

Intangible capital of Nordic Countries: A navigation map

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**Safe and Ethical Cyberspace, digital assets and risks:
*How to assess the intangible impacts of a growing phenomenon?***

The World Conference on Intellectual Capital for Communities

UNESCO, June 14&15 2018



Vinnova Prestudy Spring 2018
by Eskil Ullberg, Leif Edvinsson,
Carol Y. Y. Lin, Sarah Lidé

NIC and IA





IA case on Spotify

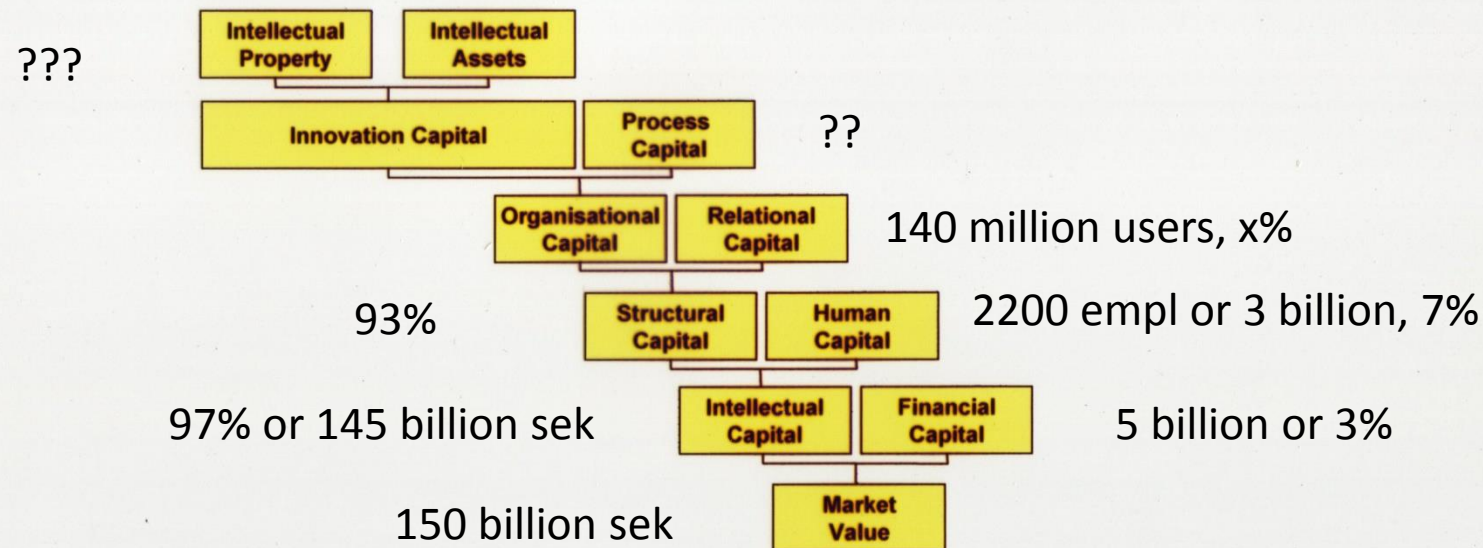
- Origin in Sweden 2006
 - Music streaming and publishing
 - Several iteration before globalising
 - Spring 2018 going public in New York
- Estimated market value 150-200 billion SEK, (today 230)
- About 3000 employees inside and outside Sweden
 - see also <https://sv.wikipedia.org/wiki/Spotify>

The Hidden Values



IC TAXONOMY

UNIC IC Value Scheme TM



Seven overlapped countries comparing the top 10 Global Competitiveness vs. NIC ranking

The Top 10 Most Competitive Global Economies Global Competitiveness Report 2017-2018			2016 The Top 10 National Intellectual Capital	
	Global rank*			NIC Rank
Switzerland	1	←	Switzerland	1
United States	2		Denmark	2
Singapore	3	←	Sweden	3
Netherlands	4		Singapore	4
Germany	5		Luxembourg	5
Hong Kong SAR	6		Norway	6
Sweden	7		Finland	7
United Kingdom	8		Netherlands	8
Japan	9		Hong Kong	9
Finland	10		Ireland	10
			USA	10

Source: The Global Competitiveness Report 2017-2018

*2017-2018 rank out of 137 economies

National Intellectual capital for long-term wealth creation

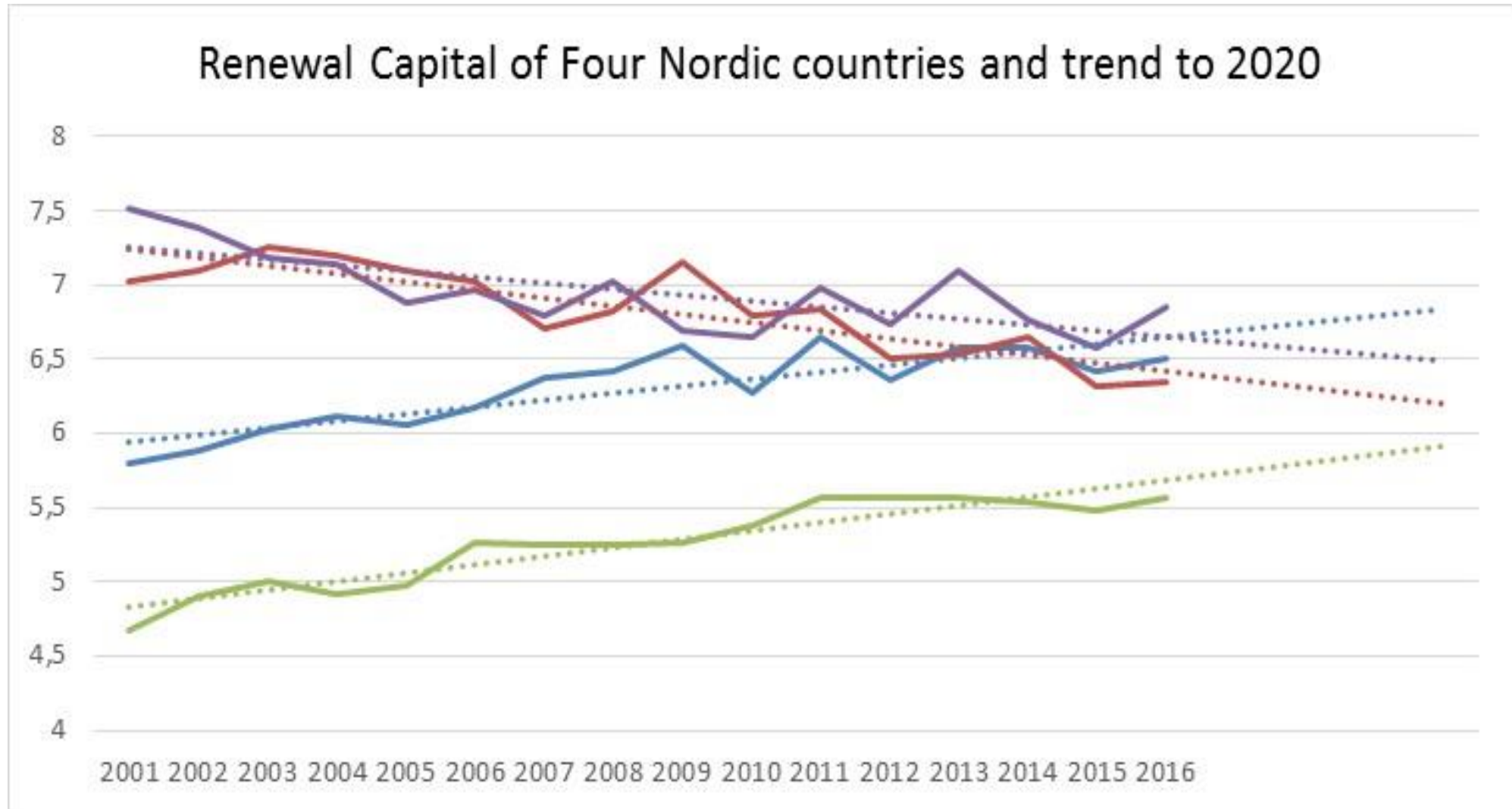
- Global tangible resources are limited and depleting day by day, whereas **intangible resources**, such as knowledge, instead **accumulate over time**.
- **The Nordics' secret recipe for success lies mainly in intangibles**, including honesty, transparency, trust, individual rights, structural reforms, and human capital, based on *Economist* 2013 report.
- Will the Nordics maintain its status as “leader of the pack”, **or are there hidden complacencies that may drive performance downwards** instead?
- **We explored measurements and models for national intellectual capital, with specific application to Sweden.**

- Lin and Edvinsson (Lin and Edvinsson 2008) developed a statistically validated 28-indicator model measuring national intellectual capital (NIC) based on data purchased from the Switzerland-based International Institute for Management Development (IMD).
- The NIC model was later modified and expanded to cover 48 indicators. This revised model, called the ELSS NIC model (Ståhle, Ståhle, and Lin 2015), removed outdated indicators (such as literacy) and included indicators reflecting current concerns (such as gender equality and freedom of speech).

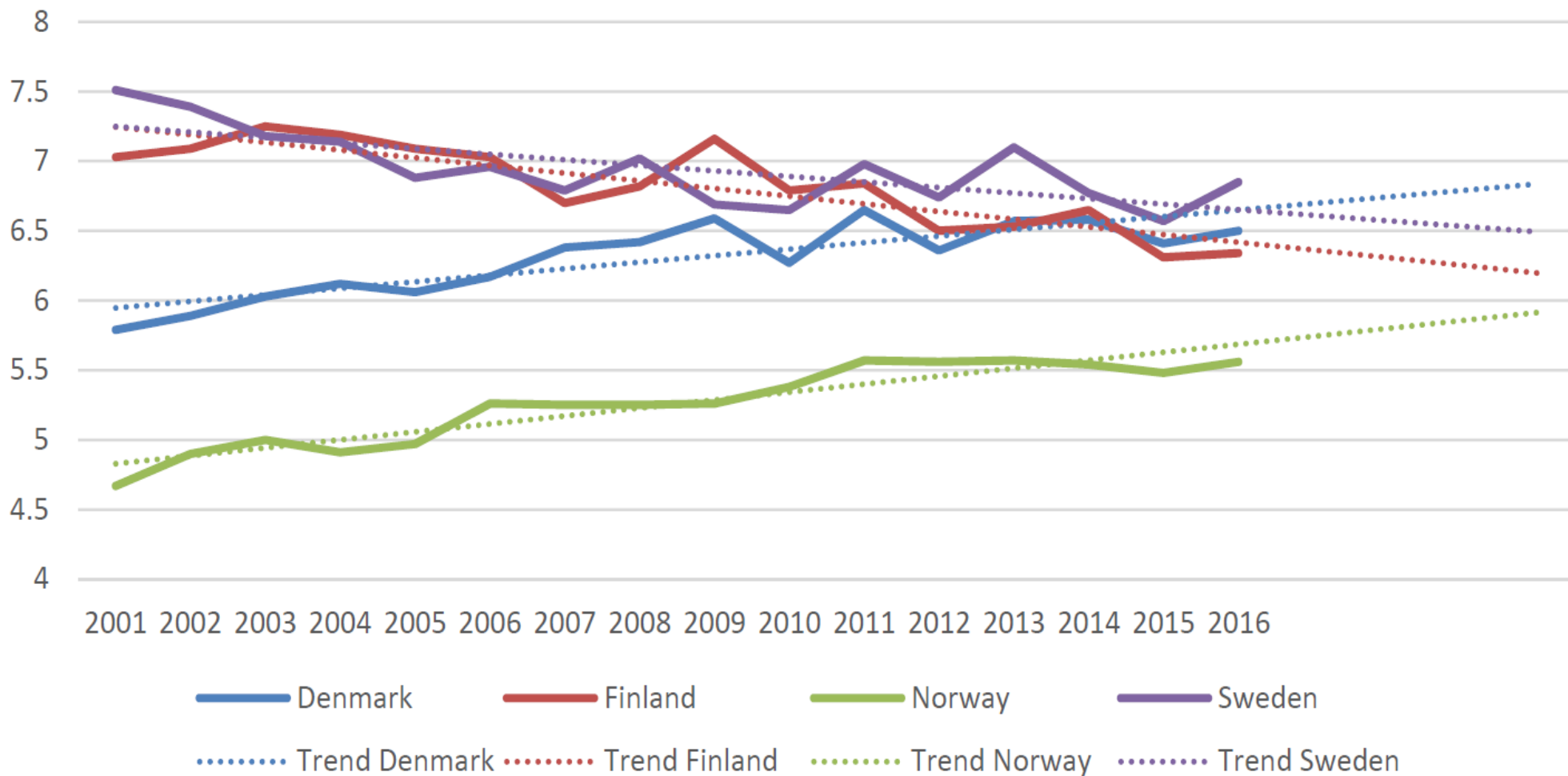
48-indicators ELSS model

	Human capital	Market capital
Input/basic	✓ Years of education	✓ Cross border venture*
	✓ Pupil-teacher ratio	✓ Openness of culture*
	✓ Public expenditure on education	✓ Capital availability*
	✓ 15-64 years old population	✓ Investment risk
Process/enhancer	◆ Skilled labor*	◆ Corporate tax encouragement*
	◆ Employee training*	◆ Transparency of government policies*
	◆ Qualified engineers*	◆ Image of your country*
	◆ R&D researchers	◆ Country credit rating
Output/Achievement	➤ Higher education achievement	➤ Trade to GDP ratio (exports + imports)
	➤ Students PISA performance	➤ Current account balance %GDP
	➤ Human Development Index	➤ Investment flows %GDP
	➤ Gender equality	➤ Globalization index
	Process capital	Renewal capital
Input/basic	✓ Fair business competition environment*	✓ Business R&D spending
	✓ Computer per capita + Mobile subscribers	✓ Basic research*
	✓ Internet subscribers + Broadband subscribers	✓ R&D spending/GDP
	✓ Convenience of establishing new firms + start up days*	✓ R&D US\$ per capita
Process/enhancer	◆ Government efficiency*	◆ IP right protection*
	◆ Goods & services distribution efficiency*	◆ Cooperation between corporations and university*
	◆ Health & environment	◆ Entrepreneurship*
	◆ Freedom of speech	◆ Venture capital*
Output/Achievement	➤ Overall productivity	➤ Utility Patents/ R&D expenditure
	➤ Unemployment % + Youth unemployment %	➤ Patents per capita (USTPO+EPO)
	➤ Consumer price inflation	➤ Scientific articles
	➤ Corruption	➤ Development & application of technology*

Guess which line is for which country?



Renewal Capital of Four Nordic countries and trend to 2020



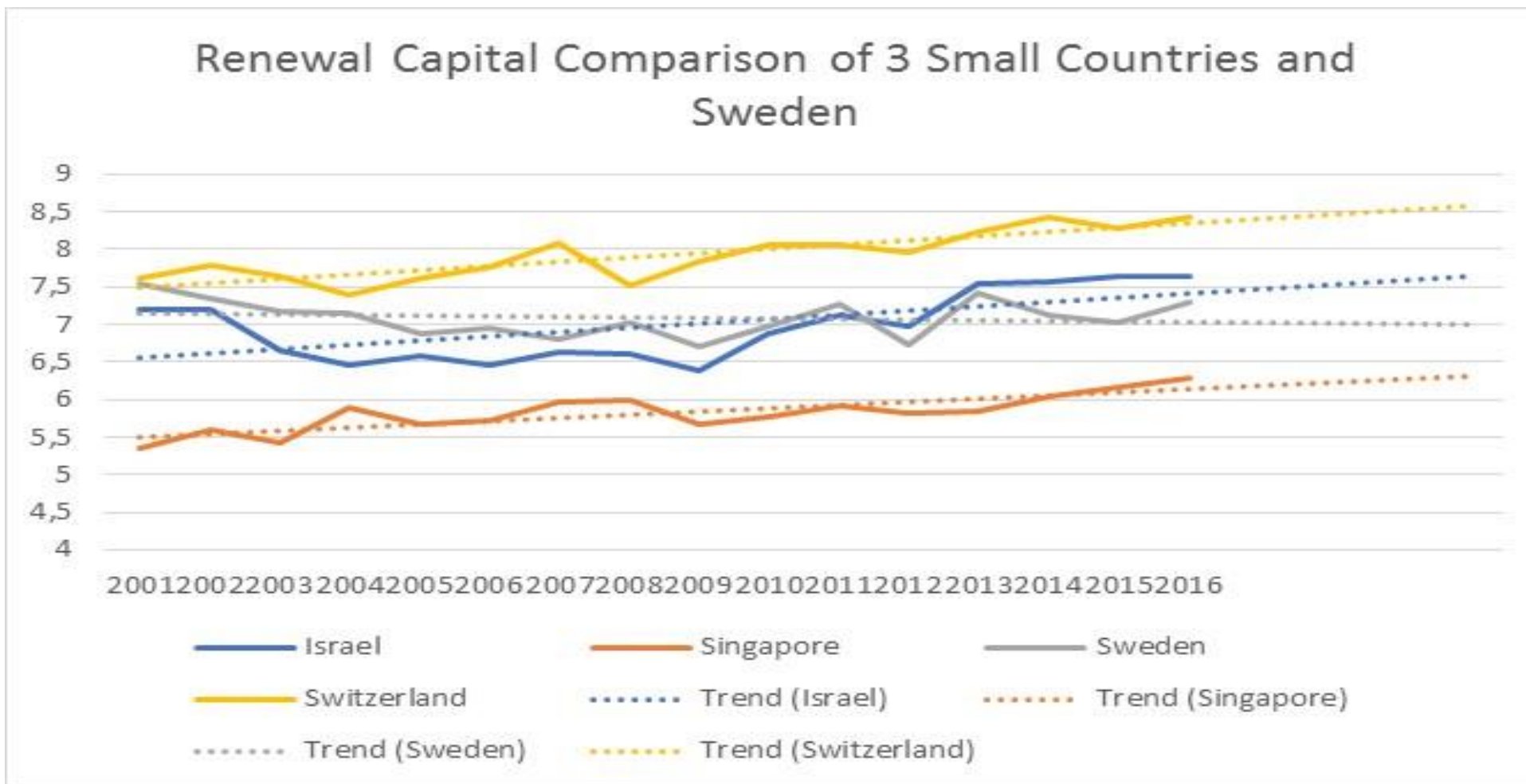
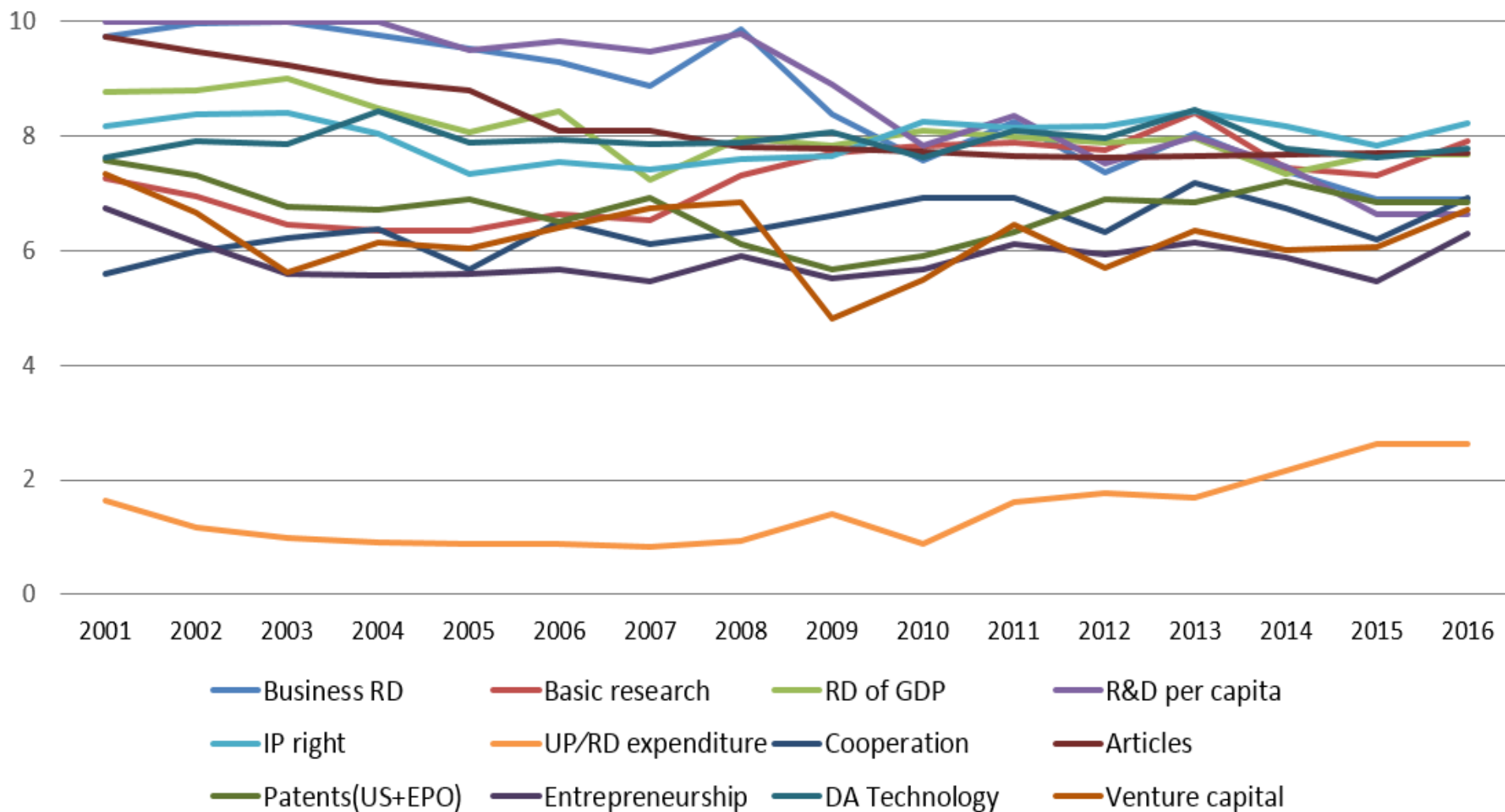
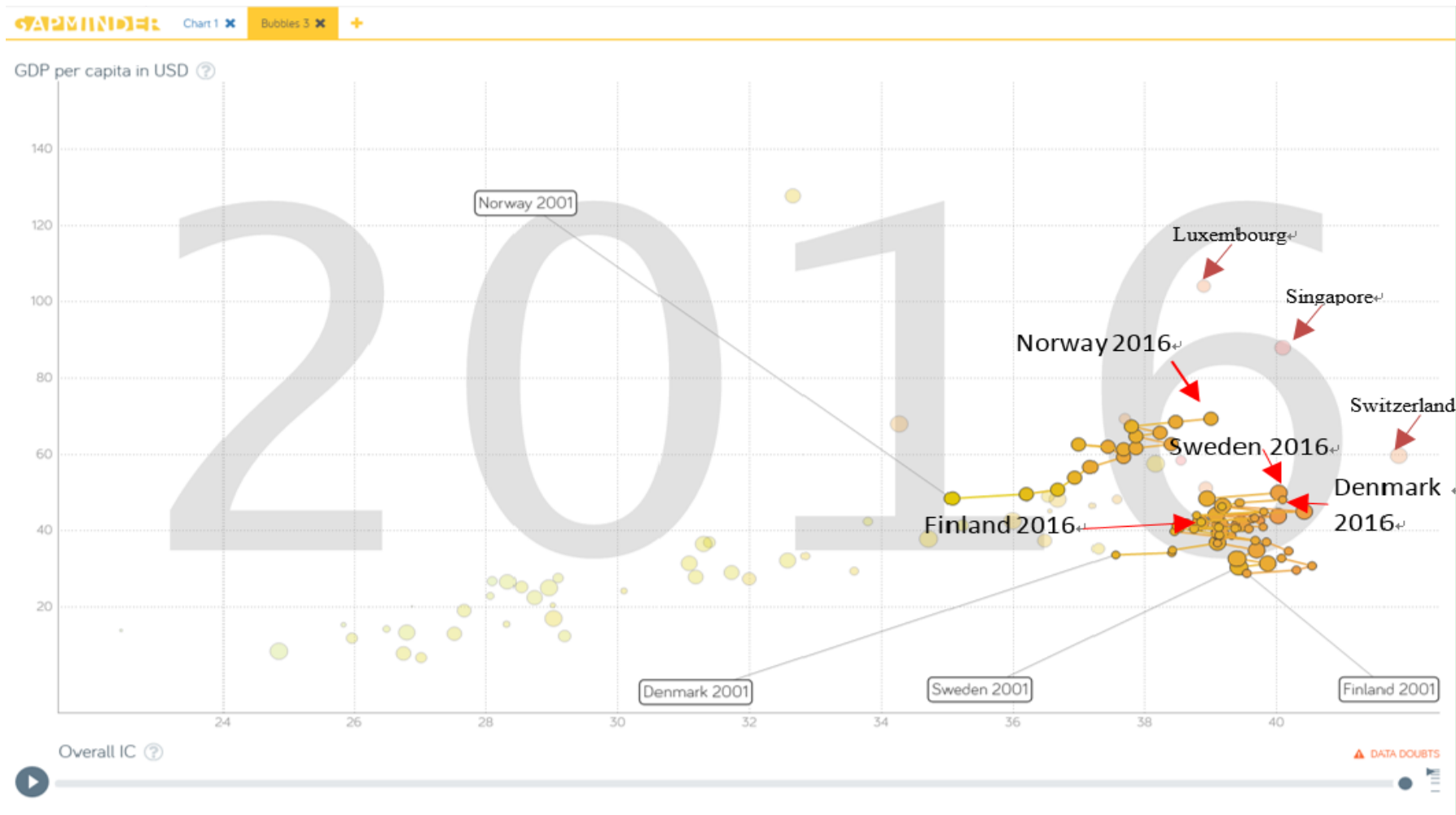


Figure 23: Renewal capital of Sweden, Singapore, Israel and Switzerland and trend to 2020

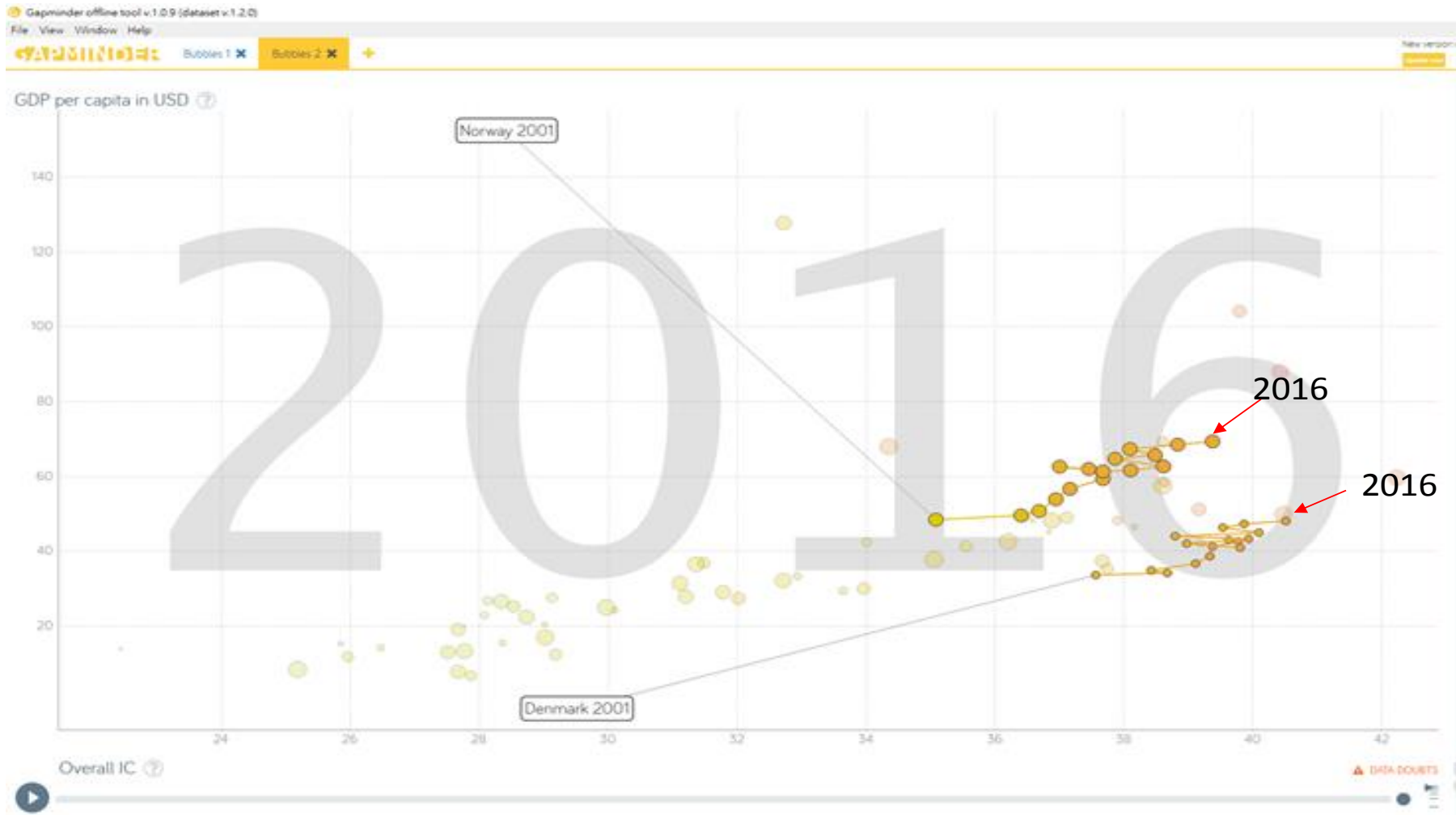
An overall declining trend

12 Renewal Capital Indicators of Sweden

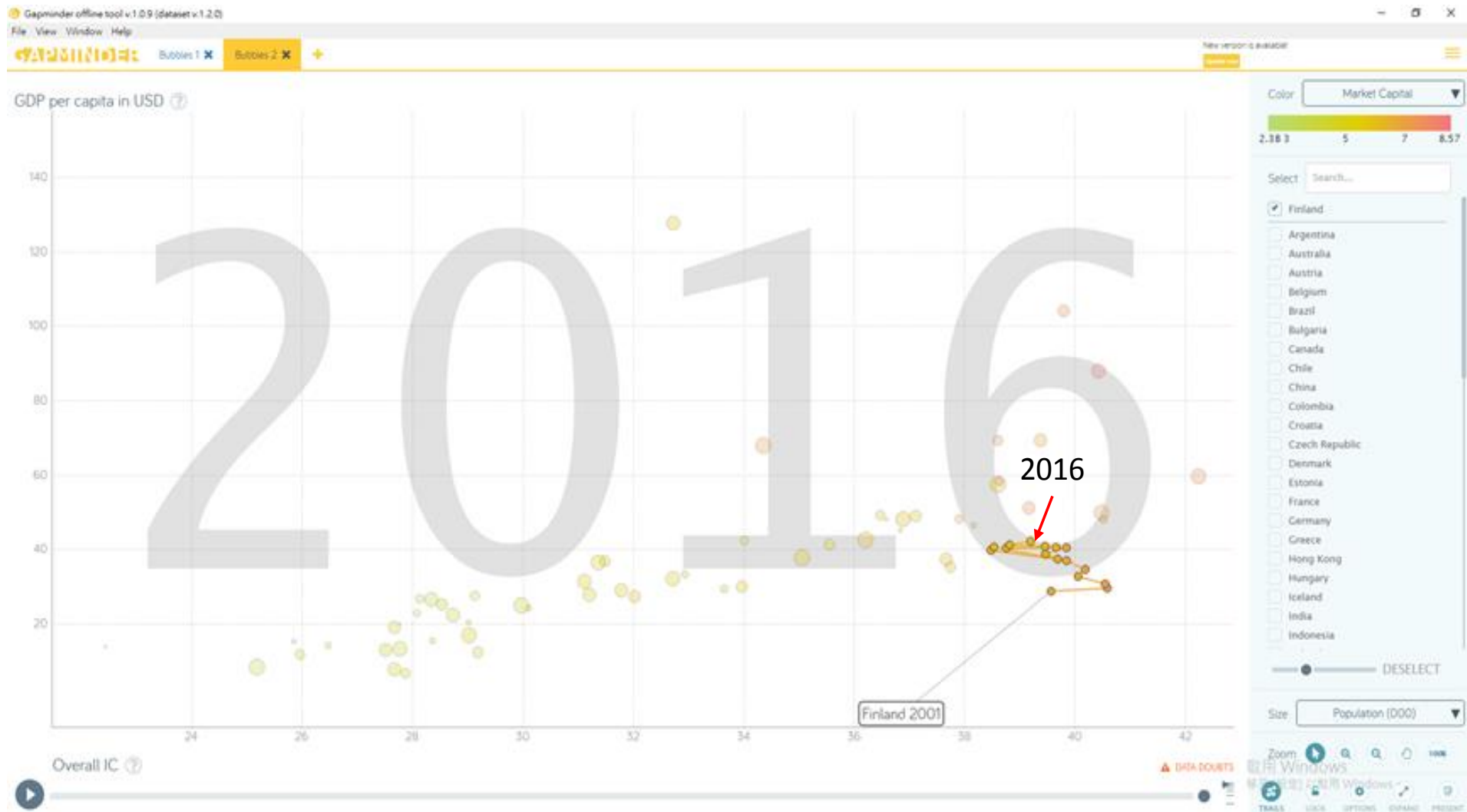




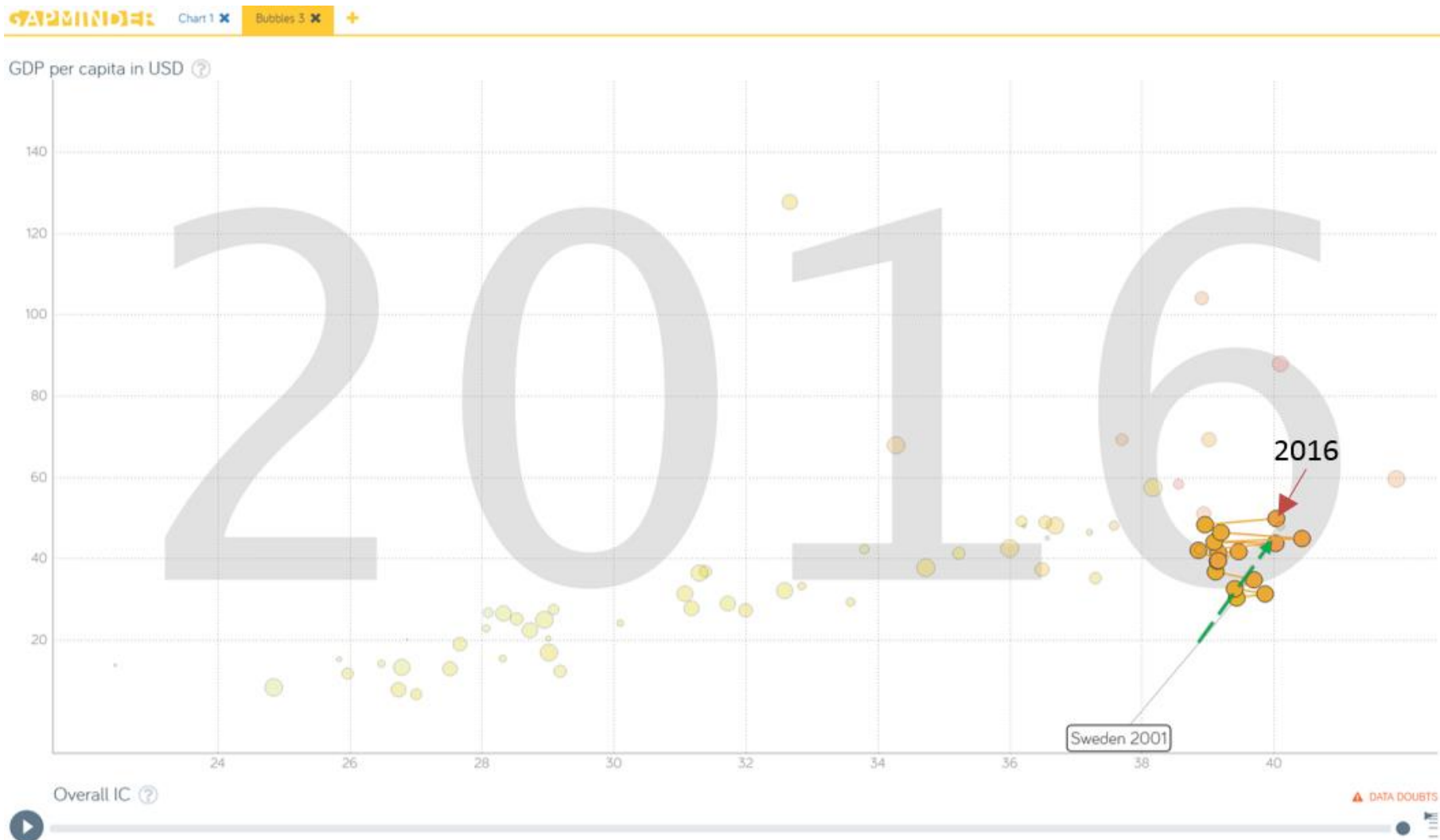
National Intellectual Capital vs. GDP per capita (ppp) for 4 Nordic countries.
Norway has the best progress



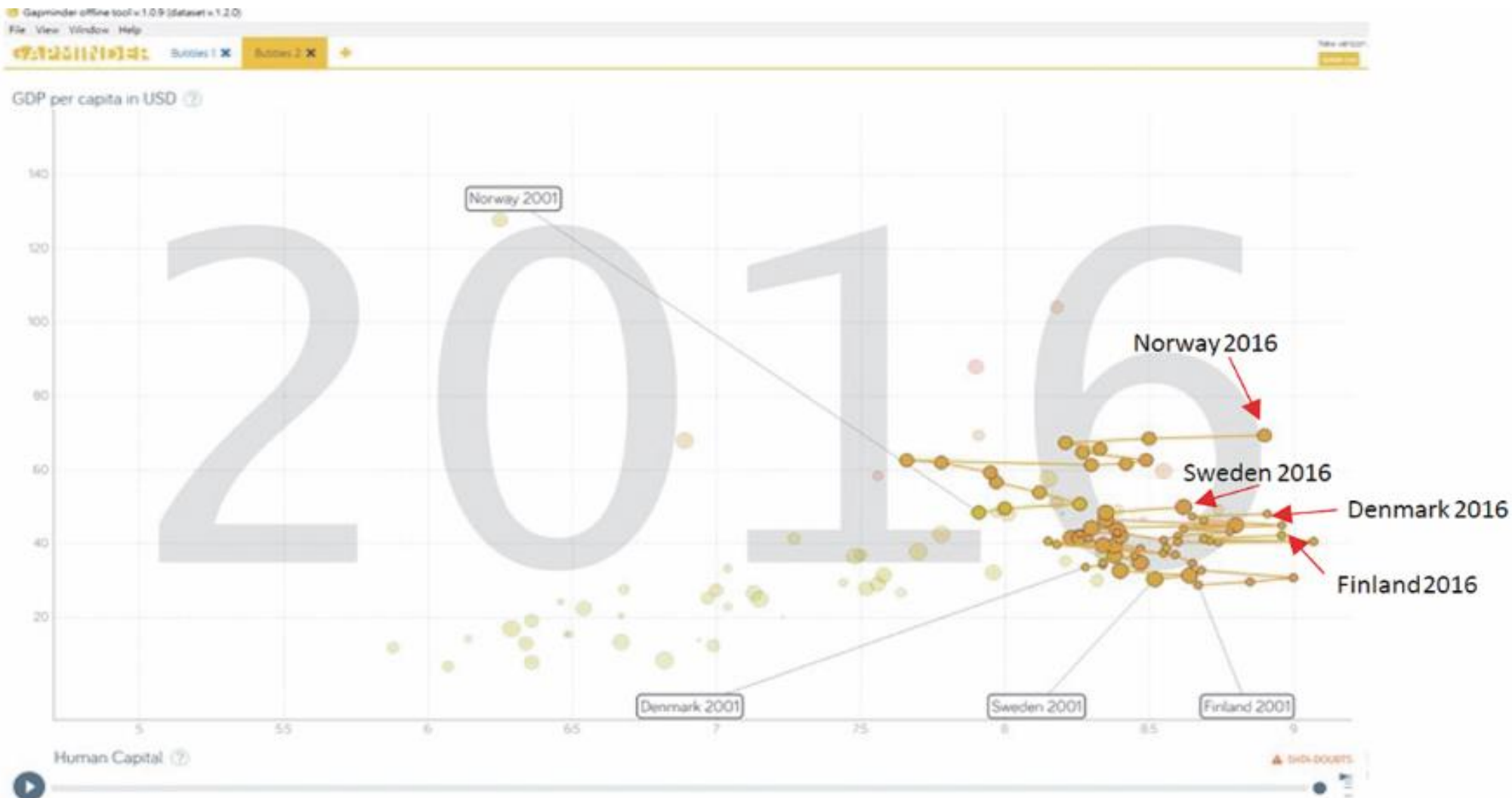
Both Denmark and Norway have good progress in NIC and GDP over the 16 years with a positive correlation.



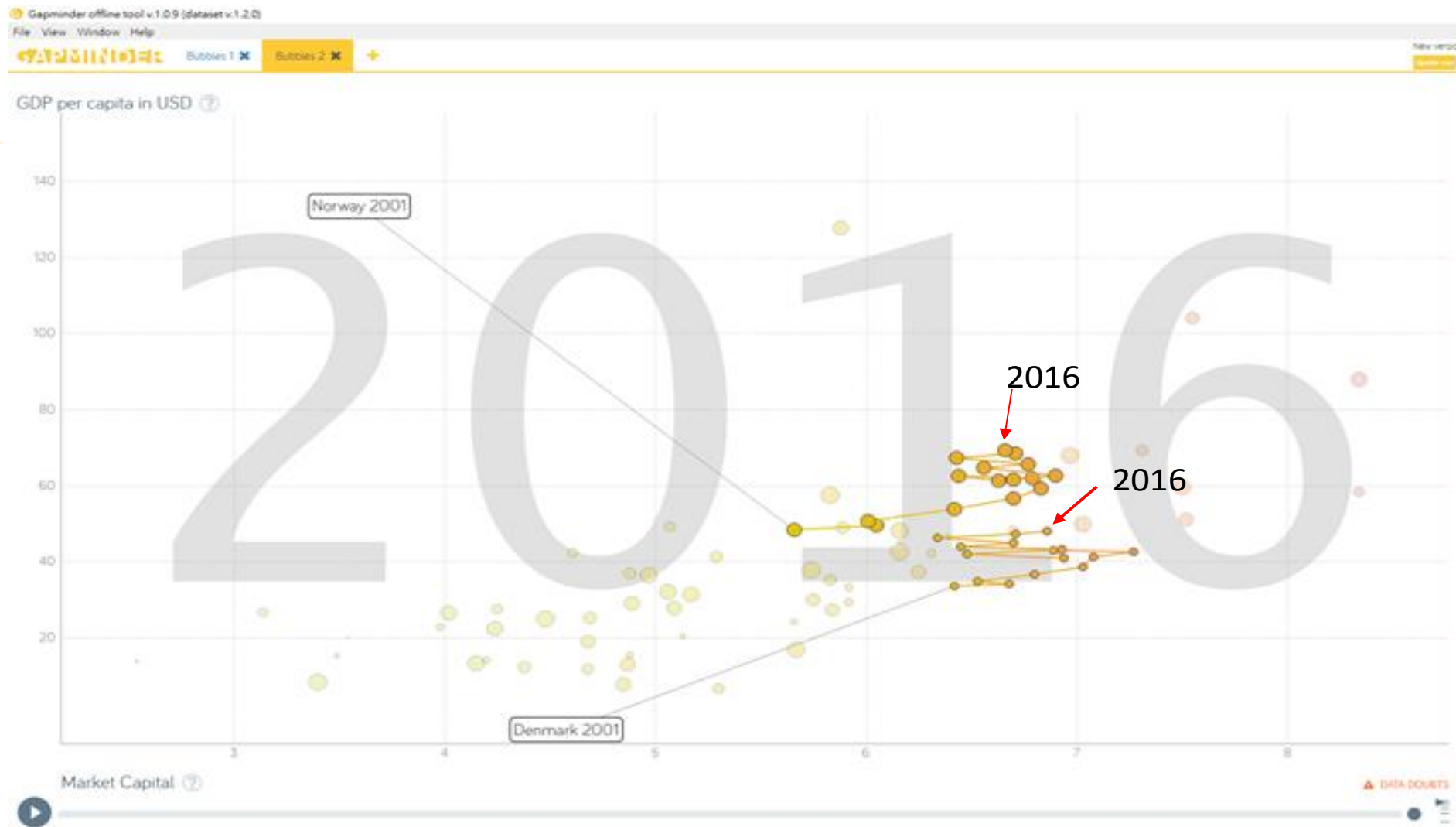
Finland's NIC regressed a little over the 16 years, even though it has some progress in GDP.



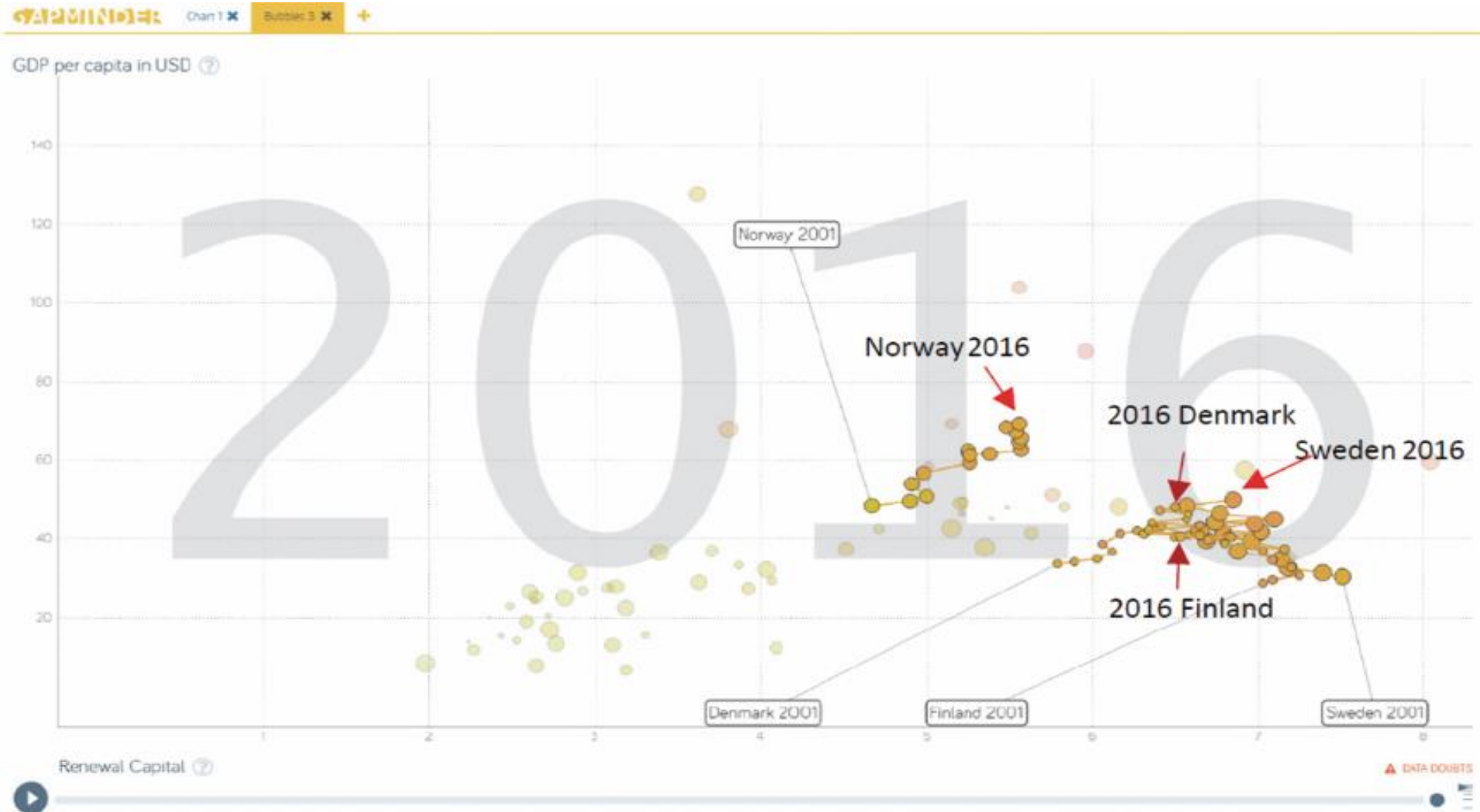
Sweden's NIC and GDP have a little progress over the 16 years with a positive correlation.



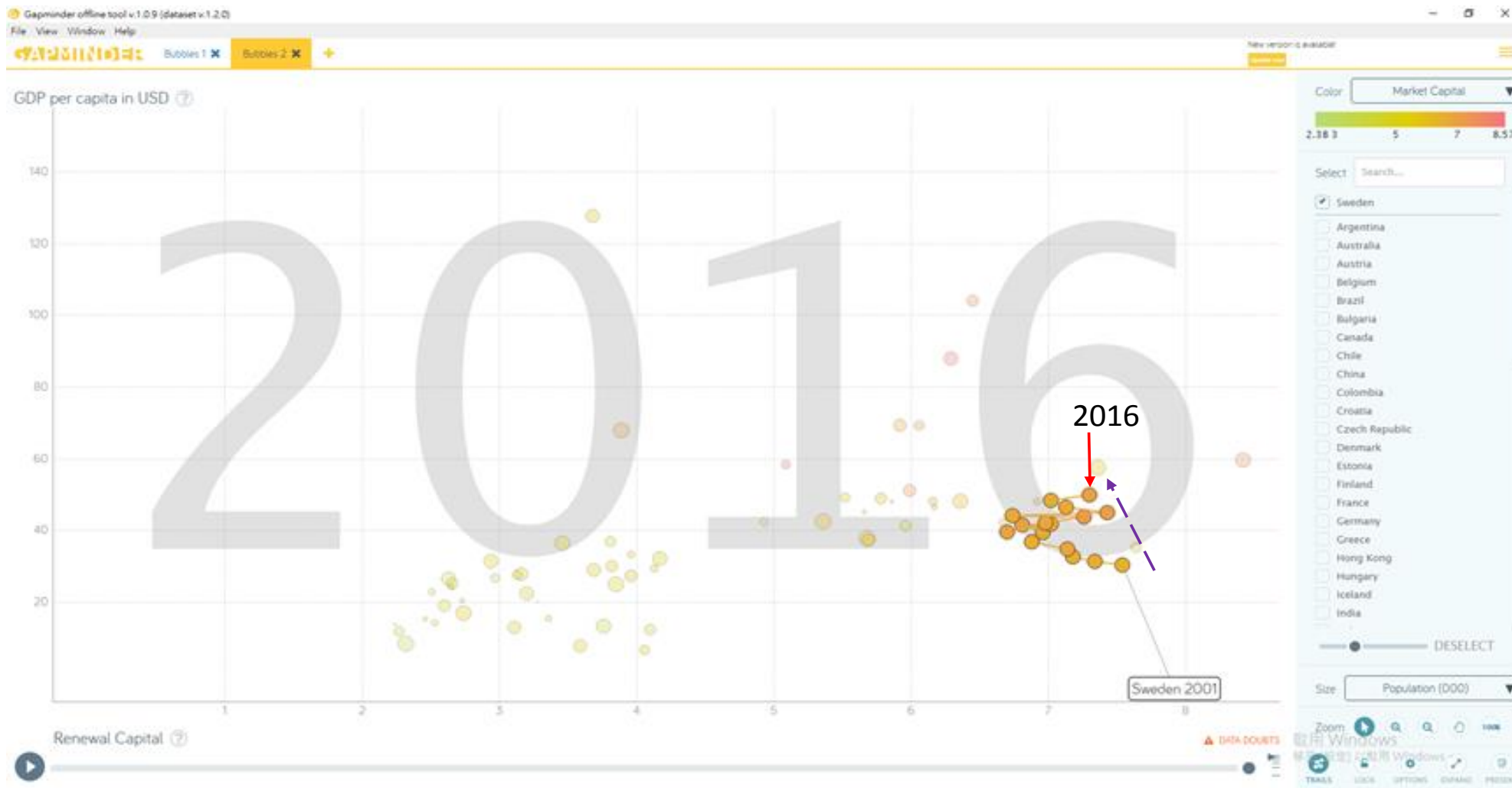
Human capital of the 4 Nordic countries has limited influence on GDP with a relatively flat line



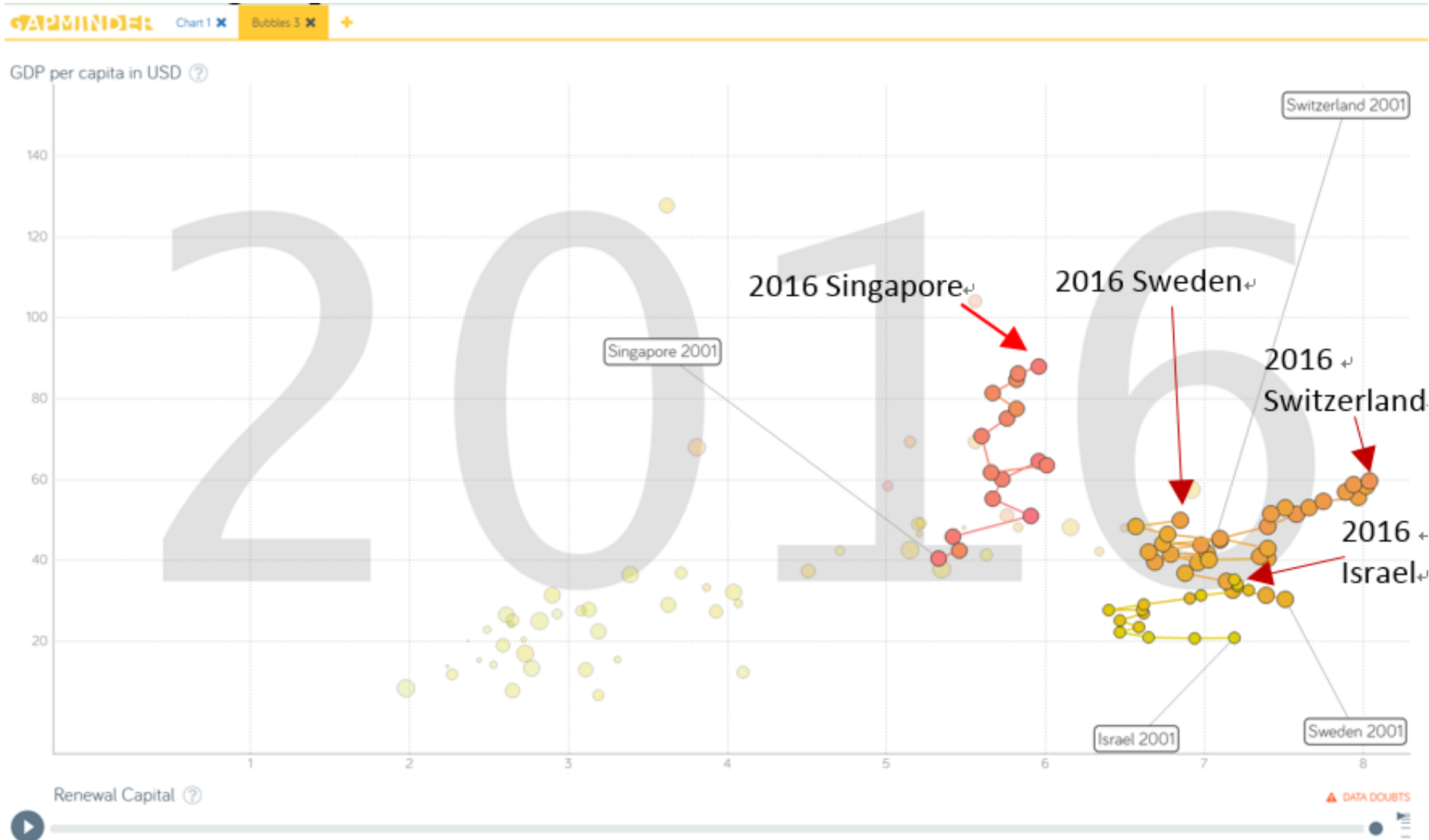
Market capital of Denmark and Norway has good progress accompanied with GDP improvement over the 16 years



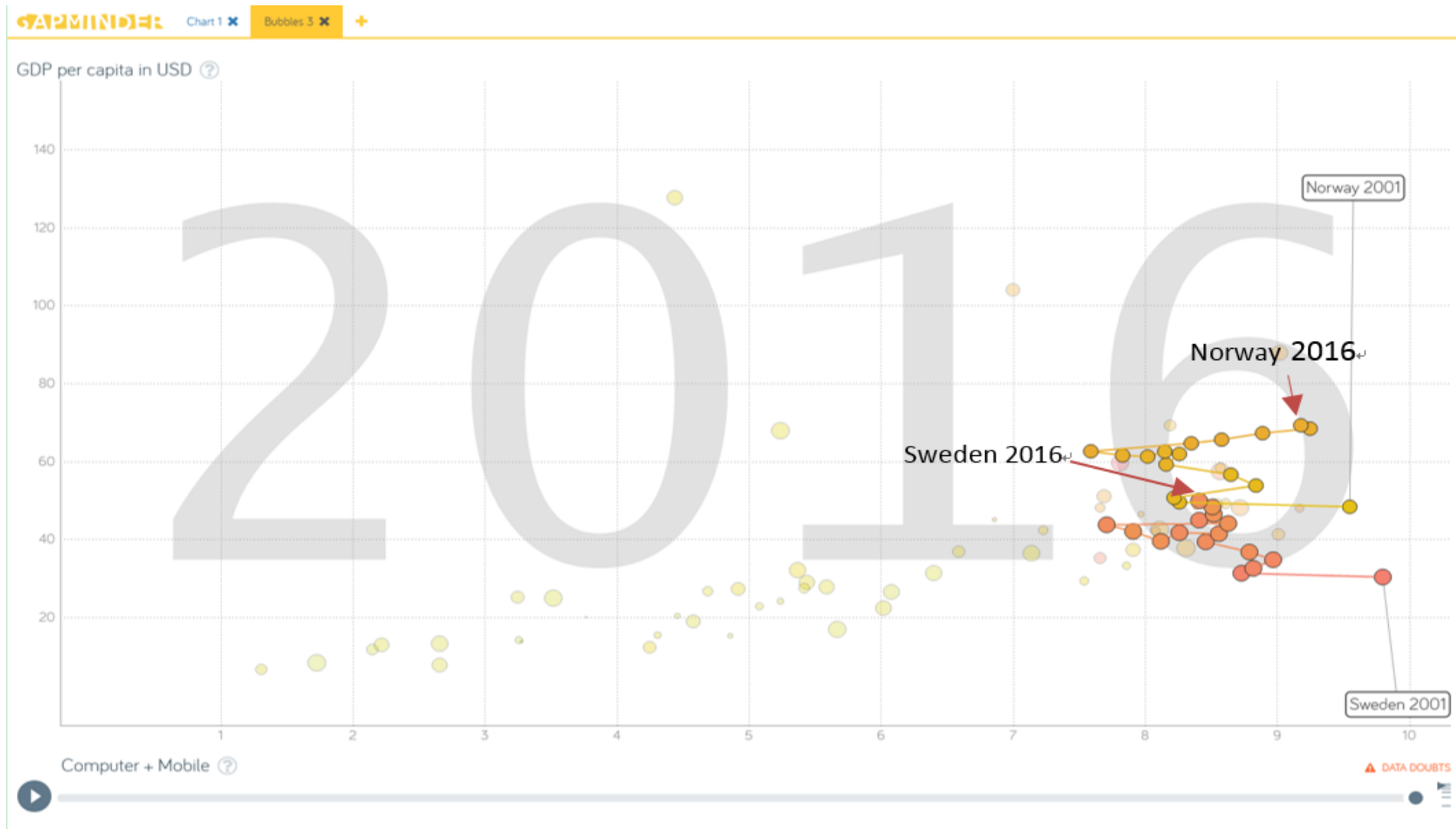
Renewal capital of the 4 Nordic countries, Norway is picking up with the other 3 countries although it still lagged behind in RC



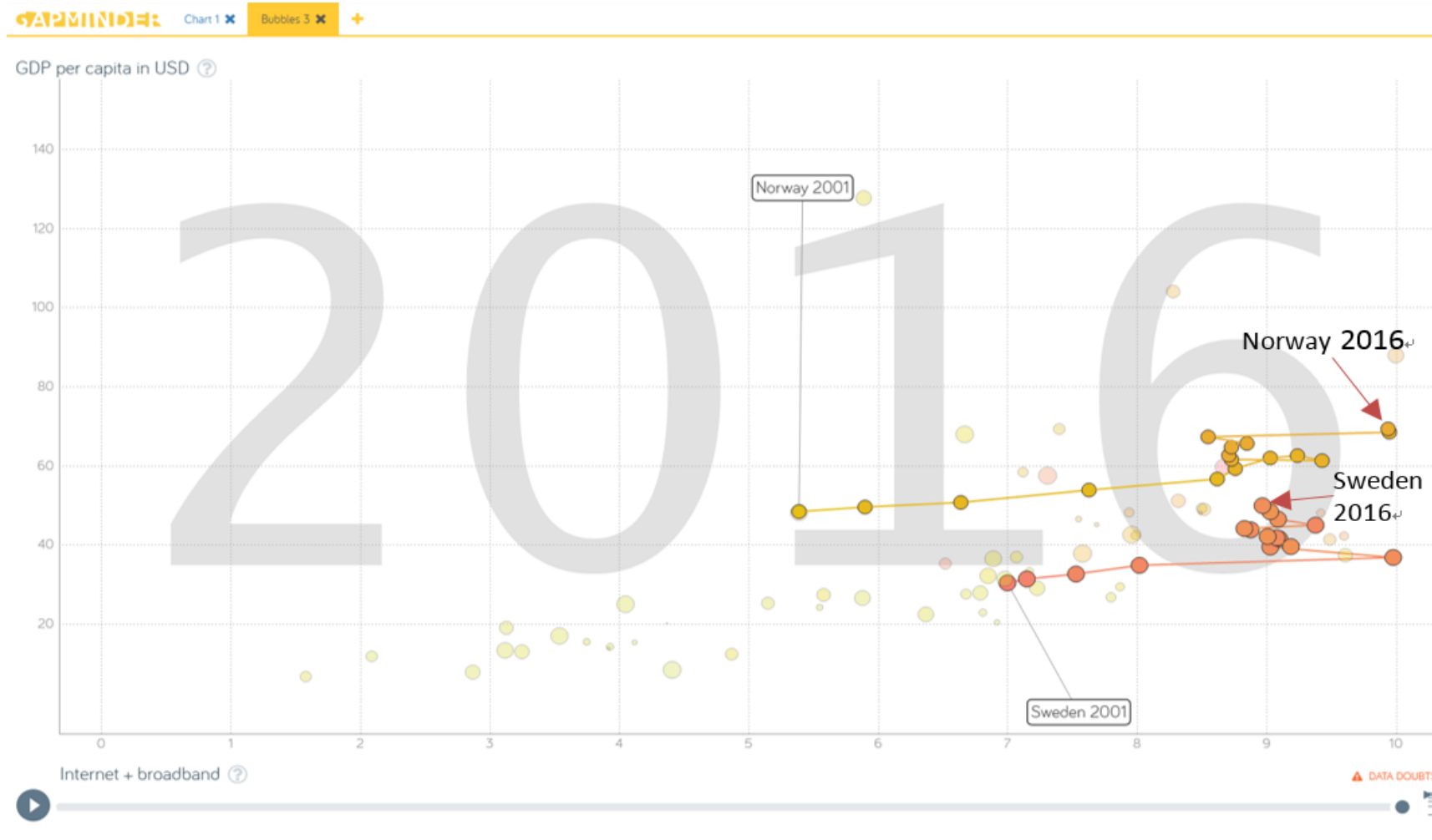
Renewal capital of Sweden regressed a little over the 16 years, with a slight negative correlation with GDP. The signal is as early as in 2002.



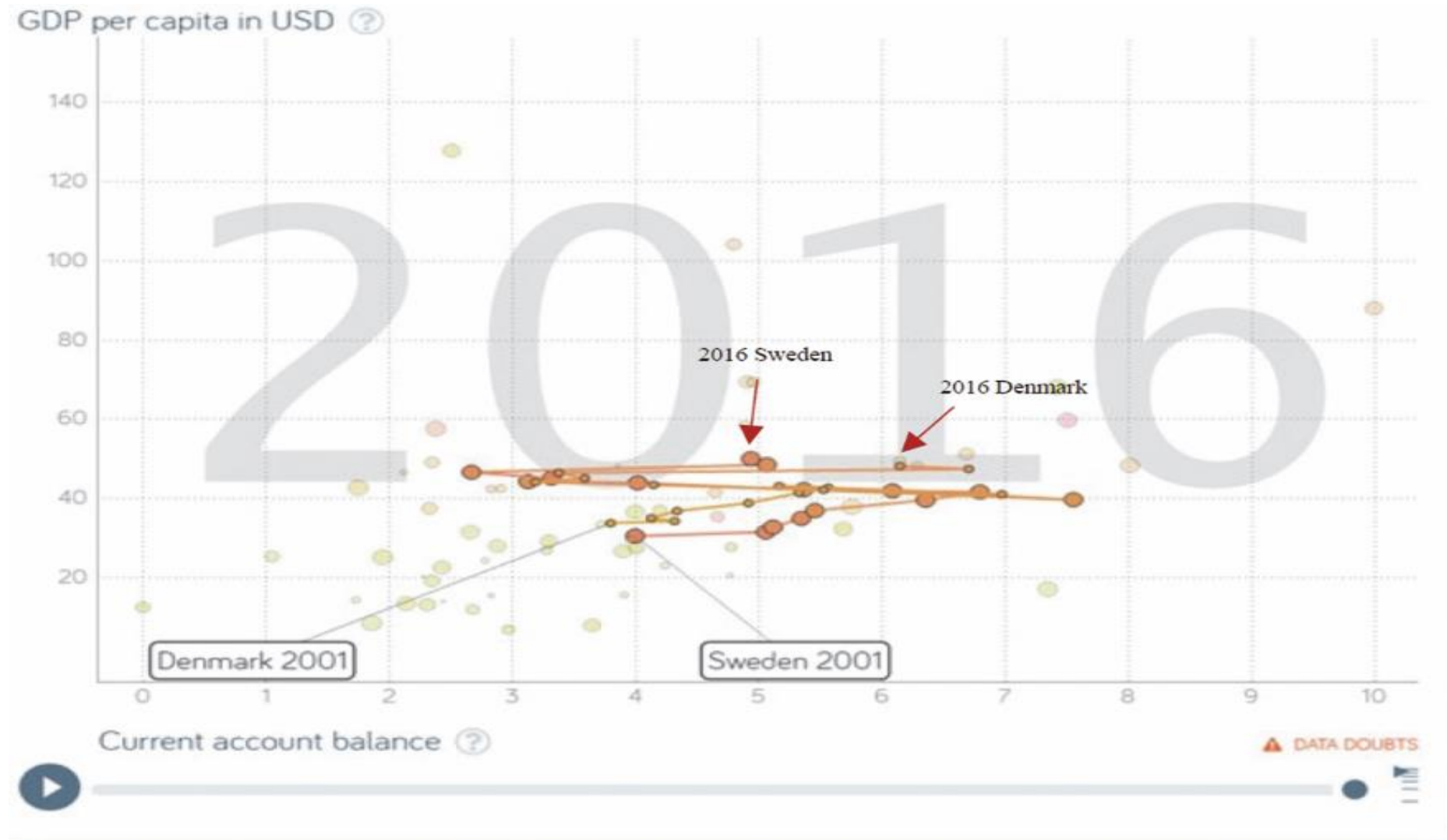
Renewal capital comparison between Sweden and 3 small countries (Israel, Singapore and Switzerland)



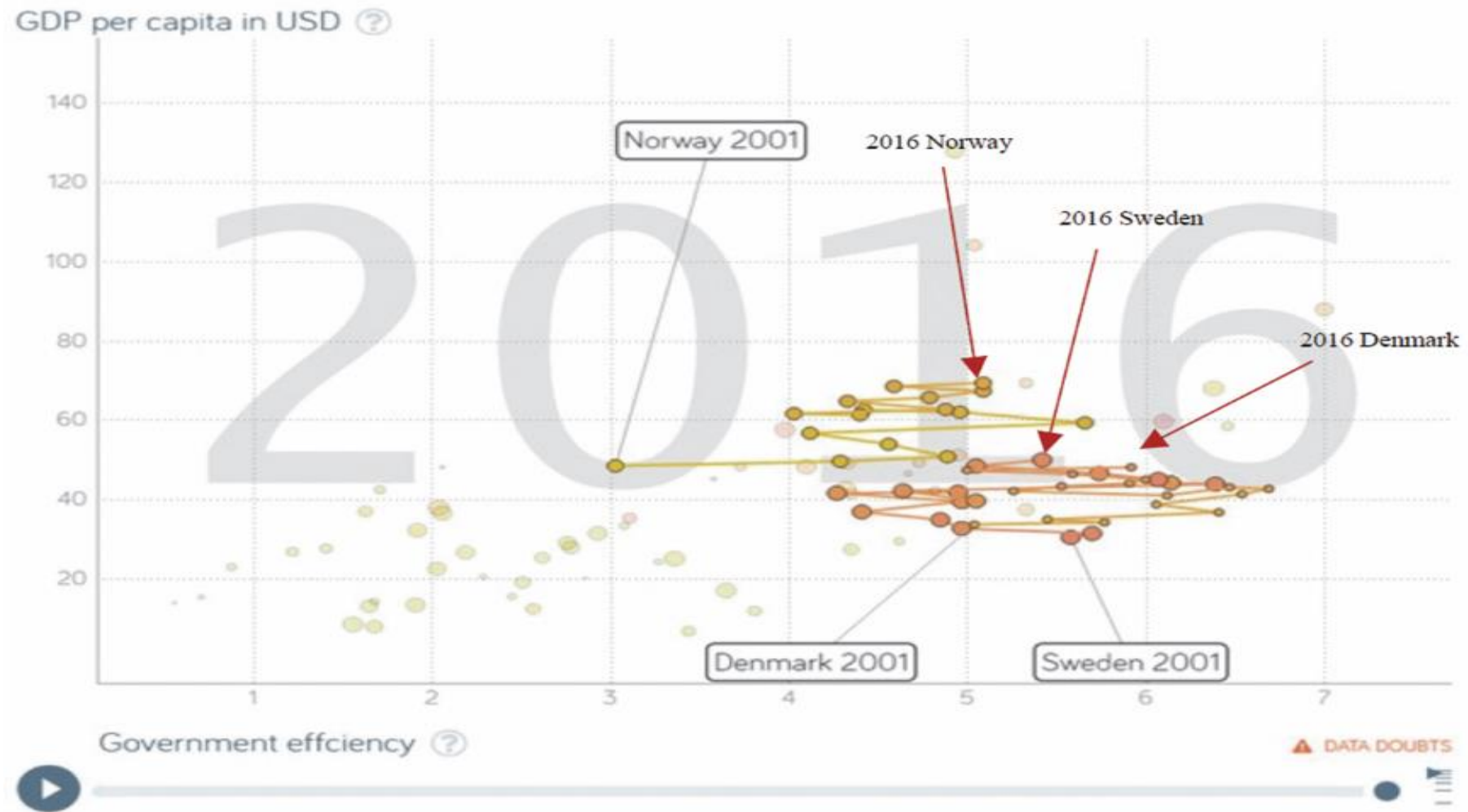
Sweden started out with a very high computer + mobile, yet surpassed by Norway in 2016



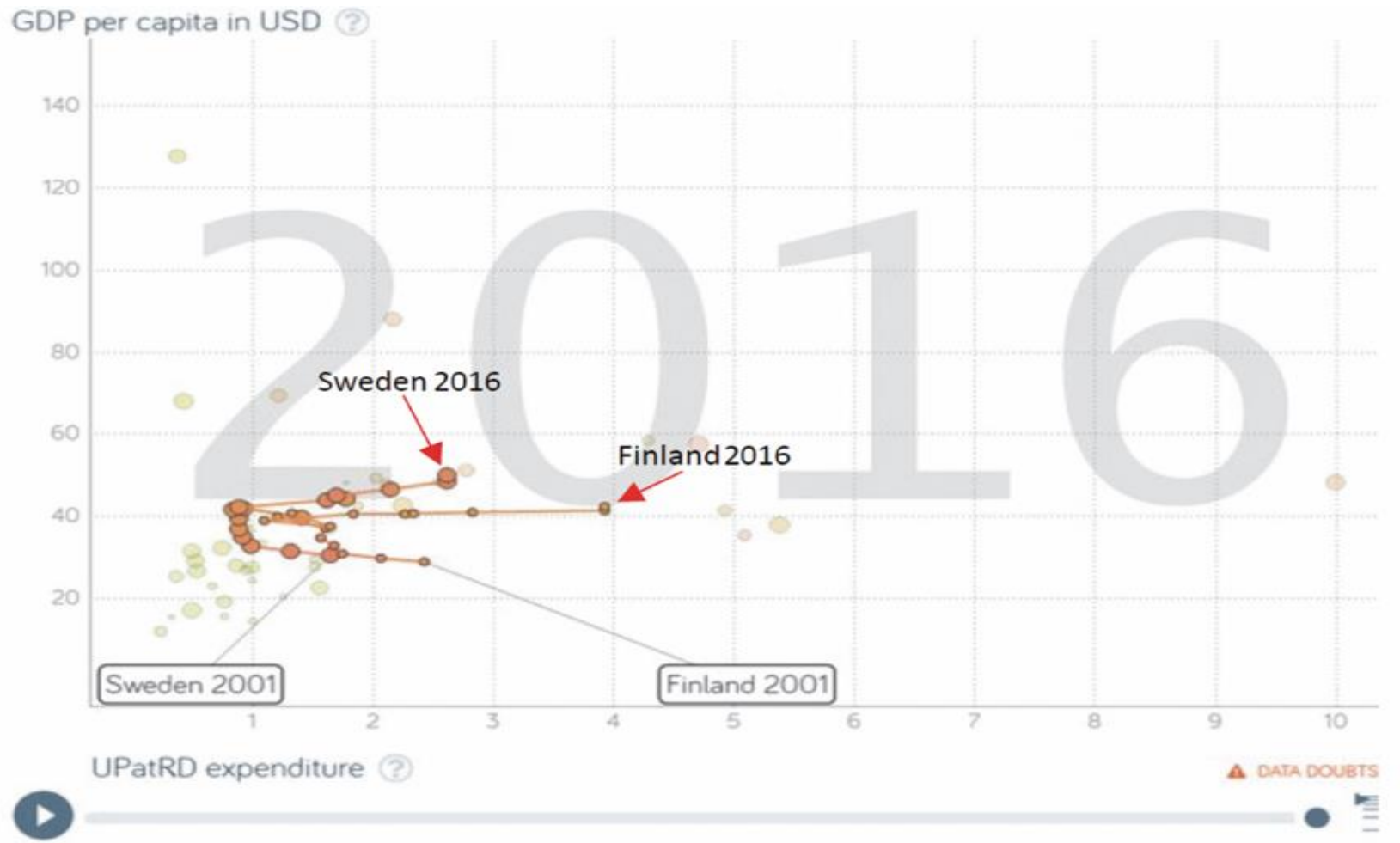
Sweden started out with a higher internet + broadband than Norway in 2001, yet surpassed by Norway in 2016



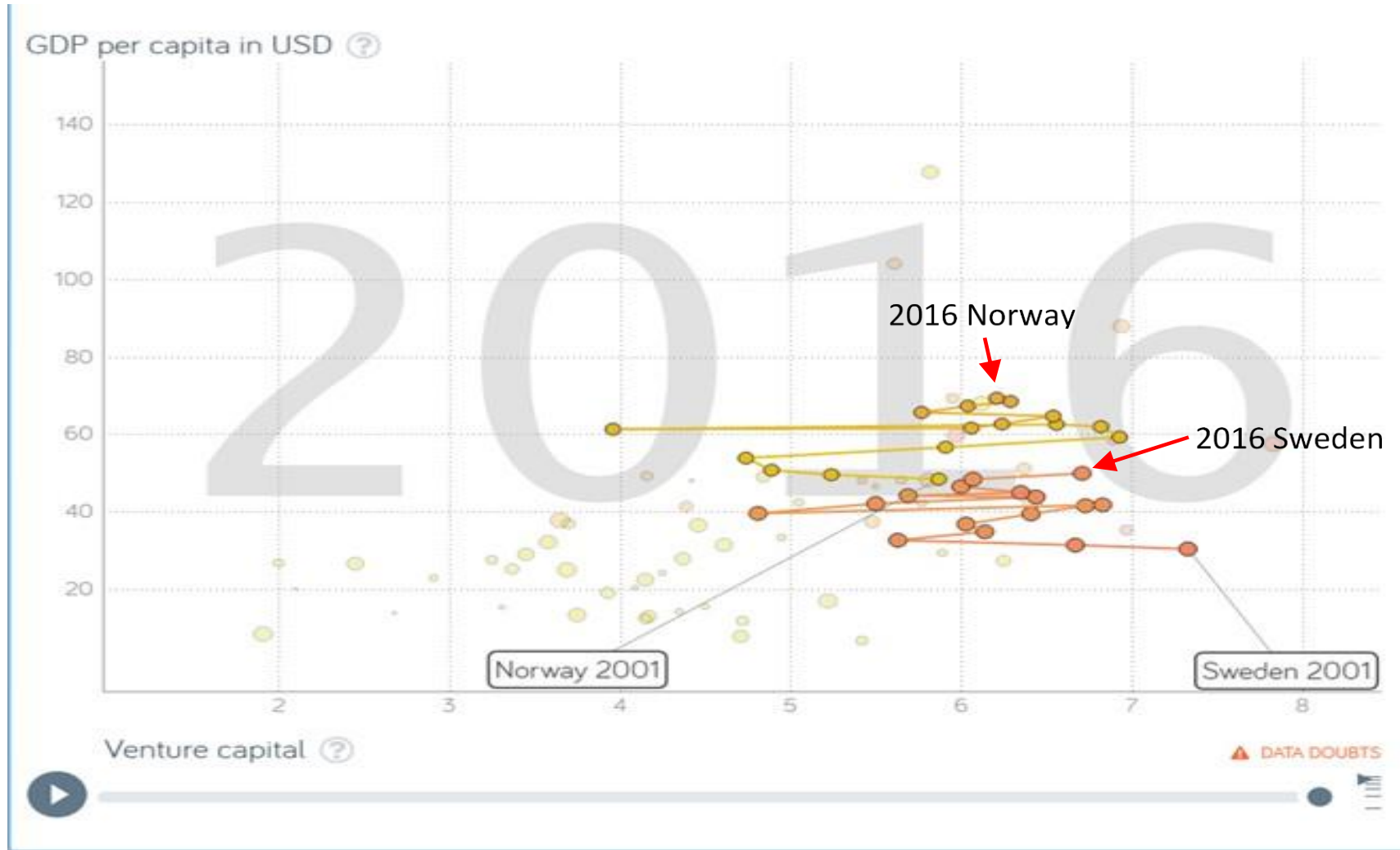
Sweden and Denmark had similar current account balance in 2001, yet Sweden was surpassed by Denmark in 2016



Sweden had the best government efficiency, yet was surpassed by Denmark in 2016 and Norway was catching up with Sweden in 2016



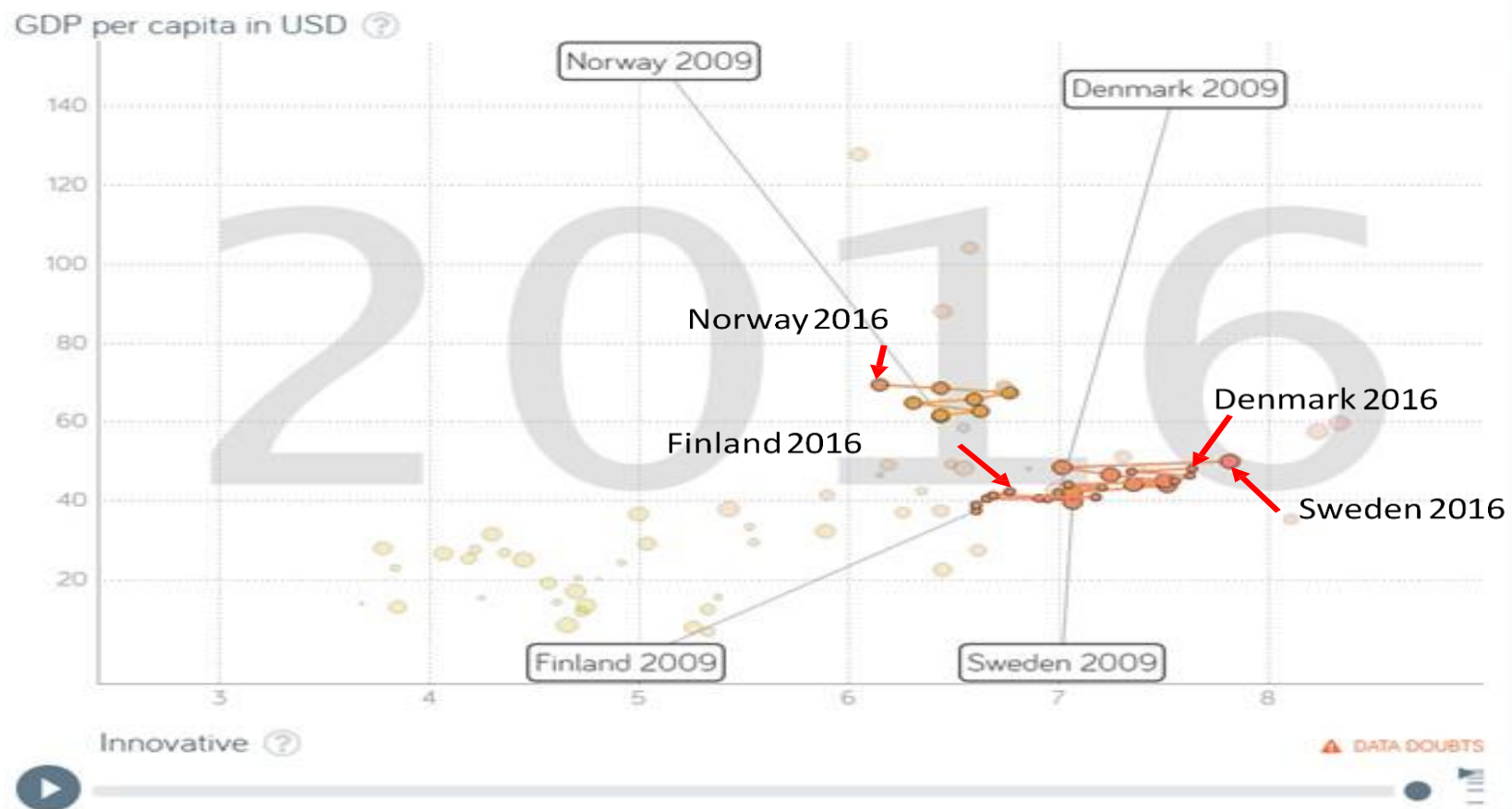
Sweden lagged behind Finland in utility patents/R&D expenditure



Sweden declined in venture capital, while Norway was catching up

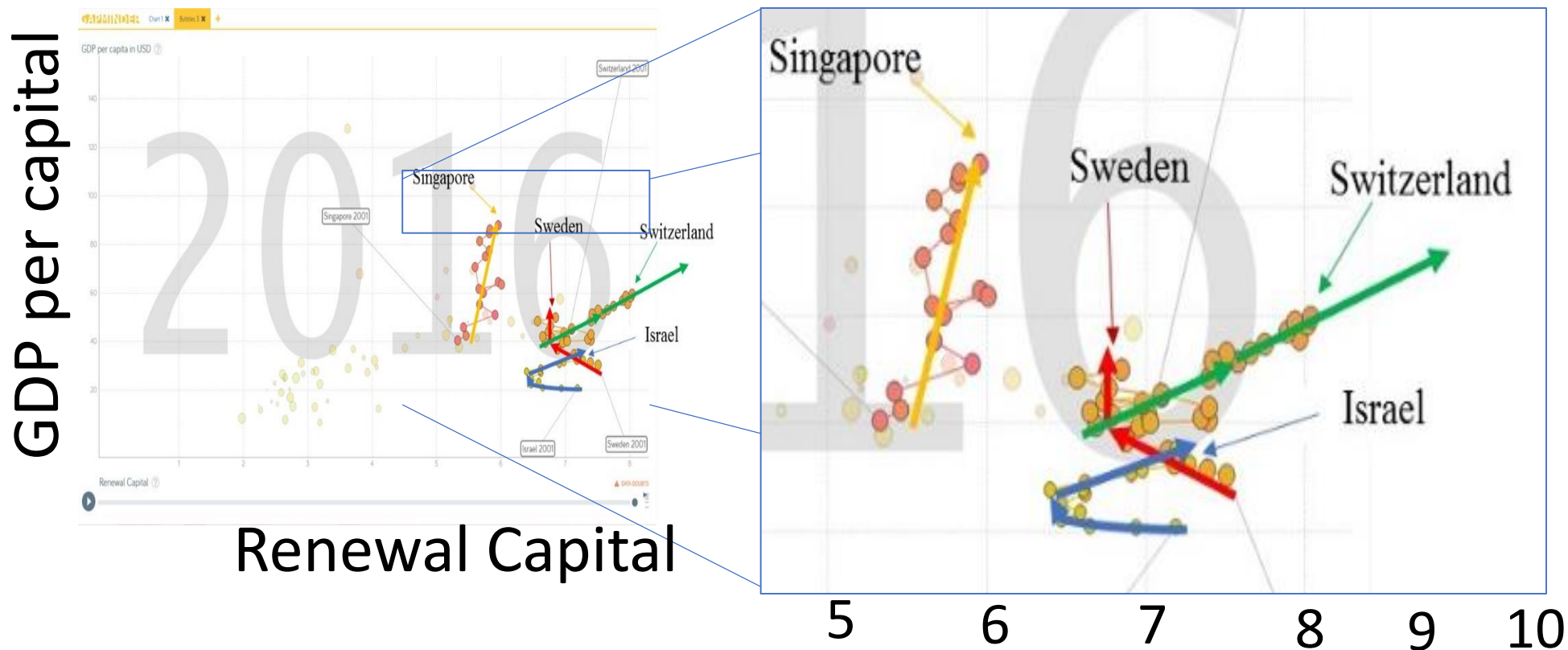


Sweden was far ahead of Denmark in research articles, yet was surpassed by Denmark in 2016



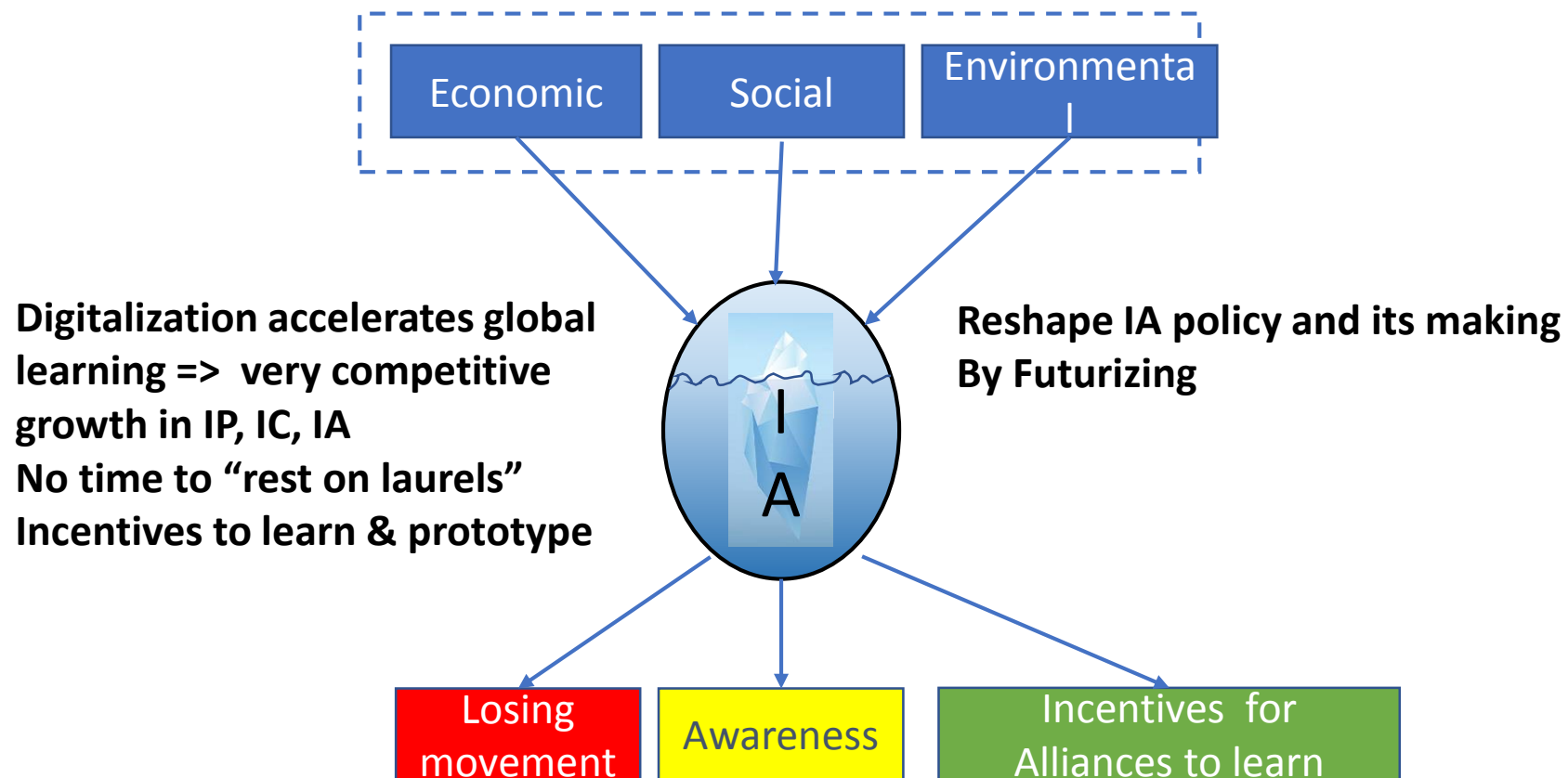
Innovative capacity vs. GDP per capita (ppp) for four Nordic countries.
Sweden has the best innovative capacity in 2016.

When renewal capital counts: Small country comparison



....new IA policy initiatives needed

Strategy for the Swedish IA



ic



Intellectual Capital
for Communities
In the Knowledge
Economy

Japan arranges since 14 years annual IA week

WISEPLACE

The Guide to Innovation Accelerating Environment Design

イノベーションを加速する
「賢い場」のガイド



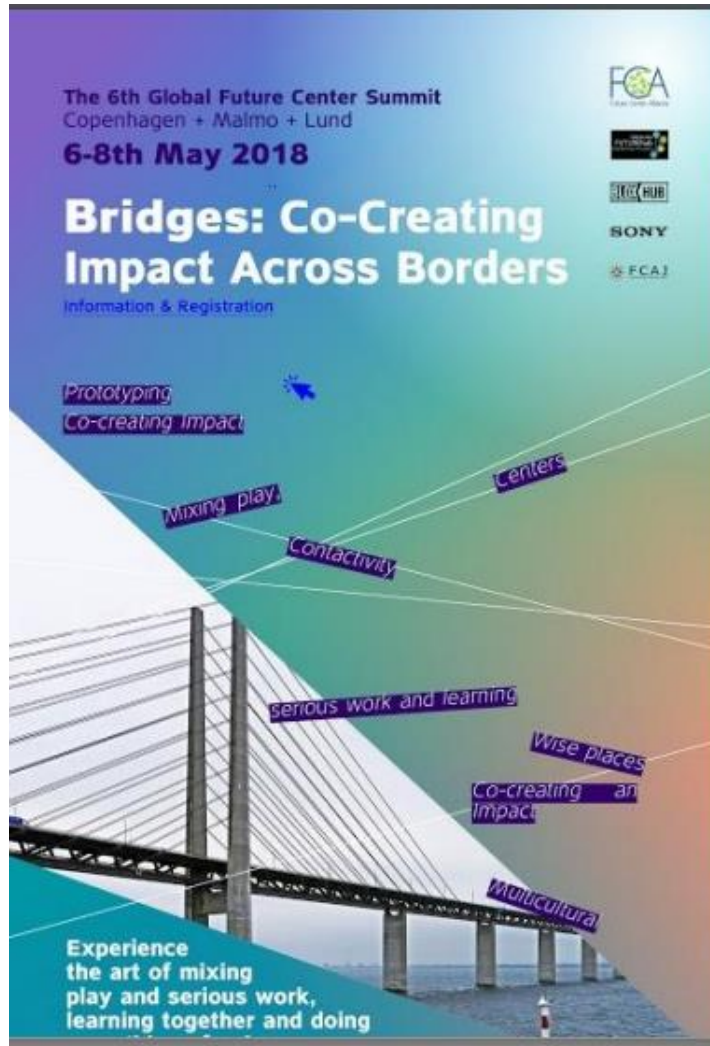
14th & 15th June 2018

The

- 14th Edition -

ties

Futurizing Culture Spaces...



<https://drive.google.com/file/d/0B0ouzk5HIGWJQV9fYzY1cjF2Um8/view>

14th & 15th June 2018

The World Conference on Intellectual Capital for Communities

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Sweden option IA Project matrix

	General public	National government	Enterprises
Coordination		6.1.1 Strategic hub (beginning with workshops, webinars, etc)	
		6.1.1 WEF Alliance	
		6.1.1 IA Alliances	
		6.1.2 IA Contract	
			6.1.3 IA Investment Fund
Awareness building		6.2.1 IA Week (+ universities)	
			6.2.2 IA Ranking
			6.2.3 IA Cheques
	6.2.4 IA Oscars		
	6.2.5 IC & IA Lexicon on Wikipedia		
	6.2.6 IA on Youtube		
Expanding our understanding		6.3.1 IA Observatory	
			6.3.2 Corporate IA data-base
	6.3.3 IA, Digitalisation and Competitiveness		
		6.3.4 Trade in Ideas	
		6.3.5 SNIC	
		6.3.6 Bridging ELSS to economic models	
	6.3.7 Developing MOOC curriculum		