Technology Innovation and Entrepreneurship

Lessons learned in Israel

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Promoting Technology Innovation & Entrepreneurship

OUT OF THE BOX THINKING

Try new ways
Be different
Experiment
Be creative
Challenge
Discover
Find out
Venture
Explore
Dare

CREATE VALUE
Technology Innovation & Entrepreneurship

Step 1
Create new technology based ideas (innovation)

Step 2
Apply them to create value (Solve problems)
Technology Innovation & Entrepreneurship

Life Cycle of Startup Venture
The life cycle of a Startup venture
From Idea to Exit

Preliminary stage
- Create an Idea
- Conduct Preliminary Feasibility Evaluation
- Form Business Model

Early stage
- Recruit Resources (Money & skilled people)
- Develop Product
- Test Product

Advanced stage
- Produce
- Go to Market
- Add Value

Prepare for exit
- Add Value
- Add Value
- IPO
- M&A
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**Early stage**
1. Recruit Resources
   - Money & skilled people
2. Develop Product
3. Test Product

**Advanced stage**
1. Produce
2. Go to Market
3. Add Value

**Prepare for exit**
1. Add Value
2. Add Value
3. IPO
4. M&A
The life cycle of a Startup venture
From Idea to Exit

- Identify problem
- Identify opportunity
- Add value
- Cost reduction
- Improve quality of life
- Improve process
- Improve services
- Eliminate pain
- Provide valuable information
- Reduce/Eliminate risks
- Provide protection
- Improve safety
- Add joy
The life cycle of a Startup venture
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Preliminary stage

Create an idea

Generating ideas - Forming concepts
Promoting Innovation  Think outside the box

How will the world  Be better with  your innovative idea  

CREATE VALUE
Innovative entrepreneurship & startup ventures

Characteristics of innovative ventures

Skilled workforce
Frequent changes
Fast adaptations
Collaboration
Competition
Uncertainty
Fast paced
High Risk
## Innovative entrepreneurship & startup ventures

<table>
<thead>
<tr>
<th>Characteristics of innovative ventures</th>
<th>Characteristics of successful entrepreneurs</th>
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What are the Characteristics and Challenges of Innovative Entrepreneurship

Uncertainty/unknown

IP Intellectual Property

Protection of Intellectual Property

Innovation that creates new markets

Long duration of development period

Skilled employees not easy to find/high cost

Dependency (on other technology) design win

Requires a lot of money before it generates revenue
Starting a startup - Forming of Business

Long & Expensive development and marketing cycles

Require highly paid skilled workforce
Intellectual Property (IP) protection
Establish credibility

The need for investors
- Why cannot use ordinary banks to finance the startup?
  Equity for cash
Investors look for:

- Team
- Market
- Technology
## Understanding the Characteristics and Challenges of Innovative Entrepreneurship

### Examples from Silicon Valley/Israel

<table>
<thead>
<tr>
<th>1,000</th>
<th>Business plans submitted to VC investors</th>
</tr>
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<tbody>
<tr>
<td>100</td>
<td>Considered and evaluated</td>
</tr>
<tr>
<td>10</td>
<td>Selected for investment/funded</td>
</tr>
<tr>
<td>1</td>
<td>Realize successful exit</td>
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Promoting Innovation

OUT OF THE BOX THINKING

Try new ways
Be different
Experiment
Be creative
Challenge
Discover
Find out
Venture
Explore
Dare

Take risks

CREATE VALUE
Innovative entrepreneurship & startup ventures

Are we providing you a safe environment to take risks?

Are we allowing the Freedom to Fail?
Technology Innovation and Entrepreneurship

Lessons learned in Israel
Innovation and Entrepreneurship Lessons learned in Israel

Why Israel

Israel

China
Israel is one of the smallest countries in the world

One of leading hub for innovation & entrepreneurship

Why Israel

Israel

China
Israel is ranked high in Innovation

Israel leads the 2014 Global Cleantech Innovation Index, with Finland following closely behind. The characteristics of the top performers highlight that there is no single pathway for creating a cleantech innovative economy – countries vary in how they score in all the sub-factors and indicators (as you will find in the

Top 10 in 2017 Bloomberg Innovation Index
What is a Startup nation?

- Over 6,000 active innovative startup ventures
  - Top foreign traded companies in NASDAQ
  - World’s highest per capita R&D investment
  - Over 250 active VCs with $16B investment
  - Over 300 Multinational Corporations with R&D centers
  - Over $42B generated by M&A exit transactions

Innovation – The main growth engine
Validation by world's technology leaders acquisitions of Israeli startups (M&A)

<table>
<thead>
<tr>
<th>Company</th>
<th>Count</th>
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<tr>
<td>Microsoft</td>
<td>12</td>
</tr>
<tr>
<td>IBM</td>
<td>10</td>
</tr>
<tr>
<td>Broadcom</td>
<td>11</td>
</tr>
<tr>
<td>Google</td>
<td>4</td>
</tr>
<tr>
<td>Intel</td>
<td>9</td>
</tr>
<tr>
<td>Cisco</td>
<td>14</td>
</tr>
<tr>
<td>Oracle</td>
<td>4</td>
</tr>
<tr>
<td>SAP</td>
<td>4</td>
</tr>
<tr>
<td>HP</td>
<td>6</td>
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Recent Mergers and Acquisitions (M&A) in Israel
Success Factors of Israel’s Innovation & Entrepreneurship

- Set Policies - Promoted by national and regional policymakers
- Provided incentives (Grants, Tax, Education)
- Created conditions to attract Foreign VC investors
- Planned technology ecosystem clusters next to universities
- Attracted Multinational Corporations (Google, Intel, IBM)
- Established and supported technology incubators (government, private)
- Allocated funds to create local Venture Capitalist industry (Government)
- Availability of skilled and experienced workforce (education, military, global)
- Collaboration between Education-Defense-Industry-Entrepreneurs
- Culture of innovation - out of the box thinking
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In order to understand Israel's culture, one must look at Israel's history.
Like China,
Israel’s History goes back thousands of years

Ancient Israel Over 3,000 Years Old

Established around 1025 BC
Located in Southwestern Asia
At the Eastern end of the Mediterranean
Ancient Silk Road

Network of routes that connect East and West for trade and exchange of goods, knowledge, innovation

3 main routes are funneled through Israel
Ancient Israel  Strategic Junction

Desired spot by world’s rulers  wars-occupation-destruction

The Jewish people were expelled into exile for about 2,000 years
Small communities around the world (including Shanghai/Harbin)

At the beginning of the 20th century/during & after World War II,
Jewish refugees moved to the land of Israel to reunite with
the old community and build homeland

Modern State of Israel  Established in 1948
Size 20,770 sq. kilometer
1948 Population: 0.5 million

Israel was established as a democracy with strong roots to communism & socialism

Early Days  Focused on farming and agriculture
Collective farming communities, Kibbutzim, kolkhoz

Shifted to innovation  Today a technology powerhouse
Today's Jewish population is over 6 million
Immigrated from over 130 nations
Success Factors of Israel's Innovation & Entrepreneurship

- Set Policies - Promoted by national and regional policymakers
- Provided incentives (Grants, Tax, Education)
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- Culture of innovation - Out of the box thinking
Non-conventional Success Factors

What are they?
How were they created?
Can they be learned and applied?

Culture of innovation - Out of the box thinking
Non-conventional Success Factors

1. Diversity - The Law of Return
   Creating a rich cultural diversity

2. Out of Necessity
   Only the paranoid survive

3. Military service (IDF)
   The paradox of hierarchal order
   Zero Power Distance

4. Local and global networks
   Six Degrees of Separation

5. Safe environment to take risks
   Freedom to Fail
Non-conventional Success Factors

1. Diversity - The Law of Return
Creating a rich cultural diversity
Right to return, Allows and supports immigration to Israel

Support package to immigrants:
- Housing
- Education
- Healthcare
- Employment

Immigrants came to Israel from over 130 nations
Creating a colorful rich cultural diversity
1 – Diversity
Rich cultural diversity

Created Cultural diversity
Wealth of perspectives and ideas

Created Global networks
Simplifying the access to resources & markets around the world

Promoted Born Global entrepreneurs
Helps Israeli startups to think globally

3 Factors that are crucial for Israel’s innovation & entrepreneurship
In 2011, the Commander of the People's Liberation Army Navy, Admiral Wu Shengli, 吴胜利 made an official visit to Israel, meeting with Israeli Navy Commander, Rear Admiral Eli Marom.

Rear Admiral Eli Marom - Chinese descent
His grandfather, Chinese man who converted to Judaism, Mother was born in China
His parents moved from China to Israel in 1955
Non-conventional Success Factors

2 Out of Necessity
Only the paranoid survive
Israel  Early days

Difficult Conditions/No Water - Forced Israel to be creative
Difficult Conditions/No Water/No resources forced Israel to be creative.

Out of necessity

Applied Technology to overcome obstacles

Israel Early days

“Only the paranoid survive”
The water crisis is over

Over the last 10 years, Israel began to build major desalination projects seaside. In 2013, the country declared that it had beaten the drought threat.
2 - Out of Necessity  Only the paranoid survive

we are living in a tough neighborhood in Israel
Difficult conditions - forced Israel to be creative

Out of necessity
Applied Technology
to overcome threats

"Only the paranoid survive"
Defense needs  Israel must stay very advanced
Missile technology  light & small
Missile guided camera
Apply existing technologies
Creating
Apply existing technologies

Creating >> Applying in other areas

PillCam

Healthcare and medical devices
Non-conventional Success Factors

3. Military service (IDF)
   The paradox of hierarchal order
   Zero Power Distance
All girls & boys are called for service at age 18 for at least 24 months
Israeli Defense Force (IDF) - Mandatory military service

Sweat saves blood

Commitment/ Discipline
Management/Leadership
Overcome difficulties
Responsibility - Technology/Projects/People

Gain skills in relevant areas
Regular - Mandatory service minimum 24 months

Permanent - Those who seek military career or special training

Reserve service  - After completion of Regular and Permanent service, veterans are enlisted and can be called for active duty

On reserve routine for about 20 years
Usually are called for one month each year
Routine training, ongoing security activities
Usually are called for one month each year
Routine training, ongoing security activities

Join other IDF units or assembled to
a unit for the purpose of specific activity

This structure can create a
blended commending hierarchy

Students-Teachers
Managers-Subordinates $\rightarrow$ Zero Power Distance
Power Distance Index (PDI) --- In lower PDI cultures:

People are relatively interdependent to the power holders

Managers and subordinates are less concerned with status
Flat management structure
Distribution of decision-making
Participation by all members

Subordinates willing to challenge their superiors
Speak up and give suggestions to supervisors
(Hofstede, Hofstede, and Minkov, 2010)
Scores of power distance in 76 nations

- Malaysia: 100
- United States
- Netherland
- Finland
- Germany
- Russia
Scores of power distance in 76 nations

(Hofstede, Hofstede, and Minkov, 2010)

- Malaysia: 100
- United States: 40
- Netherland: 38
- Finland: 33
- Germany: 35
- Russia: 93
(Hofstede, Hofstede, and Minkov, 2010)
Scores of power distance in 76 nations

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Low Power Distance and Innovation

Flat management structure
Distribution of decision-making
Participation by all members

Subordinates willing to challenge their superiors
Speak up and give suggestions to supervisors

Impact on Innovation and Entrepreneurship
Non-conventional Success Factors

Local and global networks
Six Degrees of Separation
A group of researchers at Stanford University, stated:

"The most crucial aspects of the Silicon Valley is its networks"

*Castilla, Hokyu, Granovetter, & Granovetter, (2000, p. 218)
Any one person is connected to any other person through six or fewer relationships.
In Israel, people were asked to try to bring the package to the target person in the following way:

If the person who received the package knew the target person personally,
they had to send it directly to them,
otherwise,
they had to send it to someone they knew personally,
and in their judgment they were able to bring the package to the target person who was found:

Packages arrived at the destination via six or fewer people or fewer.

Small World Phenomena
Six Degrees of Separation

Stanley Milgram (1967)

Any one person is connected to any other person through six or fewer relationships.

Stanley Milgram

Six Degrees of Separation (maybe 2) of separation

Stanley Milgram (1967)
Local networks – one degree of separation
- Advantage of being small
- a friend brings a friend / a friend of a friend

Global networks
- Sages: "כל ישראל ערבים זה בזה"
  All Israel are responsible for one another
- Open doors of Jewish Communities around the world (Chabad, JCC)
Effective business network  Guanxi 关系

In Israel -- One degree of separation

Provides Access to Resources
Shares Insight
Supports

Jewish Guanxi
Local & Global Networks

In the picture, Netanyahu and the Adelsons are hosted by Ivy and Dr. Yossi Dashti of the California based Broadcom (Nasdaq: BRCM) to promote the Israel Philanthropic Foundations. SBN-042005
How we provide a safe environment to take risks?

How is 'Freedom to Fail' embedded in the Israeli innovative and entrepreneurial culture?
Freedom to Fail

Allocate time to do things outside of job description; explore, learn, try

Embedded in society & large organizations

Embedded in Jewish tradition
Jewish culture promotes it for thousands of years
The Sabbath - Mandatory day off (Saturday)
Freedom to Fail

Post implementation reviews
A routine practice at the IDF
- Inquiry and finding faults
- What went right and what went wrong
- Individuals report on their challenges & mistakes
- Not for blaming but rather for learning

Embedded in best practice
Jewish Learning Methods
Arguments

**Freedom to Fail**

**Arguing as a method of learning**

- Students are encouraged to present opposite views
- Children/students/subordinates
  Don’t hesitate to express disagreements
Jewish Learning Methods

- Rabbi Hanina Bar Hama
  - lived in Jerusalem 2100 years ago

I have learned from my teachers, and I have learned a lot from my colleagues, but I have learned the most from my students.
Lesson # 1: Diversity - Build well rounded teams

Lesson # 2: Identify real problems - provide value
Focus on solutions with value proposition

Lesson # 3: Create MUST do attitude
Commitment out of necessity

Lesson # 4: Build/maintain effective networks

Lesson # 5: Provide safe environment to take risks
One of the largest & one of the smallest

Two ancient Civilizations, once considered hubs of innovation

Many shared values:

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<th>Israel</th>
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<tr>
<td>History</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Family values</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Next generation</td>
<td>✓</td>
<td>✓</td>
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<td>Value education</td>
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<td>Harmony/Tikun Olam</td>
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<td>Ambitious for success</td>
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Why Israel?

China-Israel
Increasing collaboration
Investors look for

- Team
- Market
- Technology

See you on Monday