Corporate Ventures in Sweden
How to improve the connection between Swedish start-ups and corporations?

April 2016
Executive summary (I/II)

1. Sweden is consistently ranked among the most innovative countries in the world and has since 2012 been in the Top 3 globally
   - Stockholm internationally considered one of the top tech hubs in the world and is the 2nd fastest growing VC tech market globally, with >$1B raised in 2015

2. However, Sweden has a challenge in growing start-ups to larger sized enterprises
   - Only 9% alumni companies (2007-2013) from Swedish incubators had turnover >5MSEK 2014

3. On the other hand corporations are in pursuit for new ways for innovation & value creation¹, where they have traditionally relied on R&D and/or M&A
   - R&D and M&A with limited correlation to value creation, and often focused on core business

4. Corporate venturing becoming an increasingly important complement to traditional innovation sources
   - Especially in R&D intense industries such as pharmaceuticals and technology
   - Three main corporate venture vehicles used by corporations:
     - Corporate venture capital with minority equity investment in start-ups
     - Accelerators and incubators focused on fast scan of new business ideas
     - Innovation labs through internal innovation team outside of traditional R&D

¹ Value creation measured as Total Shareholder Return
Executive summary (II/II)

So far, Swedish corporations have not been very aggressive in investing in local start-ups and the majority of acquisitions of Swedish start-ups are made by foreign companies

• Only ~20% of the largest companies in Sweden have their own corporate venture set-up today, compared to ~33% in 2012 and ~40% today among the world's largest companies, with considerably higher penetration in the tech industry (~70%), pharmaceuticals (~65%) and telecom (~55%)

While there are already good examples of Swedish Corporate venture set-ups there is an opportunity for Sweden better match innovative start-ups with corporations

• Comparing Sweden with other successful CV and start-up clusters such Silicon Valley, Israel, and Unternehmertum in Munich there are three key areas to further strengthen:
  – Foster and promote a more entrepreneurial culture, building on Silicon Valley success
  – Focus policy making to match private funding and pro-actively attract foreign investments & talent, building on Israel success
  – Effective incubator organizations with role to integrate private sector and academia and where the government's role is to enable the collaboration, building on Munich success
Sweden ranked third most innovative country in the world
Relatively small share of population as entrepreneurs (6.7%) but high company survivability (84.4%)

Swedish consistently ranked as top innovator...

3rd in Global Innovation Index 2015
- Top 3 placement since 2012
- Sweden with both high input and high output in innovation process

1st in Innovation European Scoreboard 2015
- Leads index since 2007
- However, sharp relative decline since 2012

... but has modest company creation, although with very high survivability

Only ~7% of Swedes engaged in entrepreneurship
- Well below OECD average

~85% of new companies still active after 2 years
- 2nd best in EU after the Netherlands

Source: Global Innovation Index, Innovation European Scoreboard 2015, Global Entrepreneurship Monitor, Eurostat
In creation of billion dollar tech companies, Sweden is ranked #1 per capita and #5 in absolute terms 2003-2015

- Stockholm as Sweden's dominating tech hub
- 2nd fastest growing VC tech market globally, with >$1B raised 2015
- Since 2003, Stockholm has supported creation of 6.3 large tech companies per million inhabitants, and is 2nd only to Silicon Valley (8.1)

1. Amount of tech companies per capita created since 2003 valued at more than 1 billion USD
2. Amount of tech companies created since 2003 valued at more than 1 billion USD

Source: Atomico, Swedish Startup Space
However, few Swedish start-ups make the enterprise journey

Only 9% alumni companies (2007–13) from Swedish incubators had turnover >5MSEK 2014

Source: ALMI, BCG analysis
R&D and M&A both with low value creation correlation
Traditional sources for innovation (R&D and M&A) also primarily focused on core business

No clear correlation between R&D spend and value creation over time...

... with very similar pattern for M&A spend compared to value creation

Corporations looking for alternative innovation and value creation sources

Note: Portfolios based on rolling 5 year average share of revenue spent on R&D, portfolio companies updated yearly
Note 2: Portfolios constant throughout period, based on average share of revenue spent on M&A activities
Source: S&P Capital IQ; Mergermarket.com; Company annual reports; BCG analysis
Corporate Venturing supports & expands existing innovation management approaches

- R&D activities in BUs → 100% financed through BUs
- Central R&D - Projects → Financed by Corporate or BU
- Central R&D – Internal Start-ups → 100% financed through Corporate
- Potential positioning of CVC

Source: BCG analysis
### Corporate Venturing and M&A with clearly differentiated characteristics

<table>
<thead>
<tr>
<th>Mergers and acquisitions</th>
<th>Corporate Venturing</th>
<th>Technology licensing</th>
<th>Research and development</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fill gaps in <strong>current portfolio</strong>&lt;br&gt;• Enter <strong>developed markets</strong>&lt;br&gt;• Directly influence <strong>revenues/profits</strong></td>
<td>• Gain access to <strong>new markets/technologies</strong>&lt;br&gt;• Create <strong>option room</strong>&lt;br&gt;• Strengthen <strong>strategic position</strong></td>
<td>• Directly acquire <strong>specific technology</strong>&lt;br&gt;• Save <strong>time and avoid R&amp;D risk/costs</strong></td>
<td>• Leverage <strong>internal knowledge and expertise</strong>&lt;br&gt;• Ensure <strong>exclusivity</strong></td>
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### Key rationale

<table>
<thead>
<tr>
<th>Investment amount</th>
<th>€1M–5M</th>
<th></th>
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<th>€500M+</th>
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<tbody>
<tr>
<td>Maturity of target</td>
<td>Low</td>
<td></td>
<td></td>
<td>High</td>
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<tr>
<td>Level of control</td>
<td>Low</td>
<td></td>
<td></td>
<td>High</td>
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<tr>
<td>Risk of failure</td>
<td>Low</td>
<td></td>
<td></td>
<td>High</td>
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<tr>
<td>Value upside potential</td>
<td>Low</td>
<td></td>
<td></td>
<td>High</td>
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</table>

Source: BCG analysis
Corporations applying especially three types of venturing tools mostly dependent on industry dynamics

1. MVP = Minimum viable product
Source: BCG analysis
The higher the R&D intensity the higher CVC penetration
Pharmaceuticals and tech with highest relative share of corporate venturing among industries

1. R&D investments divided by total sales
2. Compared to global average for various industries, industry composition of leading Swedish companies implies that there should be a 32% CVC penetration.
3. The actual CVC penetration of leading Swedish companies is just 20%, indicating an underperformance.

Source: Lovain University; BCG analysis.
Only ~20% of Sweden's top 50 companies have a CV\(^1\) set-up
Compared to average of ~33% of largest global companies

Swedish Corporate Venture less common than global average...

Since 2012 corporate ventures among global top 500 (Fortune) companies has increased from ~33% to ~40%
Swedish CVC landscape adds major players at steady pace
H&M latest to move into the investing in start-ups, even if CV set-up not fully developed yet

Swedish trend in line with global trend

Over the past decade, more and more Swedish blue chip corporations have been entering the CVC sphere at a moderate pace

Despite tech-companies being first-movers, the trend spans industries
  • Everything from tech (Google Ventures) to Apparel Retail (H&M) and Media (MTGx)

"Sweden's largest public company H&M to search for more tech investments...H&M has established a Venture Capital business aimed at investing in young tech companies in sectors adjacent to apparel, like marketing and logistics"

Breakit.se (3/9 2015)

"The newly launched MTGx is to become "the X factor" in accelerating the organization's innovation and success within digital entertainment, by creating a portfolio of new entertainment platforms and centralize digital know-how for all the group's companies."

Dagens Industri (2013)

Source: Press searches, Company websites, BCG analysis
Several successful Swedish CV set-ups now exist

<table>
<thead>
<tr>
<th>Company snapshot</th>
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<th>Company snapshot</th>
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<tbody>
<tr>
<td><strong>MTG</strong></td>
<td><strong>VOLVO</strong></td>
<td><strong>AstraZeneca</strong></td>
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<tr>
<td><strong>Entertainment broadcasting company</strong></td>
<td><strong>Automotive manufacturer</strong></td>
<td><strong>Pharmaceutical and biologics company (British-Swedish)</strong></td>
</tr>
<tr>
<td>– Free-TV, pay-TV, digital entertainment, radio and content production</td>
<td>– Trucks, buses, construction equipment, marine and industrial engines</td>
<td>– Discovery, development and commercialization of prescription medicines</td>
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<thead>
<tr>
<th>CVC activities</th>
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<th>CVC activities</th>
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<tr>
<td>– Small-scale investments to large-scale acquisitions</td>
<td>– Induce business growth and increase profitability through investments in technology-based companies</td>
<td>– Invests in early-to late-stage biotech companies</td>
</tr>
<tr>
<td>– Sub-departments: MTGx MediaFactory (incubator), MTGx media-for-equity, (media start-ups investor)</td>
<td></td>
<td><strong>BioVenture Hub</strong>, est. 2014</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– Alternative eco system and life science-incubator for academics and start-ups</td>
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<tr>
<th>Strategy</th>
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<tr>
<td><strong>Leveraging MTG’s global reach and marketing power combined with financial support to grow startups</strong></td>
<td><strong>Startups with talented mgmt teams, active in disruptive/transformative technologies that can be combined with core Volvo capabilities</strong></td>
<td><strong>Broad scope: all growth stages of startups, and very wide spectra of product categories adjacent to mother company core</strong></td>
</tr>
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</table>

Source: S&P Capital IQ; BCG analysis
Several global CV success factors that Sweden can build on
Three very different, but successful, start-up hubs compared

Key characteristics

**Silicon Valley ecosystem**
World’s premier innovative eco system with several inimitable strengths
- Private capital supporting all stages of startup cycle
- Proximity to global tech leaders
- Heavy exposure to state funded research

**Israeli government policy making**
Active long-time state support of entrepreneurship and tech startups
- Network of incubators (30 yrs)
- Matching of private capital (20 yrs)
- Actively recruiting FDI[^1] for investments and R&D to Israel (10 yrs)

**Munich incubator Unternehmertum**
Europe's largest university-based incubator
- Supporting >50 startups/year
- 90% long-term private financing
- Close cooperation with private sector
- Utilizes university's research
- Pan-regional hub for Bavaria

Key characteristics

**Culture of entrepreneurship**
- Increase status of entrepreneurship
- Focus on market need and individual innovators, not government

**Active government policy**
- Make innovation central to labor policy
- Match private investments
- Use government agencies to promote Swedish startups abroad

**Effective incubator organization**
- Integrate private sector and academia; government role only to enable
- Regional cooperation to scale incubator effectiveness

[1. Foreign Direct Investment]

Source: S&P Capital IQ; BCG analysis
Appendix
With 6.7% of working population as entrepreneurs, Sweden is well below OECD average.

1. Share of population (18-64 years) running a business that is younger that 42 months
Source: Global Entrepreneurship Monitor
But 2-year survivability of newly founded companies remains very high at 84.4% compared to other EU countries.

Company survivability (%)\(^1\)

<table>
<thead>
<tr>
<th></th>
<th>Company survivability (%)</th>
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<tbody>
<tr>
<td>NETHERLANDS</td>
<td>85.5</td>
</tr>
<tr>
<td>SWEDEN</td>
<td>84.4</td>
</tr>
<tr>
<td>BELGIUM</td>
<td>82.4</td>
</tr>
<tr>
<td>LUXEMBOURG</td>
<td>78.1</td>
</tr>
<tr>
<td>UNITED KINGDOM</td>
<td>75.4</td>
</tr>
<tr>
<td>SLOVIA</td>
<td>74.5</td>
</tr>
<tr>
<td>AUSTRIA</td>
<td>73.9</td>
</tr>
<tr>
<td>CYPRUS</td>
<td>73.3</td>
</tr>
<tr>
<td>LATVIA</td>
<td>70.0</td>
</tr>
<tr>
<td>NORWAY</td>
<td>68.3</td>
</tr>
<tr>
<td>POLAND</td>
<td>67.9</td>
</tr>
<tr>
<td>FRANCE</td>
<td>67.1</td>
</tr>
<tr>
<td>BULGARIA</td>
<td>67.1</td>
</tr>
<tr>
<td>SLOVAK REPUBLIC</td>
<td>64.9</td>
</tr>
<tr>
<td>CZECH REPUBLIC</td>
<td>64.5</td>
</tr>
<tr>
<td>ITALY</td>
<td>64.3</td>
</tr>
<tr>
<td>GERMANY</td>
<td>62.3</td>
</tr>
<tr>
<td>SPAIN</td>
<td>61.3</td>
</tr>
<tr>
<td>DENMARK</td>
<td>59.7</td>
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<tr>
<td>ROMANIA</td>
<td>59.5</td>
</tr>
<tr>
<td>HUNGARY</td>
<td>55.3</td>
</tr>
<tr>
<td>LITHUANIA</td>
<td>50.1</td>
</tr>
<tr>
<td>PORTUGAL</td>
<td>49.7</td>
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<tr>
<td>FINLAND</td>
<td>40.6</td>
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\(^1\) Share of companies founded in 2011 still active in 2013
Source: Eurostat
No correlation between R&D spend and value creation
15 year total shareholder return for five portfolios based on average R&D spend

Top 50 largest Swedish corporations (Market Cap)

Portfolios grouped on rolling 5yr average R&D spend

1 - highest R&D spending
2
3
4
5 - lowest R&D spending

Year

Note: Portfolios based on rolling 5 year average share of revenue spent on R&D, portfolio companies updated yearly
Source: S&P Capital IQ; Mergermarket.com; Company annual reports; BCG analysis
M&A activities show no clear pattern for performance
15 year total shareholder return for five portfolios based on activities in M&A deals

Note: Portfolios constant throughout period, based on average share of revenue spent on M&A activities
Source: S&P Capital IQ; Mergermarket.com; Company annual reports; BCG analysis
MTGx focuses on expanding into adjacent digital solutions

MTGx with multiple venturing divisions

- Larger investments in digital companies
- Portfolio currently mainly consists of e-sports\(^1\) broadcasting companies and YouTube MCNs\(^2\)

- Corporate accelerator for start up media companies
- Early-stage partnerships and minority stake investments
- Support with mentors, media reach and content rights

- European media alliance for investing in new digital businesses wanting to expand geographically
- Invest media space rather than money

Source: MTGx; BCG analysis


MTGx division with varied business focus

Link to operational capability

- Time to impact for BU

1-3 years  4-6 years  7-10 years

Close to core  Adjacent  Completely new

MTGx Ventures

MTGx MediaFactory

MTGx Ventures

Media-for-equity program

Media-for-equity program
"Our ambition is to find and develop digital entertainment products that complement our existing ones, as well as to discover brand new concepts."

MTGx.se

"As an investor, we can provide resources from all parts of our business […] with marketing power across multiple countries […] as well as pure development support. Finally, we have the ability to offer financial support for your company."

MTGx.se

"We think a lot about which areas we should be active in, where we are not active today due to our cultural heritage"

SvD Näringsliv

"We see a clear interest among start-up companies for developing their products and ideas along MTGx and our digital eco system."

Anil Hansjee, Chief Investment Officer MTGx

"Along the development of MTGx there has arisen some dissatisfaction among other parts of MTG. Allegedly, colleagues have reacted on the high costs of MTGx, their locales and their privileges.

Dagens Media

"MTG enters European Media Alliance to grow digital business […] The alliance creates a strong pan-European footprint that enables its members to invest in consumer-focused digital start-ups, […] that are looking to expand their geographical footprint."

MTG press release, Oct 15 2014
Volvo focuses on new technologies close to current core

Investments open up new opportunities for Volvo

- Invest in technology-based innovation in adjacent fields
- Investments should lead to increased profitability for customers and new business opportunities for Volvo
- Investment should have a positive return while contributing to the growth and competitive advantage for Volvo
- Portfolio companies currently within e.g. autonomous vehicles, artificial intelligence and online truck fleet management

Volvo venturing goals mainly within adjacent and core segments

Source: Volvo; BCG analysis
Volvo Group Venture Capital press clippings

"Our focus is on areas in which technology-based innovation results in solutions that improve the profitability of our customers and enable new business opportunities for the Volvo Group."

volvogroup.com

"We look at the company’s potential and how we can combine the assets of the company with the capabilities of Volvo Group. To find these companies, we cooperate with an extensive global network of entrepreneurs and other investors."

volvogroup.com

"Decide where you want to take your bets as a corporate, and which part of the industry you want to specialise on. Specialising focus is the only way to drive deal flow. You will never succeed as a passive investor. The only way to succeed is by doing."

Johan Carlsson 2012,
Former president Volvo Group Venture Capital

It became clear to us we are good at investing when we can combine the capabilities of the group with a company that has a new product that is ready for market and ready to be scaled up. [...] That is where our venture model works best.

Johan Carlsson 2012,
Former president Volvo Group Venture Capital
AstraZeneca ext. innovation includes venturing & incubation

Focus mainly within pharmaceuticals

- Invests in **small and large molecules, vaccines, pharmaceutical technologies and platforms**
- Invests in **early-to late-stage** products and technologies
- **IT companies** pertaining to discovery, development and commercialization of pharmaceutical products are also of interest
- **Incubation hub** for start-ups and academic groups providing **know-how, labs and offices**
- Objective to expose AstraZeneca to innovation with **lower investment risk**
- Target companies are **about to enter clinical phase** and should be a suitable collaboration partner

Mostly long-term focus for AstraZeneca

- **Link to operational capability**
  - Close to core
  - Adjacent
  - Completely new

- **Time to impact for BU**
  - 1-3 years
  - 4-6 years
  - 7-10 years

1. Video game sports
2. Multi-Channel Network
Source: AstraZeneca; Medimmune Ventures; BCG analysis
Medimmune Ventures and BioVentureHub press clippings

**Medimmune Ventures**

"[We] invest in private companies which develop **small and large molecules, vaccines, pharmaceutical technologies and platforms**. We also seek investments in medical device, diagnostic, imaging and healthcare IT companies which pertain to the **discovery, development and commercialization** of pharmaceutical products."

medimmuneventures.com

"MedImmune Ventures invests in companies with **early to late stage** products and technologies, in early (e.g. seed) to late (e.g. mezzanine) rounds of financing."

medimmuneventures.com

"We believe that in the current financial environment, there is a **growing role for corporate venture** capital funds such as MedImmune Ventures"

Ron Laufer, senior managing director, MedImmune Ventures

**BioVentureHub**

"The hub exposes AstraZeneca to **more innovation and science**. It stimulates an even more vibrant place to work and generates **future collaboration opportunities**."

azbioventurehub.com

"This venture can have a **decisive effect** on the development of life science in Sweden"

Birgitta Losman, President Västra Götaland Development Board

"In our case the **hub worked as planned**. It's given us **new partnerships** and interactions [...]. You can also engage Astra employees as consultants, which is **very valuable**."

Johannes Hulthe, CEO Antaros Medical, Company at BioVentureHub in 2015
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