Entrepreneurship, Technology Commercialization and Industrial Development

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Agenda

- Entrepreneurship
- Entrepreneurial Mindset
- Small Business
- Business Life Cycle: Births, Deaths, Survival
- Business Life Cycle: Firm Stages & Dynamics
- Networks and Connectivity

- Technology Commercialization
- Industrial Development
- “Co-opetition” (Definition)
- Conclusions
- Useful Websites
- Q & A
Entrepreneurship

Identifying a market opportunity

AND

Exploiting it!!!
Entrepreneurial Mindset

- Passionate
- Initiative
- High energy
- Minimal needs
- Energized by chaos, ambiguity and challenge
- Persistent
- Responsible

- Problem solvers
- Persuasive
- Self-disciplined, organized
- Financially prudent
- Self-confident
- Natural leaders
- Market savvy
Entrepreneurial Mindset

Passionate

• Burn with desire
• **Must** try
• **Must succeed**
Entrepreneurial Mindset

Initiative

• Aggressive
• “Just do it”
Entrepreneurial Mindset

High energy

- “If you want something done, give it to a busy person.”
- 24/7
Entrepreneurial Mindset

Minimal needs

• Low support requirements
• Able to “go it alone”
• “Independent”
Entrepreneurial Mindset

Energized by chaos, ambiguity and change

• Not frightened by lack of structure

• Welcome uncertainty

• Expect the unexpected
Entrepreneurial Mindset

Persistent

• “When the going gets tough, the tough get going.”

• Won’t accept “no”
Entrepreneurial Mindset

Responsible

• …for success or failure

• Not afraid of risk
Entrepreneurial Mindset

Problem solvers

• Adaptive

• Enjoy / “welcome” uncertainty
Entrepreneurial Mindset

Persuasive

• Salespeople

• Skilled negotiators
Entrepreneurial Mindset

Self-disciplined, organized

• 24/7 operations
• Able to delegate
Entrepreneurial Mindset

Financially prudent

- Must understand the “value” of money
Entrepreneurial Mindset

Self-confident

• Willing to stand alone

• Not paralyzed by fear
Entrepreneurial Mindset

Natural leaders

• Able to build teams and convince followers

• Not ruled by hubris
Entrepreneurial Mindset

Market savvy

• Able to identify opportunities

• Perceptive to subtle signals
Entrepreneurs are **not**…

- Lazy
- Greedy
- Dishonest
- Paranoid

- Impatient
- Disorganized
- Ignorant
- Unlucky
Entrepreneurship...begins as **small business**

- Small business in the US...
  - ✓ = 1-499 employees
  - ✓ > 99% of US employers
  - ✓ > 50% US private sector employment
  - ✓ > 44% US private sector payroll

- ✓ 60-80% of annual new job creation
- ✓ > 50% of nonfarm private GDP
- ✓ 13-14 times more patents/employee
- ✓ 39% of high-tech workers
- ✓ 97% of exporters
- ✓ 29% of exports ($)

- ...Small business is **big**!
Business Life Cycle: Births, Deaths, Survival

• In the US…
  ✓ Births : Deaths = 1:1
  ✓ Start-ups_{year0-2} = 100\% of net new jobs
  ✓ Survival: 67\% @ 2 years
  ✓ Survival: 50\% @ 4 years

• Open or close (SMEs)?
  ✓ Access to capital
  ✓ Workforce/labor
  ✓ Educational achievement
  ✓ Lifestyle decisions

• Successful firms do close!
Business Life Cycle: Firm Stages & Dynamics

Attributes for firm survival/ success

• Intellectual Capital
  ✓ Research, ideas, patents, intellectual property

• Human Capital
  ✓ Workforce, skills

• Financial Capital

• Proximity and connectivity
  ✓ Concentration, critical mass, partnerships

• Social Capital
  ✓ Regional mindset, collaboration

Source: New Economy Strategies
Business Life Cycle: Firm Stages & Dynamics

• **Stage 1**: Conception/startup/birth

• **Stage 2**: Fledgling/Formation

• **Stage 3**: Adolescence/Growth

• **Stage 4**: Maturity
Business Life Cycle: Firm Stages & Dynamics

Stage 1: Conception/ startup/ birth

- Intellectual Capital
  - Ideas, research, technology transfer, proof-of-concept, market information
- Human Capital
- Financial Capital
- Proximity and connectivity
  - Small firm-large firm relationships
  - Public-private-academic partnerships
- Social capital
  - Entrepreneurial mindset, peer groups, mentors, networks
Business Life Cycle: Firm Stages & Dynamics

**Stage 2: Fledgling/Formation**

- **Intellectual Capital**
  - Ongoing research and development
- **Human Capital**
  - Managerial, financial, legal talent
- **Financial Capital**
  - Investment, credit
- **Proximity and connectivity**
  - Small firm-large firm, public-private-academic relationships
- **Social capital**
  - Entrepreneurial support services, networks
Business Life Cycle: Firm Stages & Dynamics

Stage 3: Adolescence/ Growth

• Intellectual Capital
• Human Capital
  ✓ Managerial, financial, legal and operations talent
  ✓ Expanded personnel requirements
• Financial Capital
  ✓ Investment, credit
• Proximity and connectivity
  ✓ Small firm-large firm, public-private-academic relationships
  ✓ Expanded market access
• Social capital
Business Life Cycle: Firm Stages & Dynamics

Stage 4: Maturity

• Intellectual Capital
  ✓ Research and innovation, productivity enhancements

• Human Capital

• Financial Capital
  ✓ Investment, credit

• Proximity and connectivity
  ✓ Small firm-large firm, public-private-academic relationships
  ✓ Extended supply chain
  ✓ Expanded market access

• Social capital
Networks and Connectivity

- Proximity and connectivity
  - Concentration
  - Critical mass
  - Industrial clusters
  - Small firm-large firm
  - Public-private-academic

- Social capital
  - Entrepreneurial mindset
  - Peer groups
  - Mentors
  - Entrepreneurial support services - infrastructure
  - Informal networks
Technology Commercialization

- New or improved products and services are vital ingredients for industrial cluster growth
- Formal mechanisms for technology commercialization assist entrepreneurs
  - Technology transfer
  - In-licensing = jobs
  - Out-licensing = royalties
  - Spin-outs
Industrial Development

Industrial clusters

- **Policy objective**: Grow industry sectors by leveraging competitive advantage(s)
- Result of horizontal and vertical concentrations of firms that achieve critical mass
- **Sustainable if:**
  - ✓ A mix of firms (by size & type) who work together
  - ✓ A mix of public-private-academic relationships
Industrial Development

Social capital

- **Policy objective:** Strengthen entrepreneurial mindset
- **Entrepreneurial support services**—i.e., infrastructure—can accelerate social capital growth
  - Peer networks
  - Mentor relationships
- **Informal networks** become organic
Industrial Development

• Without critical mass, industrial clusters will not grow
  ✓ Remain small or decline
  ✓ Lose or never gain competitive advantage(s)
  ✓ Unsustainable
• Building relationships is a valid policy objective
  ✓ Attract, retain, grow…
  ✓ …Talent/ workforce, jobs, companies
Industrial Development

• Identify industries with appropriate mix of attributes in order to strengthen and leverage competitive advantage(s)
  ✓ Requires extensive data analysis and market research
• Establish/improve mechanisms for technology commercialization
• Focus on relationships
  ✓ Create infrastructure
• Attract, retain, grow…
• …Talent/workforce, jobs, companies
Industrial Development

• Identify industries with appropriate mix of attributes in order to strengthen and leverage competitive advantage(s)
  ✓ Macroeconomic analysis
  ✓ Microeconomic analysis
  ✓ Market research
  ✓ Forecasting and scenario planning
  ✓ Interview and survey research
Industrial Development

- Establish/ improve mechanisms for technology commercialization
  - Public-private-academic
  - Formally engage key decision makers and technical experts
  - Develop review mechanisms
  - Scan for new developments
  - Push technology—i.e., don’t let it sit unused
  - Partner/ combine technologies
  - Meet regularly
Industrial Development

• Focus on relationships
  ✓ Public-private-academic
  ✓ Formally engage key individuals and organizations
  ✓ Meet regularly
  ✓ Network formally as well as informally
  ✓ Connect!
Industrial Development

- Attract, retain and grow:
  - Talent/skilled workforce;
  - Jobs;
  - Companies
Definition: “Co-opetition”

- Cooperation
- Competition
Conclusions

• Despite current economic conditions, opportunities are big and growing
• Uruguay has a unique mix of advantages
  ✓ Based on location, socioeconomic and demographic mix, infrastructure, policies,…
  ✓ Technologic opportunities
  ✓ Location opportunities
Useful Websites

- http://www.entreworld.org/ —resources for entrepreneurs (Kauffman Foundation)
- http://www.celcee.edu/ —Kauffman Center for Entrepreneurial Leadership Clearinghouse on Entrepreneurship Education
- http://www3.babson.edu/eship/ —Arthur M. Blank Center for Entrepreneurship (Babson College)
- http://www.lowe.org —”Peerspectives” (Lowe Foundation); advice for entrepreneurs
- http://www.developmentgateway.org/ —Portal for information on international and sustainable development
- http://knowledge.wharton.upenn.edu/ —Knowledge@Wharton (see “The Importance of Being Latin America”)
Thank you!

www.KLIOS.net