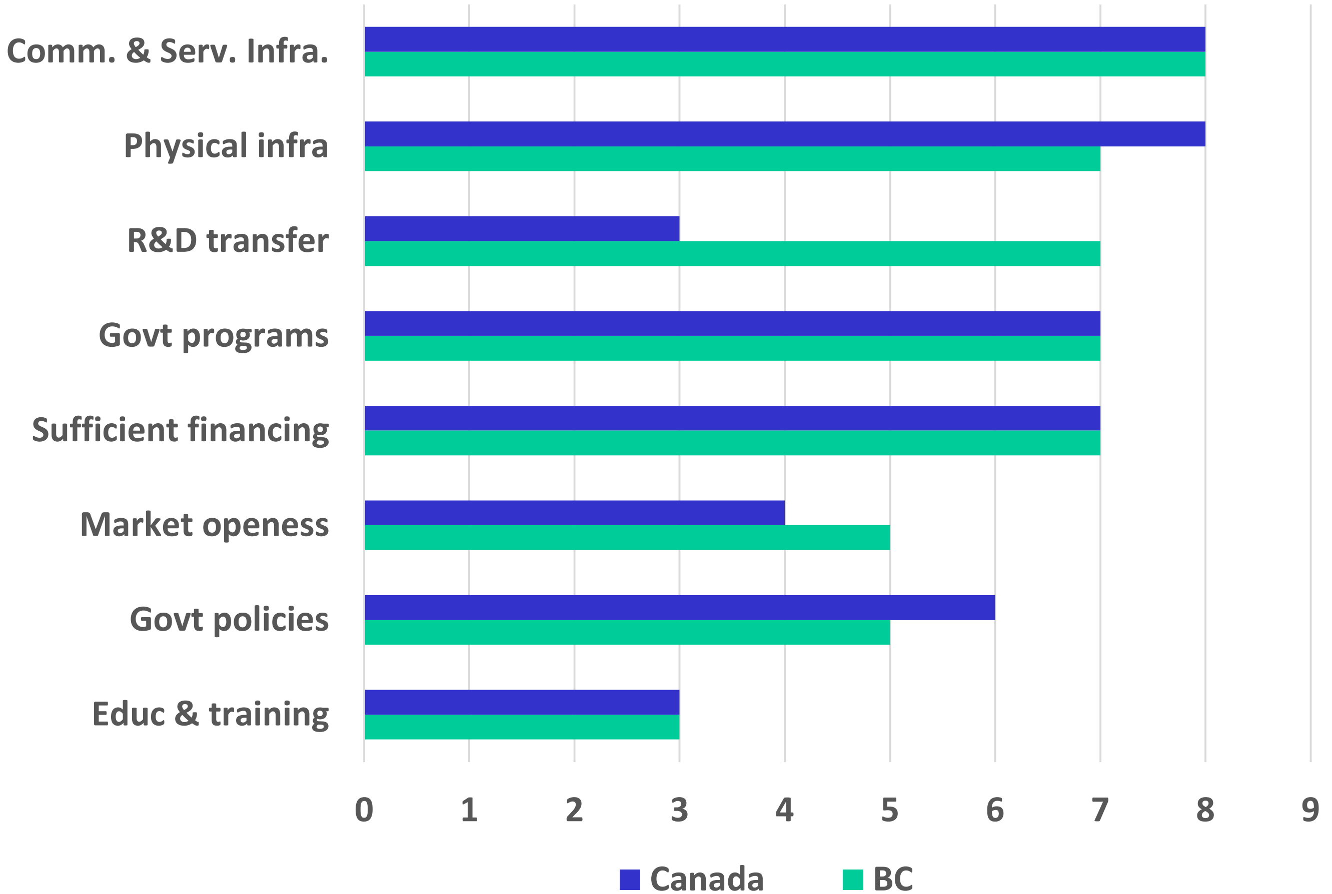
The GEM national expert survey

- The Global Entrepreneurship Monitor (GEM) has a methodology for on-line surveys of experts from firms, not-for-profits, educational institutions and government stakeholders
- Approximately half of the CDO questions are repeated in the PES interview guide. Thus we have a concordance and can use the PES results to augment the interviews.
- We have used this survey tool to obtain a timely snapshot of the cluster
- The BC PES was directed at experts in the digital industries cluster <u>in Vancouver.</u> The respondent sample was 74 over 2 years

PES Analysis

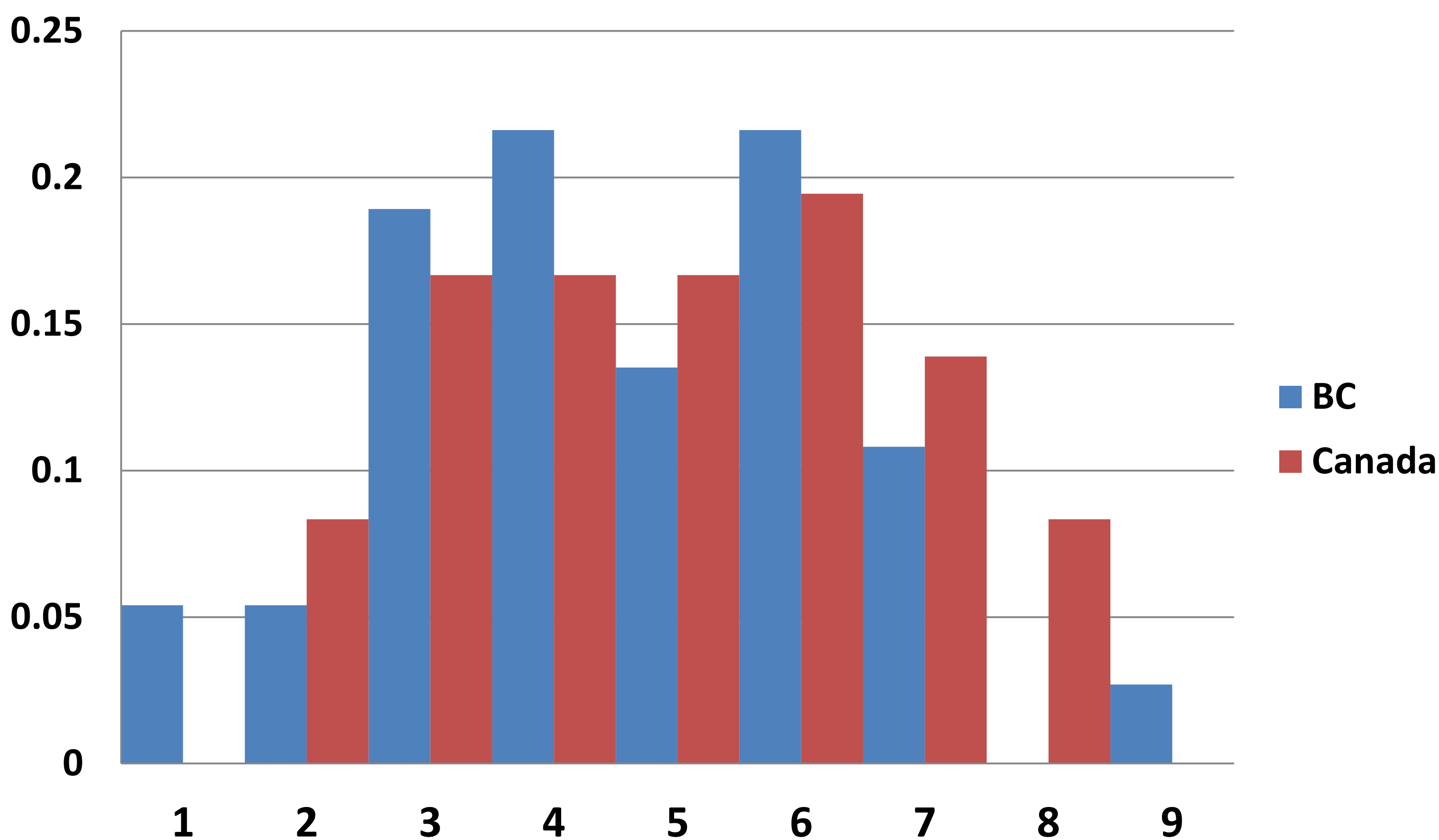
- We used three approaches:
  - Modal analyses of the responses (grouped by all questions in a specific EFC by specific classes of respondents)
  - Normalized frequency analyses of responses by specific questions
  - Frequency analyses of word occurrences from the write-in part of the questionnaire

Expert views on WEF economic factor conditions
Modal analyses: BC and Canada, 2015 plus 2016



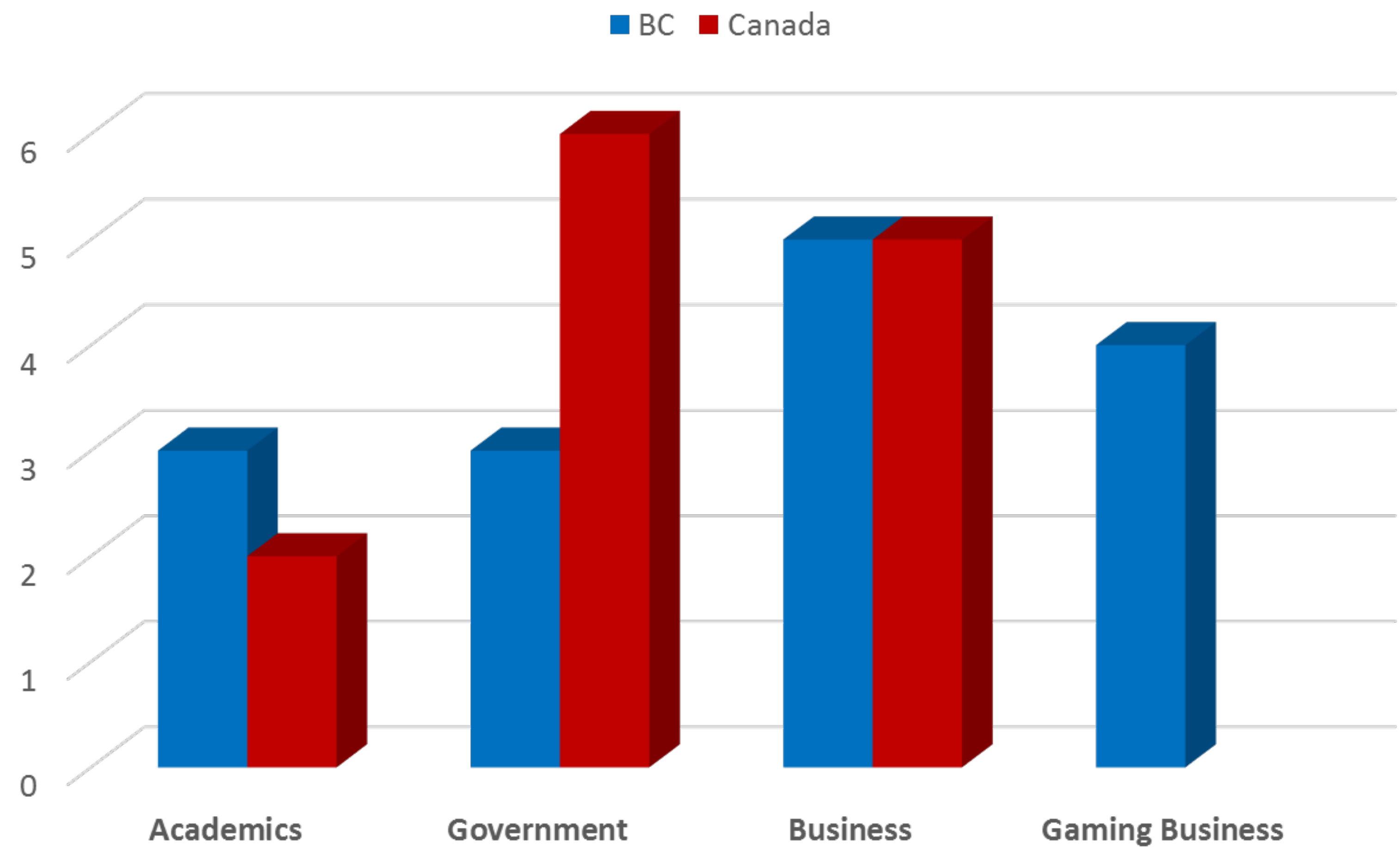
It is easy for a firm to enter new markets

Frequency distribution, Likert scale, 1 = strong no, 9 =strong yes

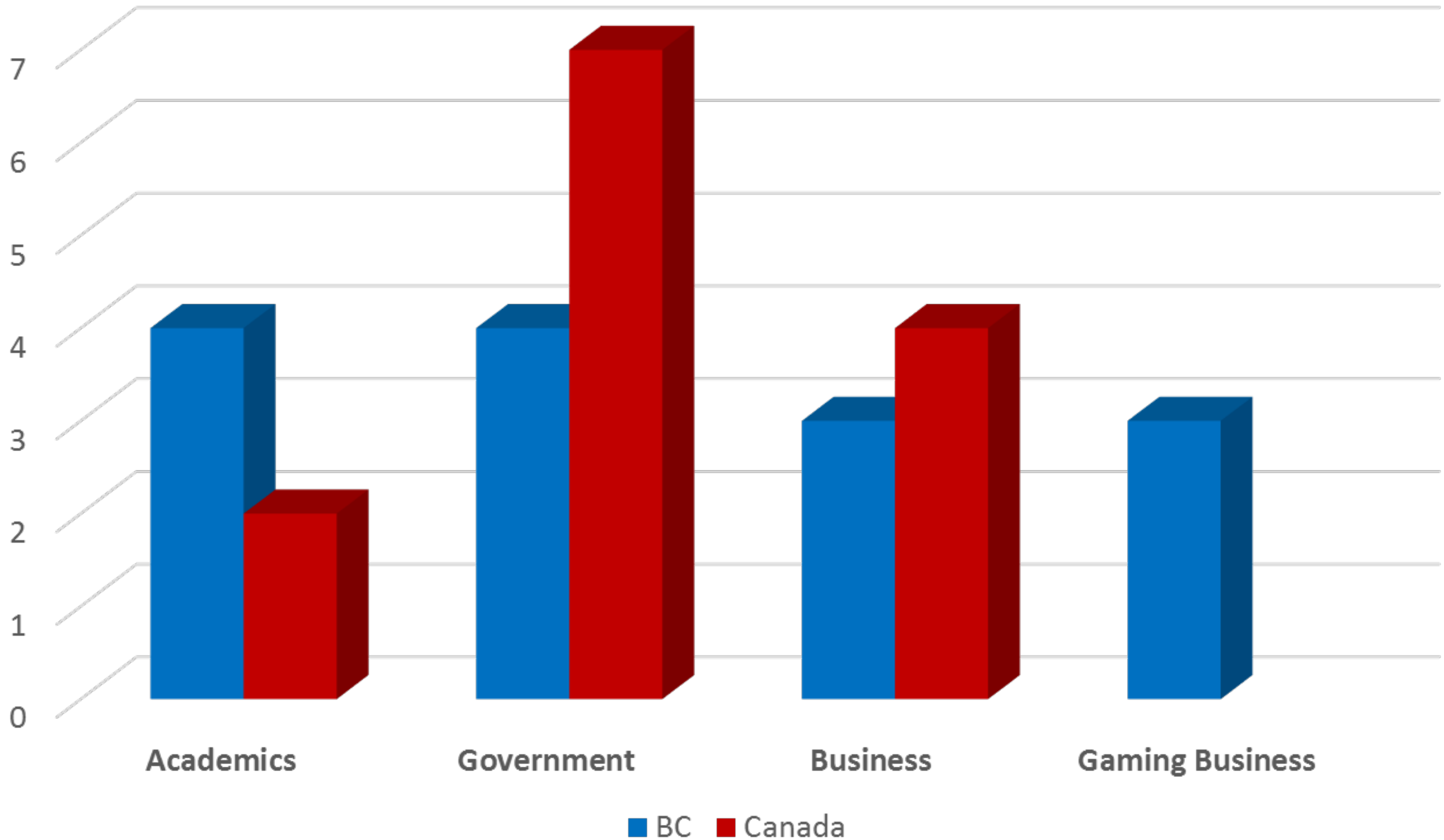


Market Opportunities

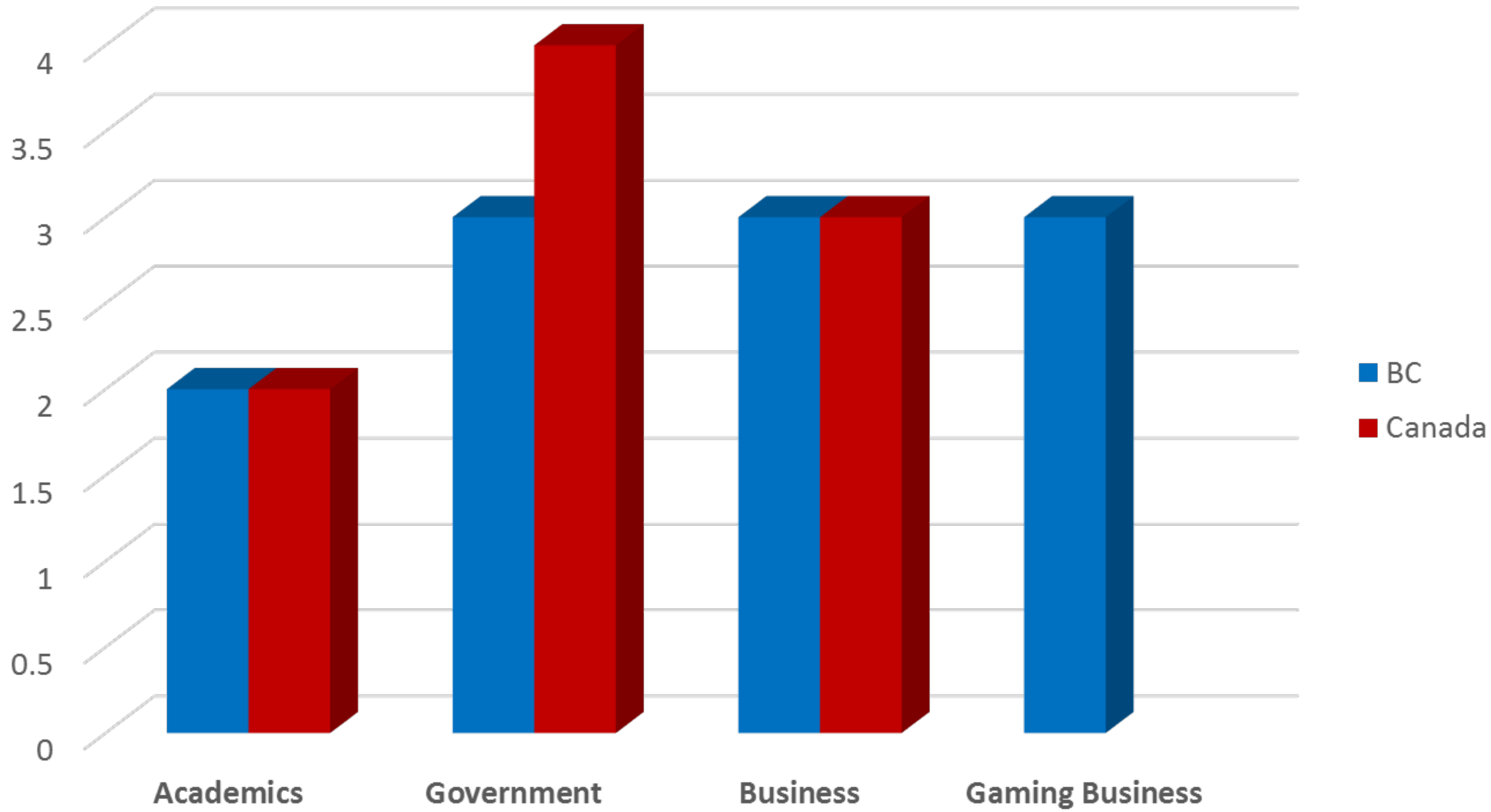
(modes, GEM group G)



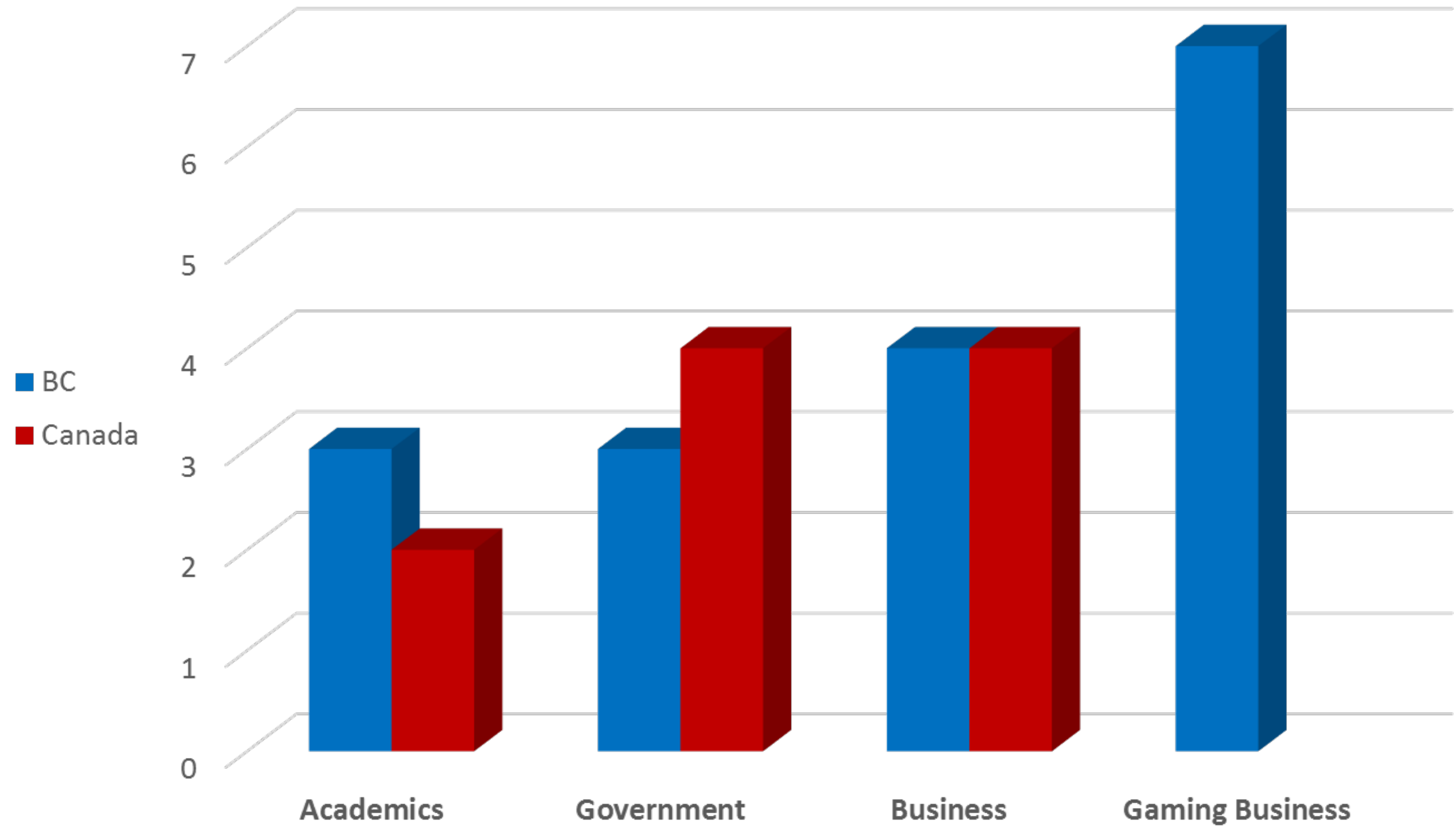
Availability of Financing
(modes, GEM group “A”)



Government Support
(modes, GEM group B)



Knowledge transfer from post-sec.
(modes, GEM group E)



Analysis of written questions

- We also did some work frequency analysis of written responses in the PES
- Word Combinations (BC) in descending order:

1. Cost of real estate
2. Direct grants to industry
3. High cost of living
4. Direct subsidies and grants

Some implications **for digital policy**

- It is clear that there is a divergence of opinions between private sector innovators/entrepreneurs and public sector stakeholders (both government and academic) over key issues concerning financing, technology transfer and market openness, at least in a very specific local innovation system
- Digital policy should not be made by one group only – there has to be a consensus among all stakeholders. The real issue will be how to create that consensus, both at the regional level and the national level
- The policies probably should not be nation-wide even though the competitive environment is global

Specific BC conclusions I

- BC software businesses, for the most part, “fly under the radar”. Their exit strategy is to get absorbed by some larger entity. Yet at the same time many are content to stay small, simply to stay in the Vancouver environment
- BC and Canada have to have clear policy concerning technology exchanges with China. While the US is, by volume much larger, market opportunities in China is becoming the major focus of our exporters. But there is increasingly a reverse flow, at least in software. Chinese software developers see the Vancouver area as a desirable area to establish software projects, both for investment as well as tapping into North American talent, particularly diaspora talent
- The US “America First” policies that appear to be coming will likely benefit BC and Canada in terms of talent, but may restrict our access to American markets

Specific BC conclusions II

- Access to technology and financing are not critical issues – the key one is housing. There is no problem in attracting highly skilled workers (even if salaries are lower than in other centres), but housing and transit are big issues and could ultimately drive out enterprises.
- Levels of financing from national level sources (eg banks, the federal govt., etc.) are perceived as being poor
- We have an upcoming provincial election. All conclusions have to be put on hold until then. Neither party has taken a policy stand on digital industries: the Vancouver housing crisis, the fentanyl crisis, and the likely dismantling of NAFTA and the softwood lumber agreements are far higher issues for the electorate.