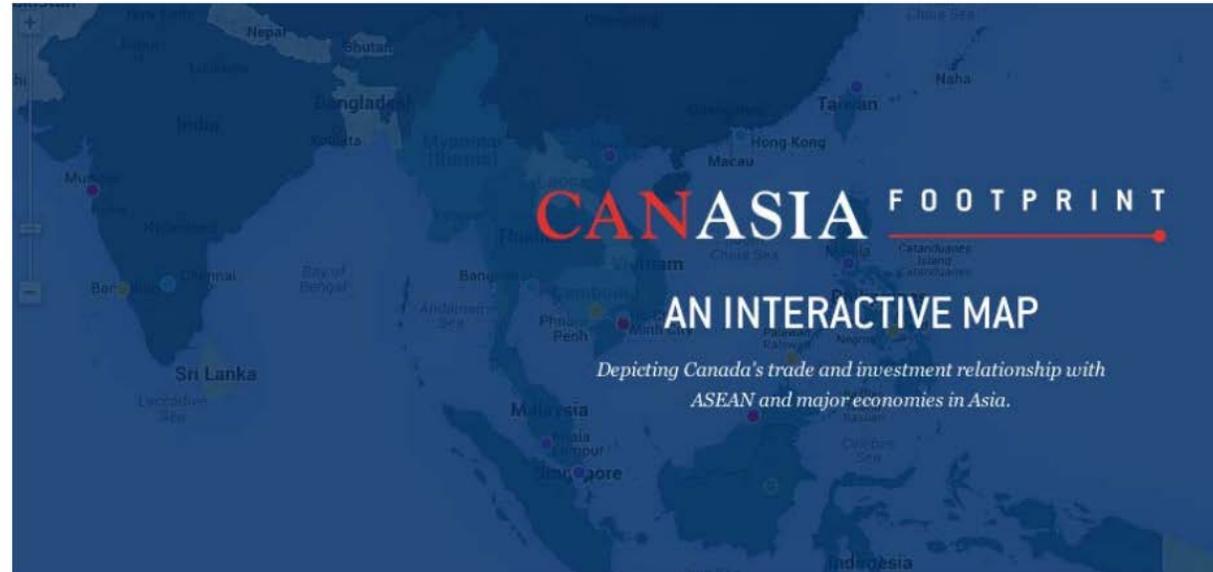




UNIVERSITY OF
TORONTO

MUNK
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AFFAIRS

CDO



Creating Digital Opportunity April 2016

Mapping Canada in Asia





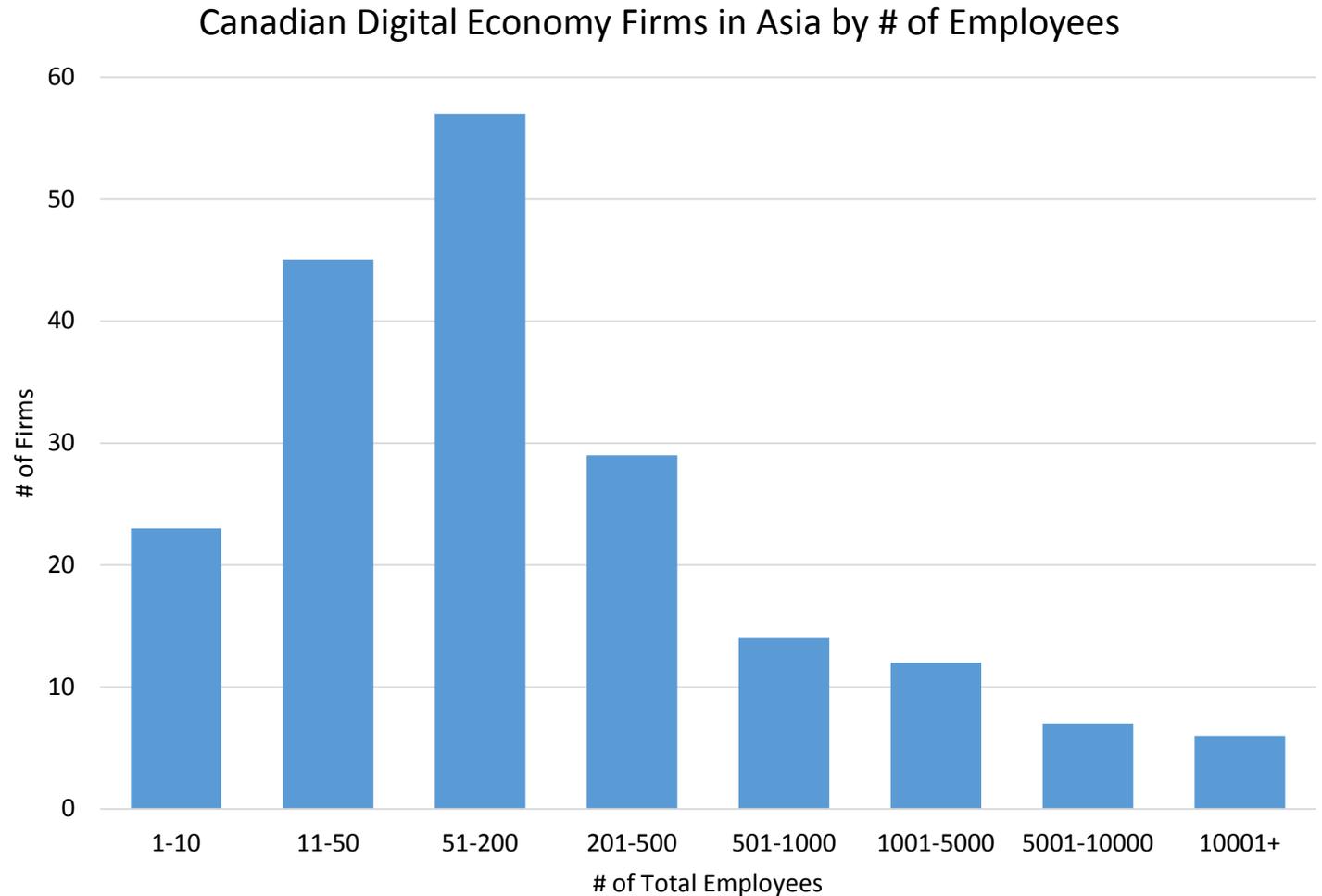
What is the CDO data set?

- Based on CanAsia Map
- CDO subset of high tech firms
- Sorted by 3 Digit NAICS code
- 192 companies
 - 43 Large Firms (> or equal to 500 employees)
 - 149 SMEs (< 500 employees)



CDO firms in Asia: mostly SMEs!

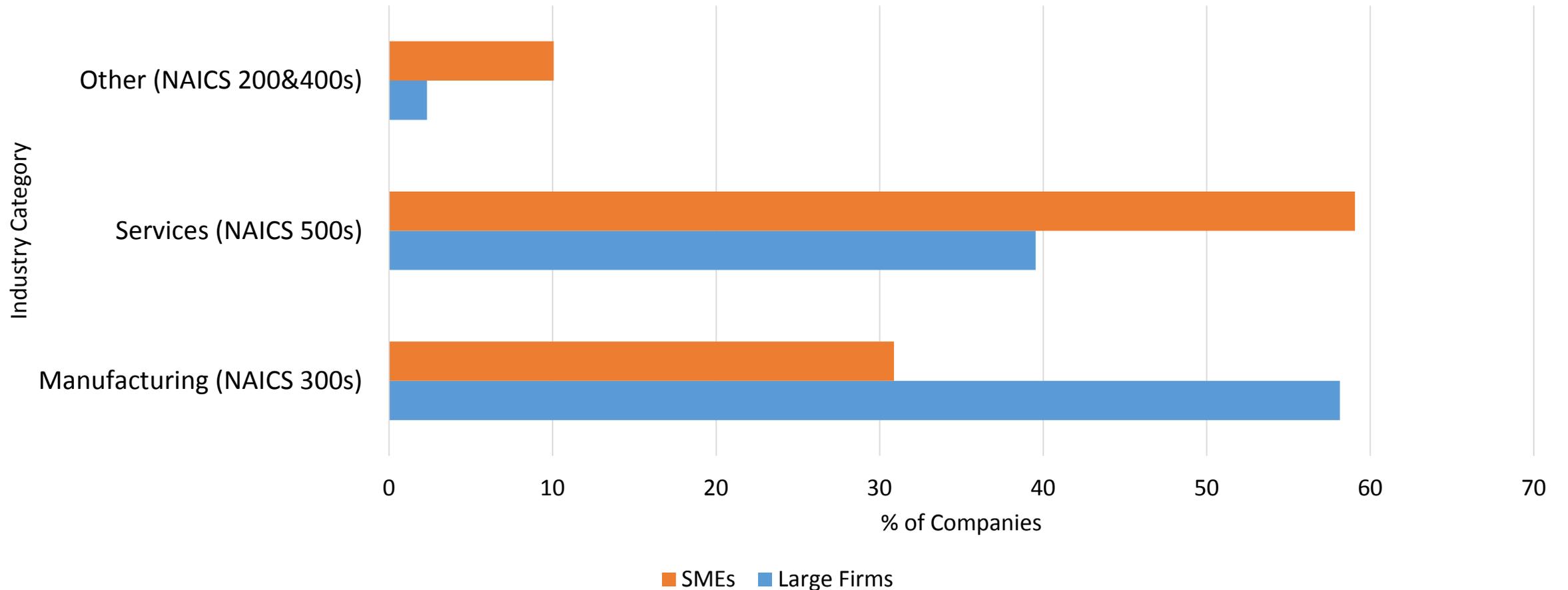
- Employee head counts provided in aggregate
- Sample size still small (under 200 companies)
- 2/3 of firms employ 51-500 people in total





Large firms in manufacturing and SMEs in software

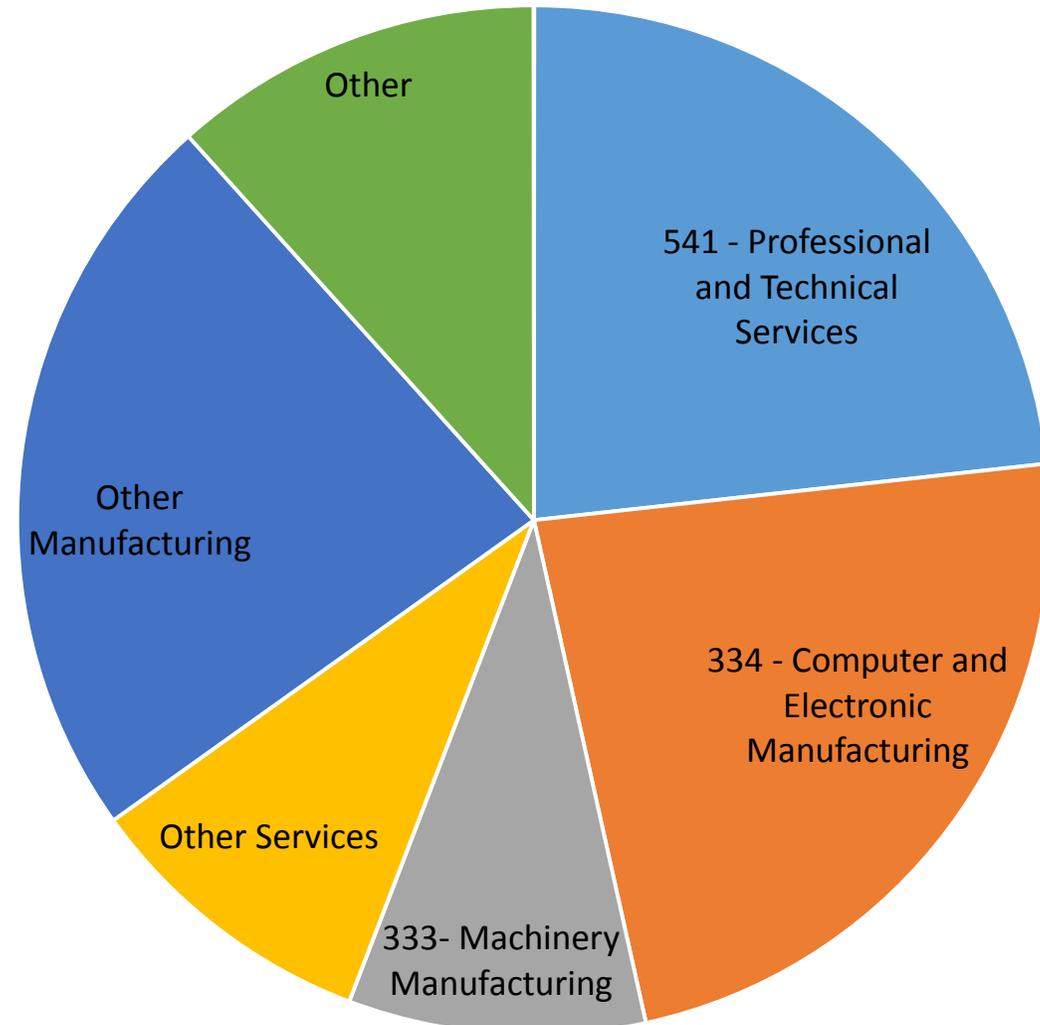
% of Large Companies vs SMEs by Industry





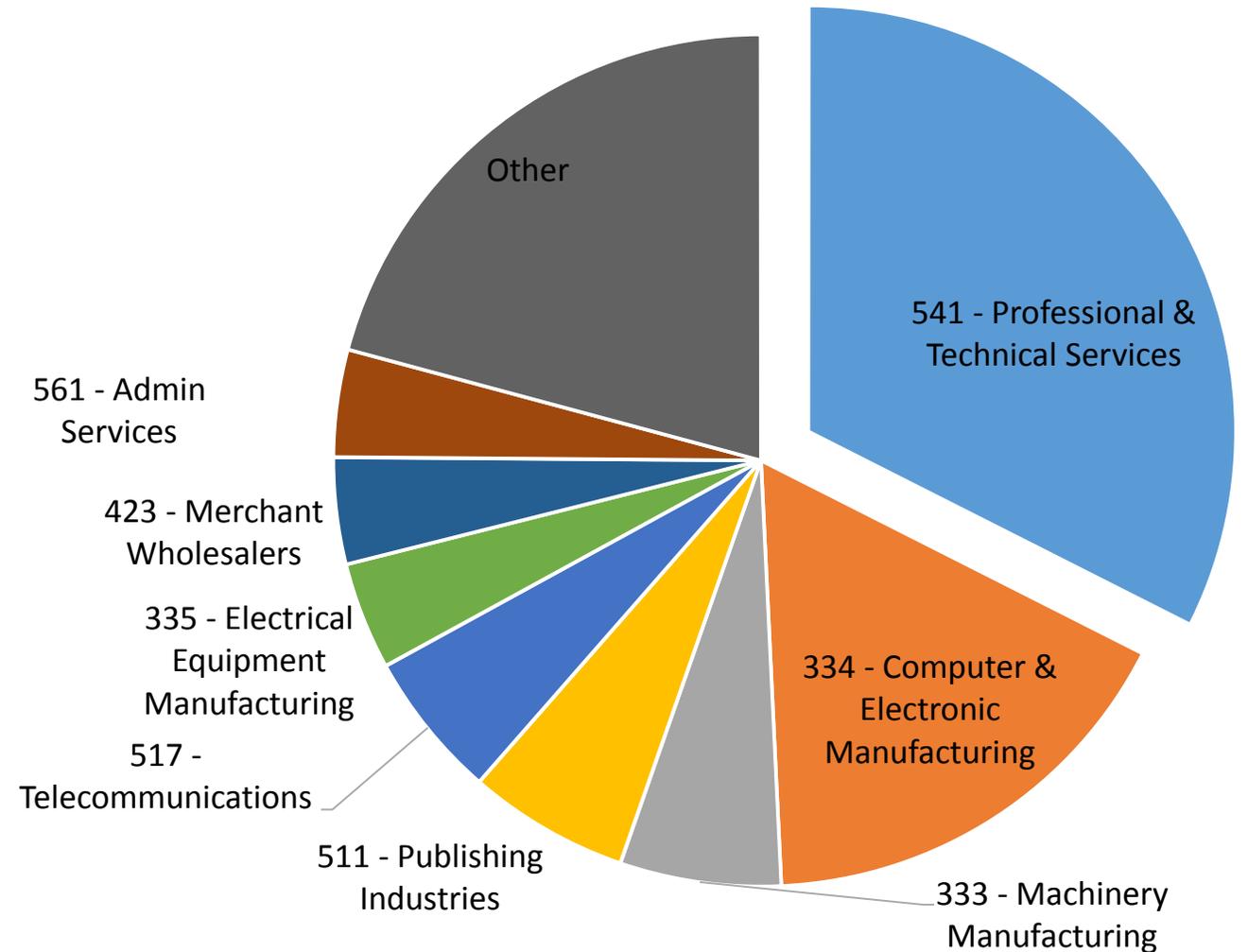
Manufacturing dominates among Large Firms

- By NAICs code
- 541: Prof and Tech Services (this includes software)
 - 10 Companies
- 334: Computer and Electronic Manufacturing
 - 10 Companies



Software dominates among SMEs

- By NAICs code
- 541: Prof and Tech Services (this includes software)
 - 64 Companies
- 334: Computer and Electronic Manufacturing
 - 33 Companies
- 41 Companies fall into Other
 - 12 NAICs Categories represented by only 1 company

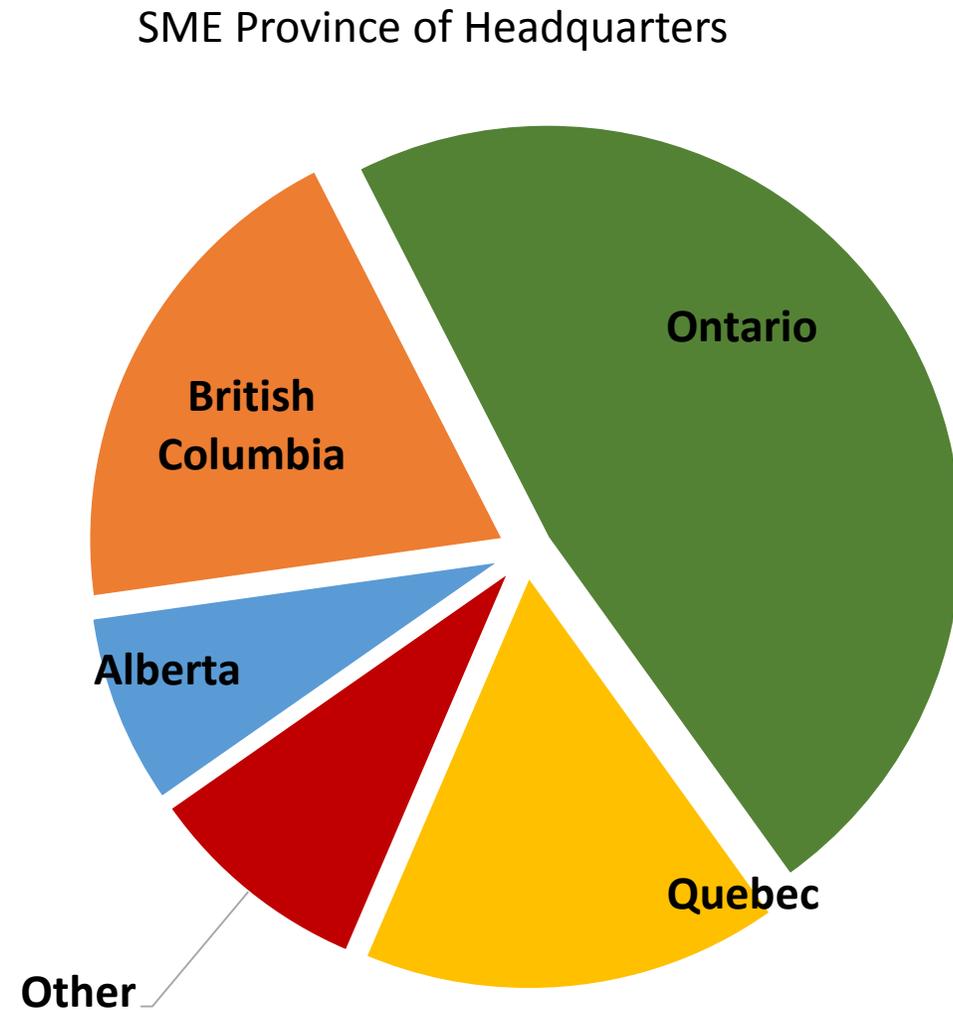




SMEs : Ontario leads in HQs

- 149 SMEs in CDO Dataset

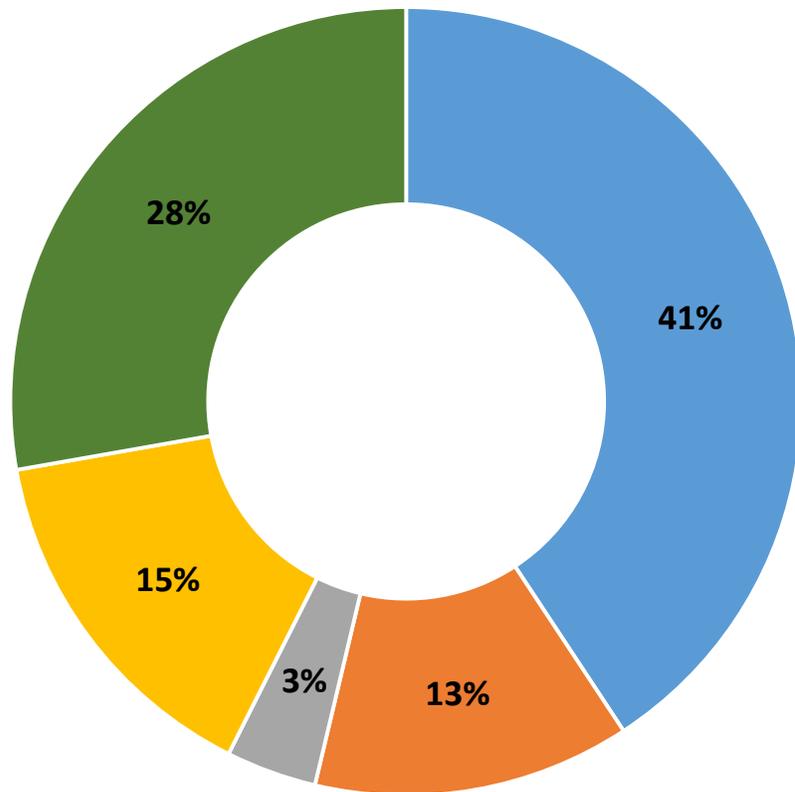
- Ontario
 - 70 Companies
- British Columbia
 - 29 Companies
- Quebec
 - 24 Companies





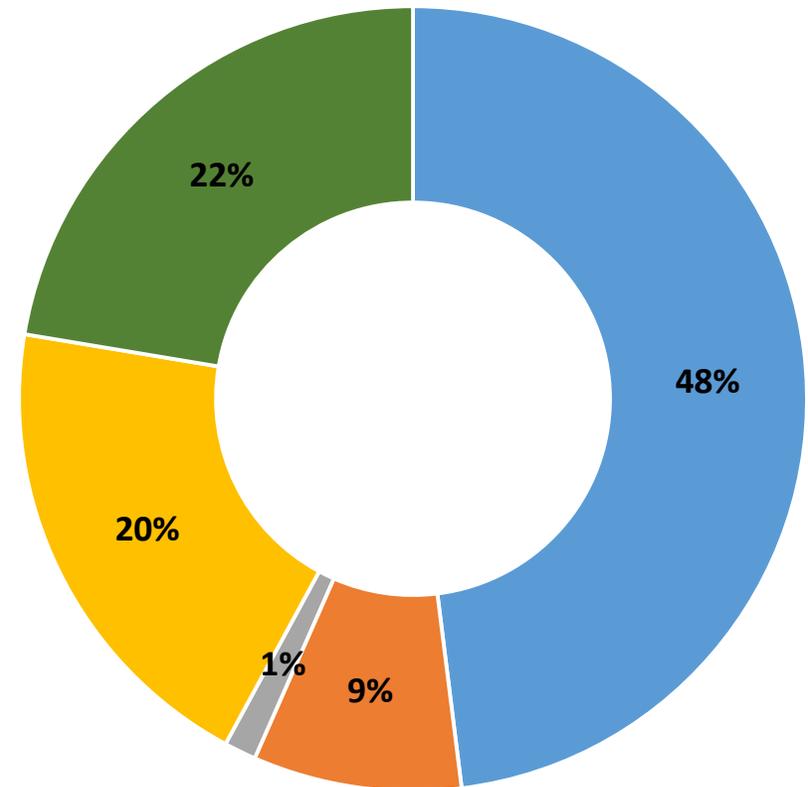
First stop in Asia: China/HK

Location of First Entry for Large CDO Firms



■ China &HK ■ India ■ S. Korea ■ Japan ■ ASEAN

Location of First Entry for CDO SMEs

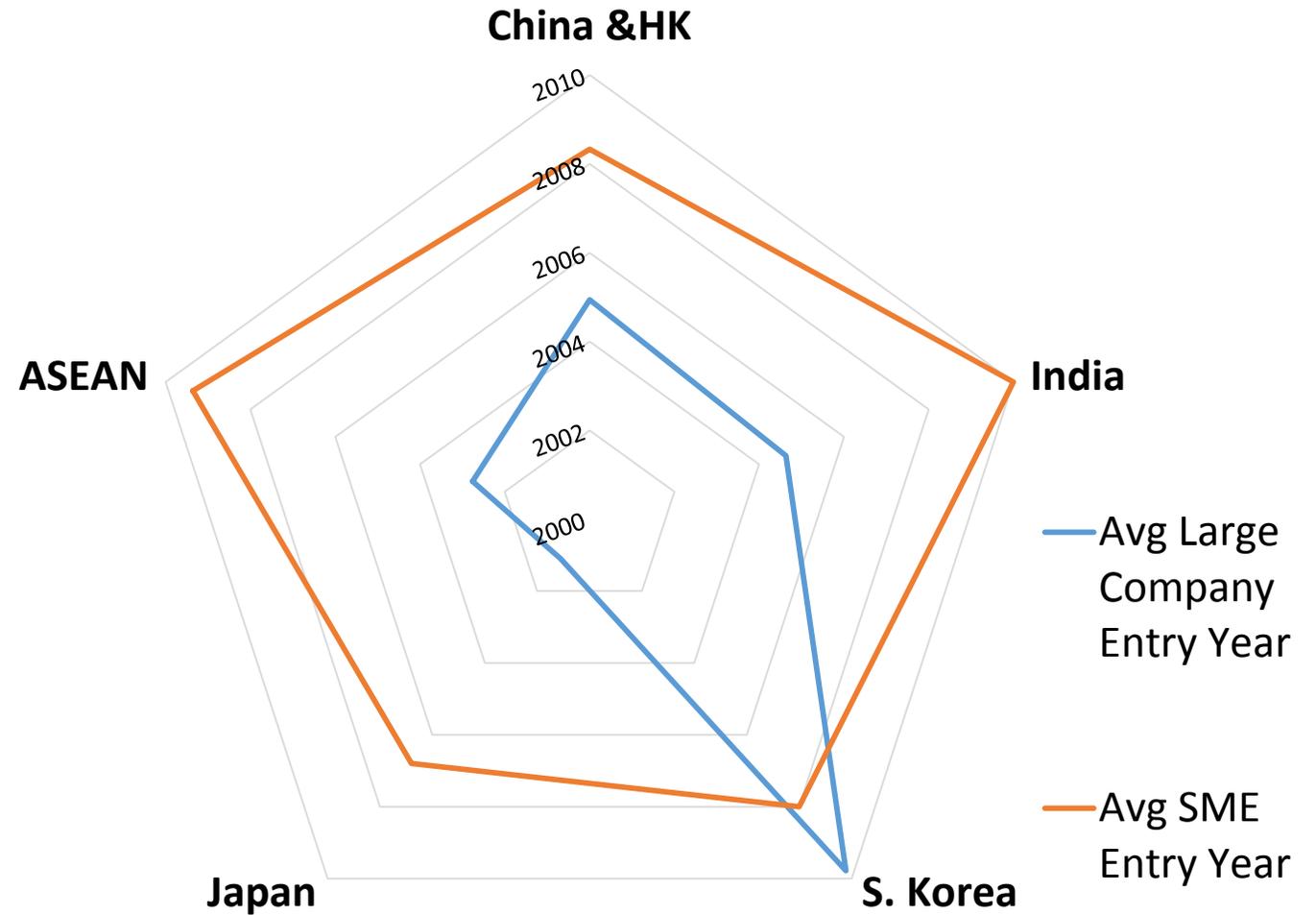


■ China &HK ■ India ■ S. Korea ■ Japan ■ ASEAN



Average Year of Entry

- Even though China has far more firms Japan was originally the favorite first destination for CDO firms



Large and Small: After China/HK, then...

Date/Sequence of Entry: Large Firms

First Entry Location	Second Entry Location (# of Firms)
China/HK 22 Firms	<ul style="list-style-type: none">• China then Japan (5)• China then ASEAN (4)• China only (7)
ASEAN 15 Firms	<ul style="list-style-type: none">• ASEAN then Japan (4)• ASEAN then India (3)• ASEAN only (4)
Japan 8 Firms	<ul style="list-style-type: none">• Japan then ASEAN (4)• Japan then China/HK (2)• Japan only (0)

Date/Sequence of Entry: SMEs

First Entry Location	Second Entry Location (# of Firms)
China/HK 73 Firms	<ul style="list-style-type: none">• China then ASEAN (15)• China then Japan (6)• China/HK only (46)
ASEAN 34 Firms	<ul style="list-style-type: none">• ASEAN then India (8)• ASEAN then Japan (5)• ASEAN only (13)
Japan 30 Firms	<ul style="list-style-type: none">• Japan then China/HK (5)• Japan then South Korea (5)• Japan only (8)



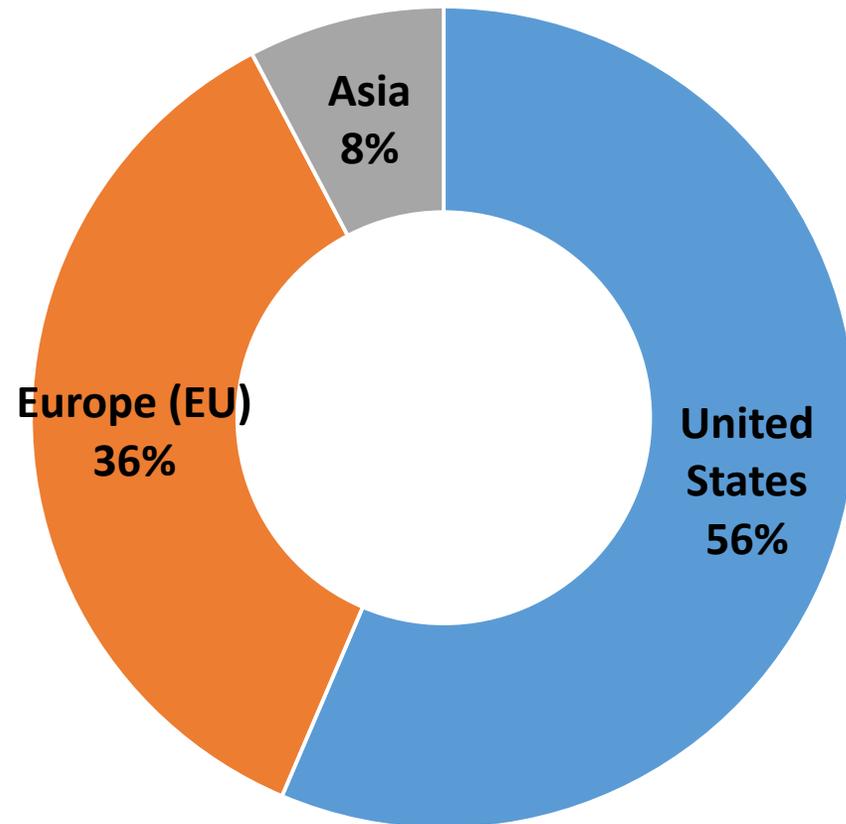
Examining 129 CDO Firms: with Operations in Asia plus EU and/or USA



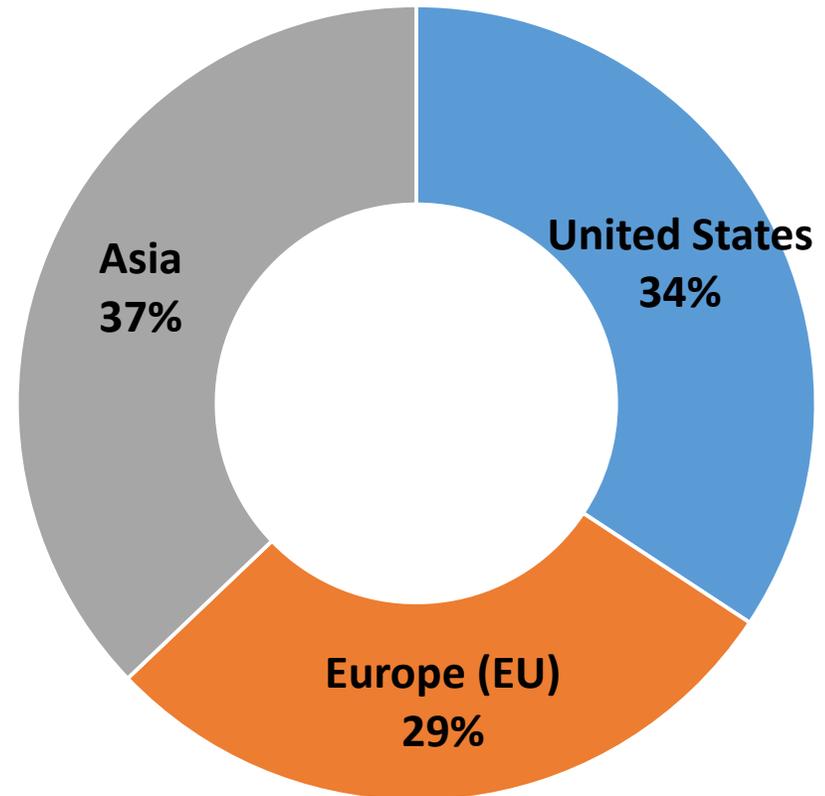
First market entry

The story is different between large firms and SMEs

First Entry Location (Large Firms)



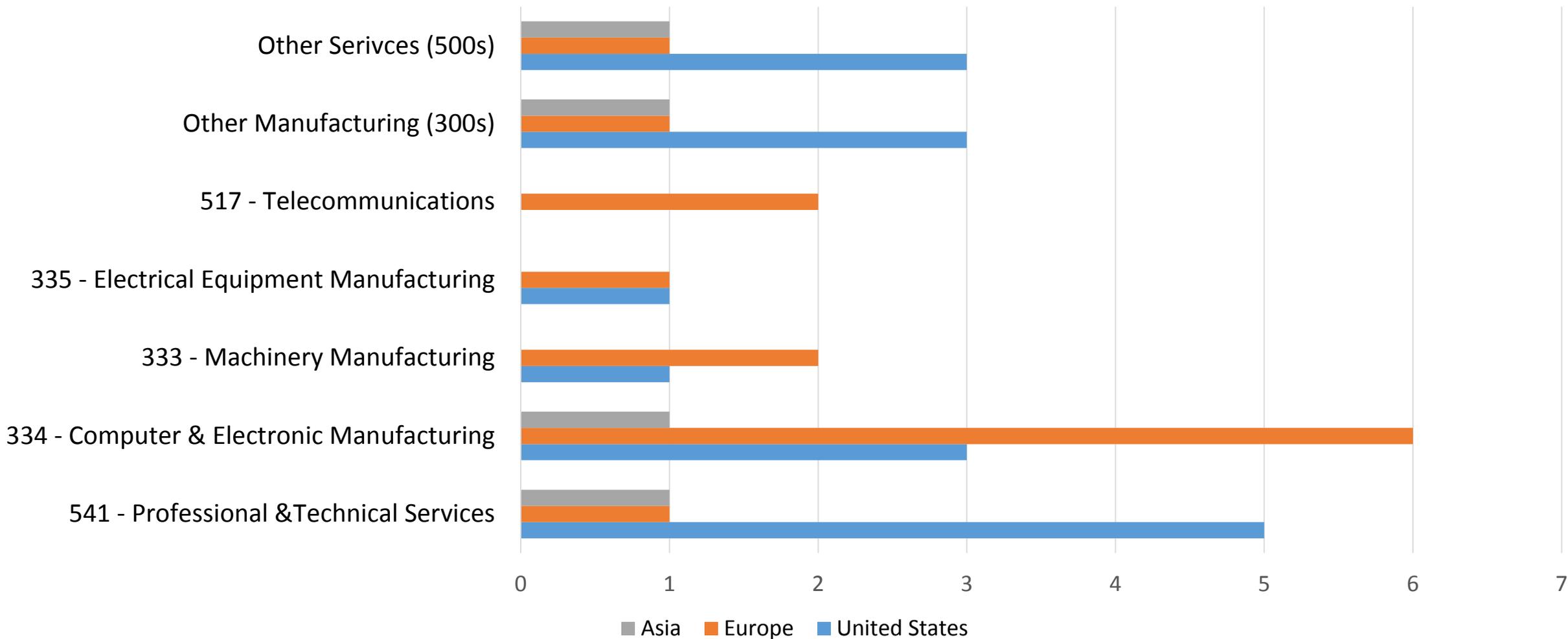
First Entry Location (SMEs)





Large Firms First Entry by Sector: Asia-US-EU

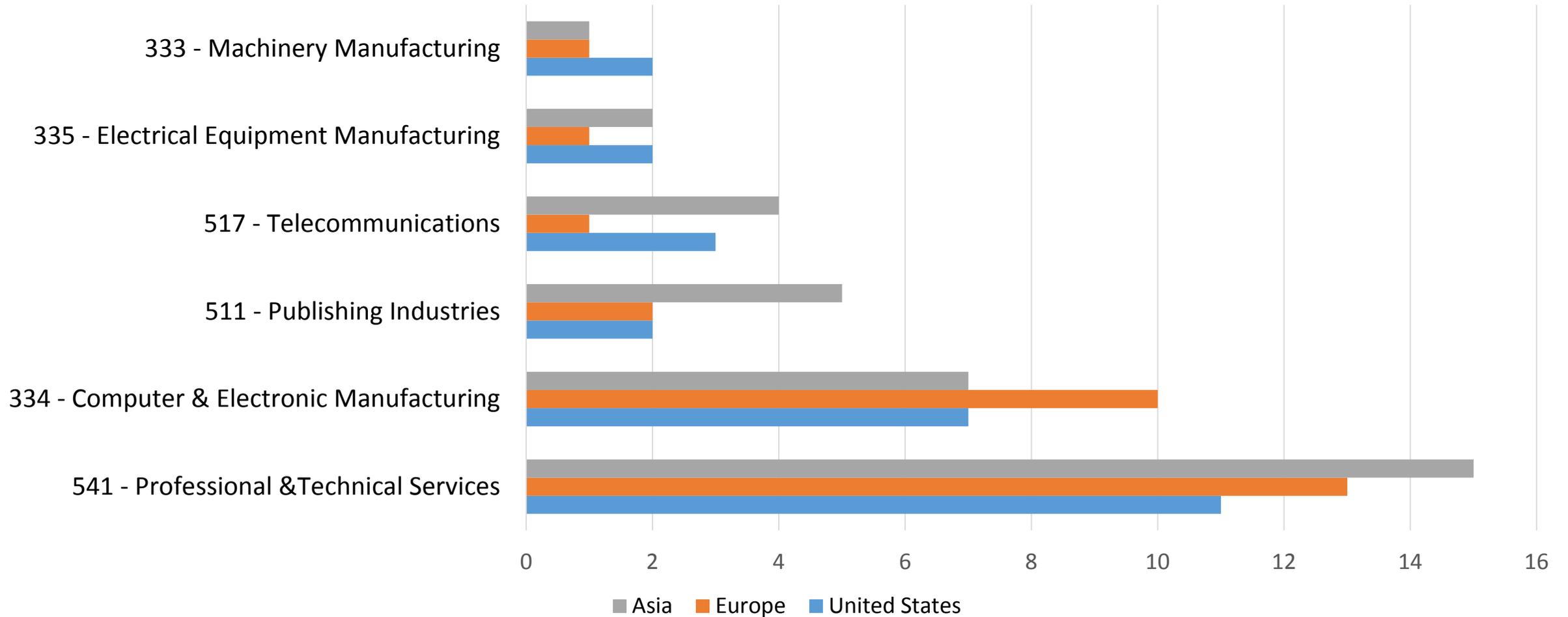
number of firms





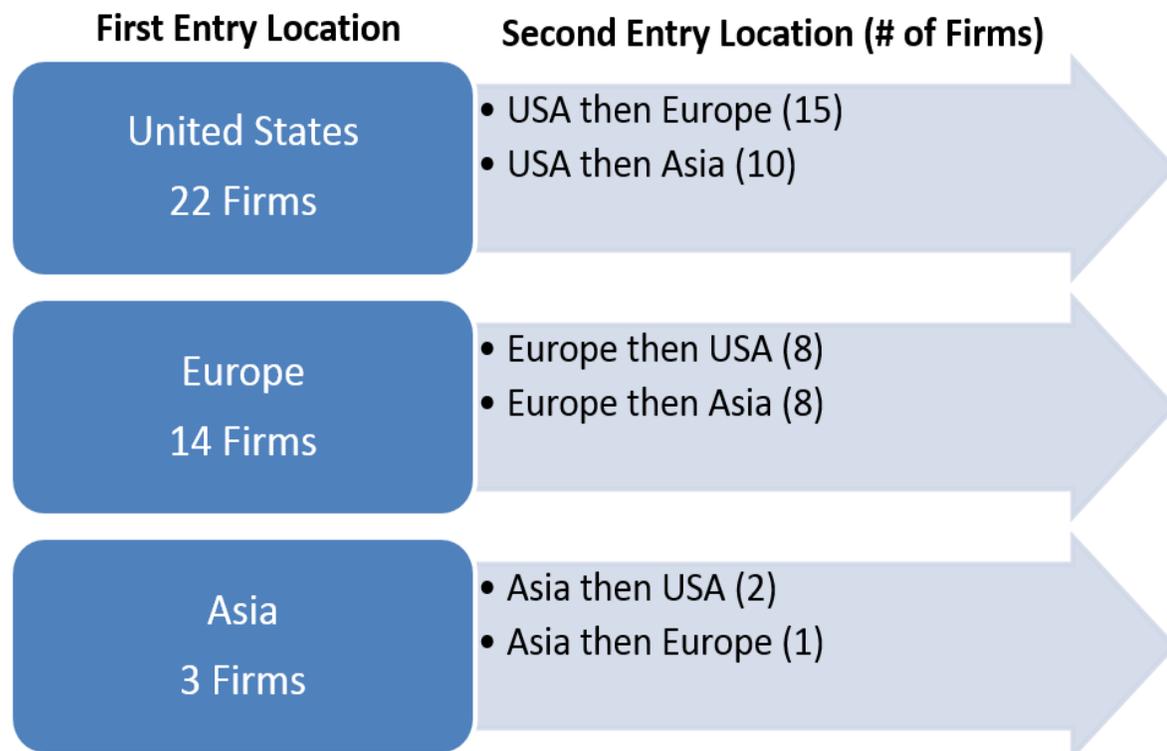
SME First Entry Location by sector: Asia-US-EU

number of firms

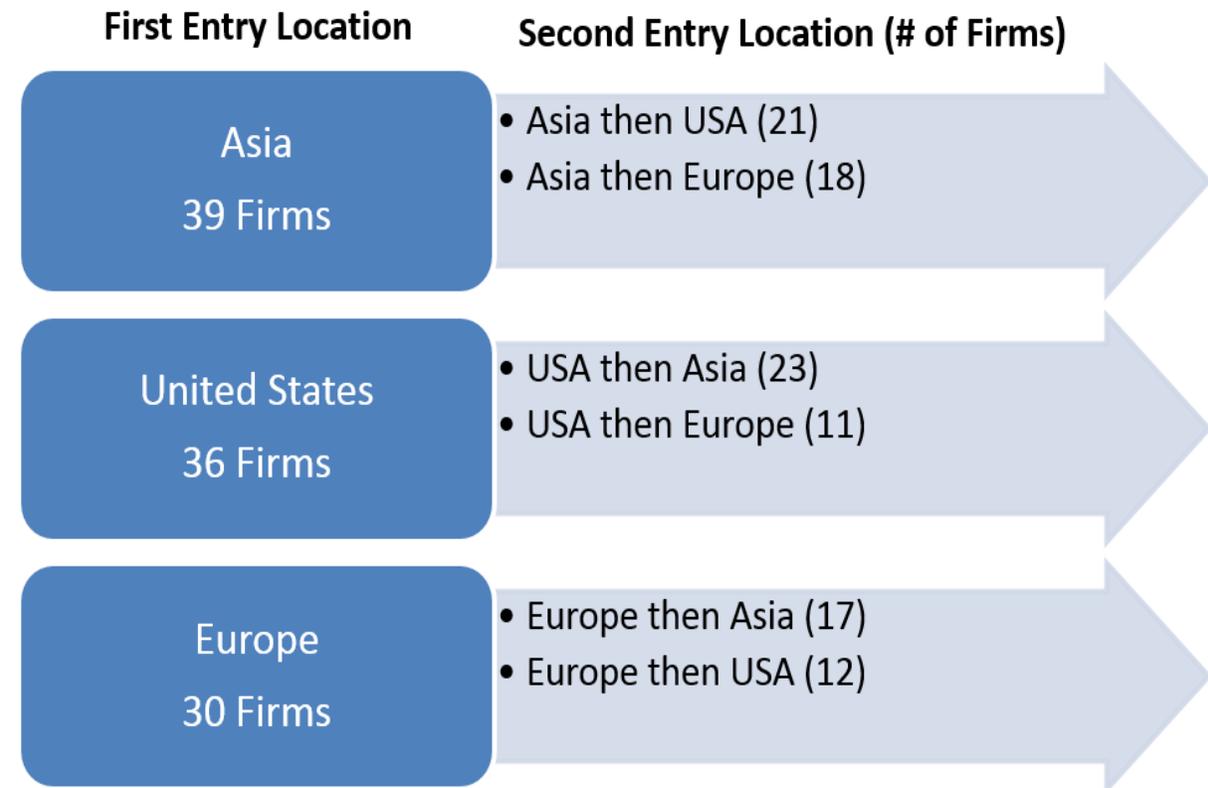


Large firms vs SMEs: noticeable differences in next markets

Date/Sequence of Entry: Large Firms



Date/Sequence of Entry: SMEs





Industry Case Studies

Software vs High Tech Manufacturing Industries



NAICS 541

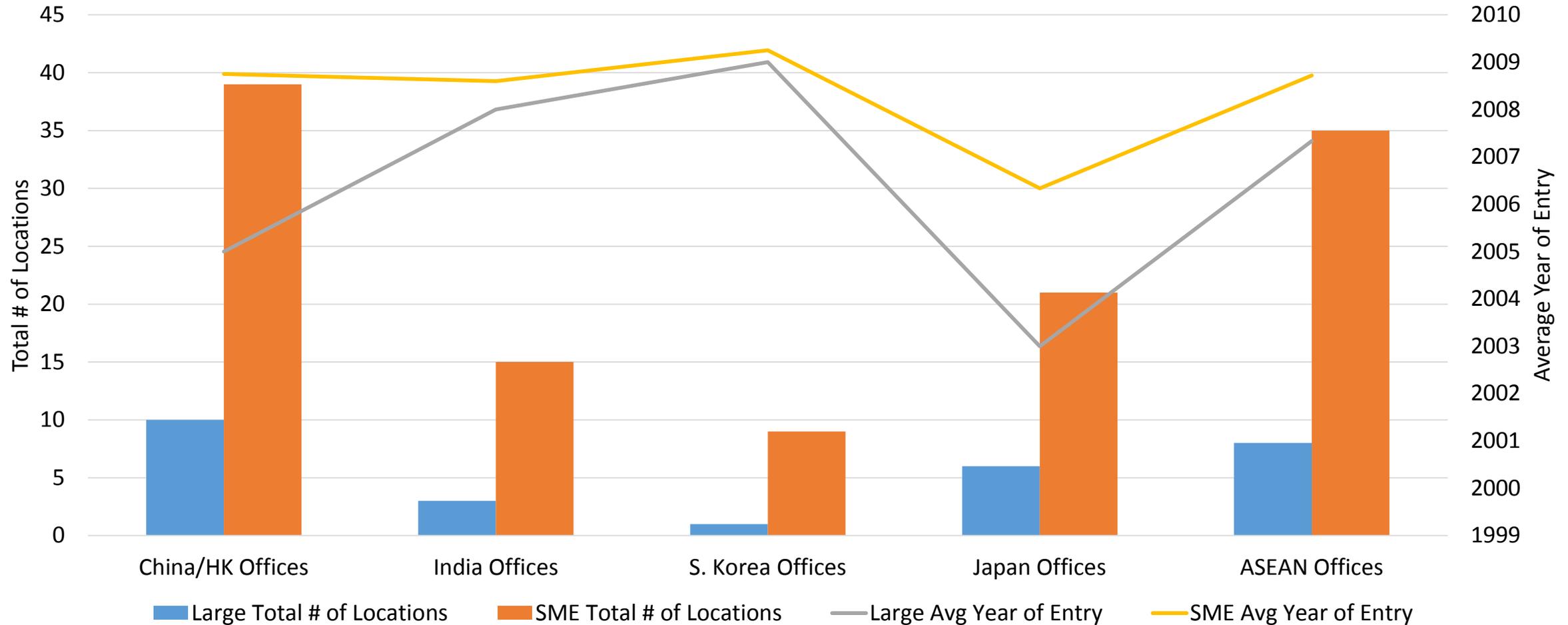
Professional and Technical Services

Large Companies	Small and Medium Enterprises (SMEs)
   	     



CDO: Software Locations in Asia

NAICS 541 - Professional and Technical Services



NAICS 334 – Computer & Electronic Manufacturing

Large Companies



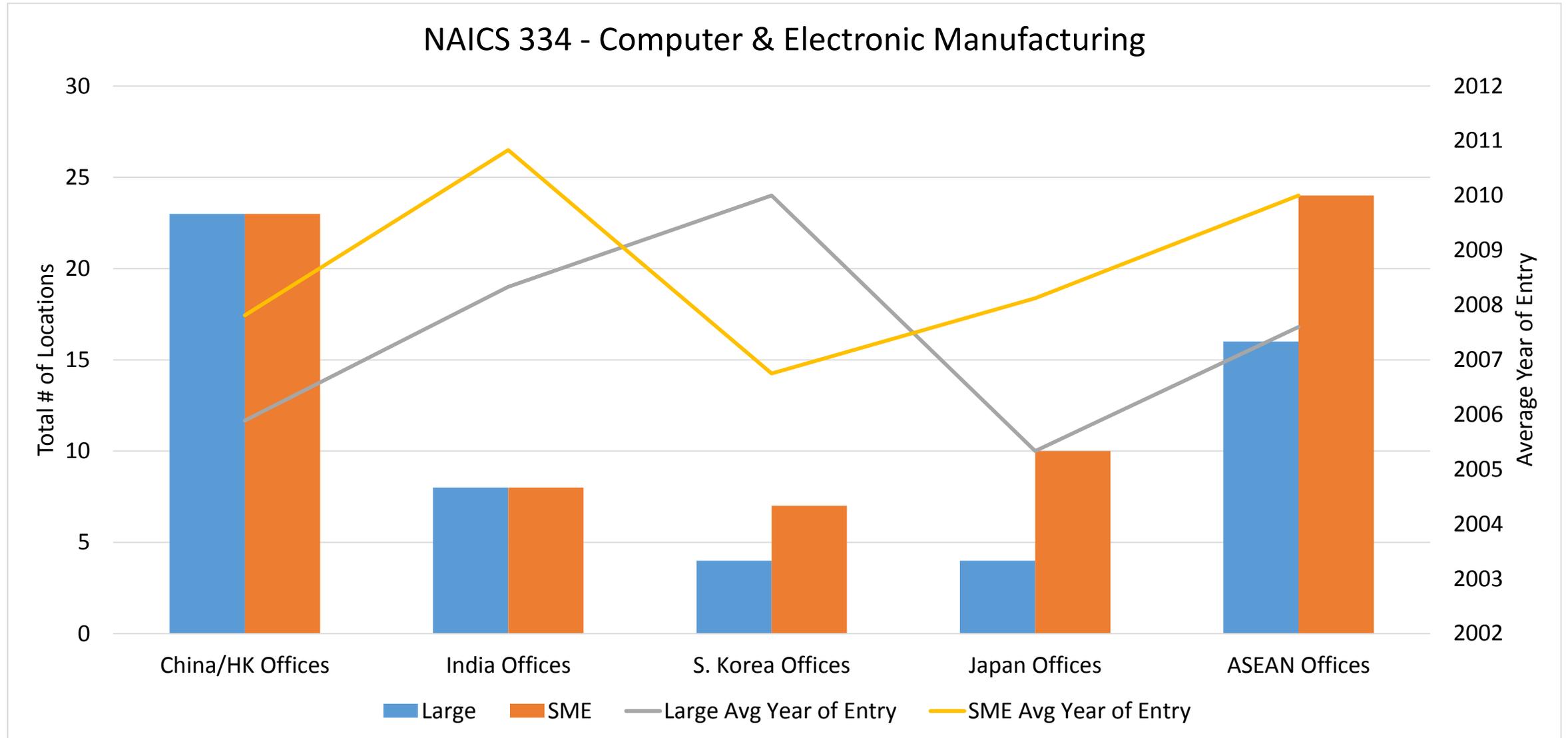
Working together to build the future



Small and Medium Enterprises (SMEs)



CDO: High Tech Mfg Locations in Asia





Next Steps

- GVC mapping to follow Canadian expertise in the digital economy:
e.g. BC digital media cluster
- Expand dataset to incorporate US- and EU-based CDO firms
- Interviews with selected NAICS 334 and 541 firms: GVC participation, major clients, priority markets

Deanna Horton and Jonathan Tavone