Growth
Division

Israel Innovation Authority

Notes on New policy Challenges

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History: Israeli Industrial R&D 50 years ago

- High level of scientific research and a national science ethos
- 10 scientists and engineers per 10,000 employees (25 at the US)
- Industrial R&D policies based in public research institutions, with almost no Industrial R&D in the private civilian-sector
- R&D expenditures — less than 1% of GDP (2nd lowest on OECD)
- Less than 1000 R&D academic workers in the industrial sector

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And then came new policies…

- Creating the OCS (Office of the Chief Scientist), and flipping the industrial policy to privately led R&D projects
  - Neutral with regard to technologies and sectors – the industry chooses the R&D projects
  - Aimed to increase every sort of private industrial R&D
  - Strengthening international cooperation & finance
- In parallel: Building the Israeli Defense Industry, following the wars of 1967 (a French embargo) and 1973

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After 25 years (in 1992)

- ✓ R&D as % of GDP reached 2.5% (2014 OECD total average)
- ✓ Industrial R&D policy was led by one main agency (OCS), supporting ~25% of industrial R&D expenses
- ✓ An R&D driven industry was formed, mainly ICT

➔ **Increased budgets and new policies were coming into place, with higher focus on entrepreneurial finance and building a new VC financial-industry**

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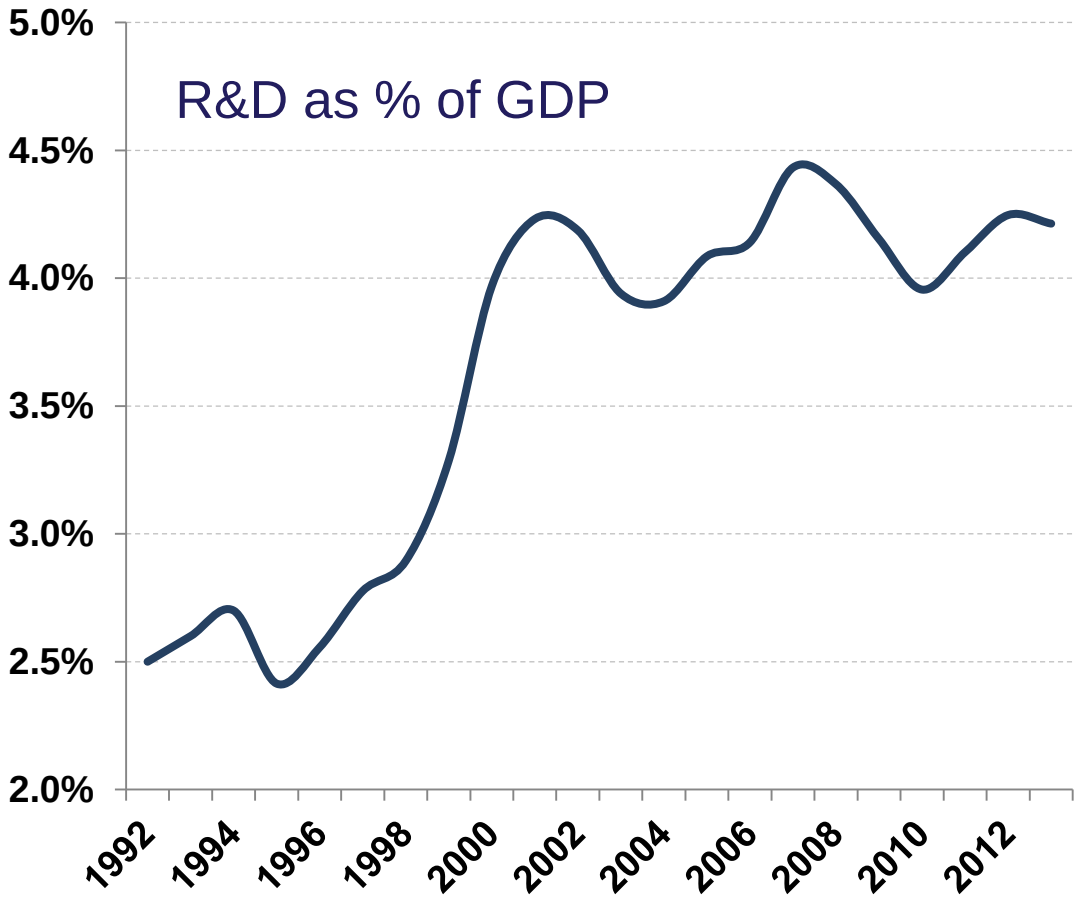
Policy was again successful



Source: OECD (2013)

- Big leap in the 90s
- Again–the ICT sector
- 9% of the employees
- ~70,000 R&D workers

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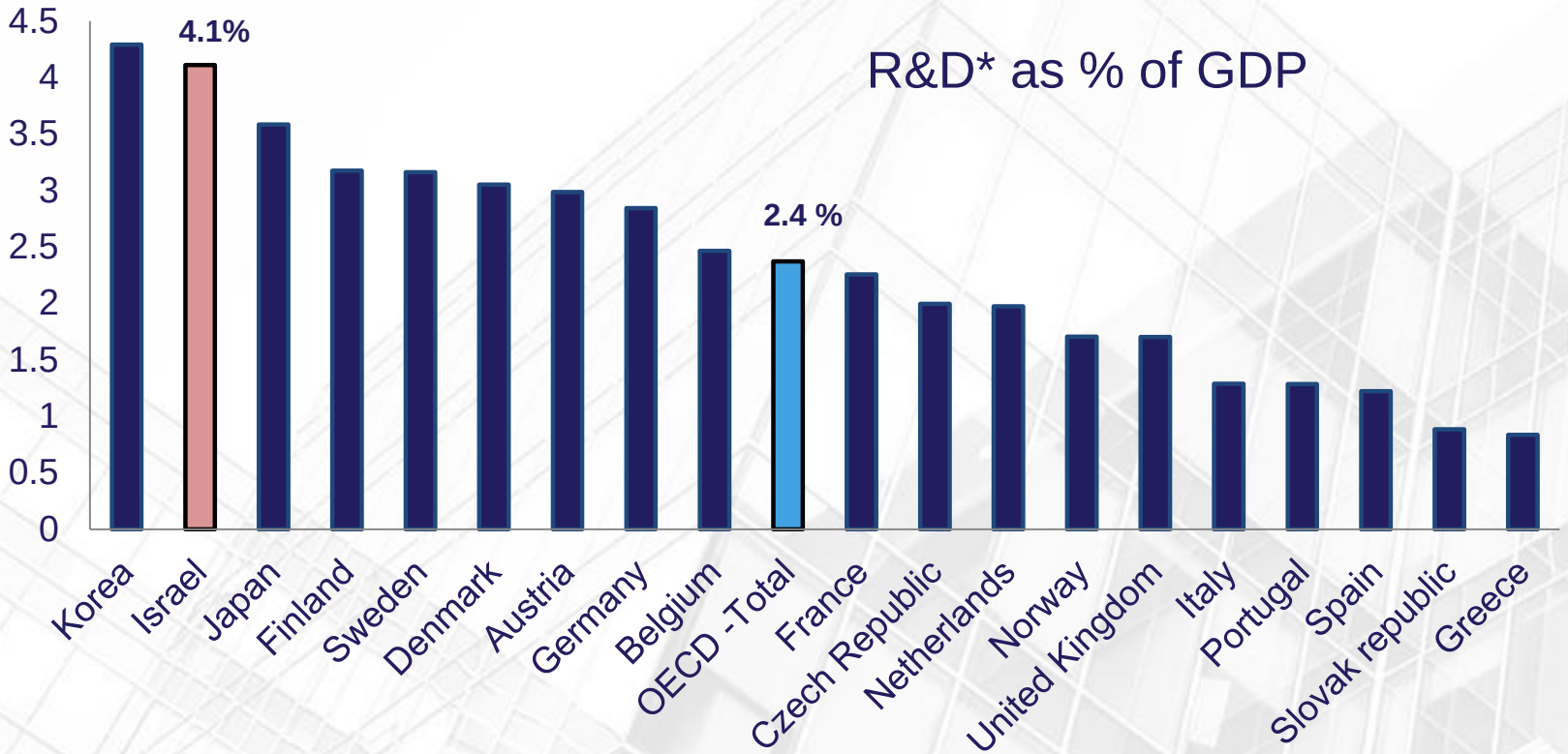
Placing Israel in the forefront of the OECD



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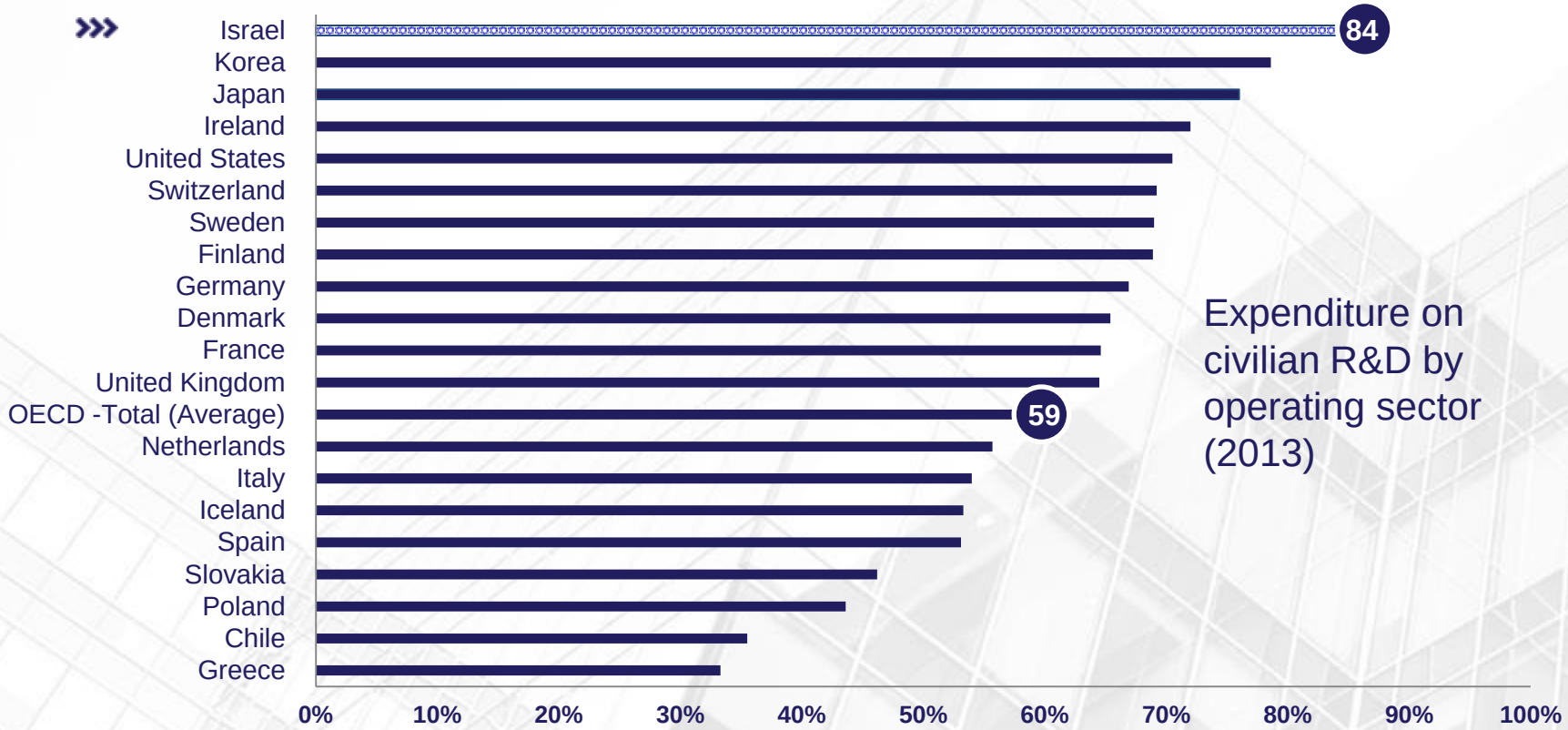
Source: OECD, 2014

* Excluding defense R&D within the government\army

Most R&D is market-driven



Expenditure on civilian R&D by operating sector (2013)

Source: OECD

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Relying heavily on tech entrepreneurship

Global startup Ecosystem ranking (2015)

1. Silicon Valley
2. New York
3. Los Angeles
4. Boston
5. **Tel Aviv**
6. London
7. Chicago
8. Seattle
9. Berlin
10. Singapore

Source: Compass

4.8B$

Total Exits in 2015

~500

Net new Startups each year

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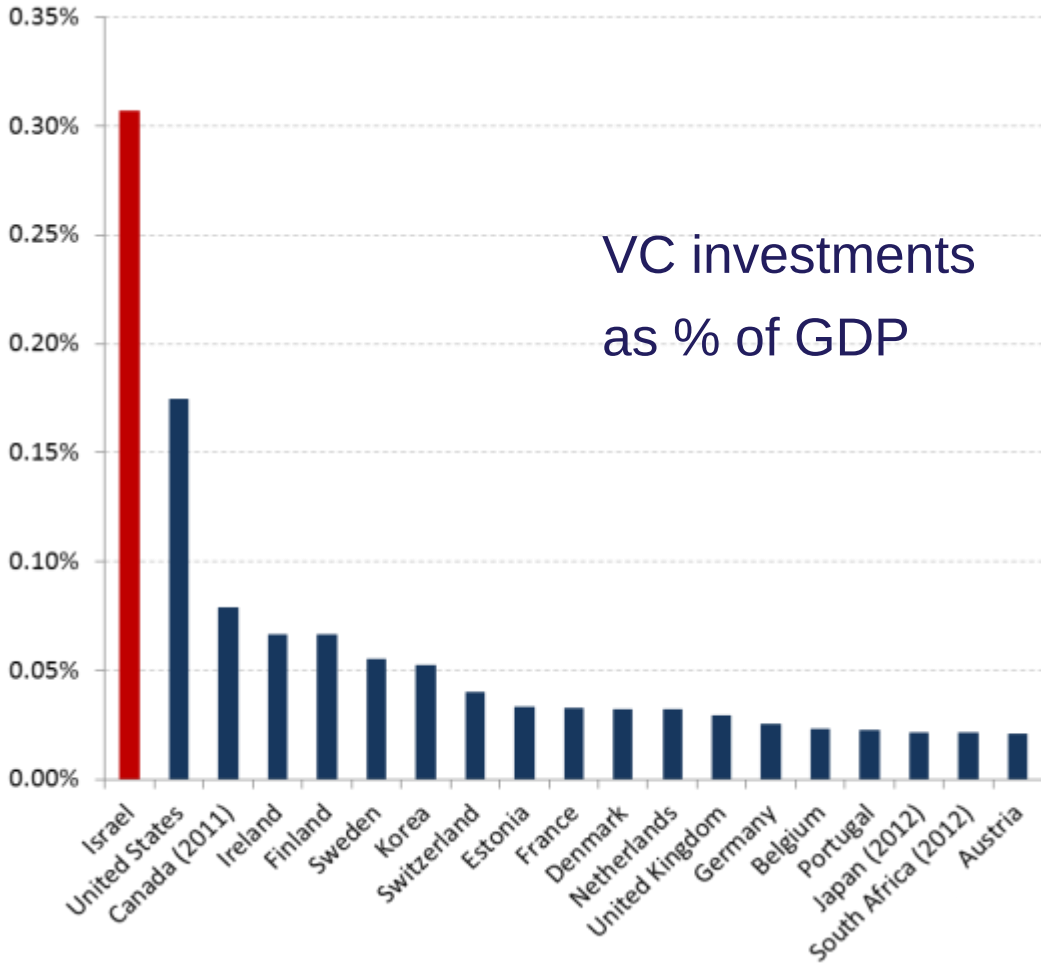
Supported by vibrant VC industry



VC investments as % of GDP

2.5B$

Annual VC investment

400

VC backed deals annually

Source: Entrepreneurship at a Glance 2014, OECD

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Attracting many Multi-National Companies

- 300
  R&D centers
- About 35% of Israel's R&D workers are working in "pure R&D" centers

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New Challenges Ahead

Success bring new (big & complicated) challenges:

- Government is small (less than 5% of the private sector)
- Human capital supply became a growth barrier
- Inequality is boosting as other sectors (Government, services, production) are much less productive or innovative

How do we enable again Radical Innovation Policy, when:

- Government control and beurocracy ramp up with time
- Neutrality and Success enhance Passiveness…
- How to "infect" the government with the innovation spirit

OCS → Israel Innovation Authority

Missions based operation, by Division:

- Technological Infrastructure
- Early Stage
- Growth
- Advanced Manufacturing
- Societal Challenges
- International Collaborations

- Each division acts as a "micro-authority"
- "New Innovation Law" gives more operational capabilities and high investment flexibilities

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