

Making Implementation Endogenous: Fomenting Schumpeterian Embryo in RIS3 Practice

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Motivation and structure of the talk

1. Making Schumpeterian / Hayekian perspective on entrepreneurial self-discovery operational.
 - If errors are unavoidable, we need to have an operational conception of a process of error detection and correction.
 - The talk introduces a set of operational concepts (project portfolio; diagnostic monitoring, Schumpeterian development agencies) which public sector officials can use.
 - Implementation as endogenous variable of analysis rather than an afterthought.
2. Applying this operational conception to entrepreneurial self-discovery to RIS3 implementation practice

Setting the stage: genre of the talk

In the Hayekian view, focus on experimentation and doing (as opposed to analysis and thinking) – is paramount. Twin perspective on action :

- Analysis of a ‘doing thinker’ -- an academic with a zest for action. For him, the main questions of action are ‘why’ and ‘what’.
- Hypotheses of a ‘thinking doer’ -- an action-oriented practitioner capable of self-reflection. For him, the main question of action is ‘how to’: institutional design of the process

But this is not just about research. As every design it blends analysis (research) with synthesis (art and craft). This is the main conundrum of new open economy industrial policy (of which SS concept is one example): economists do not have competencies to make it novel in practice.

- For a ‘thinking doer’, a gap between a policy prescription (of which S3 methodology is one example) and actual practice is unavoidable fact of life. The question is whether there is an iterative process (to be called diagnostic monitoring) to inform and improve the both.

By posing the question, the paper hopes to initiate this process in the EU SS experiment

Smart Specialization as Recombination of Capabilities

Departure from 'business-as-usual' in three dimensions:

Technological

- Diversification on the basis of existing technological capabilities

Institutional

- Creation of organizational spin-offs – drawing on existing organizations yet creating new competencies

Political economy

- Transformation elites
- Carving up space within the established vested interests

Collaborative entrepreneurial self-discovery: Two dimensions

Motivation: The need to operationalize public sector roles in the Hayekian perspective

How to trigger self discovery when private sector is at (best)myopic and (perhaps) rent seeking, while public sector is at best (risk-averse) and (perhaps) corrupt?

- Agents with new capabilities, such as a new private sector (which learns to innovate by connecting to the world economy) and a new public sector (capable of providing complementary public inputs for private-sector search) develop together.
- They are two sides of the same collaborative process.
- This process begins even if government is, on the whole, weak, and many firms are rent-seeking because the public and private sectors are highly heterogeneous.
- The issue is to leverage this heterogeneity: identify and engage with 5% of good (dynamic) exceptions, both in public and private sector sides.

Real-life entrepreneurial self-discovery process

– four issues

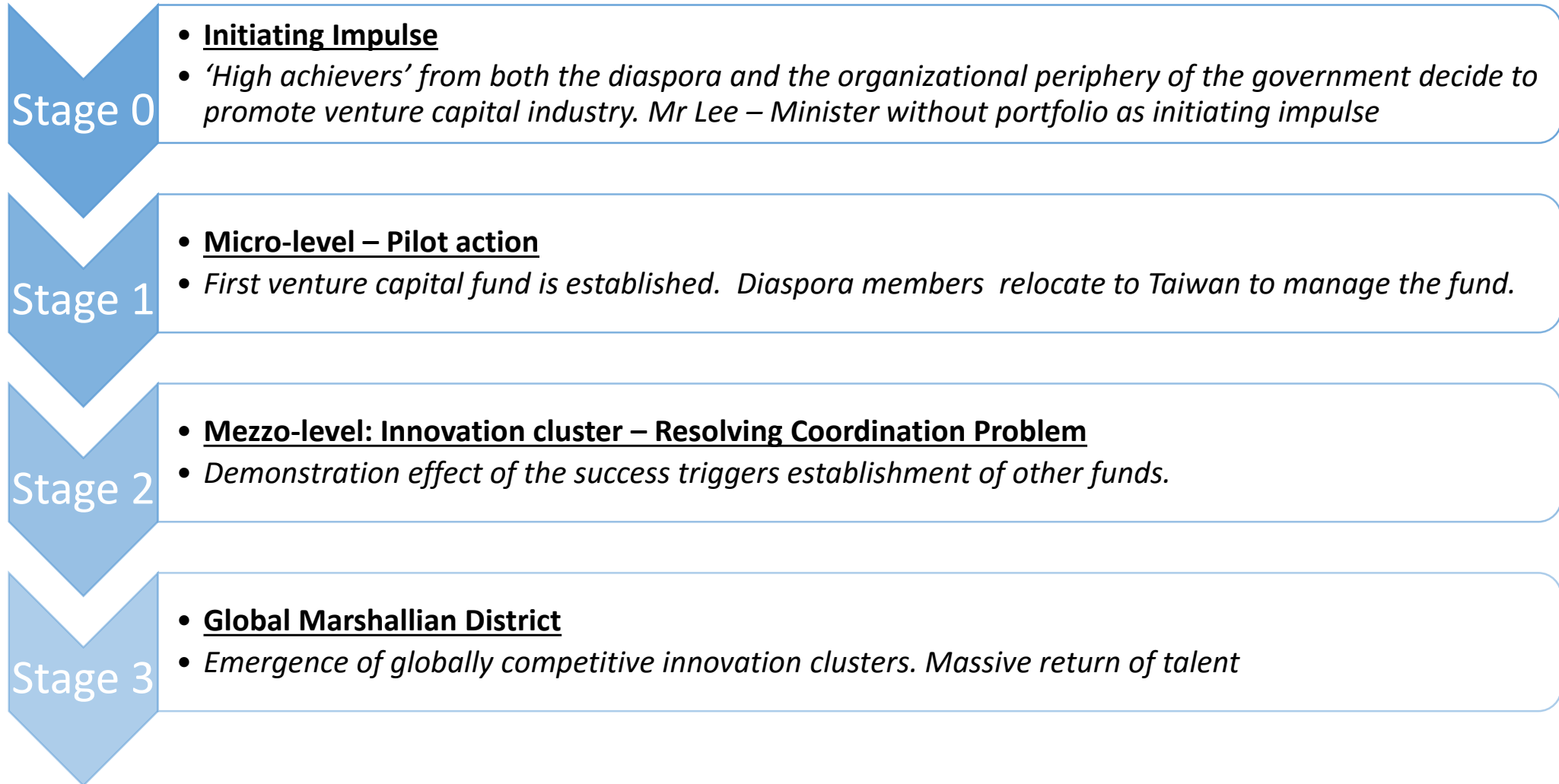
0. Initiating impulse problem: What motivates and triggers action (as opposed to meetings and studies) ?
1. First mover problem (proof of concept for a new domain): Which is the first investment project to test the new domain? How to identify collaborators for this project?
2. Collective action (regional cluster coordination) problem: How to supply complementary and usually highly specialized public inputs to transform first mover investment into a portfolio of diverse projects?
3. Critical mass problem: how to acquire specialized competences to become globally known and competitive?

In the evolution of a new domain, regional development emerges in two main facets:

- A locus of collective action to create specialized public inputs (skills, MSTQ etc.): trust emerges locally
- A by-product of global strategies : Act globally, think locally – not the other way around. Or more precisely: execute globally, think locally

To be a useful to policy maker, an operational methodology must shed light on how to resolve these four policy problems

Public sector as key agent in Hayekian process: Taiwan in the 80's and 90's as an illustration



Diagnostic monitoring as the key procedure

What replaces 'picking winners' – both in public and private sectors?

- No matter how carefully the new projects are defined and planned, there are unanticipated problems – limits of conceptions, surprises of execution.
- To detect and resolve these problems it is necessary to connect the planning phase of place-based development to an institution that monitors the progress of projects, uses signs of difficulty to trigger inquiry into the root cause of the problem, and convokes the actors who can help solve it – or calls the attention of higher-up authorities to problems that remain unsolved.
- We'll call this **DIAGNOSTIC MONITORING** – monitoring to underscore the continuing need at all levels to check on progress, given the limits of planning, and diagnostic because the aim is to facilitate and organize problem solving by the actors, not to use the threat of punishment for bad performance as an incentive for good behavior.

What is being monitored?

Two complementary portfolios: of projects and programs

Real sector portfolio of projects

- ITRI – Industrial Technology Research Institute
- ETRI – Electronics Technology Research Institutes
- Pilot VC funds

- All have project portfolios to test new innovation domain for Taiwan: those are first mover projects to explore and experiment with a new domain.

Framework program as a public sector change engine

- Taiwan Venture Capital Program – a private-public reform effort – as a new framework for action: framework program

- Framework program works with existing public and private-public programs and organizations to reform, and align them.

Who performs diagnostic monitoring? Schumpeterian Development Agencies

Schumpeterian development agencies (SDAs) – that learn, experiment, make mistake and correct them:

- Public sector – DARPA of US Department of Defense, IDA (Irish Development Agency), India Translational Research Program of Ministry of Science and Technology
- Hybrid (private-public): Foundation Chile
- Private: early stage VC funds

Lessons from SDAs :

- Project and project manager as key institution
- Project implementation experience is the key: there is no substitute for it
- Management of a project portfolio: error-detection and correction as a key issue
- Co-development: systematic search for relevant partners as key principle
- Extended peer review procedure to make project portfolio grow, to detect and correct mistakes

To what extent existing RIS methodology guides experimentation with project portfolios?

- Step 1 - Analysis of the regional context and potential for innovation
- Step 2 - Governance: Ensuring participation and ownership
- Step 3 - Elaboration of an overall vision for the future of the region
- Step 4 - Identification of priorities
- Step 5 - Definition of coherent policy mix, roadmaps and action plan
- Step 6 - Integration of monitoring and evaluation mechanisms.

Reminiscent of linear model of innovation: from R&D to wealth generation; here it is from analysis to action.

Key issues:

- Errors are corrected ex-post as M&E is backward-looking.
- Capacity-building in public sector?
- Projects are not even mentioned.

So an enlightened sceptics might say

- RIS is just an advanced lip service to experimentation: a new terminology for 'business as usual'
- International organizations continuously generate innovation in allocation of public funds

Example: failed transition of World Bank to SDA in 1995-2005

New lending instruments are introduced to institutionalize co-experimentation with clients: Learning and Innovation Loan and Adaptable Program lending are just two examples of a new experimental project cycle.

World Bank as (uplifting) Benchmark for European Commission

As EC, manifestly NOT a SDA, yet positive variations have emerged in three ways:

1. Serendipity: betting on dynamic public officials

- Through an **alliance** of entrepreneurial client and task manager in the international organization.
- **Advanced setting:** Office of Chief Scientist in Israel was funded by the World Bank 1974 loan.
- **Less developed setting:** Enterprise Restructuring SDA in Moldova 1995 – 2000.

2. “Guided Serendipity”: new framework programs

- **Debt Management Trust Fund** as an example of capacity-enhancing diagnostic monitoring (discussed in detail in the paper).
- **Diagnostic monitoring** emerges because of dismal public sector capability of low income countries, not because of innovation-induced uncertainty

3. Hand-holding: strategic pilots

- **River Blindness Program** – a World Bank consortium between private pharmaceutical companies (Merck as a ‘first mover’) and African governments which successfully eradicated River Blindness disease.

Humble Proposal: Small portfolio of strategic pilots in RIS practice

Two diagnostic monitoring pilots:

- 1. In less developed setting:** e.g. Croatia, Slovenia and Poland RIS3
- 2. In advanced settings** – where there exist both project portfolios and framework programs to build upon

E.g. Basque country RIS in Spain – which draws upon two successful frameworks – Metropoli 30 (established in 1990 to trigger an open-ended regional transformation) and Technalia (established in 2000 and which triggered, eventually, a reform of regional R&D organizations)

Conclusion 1

Building Schumpeterian Embryo in RIS Practice

Constructive program: Being humble and ambitious at the same time

Humble (in the short-run): betting on dynamic exceptions

- ‘Business as usual’ dominates
- Yet there are exceptions when dynamic RIS officials trigger Hayekian process of bootstrapping: recall Taiwan’s Minister without Portfolio and the three-stage process he triggered.

Ambitious (in the medium and long run): turning exceptions into a new rule

- The key issue is how to institutionalize dynamic exceptions yet not stifle them with public sector procedures. In two ways:
 - 1) **Engage in diagnostic monitoring.** Diagnostic monitoring as ‘light touch’ procedure to guide experimentation and error-correction.
 - 2) **Establish embryos of SDAs.** They are organizational platforms to institutionalize dynamic exceptions without stifling them.

Conclusion 2: Making Schumpeterian / Hayekian perspective operational

Key concepts:

1. Entrepreneurial self-discovery as phased bootstrapping – in 4 stages
2. Diagnostic monitoring as the key procedure
3. What is being monitored?
Two complementary portfolios: of projects and programs
4. Who performs diagnostic monitoring?
Schumpeterian Development Agencies

Thank you! Comments welcome.

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Attachment 1

Framework programs as a new generation of programs:

Examples and Key Characteristics

National Linkage Program in Ireland (1987-1992)

- Key problem of the 80's: many multinationals which do little local sourcing.
- Supplier development implies assembling of a packages of services which relies on many service providers and which is highly contextual.
- A team comprising experts in management, business development, technical issues, accounting, and banking was the key to success.
- This team (search network), in collaboration with the participating multinationals benchmarks potential suppliers and includes some of them into the program. It monitors the program.
- The program taps into a variety of SME programs and transforms them, rather than duplicating existing programs – leverages heterogeneity of service providers.
- Only a segment of multinationals participates.
- Outcome: 83 supply companies participated in the program dramatically outperformed their peer with similar characteristics.

Science matters for
growth, even in Russia.
Megaprojects Initiative
(2002-3)

- Ivory-tower science with few linkages to industry as a major binding constraint.
- A program to demonstrate that R&D matters: matching grant scheme to industry (in the order of 10 mln. US per project) to transform R&D of research institute into commercially successful and visible projects.
- Picking winners fails from the very beginning: priority areas are defined but most applications come outside the priority areas.
- Deal flow problem: many applications, no projects to select from. A search networks consisting of individuals from consulting industry, beneficiary organizations and the governments is set up by a high-ranking official to transform good ideas into projects.
- Projects are re-defined as they evolve: monitoring of projects as central issue. Monitoring is performed by the same search network.

A new generation of programs: common features

#1: Humble and ambitious at the same time

- Dramatic change is at stake but the programs themselves are very specific.
- Inexpensive from a budgetary perspective (in fact, money is difficult to spend). Management of programs, not funding as a binding constraint.
- Since the programs are initiated on organizational periphery, they are either not taken seriously by vested interests or allowed to establish an alliance with vested interests.
- Initiated and sustained by exceptions.
- Exceptional but high placed officials ('sticky people') have both personal vision and can leverage resources of their organizations to act on it.

A new generation of
programs:
common features

#2: Bootstrapping solutions, projects and reforms

- Clear benchmarks – role models to learn from.
- Glaring (yet shifting) binding constraints to respond to
- But no blueprints to follow – to match inspiring role models to mundane constraints.
- Solutions emerge as one goes along: inside-out reform.

A new generation of
programs:
common features

#3: How? Key building block: search networks

- Search networks are networks that allow you to rapidly identify people or institutions that are solving (part of) a problem closely related to the one you are trying to solve.
- Search networks are thus key to benchmarking – finding solutions that inform your provisional design.
- These framework programs – they create frameworks for tapping in and transforming into existing programs.

A new generation of programs: common features

#4: How? Motivation: from rents to quasi-rents

- The majority seeks rents: from natural resources, public office and other monopoly rents.
- Yet some pursue quasi-rents – a temporary monopoly contingent on performance (inventors rewarded by patents as an example).
- New generation of programs create ample opportunities for quasi-rents.
- But these opportunities are not automatic: projects need to be defined. This is what search networks do.
- In the long-run, quasi-rents are much larger than rents. But one needs to have an appropriate planning horizon to realize the potential. In search networks, planning horizon is endogenous rather than given.
- Transition from rent-seeking corruption to growth- and quasi-rent-promoting corruption (a heretic thought).

A new generation of
programs:
common features

#5: How? Matching problem

- The solution is revolutionary incrementalism
- This means step by step transformation of bad public and private features
- This in turn requires using internal diversity to find better performing parts of each, and matching them
- This is what search networks do

Attachment 2. Benchmarking Framework: Populating the Table with RIS experiences

	Do Schumpeterian public framework exist? No The issue is creating them	Do Schumpeterian public framework exist? Yes
Is there an experience of project implementation (related to new domains) to learn from? Yes	Reforming public support of self-discovery: RIS3 as the framework program (1)	Continuous self-discovery: RIS3 draws on existing frameworks (2) Pais Basque context and S3 strategy : drawing on various reform frameworks, such as Metropoli 30 and Technalia Irish FDI promotion and backward linkage program; Taiwan VC initiative after establishment of pilot venture fund
Is there an experience of project implementation to learn from? No. The issue is gaining implementation experience of errors, promises and successes	Triggering self-discovery RIS3 as an initiating impulse (3) Taiwan VC initiative at its inception Foundation Chile in 1982	Institutionalizing self-discovery: RIS3 establishes diagnostic monitoring procedures (4) IDA of the first years