

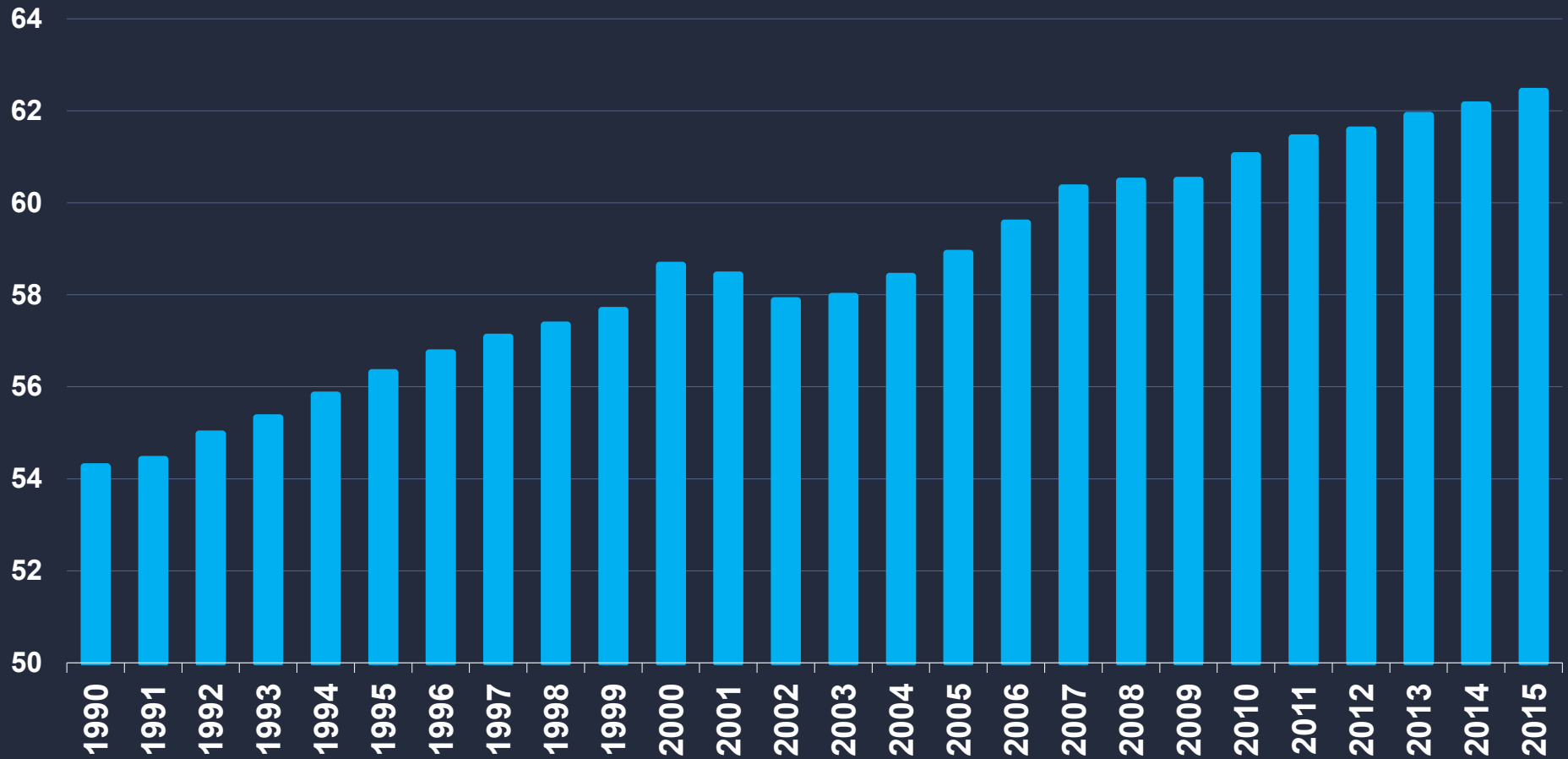
Herzliya Conference 2016

The Herzliya Indices

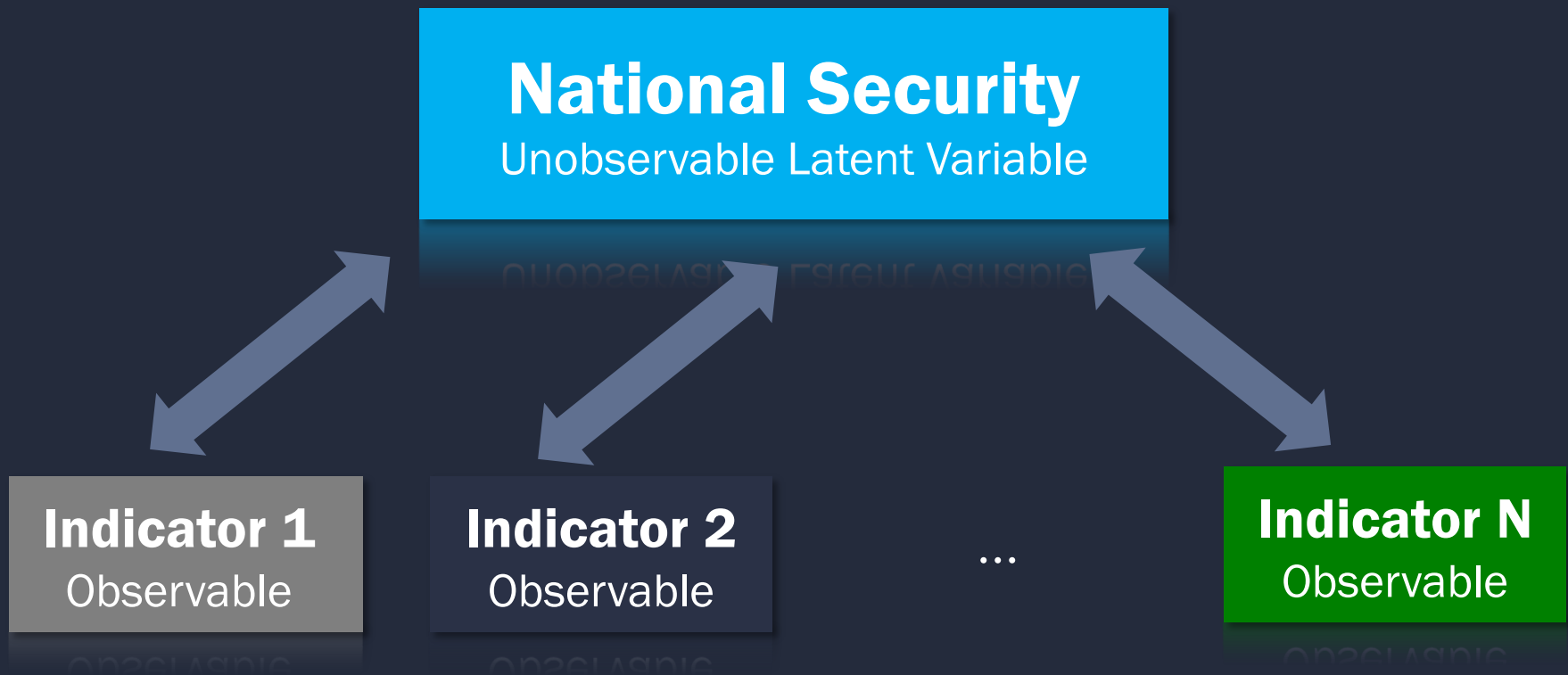
**National Security Balance
The Civilian Quantitative Dimension**

Prof. Rafi Melnick, IDC Herzliya

Development of the Economic Dimension in Israel 1990-2015



Multiple Indicators Approach



- N indicators are measurable; they affect and are affected by national security, which is an unobservable latent variable.
- The presence of multiple indicators allows (under defined assumptions) one to quantify national security.
- A rise in each indicator means improvement in national security, in the corresponding dimension.

Components of the Economic Indicator

(Relative Weight in Parenthesis)

1. GDP Per Capita, PPP (16%)
2. GDP, PPP (15%)
3. Unemployment (15%)
4. General Government Gross Financial Liabilities (half weight 11%)
5. R&D Investment - Percent of GDP (11%)
6. Current Account Balance (11%)
7. Inflation (11%)
8. Long Term interest rate (5%)
9. Fiscal Deficit (5%)

The Model

- Construction of a panel data set of 27 countries
- The model includes:
 - Israel
 - 26 OECD countries
- Data ranges from 1990 through 2015

Economic Data Resources

Primary Sources

- OECD Statistics
- OECD Economic Outlook
- Israel's National Insurance institute - Research and Planning Administration
- Israel's Central Bureau of Statistics

Secondary Sources

- IFS – International Financial Statistics (IMF)
- IMF – World Economic Outlook
- Bank of Israel and various central banks
- Other sources

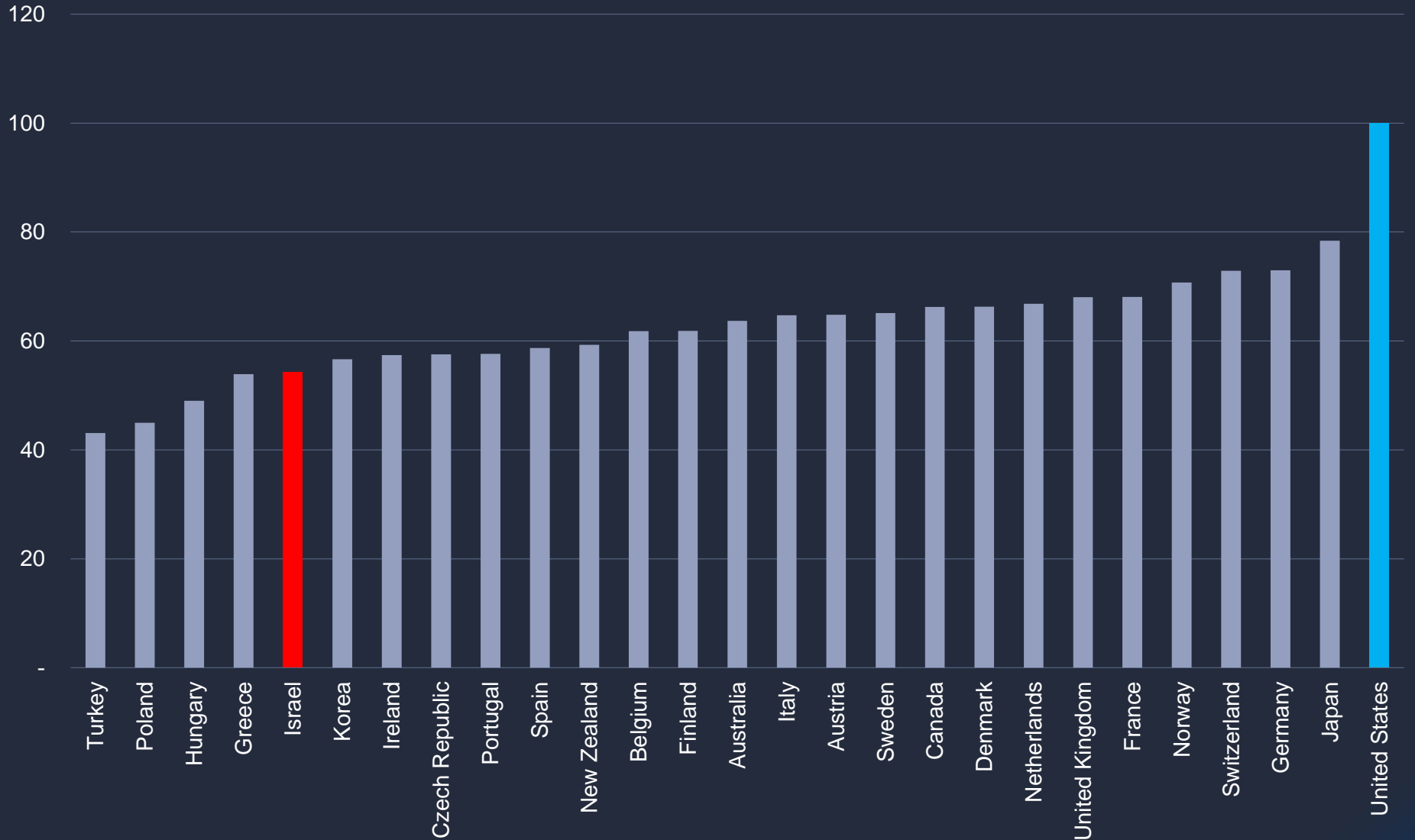
Methodology

- * A preliminary base is calibrated.
- * Each variable is measured in percentage change or percentage difference in the case that its basic measurement is in percents.
- * An annual weighted average is calculated using the weights obtained from a panel of experts.
- * The indices are formed, over time, by cumulating annual weighted averages.

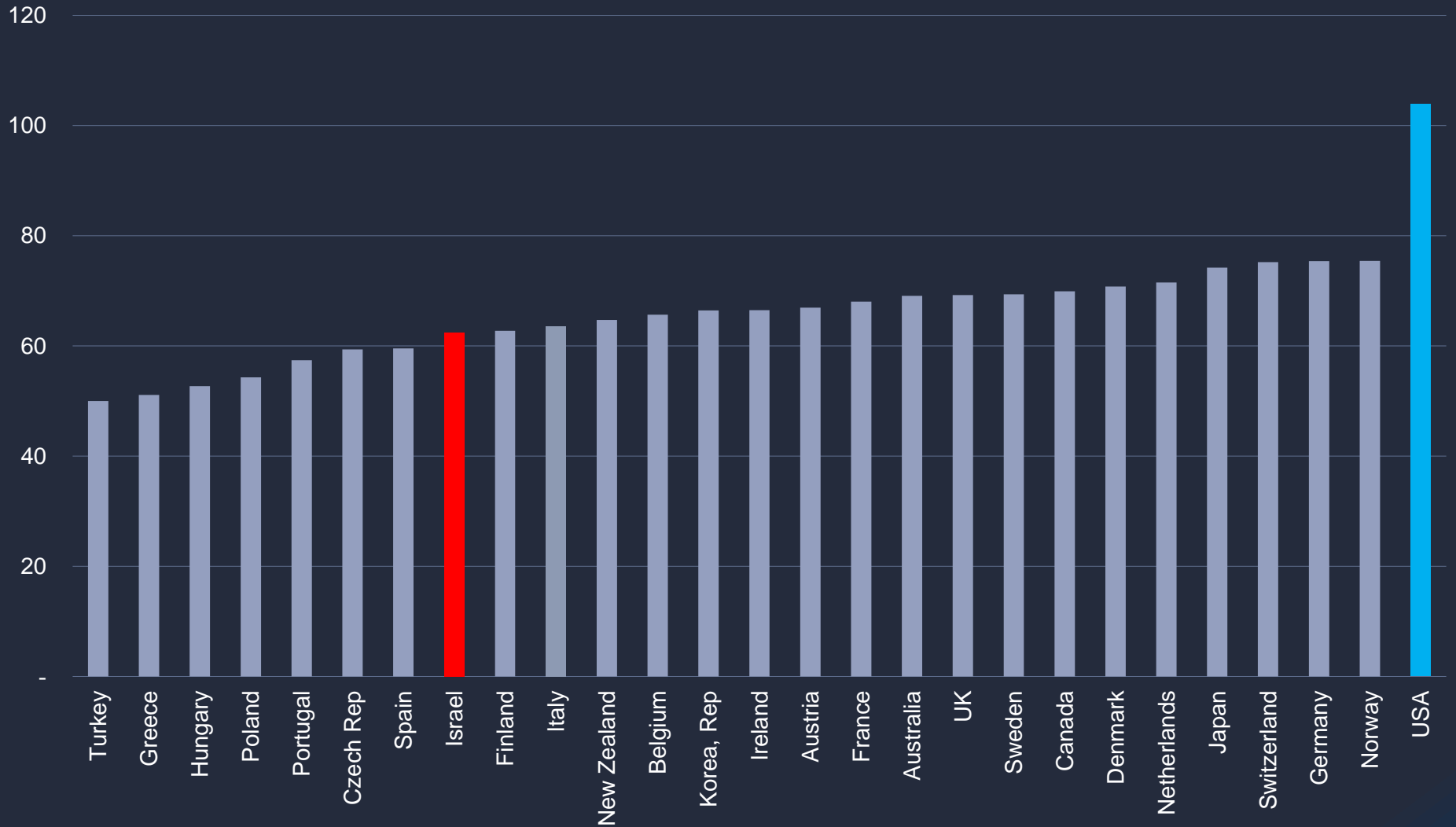
The Herzliya Indices

2016 RESULTS

Economic Base - 1990

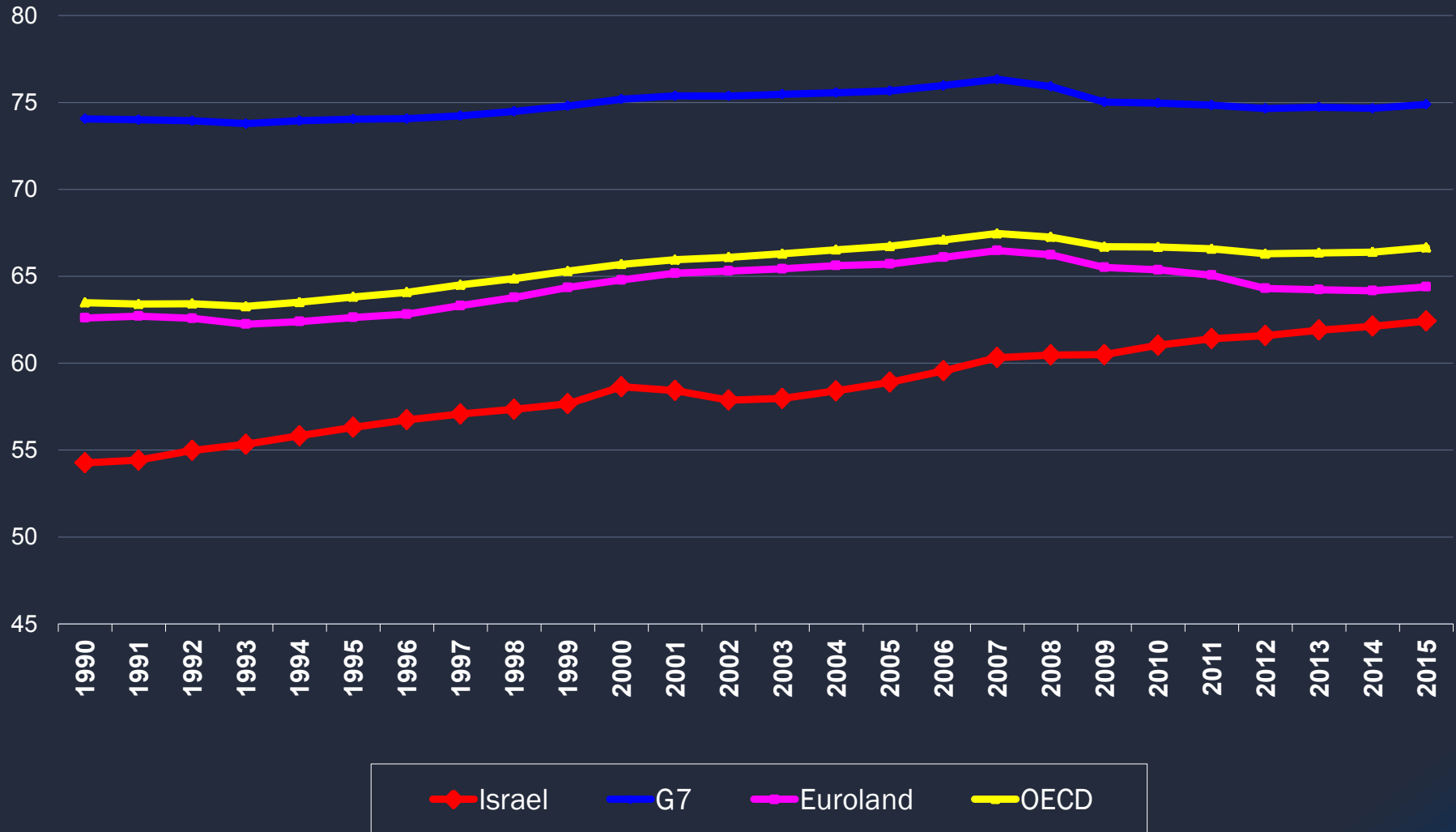


Economic Base - 2015

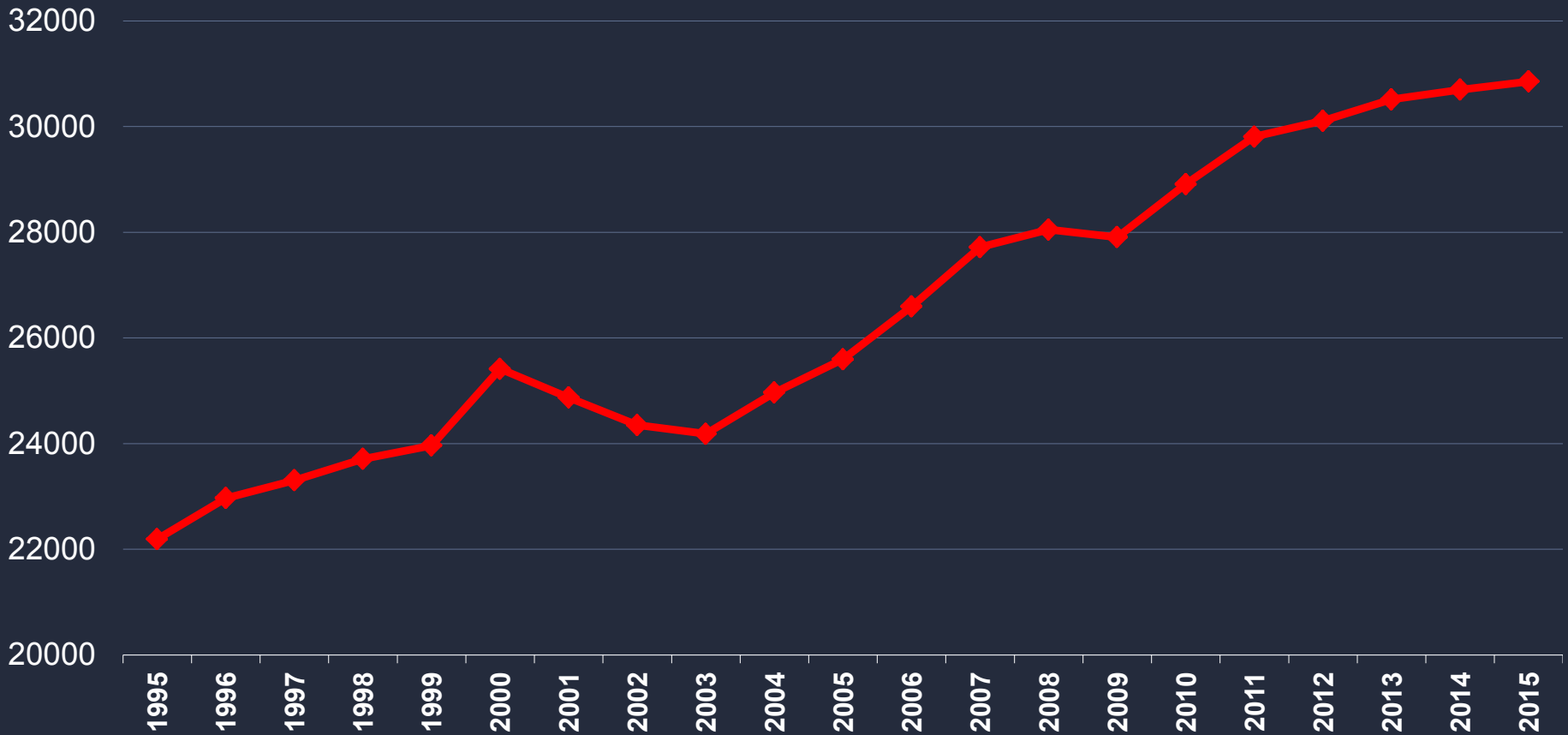


Development of the Economic Dimension

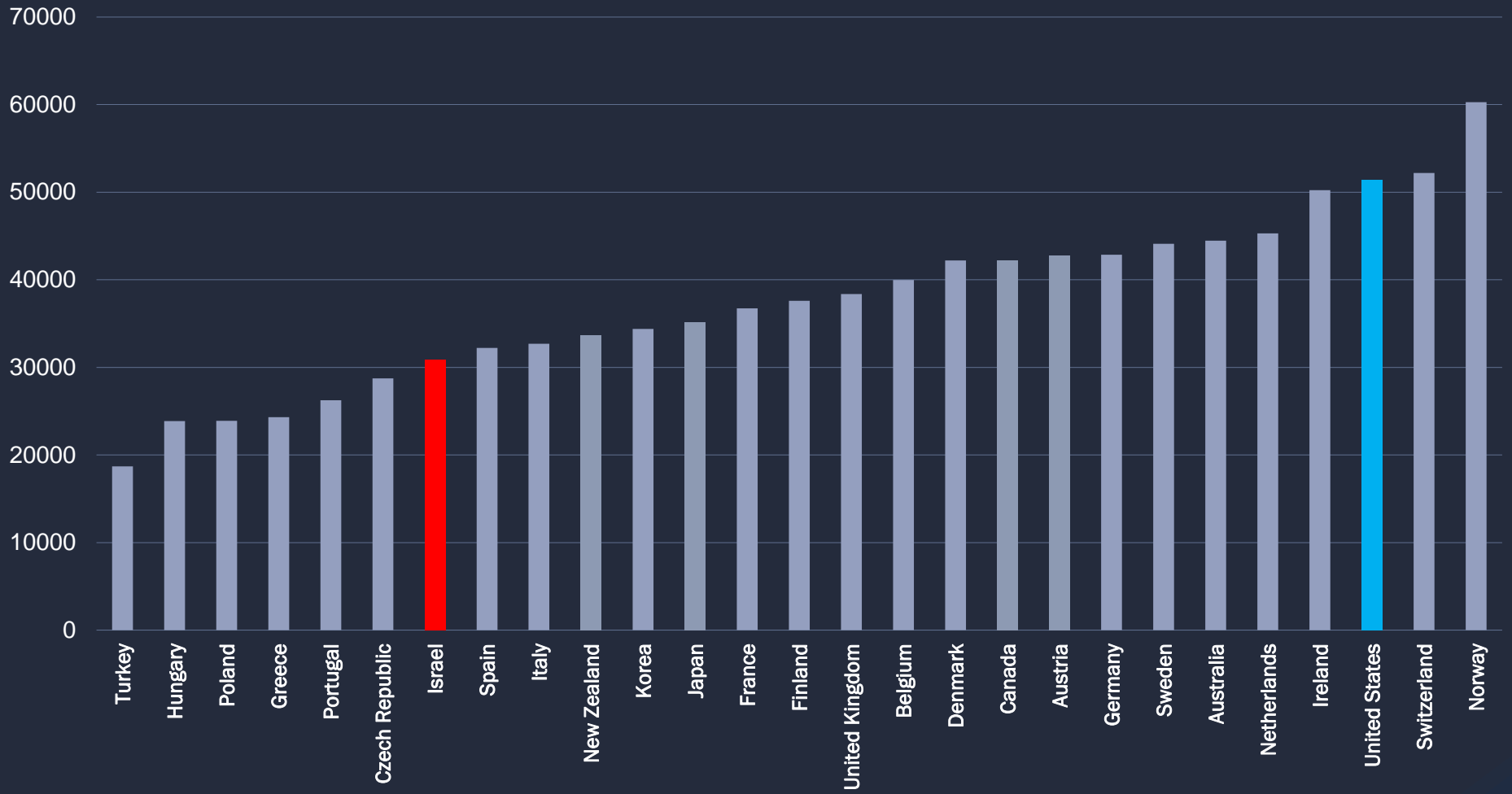
Israel and the Developed Countries



Per Capita GDP in Israel 1995 - 2015

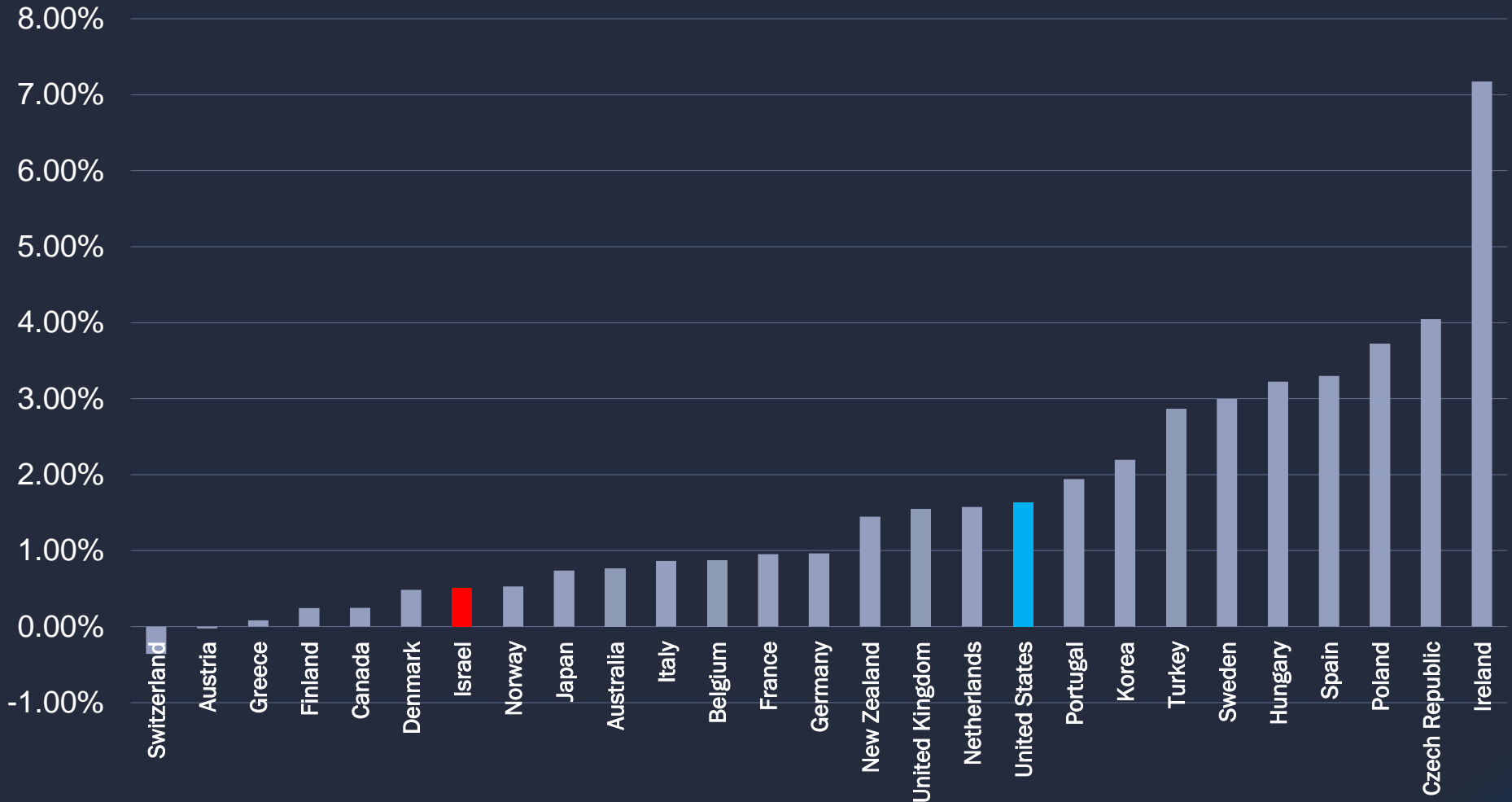


Per Capita GDP - 2015



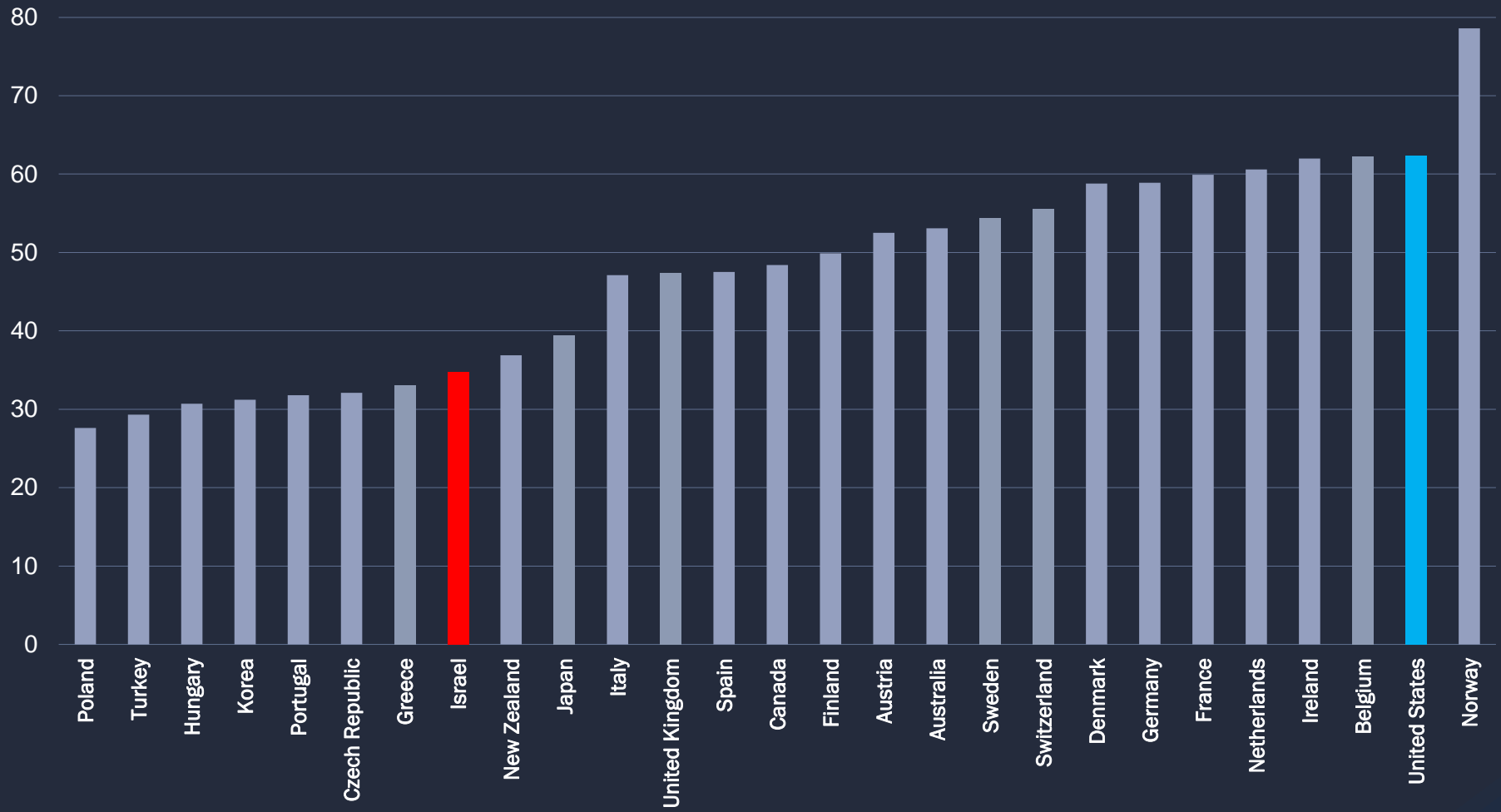
Per Capita GDP Growth - 2015

(percent)



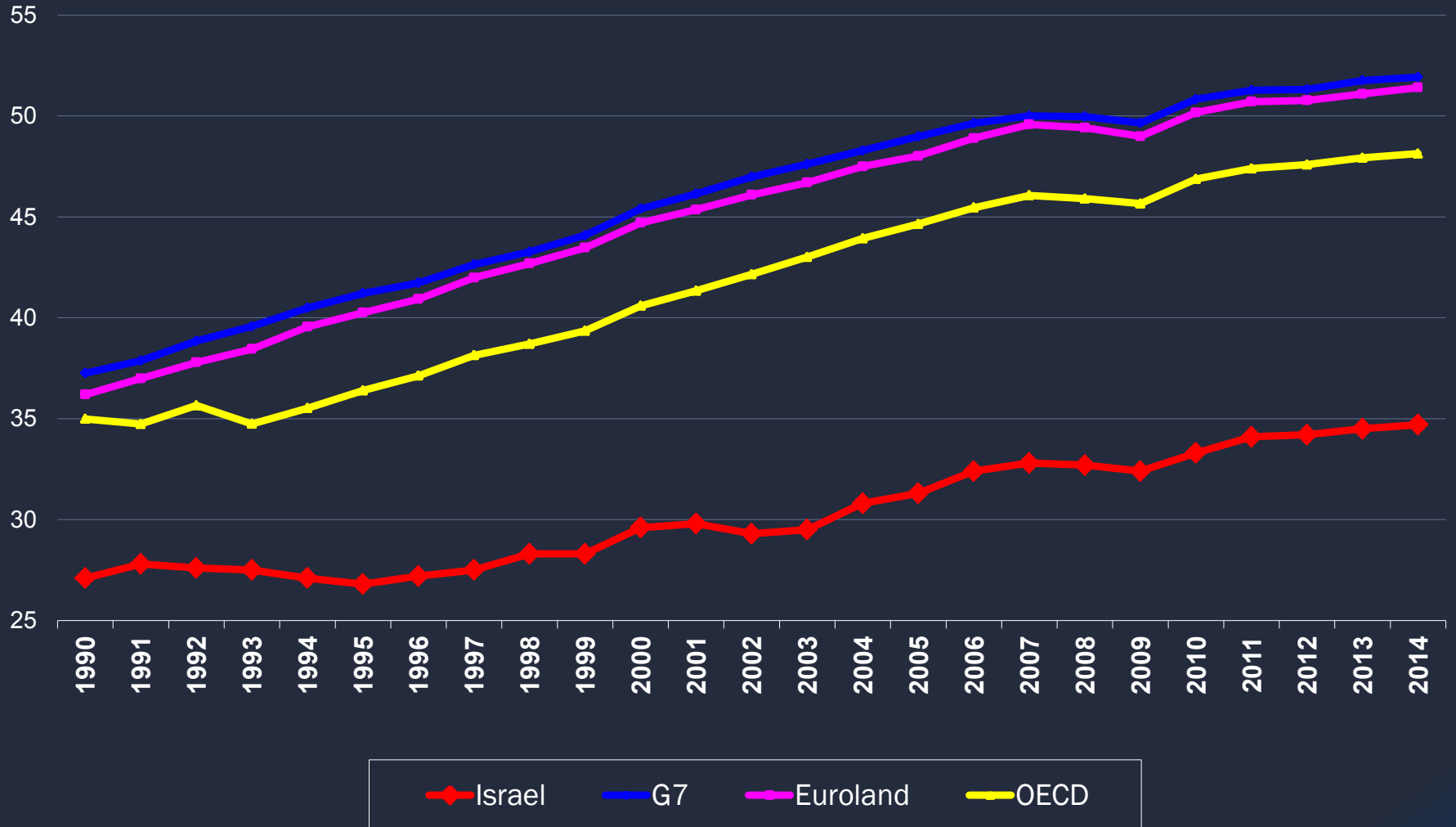
Labor Productivity 2014

GDP per Hour, US \$, 2010 prices, ppp



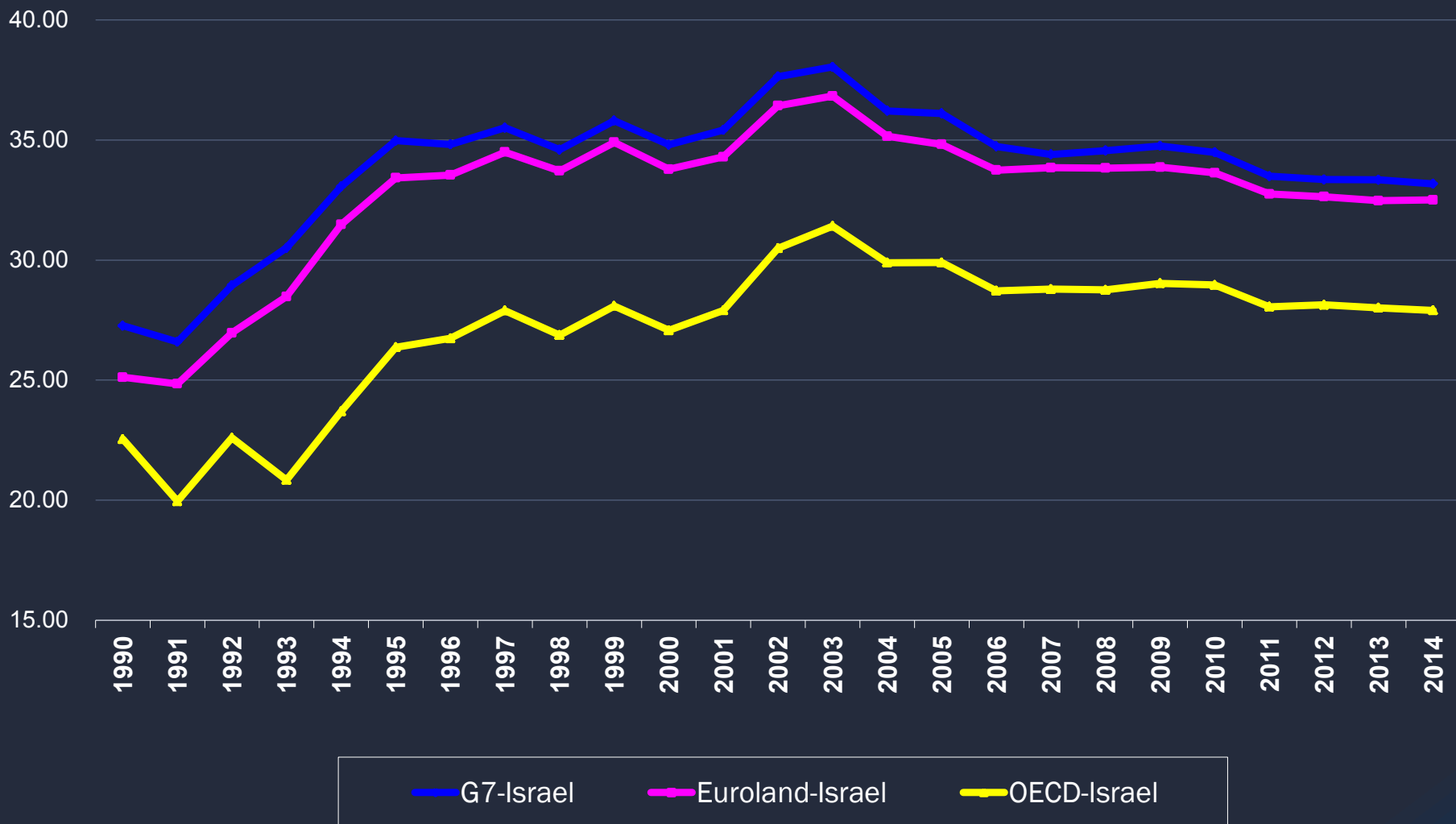
Labor Productivity 1990-2014

GDP per Hour, Israel and the Developed Countries, US \$, 2010 prices, ppp



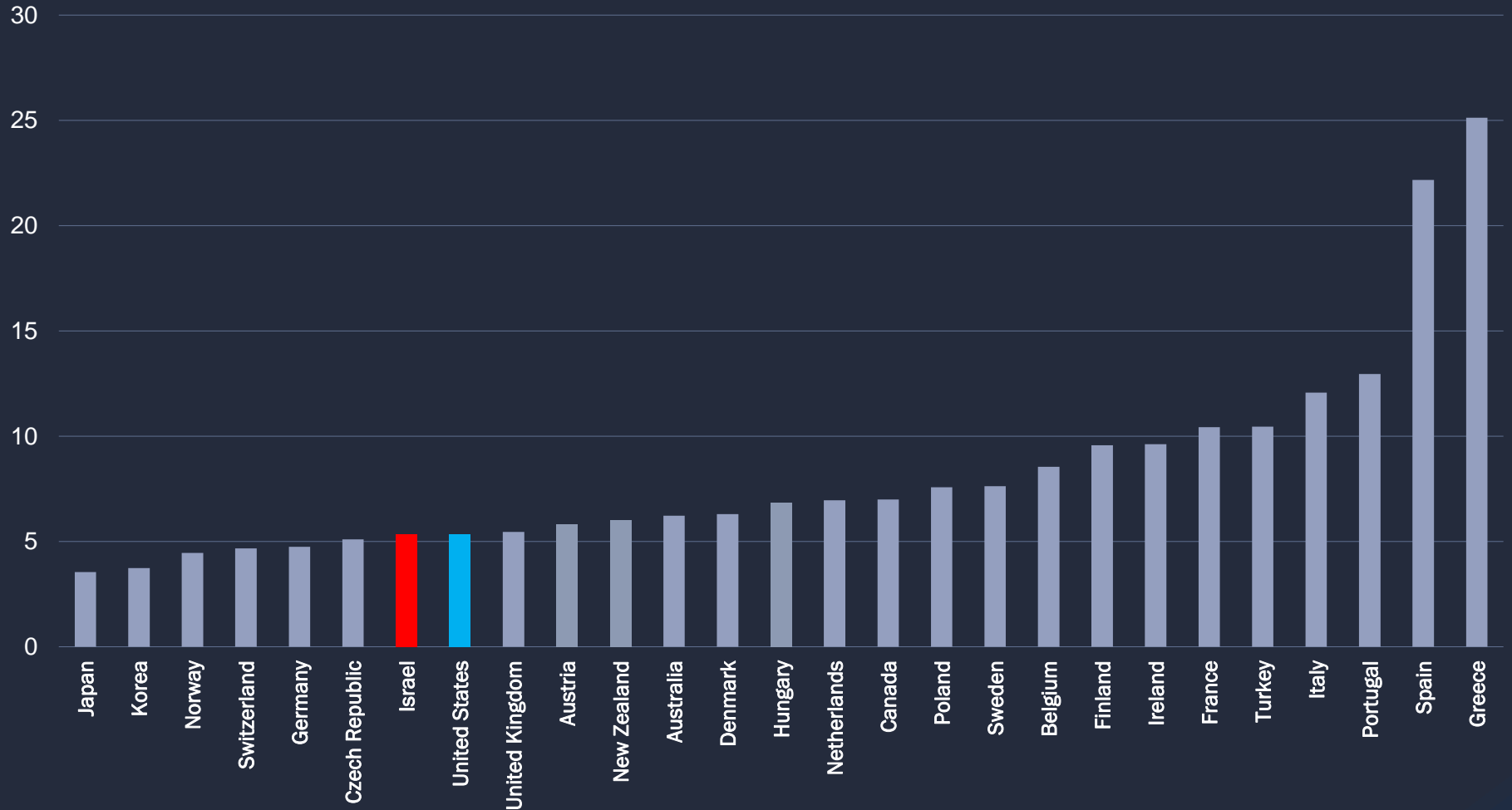
Labor Productivity Gap 1990-2014

GDP per hour, Israel and the Developed Countries, US \$, 2010 prices, ppp



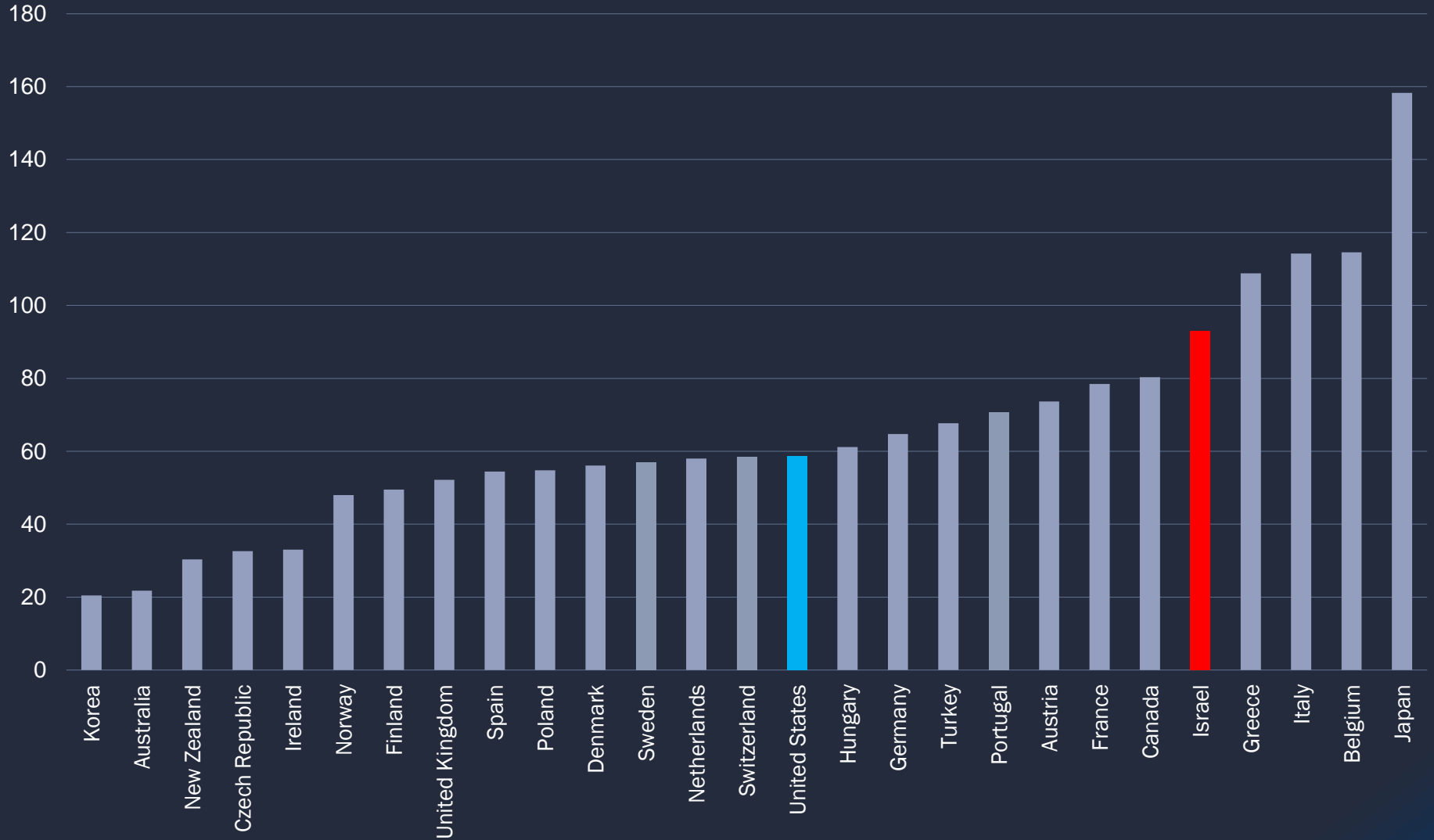
Unemployment Rate - 2015

(percent)



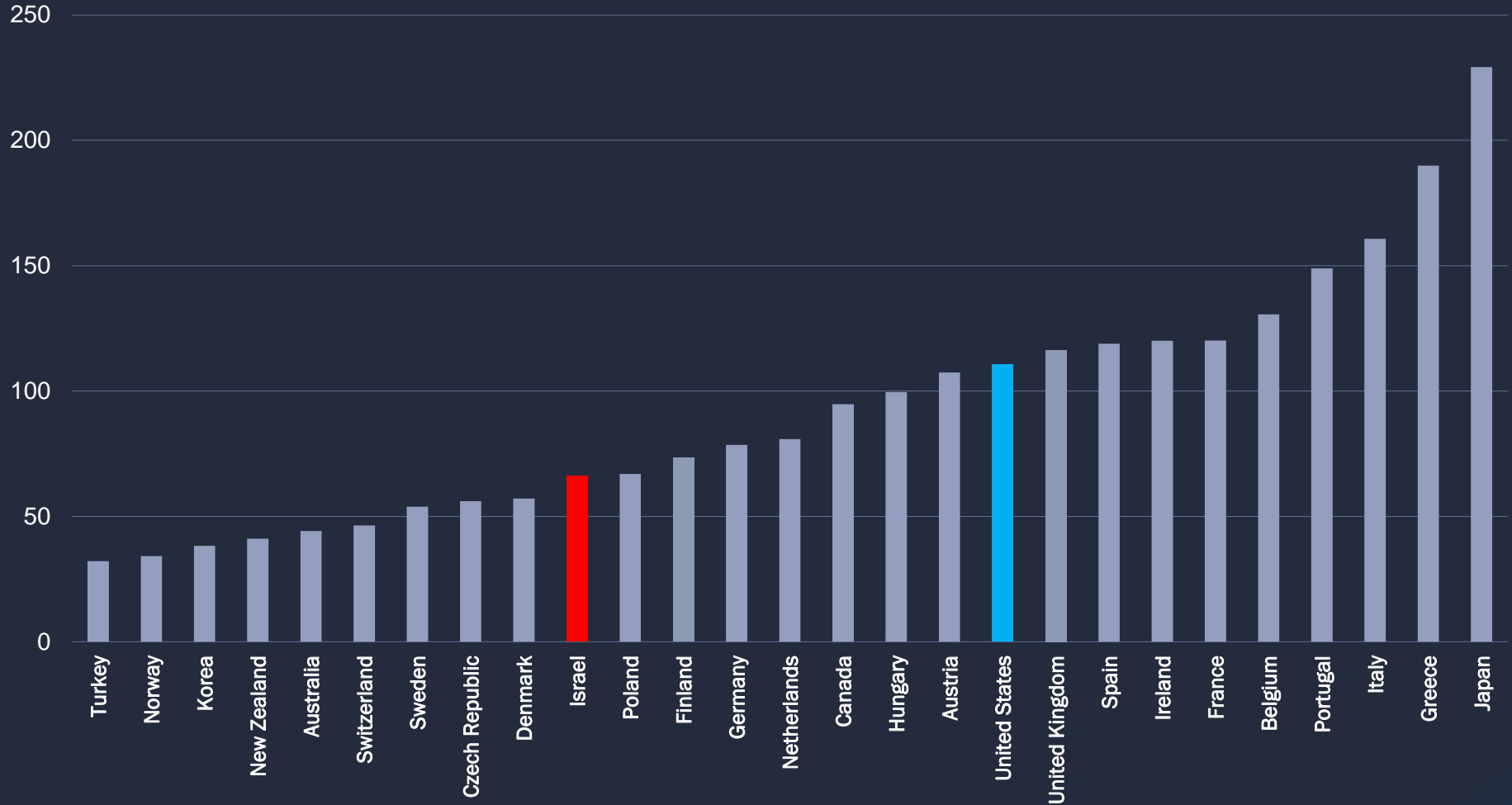
General Government Liabilities - 2003

(percent of GDP)



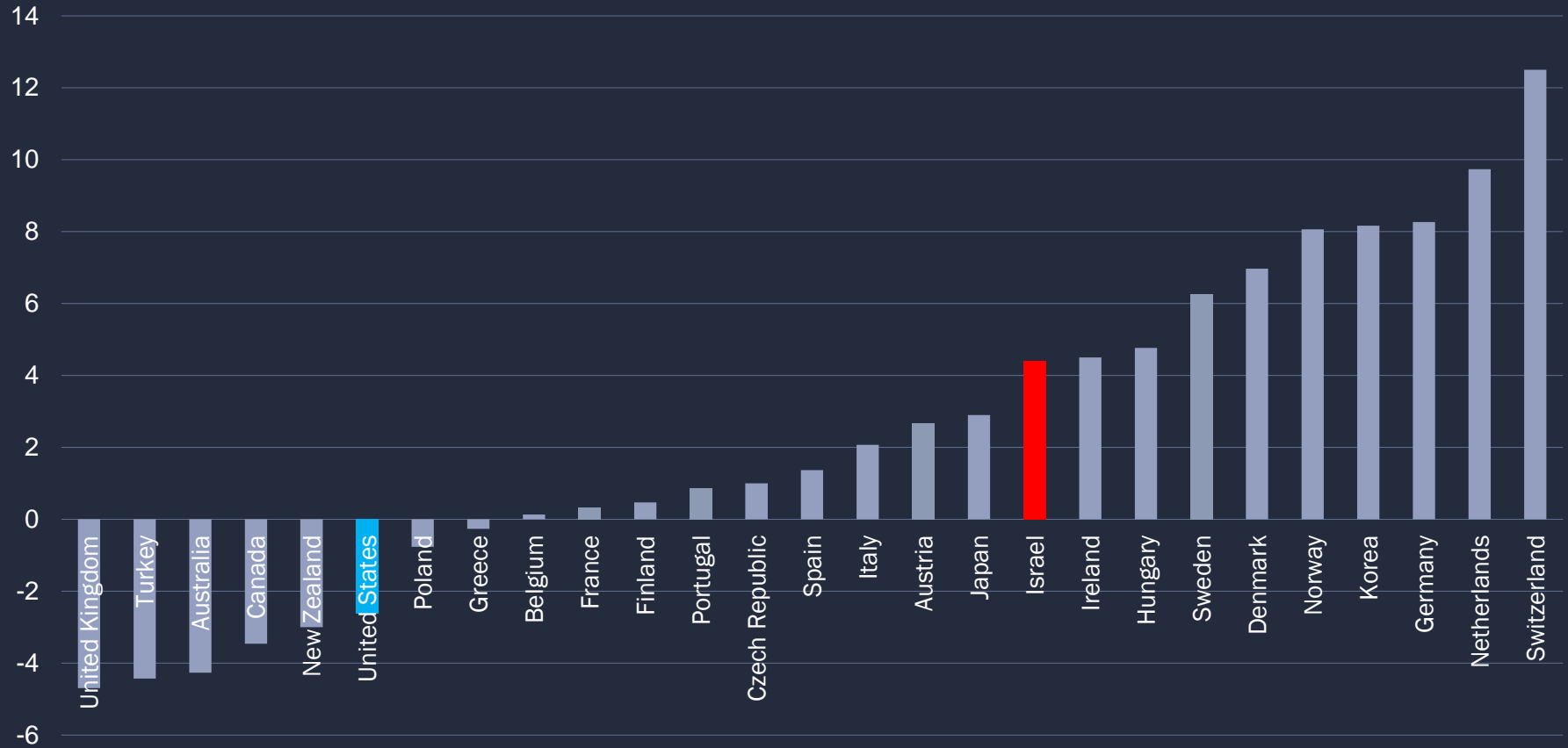
General Government Liabilities - 2015

(percent of GDP)



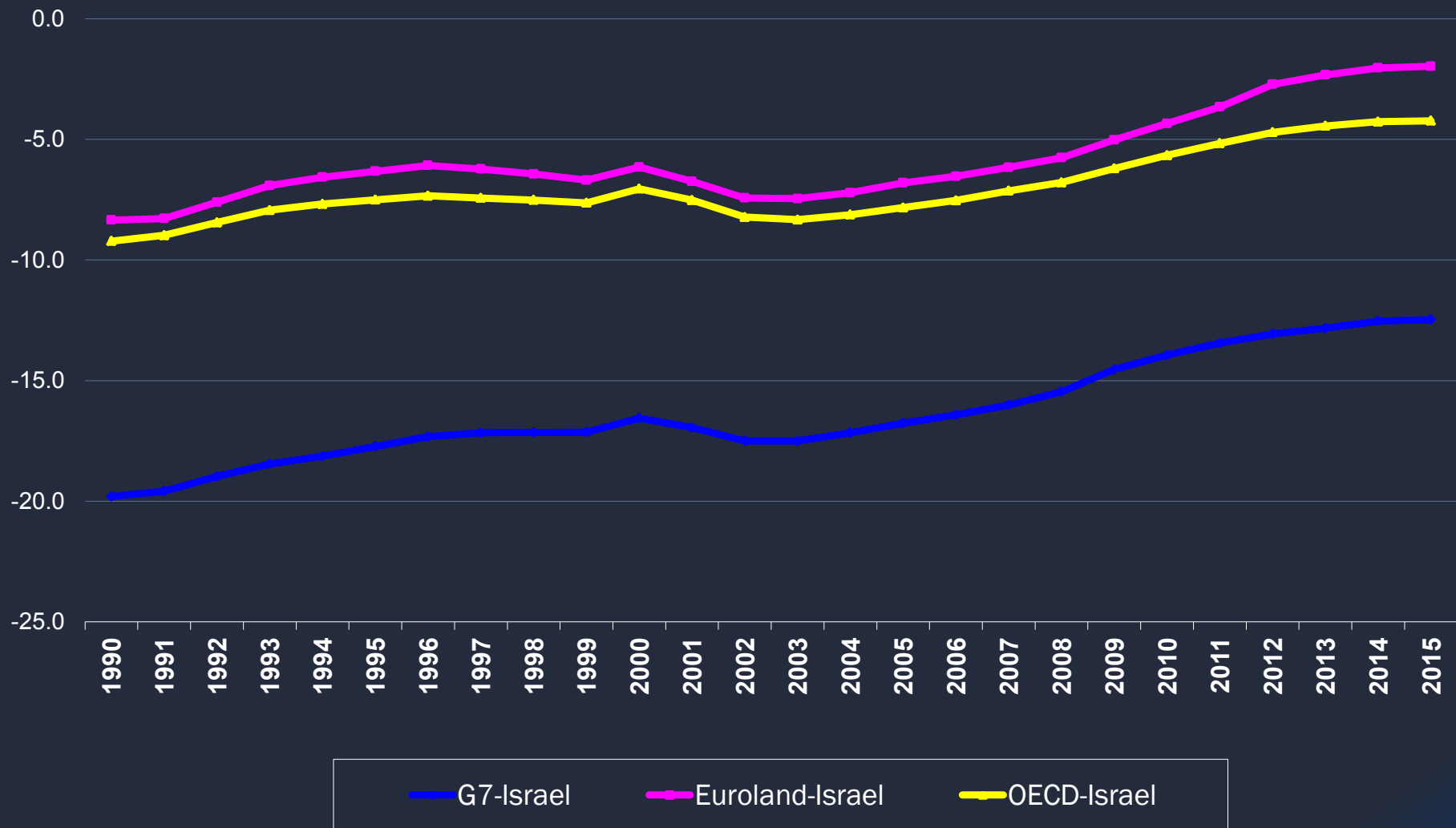
Current account balance - 2015

(percent of GDP)



Economic Dimension Gap

Israel and the Developed Countries



Economic Index 2015

1	USA	103.87	17	New Zealand	64.71
2	Norway	75.44	18	Italy	63.61
3	Germany	75.40	19	Finland	62.74
4	Switzerland	75.20	20	Israel	62.42
5	Japan	74.21	21	Spain	59.55
6	Netherlands	71.48	22	Czech Rep	59.37
7	Denmark	70.78	23	Portugal	57.39
8	Canada	69.92	24	Poland	54.28
9	Sweden	69.35	25	Hungary	52.67
10	UK	69.22	26	Greece	51.07
11	Australia	69.10	27	Turkey	50.01
12	France	68.03			
13	Austria	66.94			
14	Ireland	66.48			
15	Korea, Rep	66.43			
16	Belgium	65.65			

The Herzliya Composite Economic Social Index

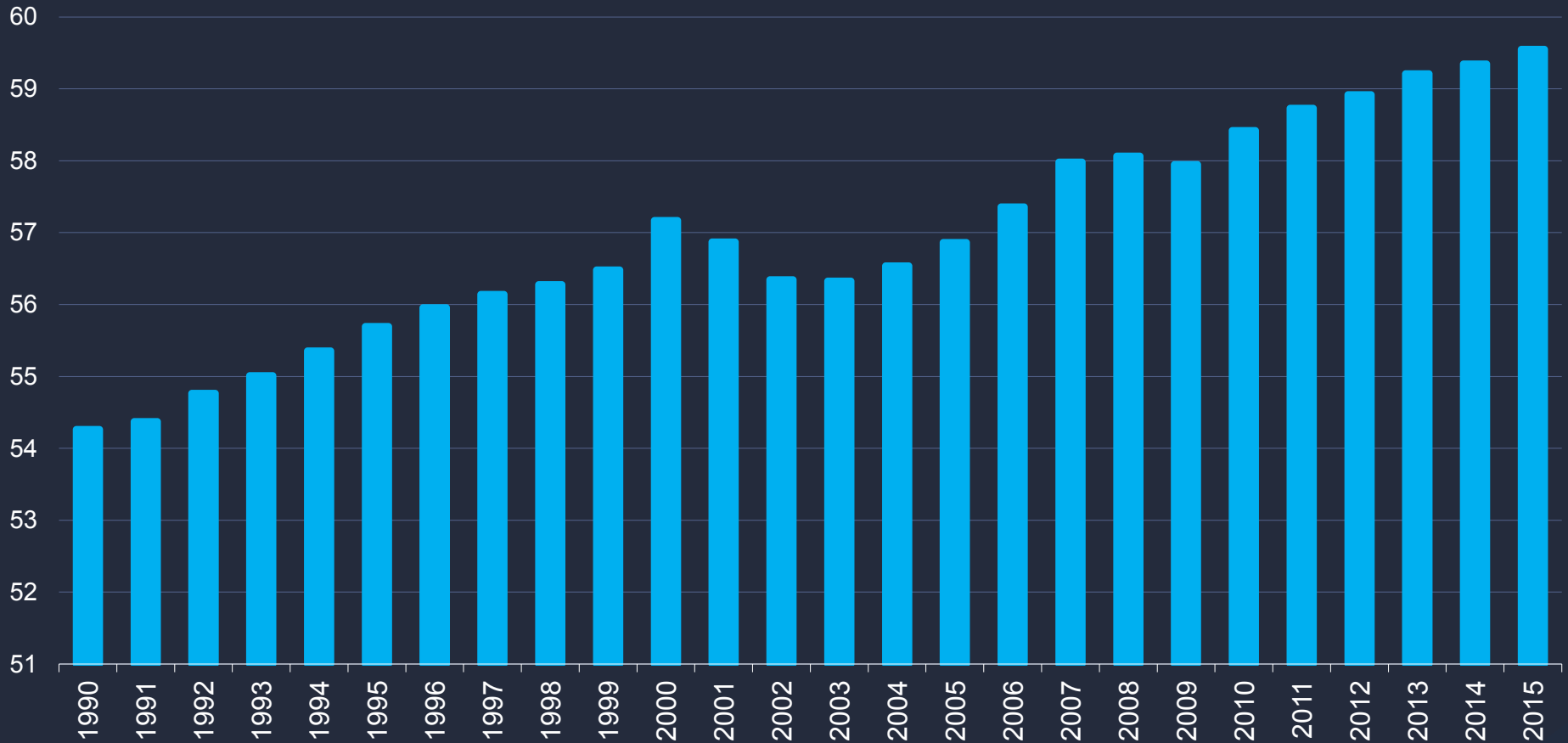
Components of the Economic-Social Indicator

(Relative Weight in Parenthesis, Social indicators in yellow)

1. GDP Per Capita, PPP (11%)
2. GDP, PPP (10%)
3. Unemployment (10%)
4. Poverty Incidence (10%)
5. Inequality Gini (8%)
6. General Government Gross Financial Liabilities (8%)
7. R&D Investment - % of GDP (8%)
8. Current Account Balance (8%)
9. Long Term Unemployment (7%)
10. Employment Rate (7%)
11. Inflation (7%)
12. Long Term Interest Rate (3%)
13. Fiscal Deficit (3%)

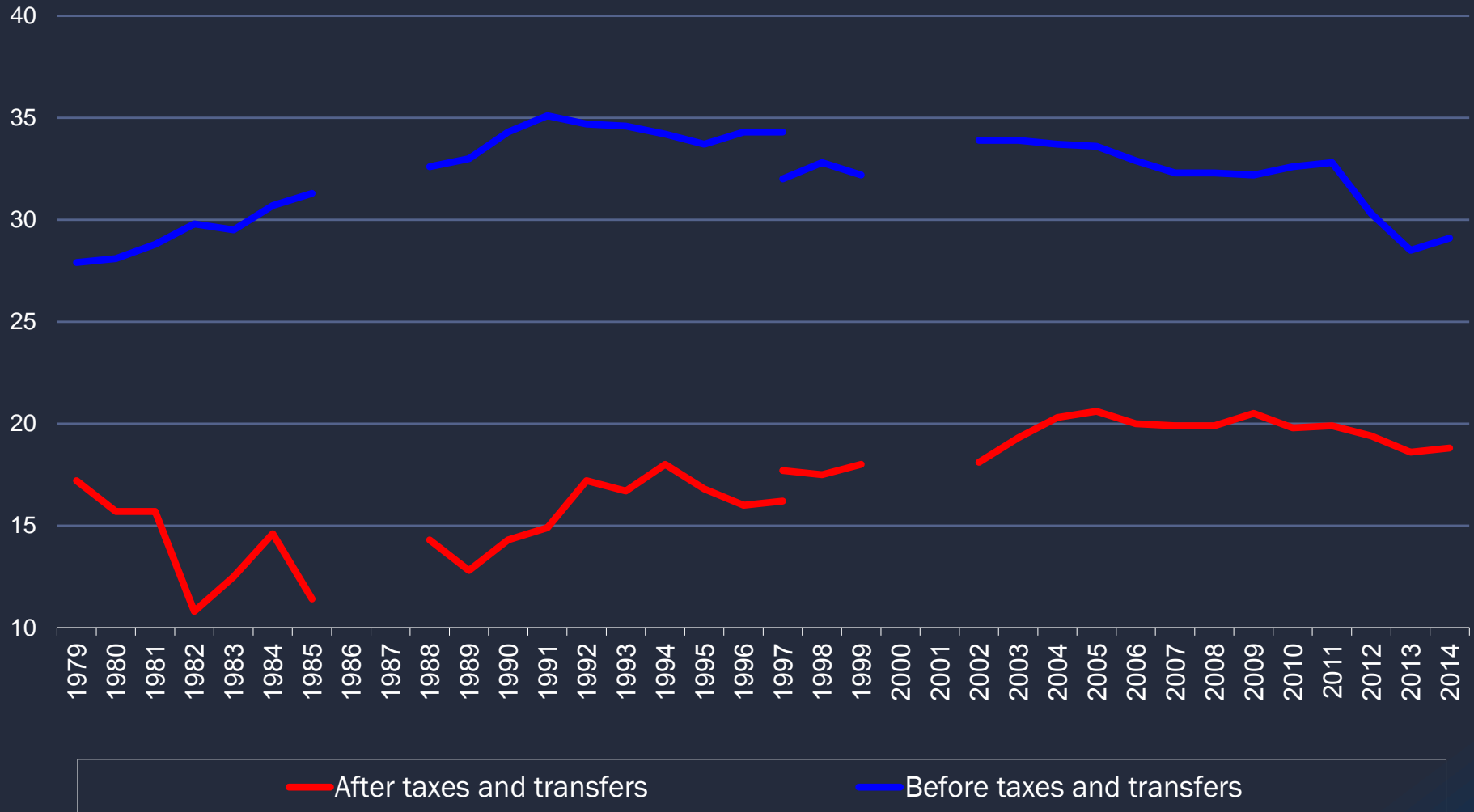
Development of the Economic and Social Dimension in Israel

1990 - 2015



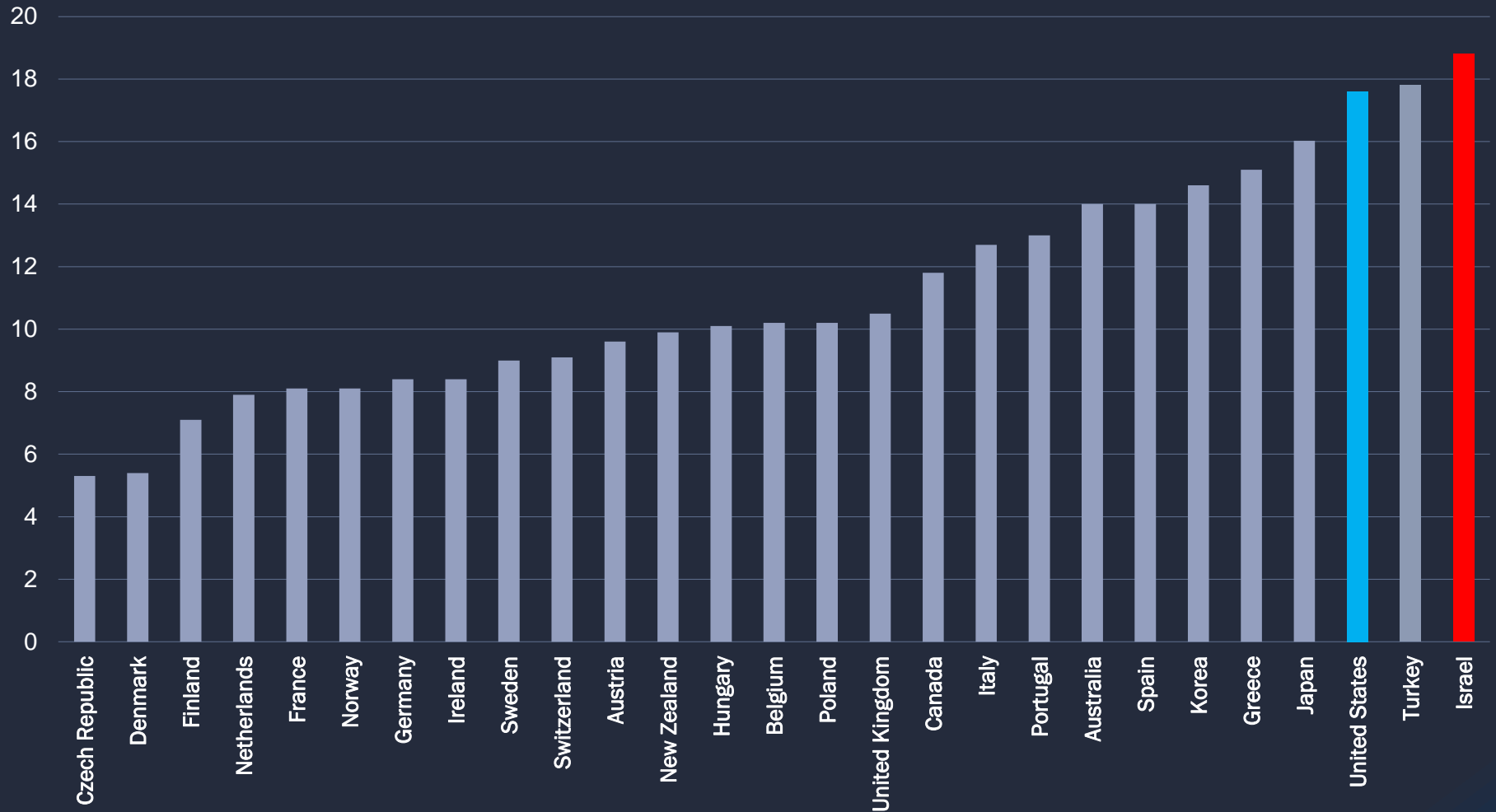
Poverty Incidence in Israel 1979 - 2014

(Families, percent)



Poverty Incidence

(Families, the latest available data point, percent)



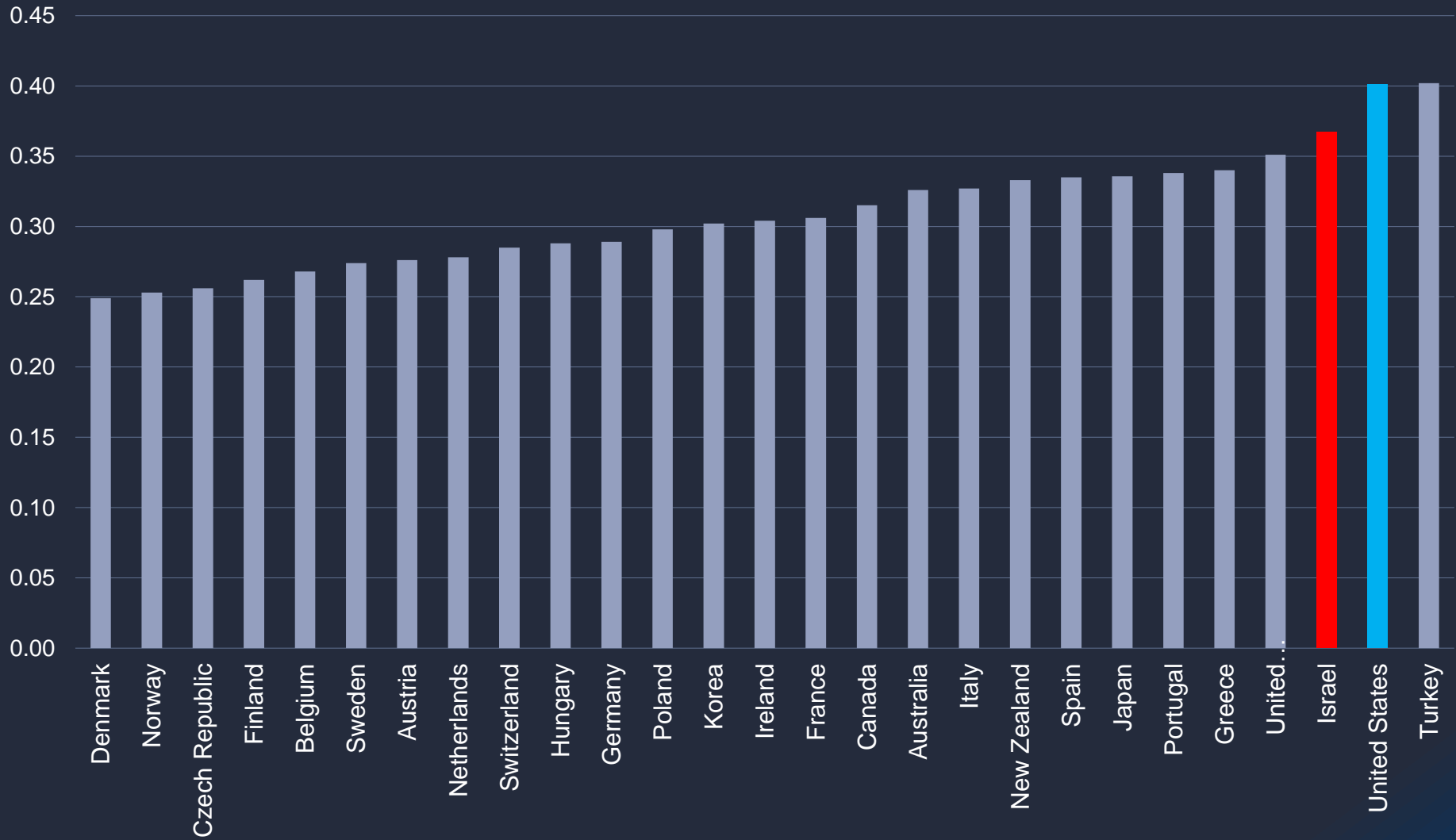
Inequality in Israel 1979-2014

(Families, Gini Coefficient)



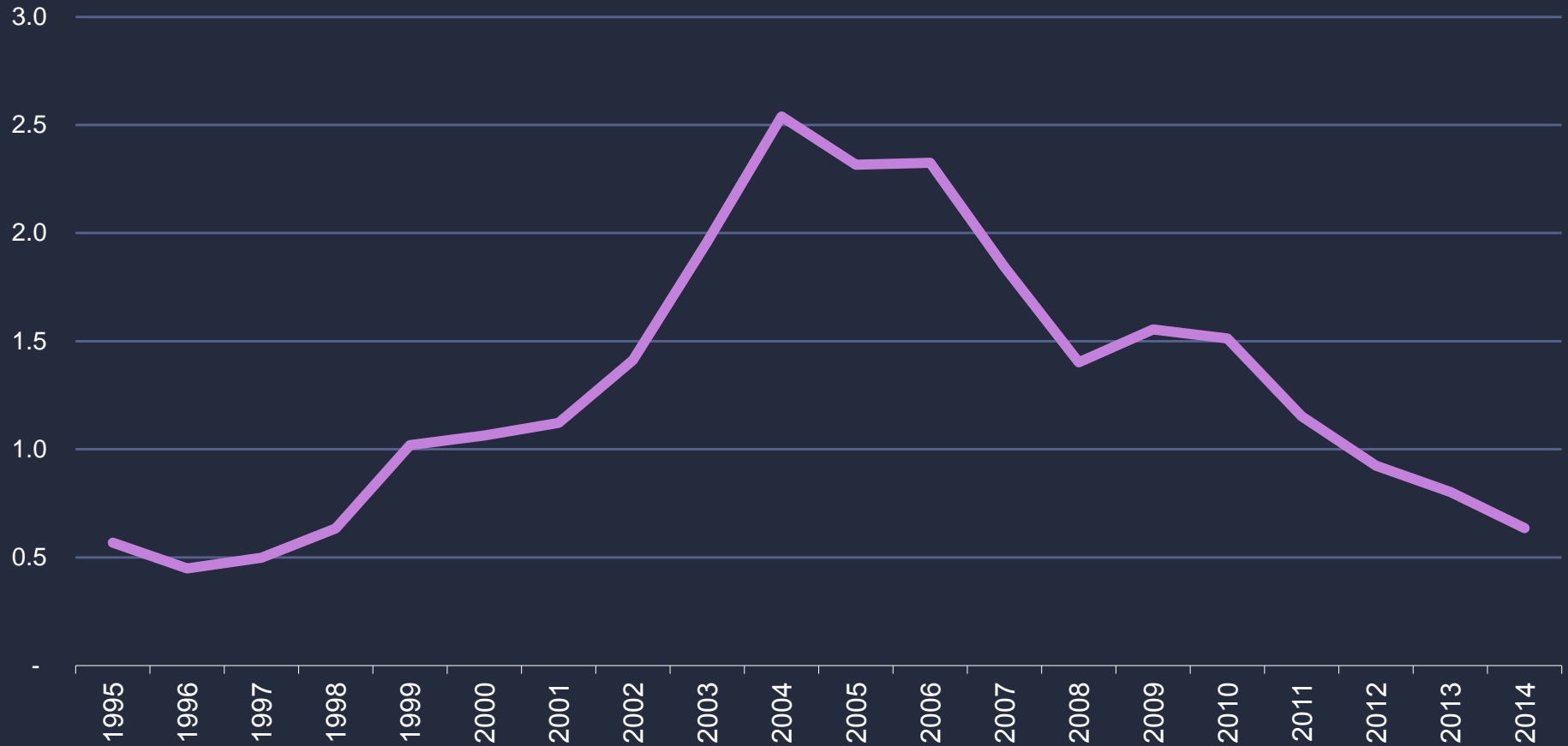
Inequality

(Families, the latest available data point, Gini coefficient)



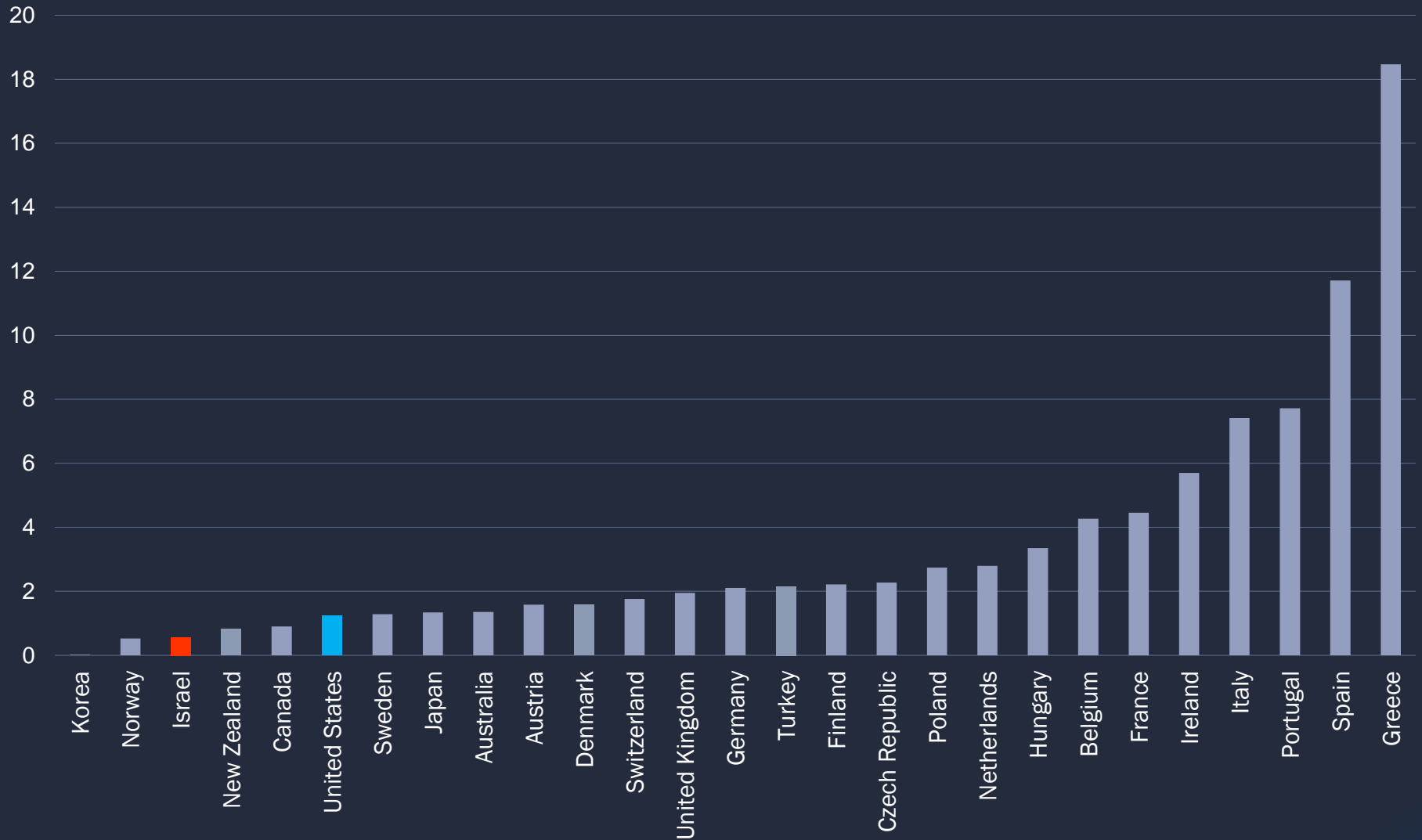
Long Term Unemployment in Israel 1995-2014

(Families, percent)



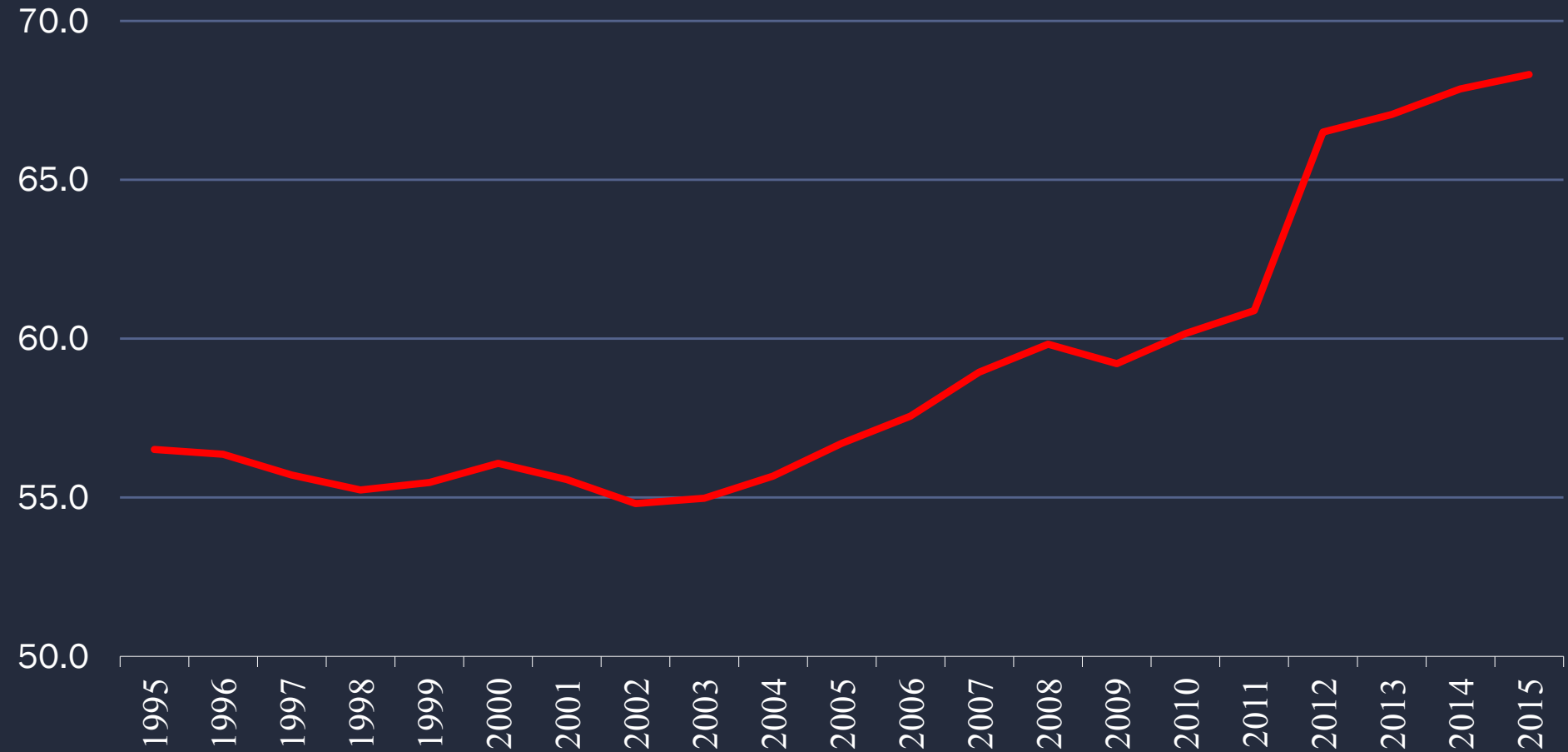
Long Term Unemployment

(Families, the latest available data point, percent)



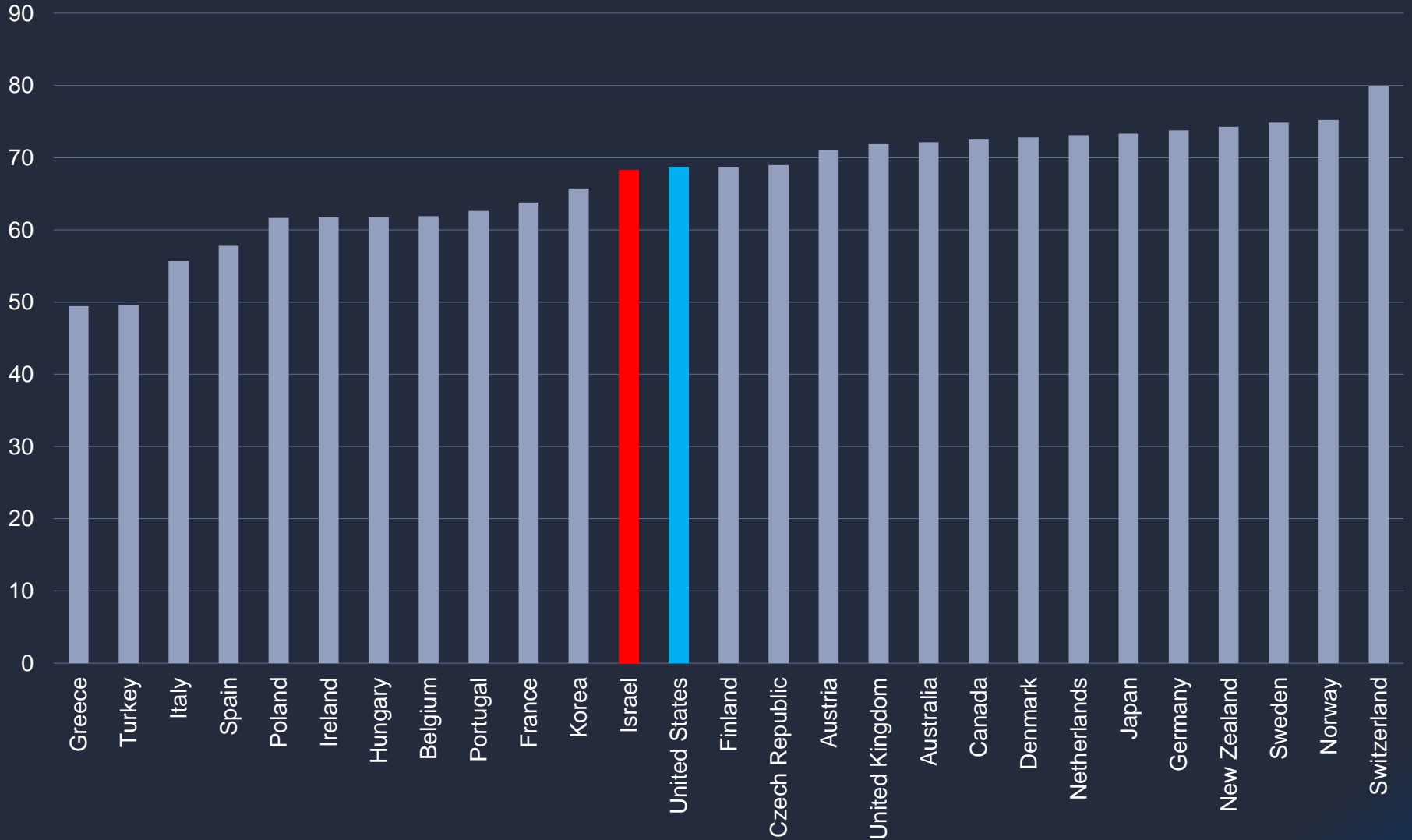
Employment Rate Israel 1995 - 2015

(percent)

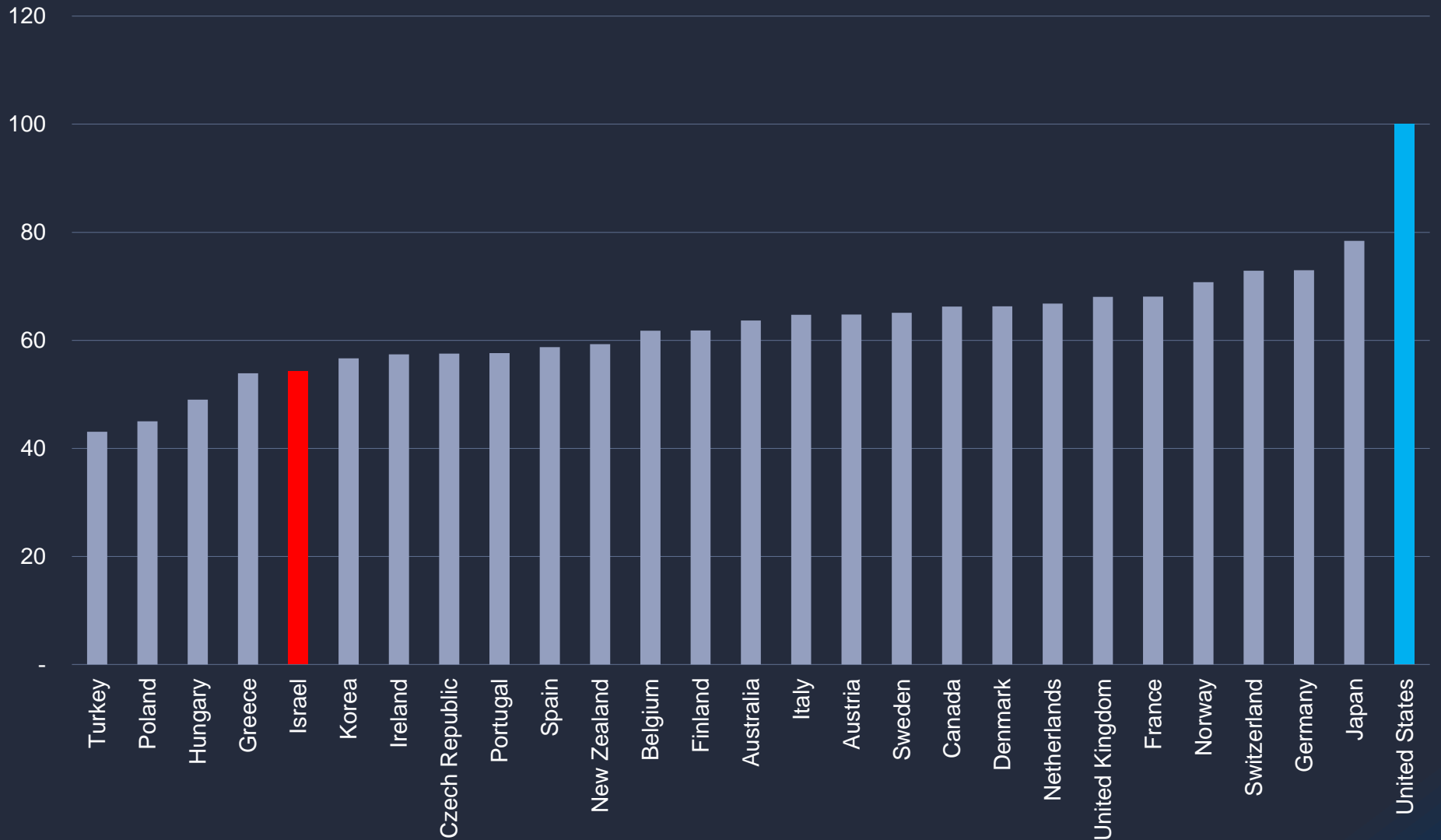


Employment Rate

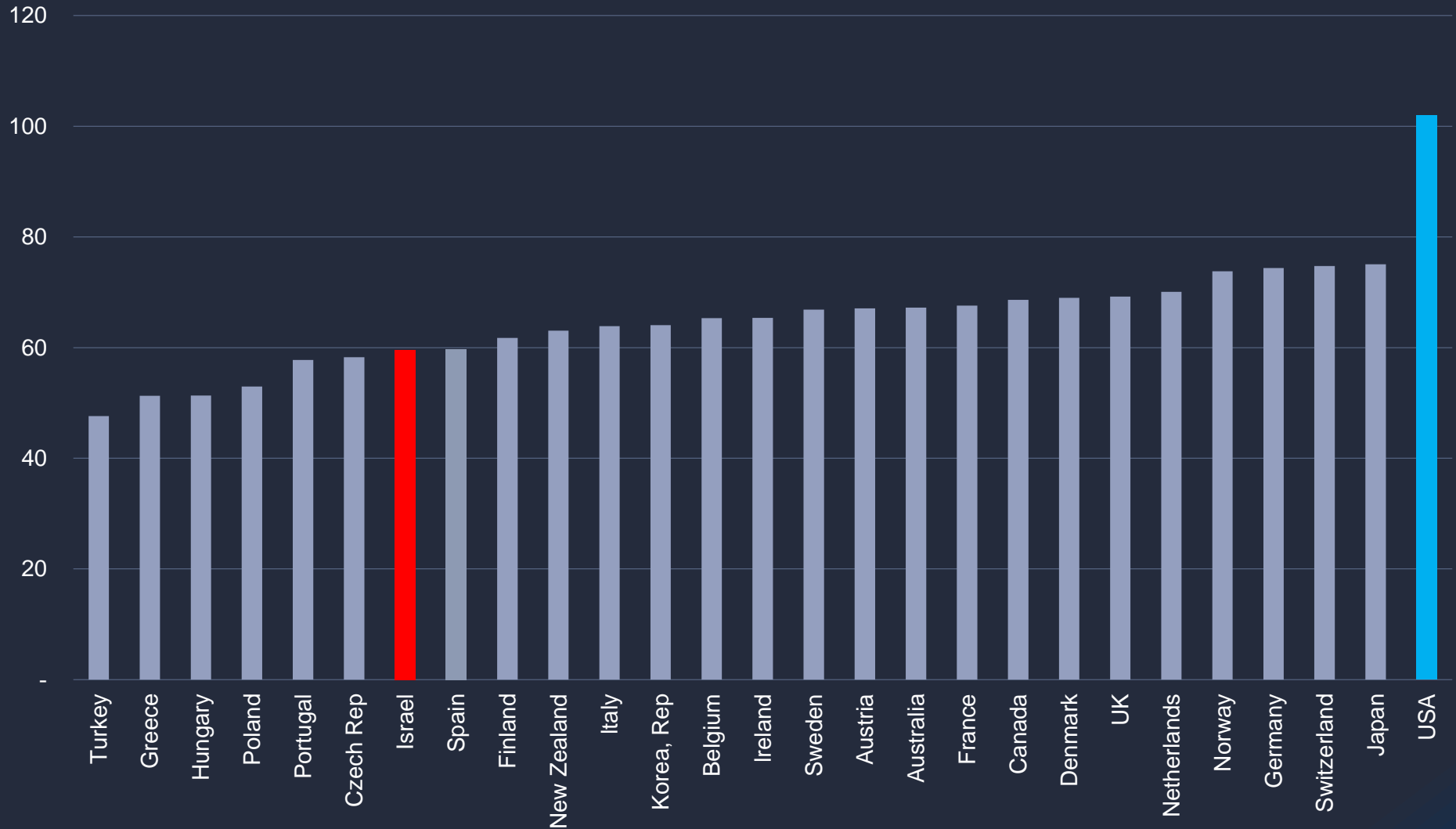
(The latest available data point, Percent)



Economic Social Base - 1990

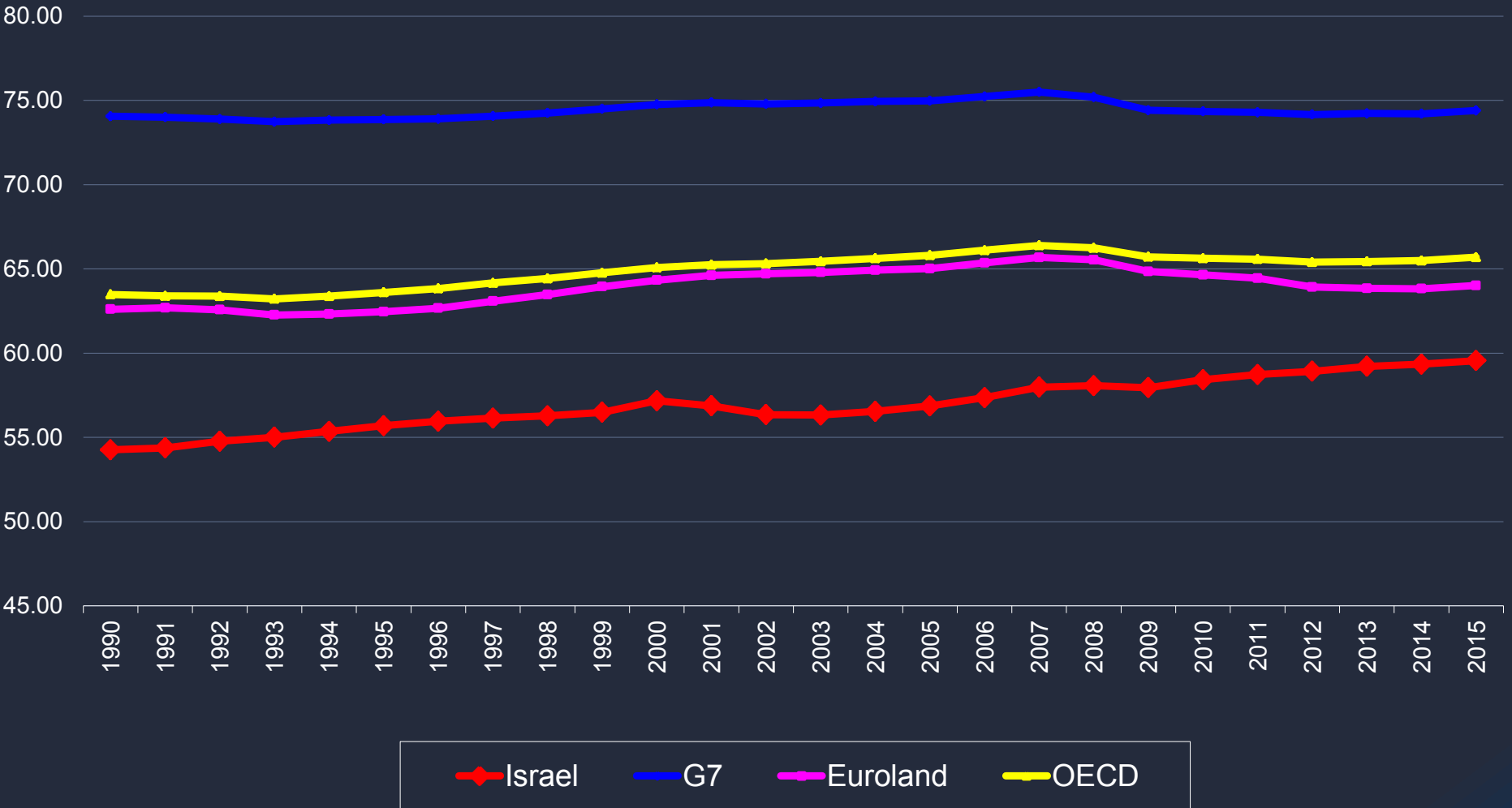


Economic Social Base - 2015



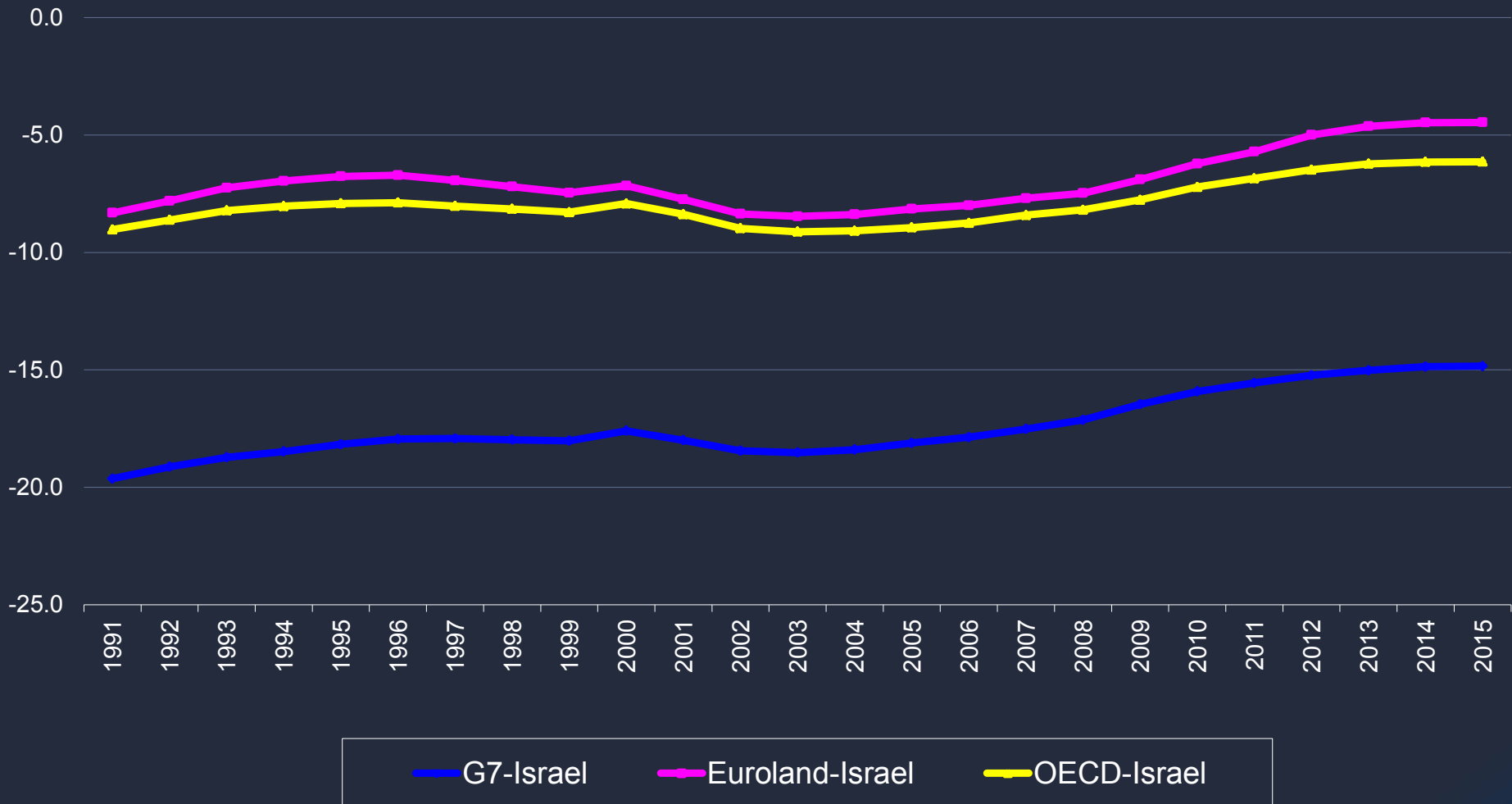
Development of the Economic Social Dimension

Israel and the Developed Countries



Economic Social Dimension Gap

Israel and the Developed Countries

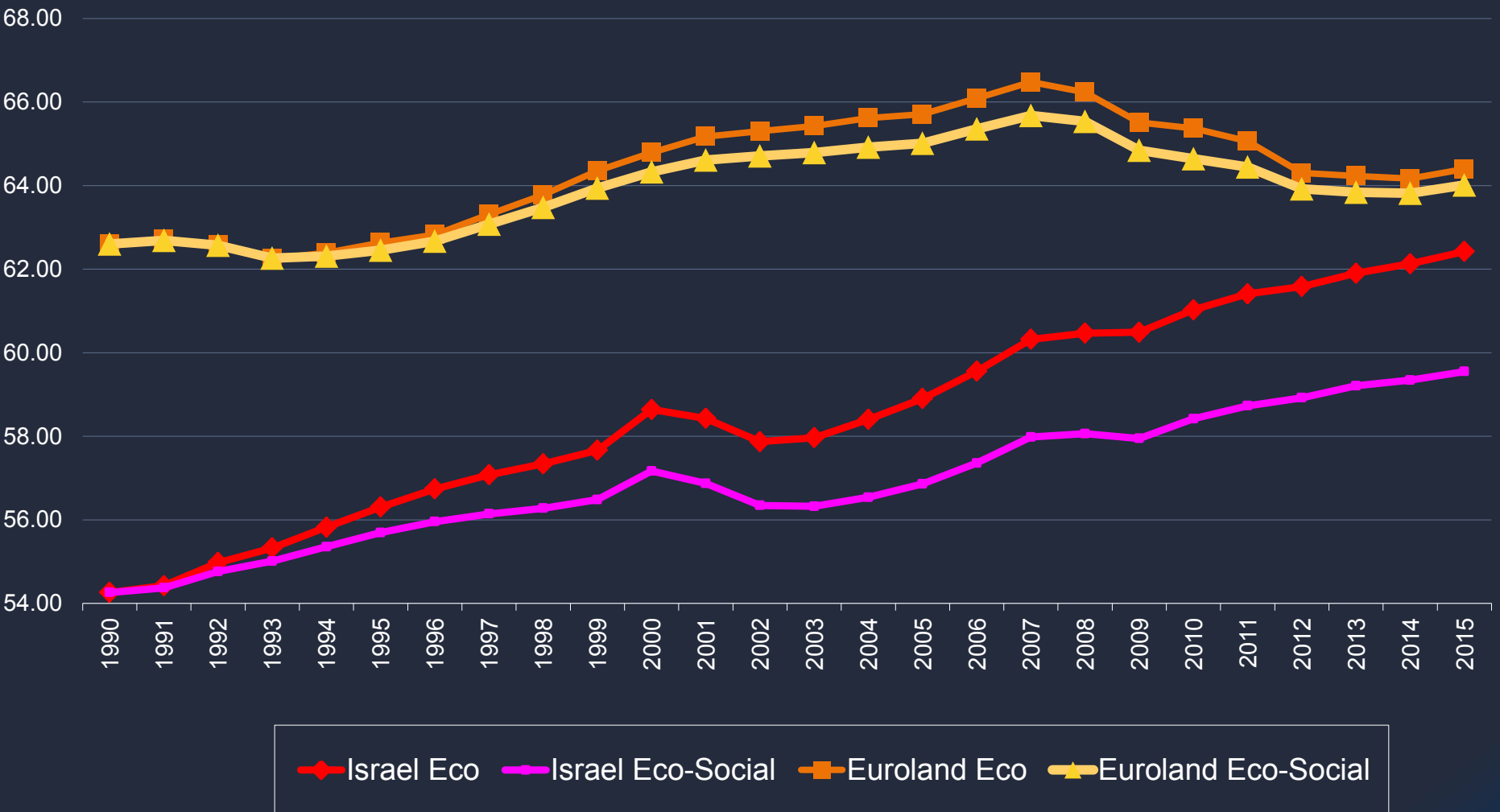


Economic Social Index 2015

1	USA	102.02	17	Italy	63.85
2	Japan	75.04	18	New Zealand	63.07
3	Switzerland	74.74	19	Finland	61.73
4	Germany	74.40	20	Spain	59.72
5	Norway	73.79	21	Israel	59.55
6	Netherlands	70.05	22	Czech Rep	58.27
7	UK	69.21	23	Portugal	57.74
8	Denmark	68.97	24	Poland	52.95
9	Canada	68.64	25	Hungary	51.31
10	France	67.61	26	Greece	51.29
11	Australia	67.24	27	Turkey	47.62
12	Austria	67.07			
13	Sweden	66.84			
14	Ireland	65.36			
15	Belgium	65.32			
16	Korea, Rep	64.06			

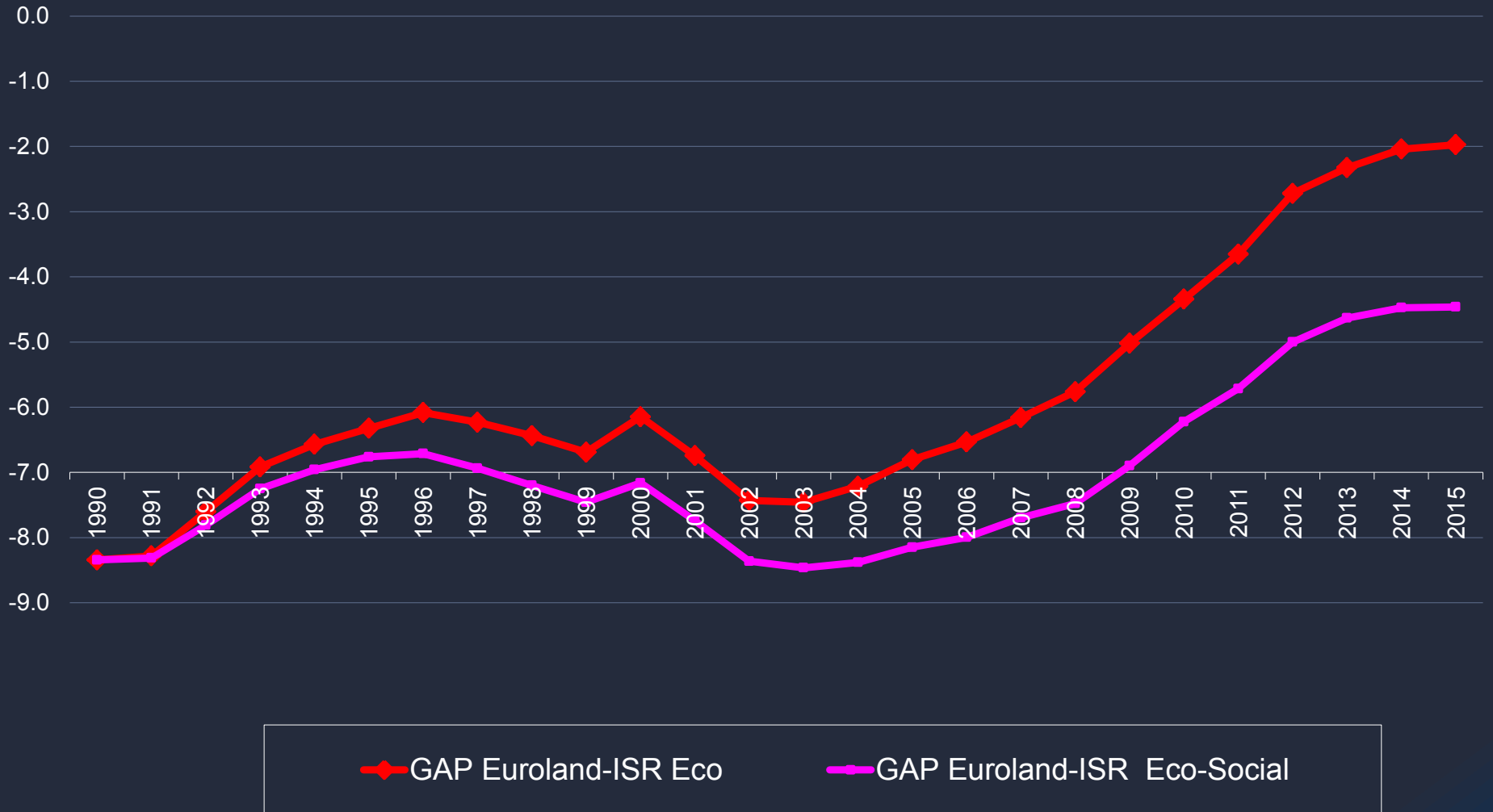
Development of the Economic and the Economic Social Dimension a Comparison

Israel and the Developed Countries



Economic and Economic Social Dimension Gap

Israel and the Developed Countries



Thank you