Technology Innovation and Entrepreneurship

Lessons learned in Israel

Dr. Yossi Dashti
yossi.dashti@gmail.com
WeChat: YossiDashti

Peking University,
School of Electronics Engineering & Computer Science

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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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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

Preliminary stage
Create an idea
Conduct Preliminary Feasibility Evaluation
Form Business Model
The life cycle of a Startup venture “From Idea to Exit”

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How will the world be better with your innovative idea?
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

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<tr>
<th>Characteristics of innovative ventures</th>
<th>Characteristics of successful entrepreneurs</th>
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<tr>
<td>Skilled workforce</td>
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## Innovative entrepreneurship & startup ventures

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### Characteristics of successful entrepreneurs
- Open to new ideas
- Loves challenges
- Takes initiative
- Visionary
- Dreamer
- Creative
- Networker
- Risk taker

### Startup Success factors
- Management capabilities
- Availability of capital
- Solid Infrastructure
- Skilled workforce
- Service providers
- Strategic partners
- Global networks
- Taking risks
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
Understanding the Characteristics and Challenges of Innovative Entrepreneurship

Examples from Silicon Valley/Israel

1,000 Business plans submitted to VC investors
100 Considered and evaluated
10 Selected for investment/funded
1 Realize successful exit
Promoting Innovation

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Try new ways
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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 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>
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<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 is over 3,000 years old. Established around 1025 BC, it is located in Southwestern Asia at the Eastern end of the Mediterranean.

Israel was an ancient kingdom of the Jewish people.
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
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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

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

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, 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”
2 - Out of Necessity “Only the paranoid survive”

Israel – Early days

Difficult Conditions/No Water - Forced Israel to be creative
2 - Out of Necessity “Only the paranoid survive”

Difficult Conditions/No Water/No resources forced Israel to be creative

Israel – Early days

Out of necessity
Applied Technology to overcome obstacles

Out of Necessity

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.
we are living in a tough neighborhood in Israel
2 - Out of Necessity “Only the paranoid survive”

Difficult conditions - forced Israel to be creative

Out of necessity
Applied Technology to overcome threats
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

Healthcare and medical devices
Non-conventional Success Factors

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
Israeli Defense Force (IDF) – Structure

**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
Usualy 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

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
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Scores of power distance in 76 nations

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Scores of power distance in 76 nations

- Malaysia: 100
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- Netherland: 38
- Finland: 33
- Germany: 35
- Russia: 93
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)
חבילות לתושבים אקראיים באומהה ובנברסקה ביקשו מאנשים לנסות לקרב את החבילה לאנשי היעד הבא:

אם האדם שקיבל את החבילה מכיר את איש היעד באופן אישי, עליו לשלוח לו את החבילה ישירות.
אחרת, עליו לשלוח את החבילה לאדם שיש לו עימו היכרות אישית, ושלדעתו הוא יוכל לקרב את החבילה לאיש היעד שאינו נמצא:

160 החבילות הלוחשות אוקראינים באומהה ובנברסקה.

בקריש מואשים لنמות לקרב את החבילה לאנשי היעד.


Six Degrees of Separation: any one person is connected to any other person through six or fewer relationships.

Small World Phenomena
Six Degrees of Separation
Stanly Milgram (1967)

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

ממצאים: החבילות הפגינו לטון על ידי שישה אישים.

אעון פוהות שדרוגה הפרדה.
Small world Phenomena
Six Degrees of Separation
Stanly Milgram (1967)

In Israel
One Degree (maybe 2) of separation
Effective business network

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 אחר גוזה"
  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

Google

20% work rule

Embedded in society & large organizations

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

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
Arguing as a method of learning

- Students are encouraged to present opposite views
- Children/students/subordinates
  Don’t hesitate to express disagreements
Freedom to Fail

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:

<table>
<thead>
<tr>
<th></th>
<th>China</th>
<th>Israel</th>
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<tbody>
<tr>
<td>History</td>
<td>✓</td>
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<tr>
<td>Family values</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Next generation</td>
<td>✓</td>
<td>✓</td>
</tr>
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<td>Value education</td>
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Why Israel?

China-Israel
Increasing collaboration
Investors look for

Team

Market

Technology

See you on Monday
Technology Innovation and Entrepreneurship

Lessons learned

Yossi Dashti
yossi.dashti@gmail.com
WeChat: YossiDashti