Role of the financial sector in the innovative growth

Financial support for SMEs and Start-ups

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**Motivation: Why innovation?**

**From input-driven to productivity-driven economy**

**Classic example: Solow’s growth model**

\[ g_Y = g_A + \alpha_K g_K + \alpha_L g_L \]

*Case 1. Increase in capital*

- **Developing economies** can get more outputs by **pouring more inputs** – e.g., labor and capital.
- However, inputs are **limited**. More seriously, this growth strategy is not sustainable, because its marginal growth is expected to be **diminishing**.
Motivation: Why innovation?

From input-driven to productivity-driven economy

Classic example: Solow’s growth model

\[ g_Y = g_A + \alpha_K g_K + \alpha_L g_L \]

Case 2. Technological progress

- It is possible to boost outputs from the same level of inputs with *technological progress*.
- This strategy is important not only for *developed economies* – which have already reached the growth deadlock – but also for *developing economies* for *more efficient use of inputs*. 
Economic growth on the wane
Strategic shift is needed – from an input-driven to a productivity-driven strategy

Korea has enjoyed rapid economic growth, called the Miracle on the Han River. Such growth was backed by the input-intensive growth strategy.

But, the input-intensive strategy has been reaching a deadlock, and sluggish productivity has dragged the economy: Contribution of TFP to GDP has dropped to below 50% level.
Policy imperative: enhancing productivity of SMEs

Both effective and inclusive growth can be achieved by boosting SMEs’ productivity.

To improve productivity of the Korean economy, policies should focus on the SME sector, which has been suffering from chronic low productivity.

Given its strong job-creation capacity, stronger SME sector would enable more inclusive and stable growth.
Quo vadis, finance?

But, the financial markets hesitate to join this new policy direction

Investment in start-ups per GDP is low

SME loans by collaterals

- Investment in the **SME sector** is small: Particularly, investment in start-ups is lower than start-up powerhouses like the United States and China

- Korean investors tend to strongly prefer **strong collateral**, especially **real-estate** – e.g., 54% of SME loans (or $0.3tn or KRW360tn) in 2018 were collateralized with real-estate
In-depth diagnosis by start-up lifecycle

Policy needs should be identified for effective supports

Lifecycle of start-ups

Cumulative profit

START
Success as a new product
Product launch
Valley of death
GROWTH
Success as a business
EXIT & RETURN

Start-ups may suffer from different kinds of difficulties according to their lifecycle: It needs to (i) **figure out difficulties** in detail and (ii) **create friendly system** throughout the lifecycle.
What do start-ups need?: *Stage 1. Start*

Start-ups have nothing except ideas

**Policy needs by start-up lifecycle**

**START**
- Lacks everything except idea, esp. *office* and *money*
- Fierce competition to take up *publicly supported offices* with 5%> acceptance rate
- Budgetary supports are concentrated in growth stage – only 5% at start stage

**GROWTH**
- *Money, money, money*
  - Investors want what start-ups don’t have – *real estates*
  - Result is *high foreign capital dependency* – circa 87%
- Whopping 94%

**EXIT & RETURN**
- Investors are *hard to harvest* their investment
- Complicated *listing requirement*: takes about 13.1 yrs from birth to listing
- *M&A* record is particularly weak

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<th>Only</th>
<th>Whopping</th>
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<td>25%</td>
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Korea vs. U.S.
What do start-ups need?: *Stage 2. Growth*

They want what they don’t have

**Policy needs by start-up lifecycle**

**START**
- Lacks everything except idea, esp. *office* and *money*
  - Fierce competition to take up *publicly supported offices* with 5%> acceptance rate
  - Budgetary supports are concentrated in growth stage – only 5% at start stage

**GROWTH**
- *Money, money, money*
  - Investors want what start-ups don’t have – *real estates*
    - What *s-ups* have… | What investors want…
      - Only 25% | Whopping 94%
  - Result is *high foreign capital dependency* – circa 87%

**EXIT & RETURN**
- Investors are *hard to harvest* their investment
  - Complicated *listing requirement*: takes about 13.1 yrs from birth to listing
  - *M&A* record is particularly weak
    - Only 11% | vs. U.S. 94%
What do start-ups need?: *Stage 3. Exit & Return*

Complicated listing process and dull M&A market drags down investors’ interest

**Policy needs by start-up lifecycle**

**START**
- Lacks everything except idea, esp. *office* and *money*
  - Fierce competition to take up *publicly supported offices* with 5%+ acceptance rate
  - Budgetary supports are concentrated in growth stage — only 5% at start stage

**GROWTH**
- *Money, money, money*
  - Investors want what start-ups don’t have – *real estates*

  - Only 25%
  - Whopping 94%

  - What s-ups have…
  - What investors want…

  - Result is *high foreign capital dependency* – circa 87%

**EXIT & RETURN**
- Investors are *hard to harvest* their investment
  - Complicated *listing requirement*: takes about 13.1 yrs from birth to listing
  - *M&A* record is particularly weak

  - Only 11% vs. 94%
Tailored supports: *Stage 1. Start*

More space, more money, and less regulation

**Policy framework by lifecycle**

**START**
- **Lack of space**
  - Opening start-up incubation hub
  - Providing office space *about 0.1mn m²* space with Seoul Metropolitan Govt

**GROWTH**
- **Lack of funds**
  - Expanding policy support
  - Providing guarantees worth KRW 15.4tn
  - Incubating alternative funding channels, e.g., *crowdfunding*

**EXIT & RETURN**
- **Outdated regulation**
  - Launching pan-governmental *regulation sandbox* (FSC, MSIT, MOTIE, and MSS)
Tailored supports: *Stage 2. Growth*

Attract investors to want what start-ups have

Policy framework by lifecycle

**START**
- Obsession with *real estates*

**GROWTH**
- Lack of *funds*
  - Drawing investors’ interest in what s-ups have by establishing an infrastructure for:
    - *Assessment of movables* and *trades of movable collaterals*
    - *Incentivizing financial institutions* to provide more movable-backed finance

**EXIT & RETURN**
  - Creating various *fund schemes*:
    - Special fund for *scale-up (KDB Global Challenger, KRW 15tn)*
    - *Matching fund* btw SOBs and large firms
Tailored supports: *Stage 3. Exit & return*

Facilitate exit of investors to attract more investment

**Policy framework by lifecycle**

**START**
- Weak M&A performances

**GROWTH**
- Complicated listing process

**EXIT & RETURN**
- Creating *fund schemes with incentives* to channel more capital into KOSDAQ:
  - KOSDAQ Scale-up Fund (KDB, 300bn), KOSDAQ Venture Fund
- Promoting *pre-IPO deals in the OTC market*
- *Legislating new regulations* to promote listing of innovative businesses

<table>
<thead>
<tr>
<th>Year</th>
<th>No of newly listed firms with innovative businesses</th>
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<tbody>
<tr>
<td>2016</td>
<td>10</td>
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<td>2019</td>
<td>24</td>
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Thank You