

## Analysis Base

# A Downward Trend in Israel's Competitiveness

### Abstract

1. The ISRAEL 15 Vision focuses on placing Israel among the fifteen leading countries in terms of Quality of Life.
2. The vision's fulfillment requires a social and economic leapfrog which is a significant and enduring improvement in the quality of life of the country's residents compared to other countries.
3. The ability to create a leapfrog in Israeli quality of life depends on the Israeli economy's ability to compete for human capital and global investments.
4. An efficient policy for improving the quality of life will be based on comparing Israel to its competitors.
5. Indices that enable international comparison are a useful tool for decision makers in identifying challenges and in estimating the success of policies for the improvement of quality of life.
6. This document compares Israel's performance in 2008 to that in 2006.
7. Conclusion: While the public sector's performance fell even further behind that of the private sector, Israel's world-leading engine of innovation has slowed down.

### What is the issue?

1. The World Economic Forum<sup>1</sup> recently published the 2008 Global Competitiveness Index. The index gives a comparative report of the growth potential of the ranked countries. It examines the factors that influence an economy's productivity, identifies the economy's strengths and weaknesses, and identifies growth engines or constraints on growth. Moreover, it contributes to enhancing debate on competitiveness and productivity.
2. The index's importance stems from two reasons:
  - **Leapfrog is based on identifying constraints and opportunities** – The index evaluates economies' productivity and efficiency and thus may provide initial indications for the identification of constraints and opportunities. Using the index's data together with other hard data can inform the allocation of limited resources on particular policy issues.<sup>2</sup>
  - **The index helps evaluation of Israel's competitiveness policy** – Israel has launched reforms in education and capital markets to improve its competitiveness.<sup>3</sup> An analysis of

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<sup>1</sup> The [World Economic Forum](#) is an independent organization which promotes economic growth and international cooperation. The forum publishes the annual [Global Competitiveness Report](#).

<sup>2</sup> Such issues in Israel may be: extent of market dominance (83), extent and effect of taxation (78) or organized crime (48).

For further reading on leapfrogging see Reut's paper: [The 'ISRAEL 15' Vision for Social and Economic Leapfrogging](#).

<sup>3</sup> Outstanding examples are: 'New Horizon' reform in the education sector and [Bachar](#) reform in the banking sector.

the index enables evaluation of policy outcomes by comparing the performance of Israel and its competitors on human capital, technology and investment

## Why now?

3. **The current global crisis poses a challenge to the Israeli economy** – Due to the crisis, Israel is considering fiscal stimulus.<sup>4</sup> In a reality of abundant needs and limited resources, a thorough analysis is needed to ensure that the resources are directed to areas that yield maximum benefits.

## The index's structure

4. **The Global Competitiveness Index is composed of three sub-indices:** Basic requirements, efficiency enhancers and innovation and sophistication factors.
5. **The sub-indices are composed of twelve pillars** that examine institutions, infrastructure, macroeconomic stability, health and primary education, higher education and training, goods market efficiency, labor market efficiency, financial market efficiency, technological readiness, market size, business sophistication and innovation.
6. **These pillars are composed of 110 variables** that relate to competitiveness. For example, the variables that form the pillar 'macroeconomic stability' are government surplus/deficit, national saving rate, inflation, interest rate spread and government debt.
7. **Data's source** – There are two main sources for the competitiveness index: statistical data are attained from databases like the IMF and World Bank, other data are attained from a survey in which leading businessmen were asked to grade several aspects of their economy.<sup>5</sup>

## The index's limitations

8. **An opinion survey in the business sector** – The index is mainly based on a survey of about 90 leading businessmen in each country, thus it is limited to the temperament and opinions of this select group.<sup>6</sup> However, leaders' opinions may influence investment decisions.
9. **Ranking misleads** – The Global Competitiveness Index compares relative competitiveness, but it does not shed light on the gaps between countries.
10. **The GCI does not reflect unique characteristics** – The GCI, like most comparative indices, does not reflect many of the unique characteristics that influence a country's development. Therefore, the index does not inform us of the reasons for the gaps between countries.
11. **GCI 2008 reflects 2007 data** – The ranking in 2008 is based on statistical data from 2007 or older and may serve as an evaluative tool of the policy of those years.

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<sup>4</sup> See the Ministry of Finance's [Acceleration Plan](#) (Hebrew only).

<sup>5</sup> In order to formulate a list of interviewees, the World Economic Forum created partnerships with organizations in each country. In Israel, the Manufacturers Association formulated a list of potential interviewees that represent a variety of firms (small, medium, and large, export oriented and domestic market oriented) from which 90 interviewees were randomly picked. Porter, Michael E. and Schwab Klaus, [The Global Competitiveness Report 2008-2009](#) (World Economic Forum: Geneva, Switzerland), p. 68-69

<sup>6</sup> Porter, Michael E. and Schwab Klaus, [The Global Competitiveness Report 2008-2009](#) (World Economic Forum: Geneva, Switzerland), p. 70.

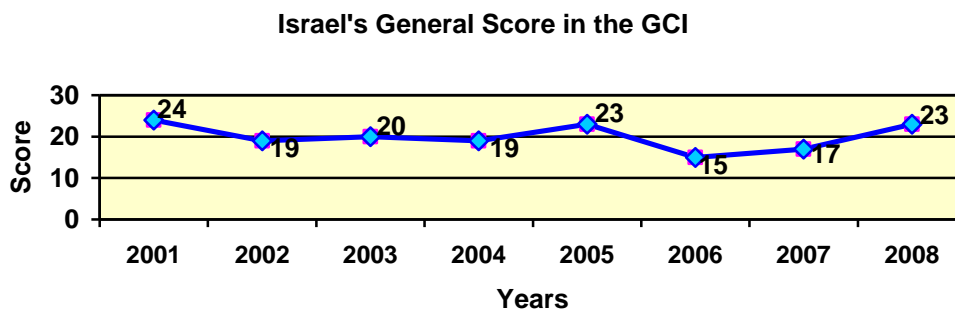
12. **The index does not reflect the severity of the current economic crisis** – the survey was held in January-May 2008, thus, the findings do not reflect the interviewees' full understanding of the crisis' severity.
13. **The Index's structure changes each year and limits comparison over time** – The number of pillars and their variables may change from year to year. For example, one of the nine pillars in the 2006 index was 'Environment' but it is not included in the 2008 index. Moreover, the number of variables changes from year to year. While in 2004 180 variables were examined, in 2006 only 90 variables were examined. In addition, every year new countries are included in the index. These changes limit the ability to compare the aggregated results of a country between years.

## Analysis of the 2008 Global Competitiveness Index

14. The analysis of Israel's comparative state was based on analyzing its general score and its grades in several clusters that match the Israeli economy's characteristics. The clusters analysis is based on previous work done at Reut which can be found in: [Case Study: Incorporating the Global Competitiveness Index in Policy Planning](#).

### A. The General grade: Israel compared to other countries

15. **Leading countries** – The three leading countries today are (in descending order): USA, Switzerland and Denmark. Israel moved away from the leading countries and declined from 17<sup>th</sup> in 2007 to 23<sup>rd</sup>, its rank in 2005.



16. **The five countries that were ranked immediately after Israel in 2006 overtook it**, while all the countries that were more competitive than Israel stayed in leading positions.<sup>7</sup>
17. **Other countries overtook Israel as well** – South Korea and Malaysia, which were ranked after Israel in 2006, also managed to close the gap and to overtake Israel. South Korea ascended from 24<sup>th</sup> in 2006 to 13<sup>th</sup> in 2008, and Malaysia ascended from 26<sup>th</sup> to 21<sup>st</sup> in those years.
18. **Who is quickly closing the gap?** Qatar, Saudi-Arabia and China<sup>8</sup> improved significantly compared to Israel. These countries pose a challenge for Israel in their attractiveness to foreign investors.

<sup>7</sup> Countries that overtook Israel: Canada (went up from 16<sup>th</sup> to 10<sup>th</sup>), Austria (from 17<sup>th</sup> to 14<sup>th</sup>), France (from 18<sup>th</sup> to 16<sup>th</sup>), Australia (from 19<sup>th</sup> to 18<sup>th</sup>), Belgium (from 20<sup>th</sup> to 19<sup>th</sup>) and Ireland (from 21<sup>st</sup> to 22<sup>nd</sup>).

<sup>8</sup> Qatar ascended from 38<sup>th</sup> in 2006 to 26<sup>th</sup> in 2008, Saudi-Arabia from 35<sup>th</sup> in 2007 to 27<sup>th</sup>, and China from 54<sup>th</sup> in 2006 to 30<sup>th</sup>.

19. However, the inclusion of 19 new variables in the 2008 index, all but four<sup>9</sup> of which rank Israel's performance below its 2006 score, biases Israel's aggregate score downwards.

**B. Grading by clusters: The public sector puts breaks on growth – what have changed?**

20. **The general score does not reflect the competitiveness gap between the private and the public sectors** – the Reut analysis of the 2006 index indicated that the general score of Israel does not reveal the imbalance between the public sector's deteriorated competitiveness on the one hand and the efficiency and innovation that characterize the private sector on the other hand.
21. **Therefore, clusters that describe the sectors' performance were built** – In the 2006 GCI analysis, Reut created an analysis technique to compare the performance of clusters of fixed variables that describe elements of the public sector, the private sector, and innovation abilities.<sup>10</sup> The comparison of Israel performance using clusters of fixed variables enables us to overcome the limitation of frequent changes in the index' formulation.

**Public Sector**

22. **Clusters of public sector** – To examine the public sector competitiveness, central variables, which are affected by the Government's policies, were assembled in clusters like infrastructure and trust in the public sector.
23. **2008 Index results: Sharp decline in the public sector's performance** – The performance of the Israeli public sector in 2008 severely declined compared to 2006: While the average score of Israel in 2006 was 35, its 2008 average score fell to 49 (For more details, see appendix A).
24. **As opposed to this trend, macro-economic stability improved** – With the exception of the national debt, the Israeli public sector has improved its competitiveness in variables that are related to macro-economic stability.<sup>11</sup>
25. **Which countries overtook Israel in prominent variables?** Hereinafter a short list of prominent variables in which Israel deteriorated while its competitors advanced.
- **Time required to start a business**<sup>12</sup> – Israel deteriorated from 50<sup>th</sup> in 2005 to 80<sup>th</sup> in 2008 while Belgium and Egypt improved from 50<sup>th</sup> to 3<sup>rd</sup> and 16<sup>th</sup> respectively. Today, Israel ranks with India, Thailand and Zambia (ranked 77<sup>th</sup>) and with Nigeria and Oman (ranked 80<sup>th</sup>).
  - **Quality of math and science education**<sup>13</sup> – Israel deteriorated from 17<sup>th</sup> in 2006 to 66<sup>th</sup> in 2008 while Estonia and Barbados that were closely ranked after it, improved to 14<sup>th</sup> and 15<sup>th</sup> respectively. Today, Israel ranks with Costa Rica (64), Kenya (65), Morocco (67) and Bahrain (68).

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<sup>9</sup> The four variables are: 4.11 – Education expenditure, 8.06 – Strength of investor protection, 8.09 – Legal rights index, 9.08 – Broadband internet subscribers.

<sup>10</sup> The report classifies Israel as a knowledge based economy. Porter, Michael E. and Schwab Klaus, [The Global Competitiveness Report 2008-2009](#) (World Economic Forum: Geneva, Switzerland), p. 194.

<sup>11</sup> Though Israel reduced its debt from 102% to 80.6% of the GDP in those years, other countries improved their performance more significantly and therefore in competitive terms Israel declined from 99<sup>th</sup> in 2006 to 115<sup>th</sup> in 2008. However, compared to the average debt rate of the OECD countries that almost stayed the same (circa 56%) Israel has very much closed the gap.

<sup>12</sup> 6.07 Time required to start a business (hard data): Number of days required to start a business.

<sup>13</sup> 5.04 Quality of math and science education: Math and science education in your country's schools (1 = lag far behind most other countries, 7 = are among the best in the world).

- **Quality of overall Infrastructure**<sup>14</sup> – While Israel deteriorated from 23<sup>rd</sup> in 2006 to 42<sup>nd</sup> in 2008, Barbados and Cyprus, which were closely ranked after Israel then, advanced to 20<sup>th</sup> and 21<sup>st</sup> respectively. Today, Israel ranks with Qatar (40), Malta (41), Botswana (43) and Kuwait (44).

### Private Sector (General)

26. **Clusters in the private sector** – To examine private sector competitiveness, variables were assembled in clusters that represent labor relations, management quality and business sophistication.
27. **2008 index results: An erosion in the private sector's performance** – In almost all of the examined variables, Israel's relative performance has eroded. While the average 2006 score of Israel was 25, the average 2008 score declined to 35 (For more details, see appendix B).
28. **Which countries overtook Israel in prominent variables?** Hereinafter examples of prominent variables in which Israel deteriorated while its competitors advanced.
- **Cooperation in labor-employer relations**<sup>15</sup> – Israel deteriorated from 33<sup>rd</sup> in 2006 to 49<sup>th</sup> in 2008. In these two years, the USA and Cyprus improved from 34<sup>th</sup> and 36<sup>th</sup> to 16<sup>th</sup> and 22<sup>nd</sup> respectively. Today, Israel ranks with Jordan (47), Georgia (48), Egypt (50) and Chile (51).
- **Relation between pay and productivity**<sup>16</sup> – Israel deteriorated from 19<sup>th</sup> in 2006 to 49<sup>th</sup> in 2008. In the meanwhile, Russia, South Korea, and Moldova that were ranked immediately after Israel advanced to 11<sup>th</sup>, 14<sup>th</sup> and 15<sup>th</sup> grades respectively. Today, Israel ranks with Armenia (47), Kenya (48) and the Dominican Republic (50).

### Innovation in the private sector

29. **Clusters of innovation in the private sector** – Since Israel is characterized as a knowledge based economy, variables measuring innovation were examined separately by creating clusters of variables such as human capital and technological readiness.
30. **2008 index results: a slowdown** – In this sector as well we observed declines in all variables but one,<sup>17</sup> but these declines were fairly moderate. The Israeli average 2006 score was 12. In 2008 it declined to 19 (For more details, see appendix C).
31. **Which countries overtook Israel in prominent variables?** Hereinafter some examples of prominent variables in which Israel deteriorated while its competitors advanced.
- **University-industry research collaboration**<sup>18</sup> – Israel declined from 6<sup>th</sup> in 2006 to 18<sup>th</sup> in 2008. In the meanwhile, Singapore improved from 7<sup>th</sup> to 5<sup>th</sup>. Today, Israel ranks with Ireland (16), Norway (17), Australia (19) and Malaysia (20).

<sup>14</sup> 2.01 Quality of overall infrastructure: General infrastructure in your country is (1 = underdeveloped, 7 = extensive and efficient by international standards).

<sup>15</sup> 7.01 Cooperation in labor-employer relations: Labor-employer relations in your country are (1 = generally confrontational, 7 = generally cooperative)

<sup>16</sup> 7.07 Pay and productivity: In your country, pay is (1 = not related to worker productivity, 7 = strongly related to worker productivity)

<sup>17</sup> 9.04 Foreign direct investment in your country (1 = brings little new technology, 7 = is an important source of new technology)

<sup>18</sup> 12.04 University-industry research collaboration: In the area of R&D, collaboration between the business community and local universities is (1 = minimal or nonexistent, 7 = intensive and ongoing)

- **Availability of scientists and engineers**<sup>19</sup> – Israel led the world in this variable in the 2006 GCI. In 2008, Israel was 9<sup>th</sup>. Finland, Japan, and India which were ranked immediately after Israel in 2006, managed to sustain their competitive situation and were ranked 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> respectively. Today, Israel ranks with Canada (7), Taiwan (8), Tunis (10) and the Czech Republic (11).

## Conclusion: The innovation locomotive has slowed and the public sector lags behind

32. **2008 index points to a decline in Israel's competitiveness in all sectors.** The largest decline happened in the public sector. However, the private sector in general and specifically in the innovation sector also experienced a slowdown in competitiveness. In other words, **not only did the public sector's competitiveness worsen but also the engine of innovation that was supposed to carry the Israeli economy slowed down.**
33. **The meaning: a blow to the ability to realize the Israel 15 vision** – Competitiveness is not a measure of quality of life, but it may point to components of quality of life (such as quality of institutions, pro-growth environment or the quality of education, health and police services) and indirectly influence the ability to divert resources to maintaining components of quality of life like economic security. Therefore, a slowdown in the competitiveness of all Israeli sectors means that the ISRAEL 15 Vision is receding into the distance.

## Further research and policy options to be considered

- Since the index is based on a survey, the trends identified by the GCI analysis must be validated by cross-checking it with data. Such cross-checking will enable a comprehensive analysis of the areas in which Israel is lagging behind other countries.
- Changes in the current policy must be considered in issues in which have proven to be ineffective over time.
- Mapping the current policy in light of the challenges that were discovered in this analysis may aid the identification of the issues that demand attention but have not received one yet.
- The Principles and Guidelines for economic and social leapfrogging, version 2, should become a basis for handling some of the major challenges discovered in this analysis.

End.

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<sup>19</sup> 12.06 Availability of scientists and engineers: Scientists and engineers in your country are (1 = nonexistent or rare, 7 = widely available)



## Appendices

The clusters are based on Reut's previous analysis [Case Study: Incorporating the Global Competitiveness Index in Policy Planning](#). Certain variables that were not present in both the 2006 and 2008 GCI are omitted. In order to neutralize random deviations, only those variables in which Israel's performance improved or decline by five ranks are included.<sup>20</sup>

### Appendix A: Public sector performance

	2006	2008	The Gap
<b>Pro-growth environment cluster</b>			
Extent and effect of taxation	58	78	-20
Time required to start a business	50	80	-30
Efficiency of the legal framework	21	48	-27
Extent of market dominance	33	83	-50
<b>Trust in the political arena cluster</b>			
Public trust in politicians	33	61	-28
Favoritism in decisions of government officials	38	48	-10
<b>Personal safety cluster</b>			
Business costs of terrorism	121	130	-9
Business costs of crime and violence	36	43	-7
Reliability of police services	42	76	-34
Organized crime	38	48	-10
<b>Budgeting process cluster</b>			
Diversion of public funds	32	40	-8
Wastefulness of government policymaking	28	60	-32
Burden of government regulation	23	36	-13
<b>Macro-economic stability cluster</b>			
Inflation	11	5	6
Interest rate spread	27	19	8
Government debt	99	115	-16
<b>Higher education and training cluster</b>			
Secondary enrollment	46	53	-7
Quality of the educational system	22	45	-23
Quality of math and science education	17	66	-49
Quality of management schools	14	24	-10
Extent of staff training	23	32	-9
Internet access in schools	16	23	-7

<sup>20</sup> However in the average score of each cluster we included all the comparable variables.

<b>Infrastructure cluster</b>			
Quality of overall infrastructure	23	42	-19
Quality of railroad infrastructure	31	40	-9
Quality of port infrastructure	30	53	-23
Quality of air transport infrastructure	26	39	-13
Quality of electricity supply	17	28	-11
Quality of roads	26	45	-19

### Appendix B: Private sector performance

	<b>2006</b>	<b>2008</b>	<b>The Gap</b>
<b>Business sophistication cluster</b>			
Local supplier quantity	34	53	-19
Local supplier quality	21	27	-6
Extent of marketing	21	30	-9
Control of international distribution	12	27	-15
Buyer sophistication	20	37	-17
Degree of customer orientation	25	54	-29
Reliance on professional management	21	26	-5
<b>Management of Publicly Listed Firms cluster</b>			
Ethical behavior of firms	26	46	-20
Protection of minority shareholder' interests	30	18	12
Strength of auditing and reporting standards	19	29	-10
<b>Labor market relations</b>			
Cooperation in labor-employer relations	33	49	-16
Flexibility of wage determination	65	80	-15
Extent of staff training	23	32	-9
Pay and productivity	19	49	-30

### Appendix C: Innovative private sector performance

	<b>2006</b>	<b>2008</b>	<b>The Gap</b>
<b>Innovation cluster</b>			
University-industry research collaboration	6	18	-12
Intellectual property protection	21	39	-18
<b>Technological readiness cluster</b>			
Technological readiness	4	16	-12



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Firm level technology absorption	4	11	-7
Laws relating to ICT	22	31	-9
FDI and technology transfer	26	18	8
Internet users	25	48	-23
Personal computers	4	37	-33
<b>Non-Bank Financing</b>			
Venture capital availability	2	8	-6
Financing through local equity market	15	24	-9
Ease of access to loans	18	33	-15
<b>Human Capital cluster</b>			
Availability of scientists and engineers	1	9	-8