Financing Innovative Enterprises

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Some key questions

- What is innovation?
- Why is it important?
- What are innovative enterprises?
- How do they develop?
- What are the financing problems they face?
- How can these be alleviated through various forms of public support?

National Innovation Systems

- Innovation is a **complex** process: emerges from a continuous interaction between
  - firms,
  - suppliers and buyers
  - external actors like universities or research and development (R&D) organizations
  - Government policies
- International dimension

Innovation as a source of competitiveness

- Innovation is the creation of new products or processes or the improving of existing ones
- Innovation results in higher added value
- Innovation is a key way to retain or gain competitiveness

What are innovative enterprises?

- What do they do?
  - Introduce to the market new inventions or technological discoveries
  - New applications for existing technologies
  - Introduction of business practices or technologies which are new to country/market (but <u>not to the world</u>)
- They are new/young and can grow very fast

Financing for innovation

Critical link between economic agents involved in the innovation process:

- Enabling (providing resources)
- Discriminating (between good and bad projects)
- Facilitating the dissemination of information

The financing challenges

- High uncertainty
  - No track record, no collateral
  - Limited evidence of feasibility
  - Possible high-rates of obsolescence
- Information asymmetry:

entrepreneurs vs. investors

The case for public intervention

- R&D underprovided in a competitive market
- Increasing returns in developing new forms of financing
- Network effects to address information issues

Market failures justify government intervention but the design of policies needs to avoid government failures through the creation of a proper system of incentives.

Financial development and innovation

- New firms depend more on external finance than existing firms.
- Well-developed financial systems ease external financing constraints that impede firms' expansion.
- Sectors that depend on external finance because of technological reasons, grow faster in more developed financial countries.
- Intangible assets more likely to attract financing in more developed financial systems.
- Higher levels of financial development are associated with faster adoption of new

Financial development promotes economic diversification and innovation

BUT..

- What are the specific needs of innovative companies ?
- What are the challenges for traditional financial intermediaries?
- What is the role of public policy?

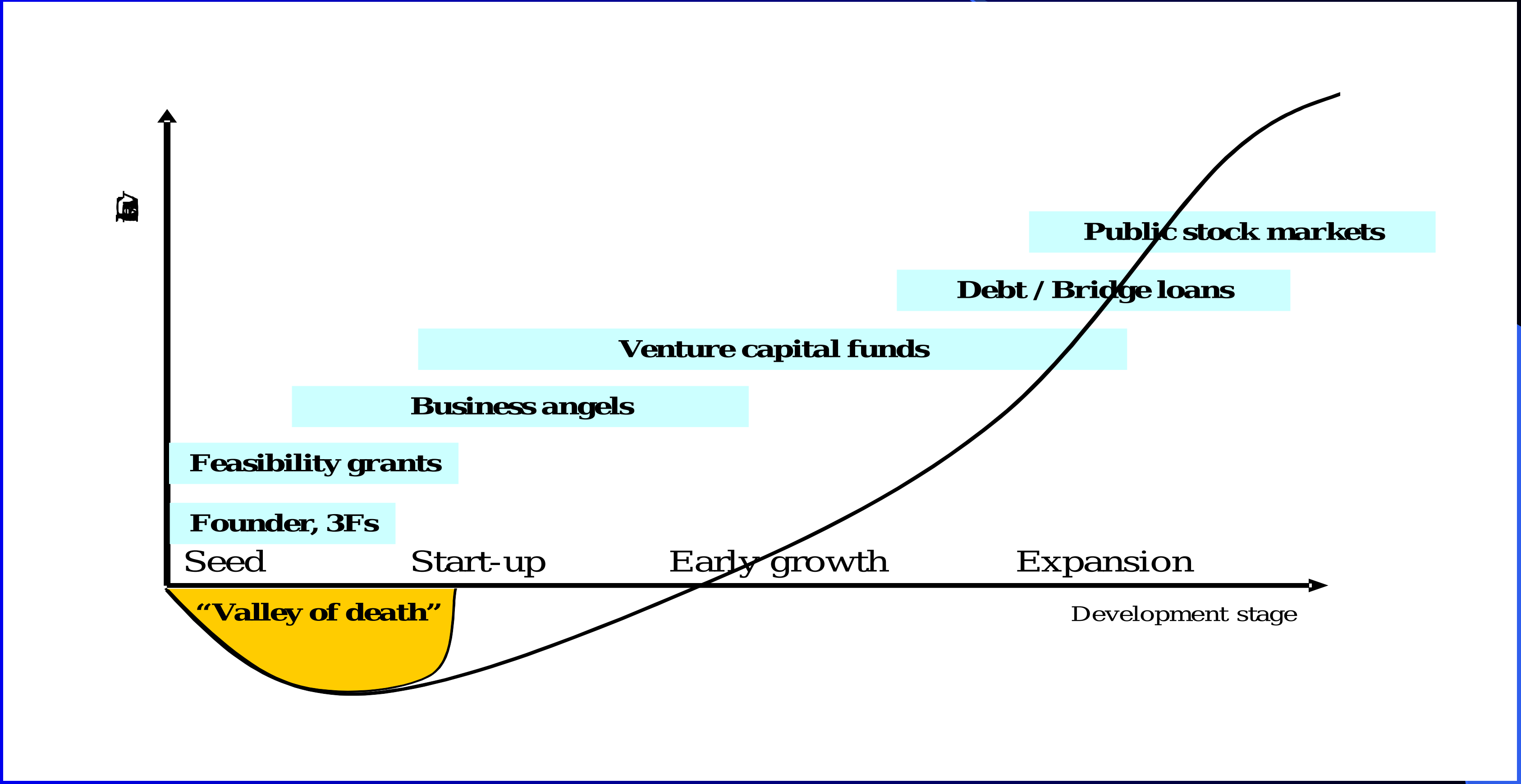
Development of innovative enterprises

- It starts with an individual (group) and an idea
- Exploration of technical feasibility, market potential, and economic viability
- Product development
- Start-up of operations; market introduction
- Market and organizational expansion

Development stages

- Seed stage – initial R&D, business concept refinement, feasibility analysis
- Start-up stage – prototype development, market research, formal organization.
- Early-growth – small-scale commercialization, platform for scalability
- Expansion – substantial growth in scale

Development stages



Starting the financing chain

- Is there a **supply of entrepreneurs** coming from an existing industry?
- Known issues in economies in transition:
  - Entrepreneurship/business environment
  - Low R&D and dominance public R&D
  - Poor links between publicly-financed R&D and industry
- How **R&D/early-stage support programmes** can create a stream of potential opportunities?

Financing available

- Public: feasibility grants, guarantees, co-investment and other form of support to private investors.
- <u>In addition:</u> tax incentives, technical, infrastructure, or knowledge support
- Private: microcredits, other loans, mezzanine financing, equity

Public financing

- It nurtures the development of business through their riskier development phases.
- But it is not clear which enterprises will succeed.
- Balance between screening and nurturing.
- It creates opportunities for future private involvement.

Feasibility grants

- Effective source of seed financing
- Exploration of new ideas
- Importance of the decision-making process for allocation (transparency, guidelines for eligibility, unconditional allocation rules),
- Monitoring of projects – staged funding.
- Evaluation – but not focus on the

Business support services

- Platform for “investor readiness”
  - Facilitate quality business planning
  - Prepare companies to communicate with lenders and investors.
- Wide range of services
  - Awareness raising
  - Networking
  - Matchmaking
  - Training and coaching.

Support institutions

- Technology incubators / innovation accelerators
- Specialized information intermediaries
  - Technology transfer offices
  - Networks for cooperation between business, educational, and R&D institutions

Microcredits

- Small loans
- Unfeasible for traditional banks to provide
- Granted by specialized micro-finance institutions (MFI)
  - Appraise credit worthiness differently
  - Have different collateral requirements
  - Provide business advice and support
  - Public support to facilitate their

Innovation and traditional banks

- Lack of tangible assets (collateral)
- Volatility in cash flows
- Lack of historical operating performance
- No gain from the enterprise success, beyond the repayment of principal and interest
- Public support to credit enhancement can help to overcome these difficulties.

Forms of credit enhancement

- Provision of guarantees
  - Promise to reimburse lenders for losses up to pre-specified amounts
  - Enterprises can use guarantees to obtain financing
- Securitization (asset-backed securities)
  - Pooling of risks
  - Transfer of risks to separate entities

External equity

- Match between risk profile and potential payoffs
- Investors have claims on the residual value of the enterprise (i.e. they share the upside)
- Investors also share the downside (i.e. they can lose their money entirely)

Types of equity investors

- Informal: business angels
- Formal: venture capital companies
- Corporate: Collaboration between start-ups and MNC/large local companies.
- Public support: hybrid funds, support to networking, tax incentives.

Tax incentives

- Provided to individual, corporate or institutional investors
- Major forms
  - Tax rebates for investments in certain companies
  - Tax deduction for losses
  - Exemption or deferral of capital gains

Displacement of private funding

- Would financing be possible without the public programme?
- Does the programme attract enterprises of marginal or poor quality?

Measuring success

- Necessary but difficult
- Many dimensions, some of them difficult to value
- Long-term considerations to be taken into account.

Innovation financing

- It's <u>not only</u> about money
- Favourable framework conditions – business environment.
- Attractive business opportunities
- Need to avoid bottlenecks at any stage of development
- Institutional development – basic financial intermediation.
- Accumulation of skills