

Competitiveness Report

on the Turkish Cypriot Economy 2009 - 2010

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Kıbrıs Türk Ticaret Odası
Turkish Cypriot Chamber of Commerce

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Preface

It has been a year since we published the first Competitiveness Report on the Turkish Cypriot economy, and we are proud to present the second one this year, again at the same time as the World Economic Forum's 40th Annual Meeting is being held in Davos, Switzerland. The Competitiveness Report provides a different perspective of looking at our economy as it highlights where our economy stands vis-à-vis other economies in the areas of infrastructure, health and education, financial and goods markets, technology as well as labor markets. As competitiveness impacts productivity and standard of living, the report also demonstrates where our economy is compared with the rest of the world from this perspective as well.

With this report, our objective is to use World Economic Forum's methodology to analyze and understand the strengths and weaknesses of our economy. Because competitiveness is a relative concept, or in other words, it implies comparison, this analysis enables us to see how our economy compares with other economies around the world. With this report, we are able to identify what the different stakeholders in the Turkish Cypriot economy need to do in order to be better able to bring our products and services to market in a globalized world by focusing on value and quality. We would also like to use the study to help enhance our economy's ability to be prepared for a possible reunification of the island as well as to better use the opportunities offered by such a fair and sustainable settlement in Cyprus.

As you will read, the message in this year's report is similar to that of the last year: there are deep structural problems in our economy that need immediate attention. We have a long list of measures to implement in order to be able to create an economic system that can stand on its own feet. Above all, we need a long-term economic vision, the contribution of different stakeholders to the creation of this vision, and a consensus by all stakeholders on the steps to be taken to reach this vision. If we cannot agree on a common vision and a roadmap to reach it, we cannot reach this vision; we will be like a carriage pulled into different directions by the horses in front of it.

Our institutions are inefficient; our financial markets face serious challenges; our infrastructure is insufficient; and we are not advanced in R&D. Our macroeconomic instability is the most significant obstacle to achieving a sustainable economic growth. The fact that we went up in the competitiveness rankings from the 117th place last year, to the 99th place this year, unfortunately does not mean that our economy is improving. This change in

ranking is also due to other economies around the world experiencing more severe effects of the global economic crisis than the Turkish Cypriot economy, leading to a relatively larger decline in their competitiveness scores. It is important to underline the fact that independent from the rankings, our macroeconomic indicators have worsened. All things aside, as a society with such a high level of education it is unacceptable that we lag behind 98 other economies. It is not impossible for our economy to excel in sectors of higher education and technology and become competitive in international markets. We have highly educated population, rich historical and natural heritage, and several higher educational institutions and techno-parks that provide the necessary foundation to become competitive in services sectors.

The current political situation in Cyprus and years of isolation from the world markets are factors beyond our control. However, the political situation should not deter us from improving our economy in those aspects that we can control. This report not only provides us with an assessment of our economy's current situation but also provides a roadmap with specific recommendations for becoming a more successful and efficient society.

I would like to take this opportunity to thank Dr. Mustafa Besim, the author of this year's Competitiveness Report, and commend him for producing a report that presents the condition of our economy and provides recommendations in the most comprehensive manner that appeals to all stakeholders, including the authorities, private sector, labor unions, and academia. As an academic who has worked on these issues for years, Dr. Besim's analysis and conclusions are invaluable for our economy.

I would like to thank our strategic partners on Competitiveness, the Investment Development Agency (YAGA) and the State Planning Organization (DPÖ) for their significant contribution to the development of this report. I also extend my gratitude to our Chamber's professional staff working on this report as well as the USAID-funded EDGE Project for their invaluable support in this process. As the Turkish Cypriot Chamber of Commerce, we will continue to do our utmost to be able to achieve a better standard of living for our community.

Sincerely,

Günay Çerkez
President, Turkish Cypriot Chamber of Commerce

Executive Summary

Increased global interdependence has highlighted the importance of the competitiveness dialogue in both developed and developing economies. The success of an economy in international markets depends on its effective and efficient use of resources, while the economy's increase in competitiveness directly contributes to the generation of higher income and standards of living. As a result, economies are seeking knowledge to better understand their advantages and disadvantages when competing globally so that they can design and implement targeted policies aiming at creating prosperity in their community.

The second annual competitiveness assessment of the Turkish Cypriot economy was conducted in 2009, following the World Economic Forum methodology to derive the Global Competitiveness Index. The assessment consisted of a comprehensive business opinion survey and an analysis of published statistical data that resulted in an overall index for the Turkish Cypriot economy of 3.66 out of 7.00, an increase from the index of 3.43 achieved in the previous year. For the sake of comparison, this index positions the Turkish Cypriot economy in the 99th place out of 134 economies, an increase from the 117th place a year ago.

Under the WEF methodology, the participating economies are classified across three stages of development based on their level of GDP per capita and natural resource endowment, resulting in factor-driven, efficiency-driven or innovation-driven economies. This classification allows for assigning different weights to each competitiveness factor when determining an economy's overall competitiveness index. The Turkish Cypriot economy continues to be classified as an "efficiency-driven" economy. Although an improvement in the overall ranking has been noted,

the current rank nevertheless indicates that the overall competitiveness of the Turkish Cypriot economy is comparable to "factor-driven" economies with a significantly lower per capita income, such as those of Kenya, Nigeria, Tanzania and Pakistan.

The report identifies the most important barriers to the Turkish Cypriot economy's competitiveness as follows: small size of its market, limited financial market sophistication, deep-seated structural macroeconomic weaknesses and instability, unsophisticated businesses, and inefficient goods market. However, there are areas in which the Turkish Cypriot economy is faring favourably, such as health and primary education, technological readiness and higher education and training.

In comparison to the prior year's competitiveness assessment, Turkish Cypriot economy made progress across all areas other than macroeconomic stability and financial market sophistication. The macroeconomic stability was worsened by a further increase in budget deficit, public debt and worsening inflation, highlighting a fragile macroeconomic foundation and inefficient public finances unable to support sustainable economic growth. Limited access to finance continues to be a key issue for businesses. The areas that recorded the highest level of progress include access to innovation, increase of market size and technological readiness.

The report provides a comprehensive discussion of possible reform measures to remove the barriers to the competitiveness of the Turkish Cypriot economy. While some of the barriers are related to unresolved political issues, the Turkish Cypriot community can markedly improve the competitiveness of its economy – independently from and in anticipation of the solution of

the political issue - by implementing comprehensive and targeted reforms. These may include:

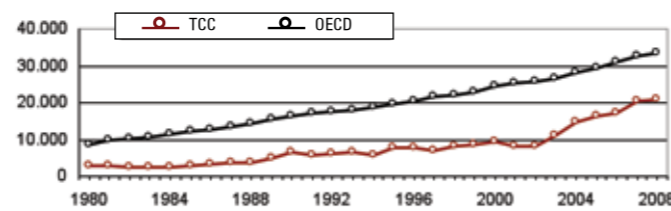
- *Increase market efficiency and productivity by improving free market conditions*
- *Increase resources in the economy by improving financial market efficiency*
- *Achieve macroeconomic stability by institutionalizing macroeconomic management and restructuring tax policy*
- *Gain micro level improvements by enhancing private sector capacity for development*
- *Improve labor market efficiency by minimizing public sector intervention in the labor market and by developing educational programs in collaboration with the universities based on market needs*
- *Improve the physical infrastructure by expanding public-private partnerships*
- *Increase public sector efficiency by increasing transparency, enhancing public servants skills, and introducing performance-based pay*
- *Harmonize regulations to accelerate the adoption of EU *acquis communautaire*.*

With the right management, the existing factors of production and human resources of the Turkish Cypriot economy can be utilized more productively to make the economy stronger and more competitive. Active steps need to be taken by the whole of the Turkish Cypriot community to support such economic reform measures. For this purpose, a multi-stakeholder forum needs to be established to promote the public-private dialogue among the public authorities, businesses, unions, educational institutions and other stakeholders in reaching a common vision and reform roadmap. This will not only increase their responsibility and accountability but also ensure efficiency in the design and implementation of needed policies. In this sense, this competitiveness study and report may be considered as the first vital step in the establishment of informed public-private dialogue.

Key Indicators

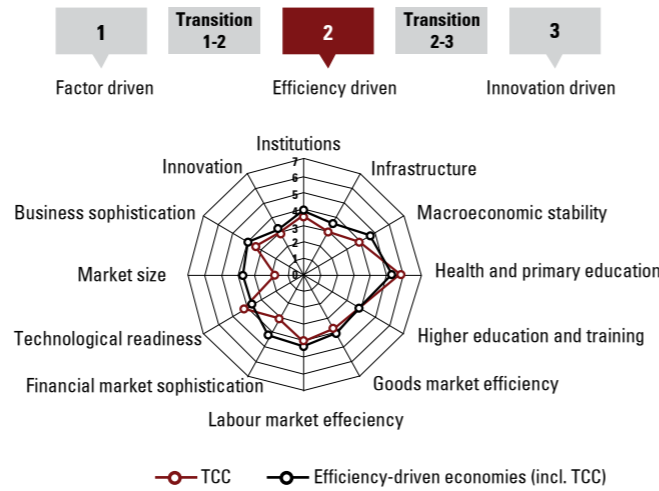
Total population (thousands), 2008.....	274
GDP (US\$ millions), 2008.....	3,958
GDP (current prices) per capita, 2008.....	16,005
GDP (PPP) as share (%) of world total, 2008.....	0.0065

GDP (PPP US\$) per capita, 1980-2008



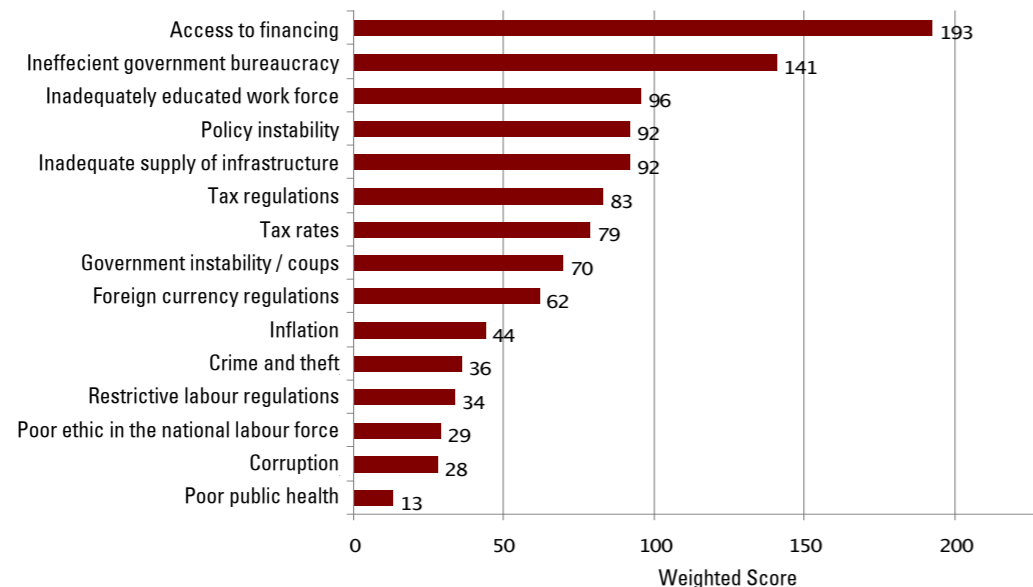
Global Competitiveness Index

	Rank (out of 134)	Score (1-7)
Global Competitiveness Index 2009-2010.....	99	3.66
Basic Requirements.....	88	4.06
1st pillar: Institutions.....	88	3.55
2nd pillar: Infrastructure.....	91	3.03
3rd pillar: Macroeconomic stability.....	111	3.88
4th pillar: Health and primary education.....	42	5.78
Efficiency Enhancers.....	108	3.44
5th pillar: Higher education and training.....	70	3.90
6th pillar: Goods market efficiency.....	109	3.74
7th pillar: Labor market efficiency.....	90	4.15
8th pillar: Financial market sophistication.....	128	3.02
9th pillar: Technological readiness.....	46	4.14
10th pillar: Market size.....	130	1.71
Innovation and sophistication factors.....	102	3.15
11th pillar: Business sophistication.....	110	3.36
12th pillar: Innovation.....	88	2.94



*These economies include: Bosnia Herzegovina, Brazil, Bulgaria, China, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Jordan, Macedonia FYR, Malaysia, Mauritius, Namibia, Panama, Peru, Serbia, South Africa, Suriname, Thailand, Tunisia, Ukraine

The most problematic factors for doing business



Note: From a list of 15 factors respondents were asked to select the five most problematic for doing business and to rank them between 1 (most problematic) and 5. This differs from the World Economic Forum's Economy Profiles by providing a score based on the weight of each response rather than the percentage of total responses. Respondents ranking a particular item a 1 were given a multiplier of 5 while those ranked a 5 received a multiplier of 1.

The Global Competitiveness Index

INDICATOR	RANK/134
1st pillar: Institutions	
1.01 Property rights.....	104
1.02 Intellectual property protection.....	101
1.03 Diversion of public funds.....	69
1.04 Public trust of politicians.....	70
1.05 Judicial independence.....	63
1.06 Favoritism in decisions of government officials.....	77
1.07 Wastefulness of government spending.....	122
1.08 Burden of government regulation.....	71
1.09 Efficiency of legal framework in setting disputes.....	89
1.10 Efficiency of legal framework in challenging regulations.....	85
1.11 Transparency of government policymaking.....	96
1.12 Business costs of terrorism.....	93
1.13 Business costs of crime and violence.....	48
1.14 Organized crime.....	75
1.15 Reliability of police services.....	86
1.16 Ethical behavior of firms.....	93
1.17 Strength of auditing and reporting standards.....	129
1.18 Efficacy of corporate boards.....	129
1.19 Protection of minority shareholders' interests.....	121
2nd pillar: Infrastructure	
2.01 Quality of overall infrastructure.....	98
2.02 Quality of roads.....	102
2.03 Quality of railroad infrastructure.....	n/a
2.04 Quality of port infrastructure.....	117
2.05 Quality of air transport infrastructure.....	95
2.06 Available seat Km*.....	110
2.07 Quality of electricity supply.....	116
2.08 Telephone lines*.....	33
3rd pillar: Macroeconomic stability	
3.01 Government surplus/deficit*.....	132
3.02 National savings rate*.....	89
3.03 Inflation*.....	113
3.04 Interest rate spread*.....	106
3.05 Government debt*.....	129
4th pillar: Health and primary education	
4.01 Business impact of malaria.....	77
4.02 Malaria incidence*.....	1
4.03 Business impact of tuberculosis.....	34
4.04 Tuberculosis incidence*.....	21
4.05 Business impact of HIV/AIDS.....	42
4.06 HIV prevalence*.....	1
4.07 Infant mortality*.....	61
4.08 Life expectancy*.....	53
4.09 Quality of primary education.....	67
4.10 Primary enrollment*.....	1
4.11 Education expenditure*.....	16
5th pillar: Higher education and training	
5.01 Secondary enrollment*.....	80
5.02 Tertiary enrollment*.....	12
5.03 Quality of the educational system.....	73
5.04 Quality of math and science education.....	74
5.05 Quality of management schools.....	99
5.06 Internet access in schools.....	58
5.07 Local availability of specialized research and training services.....	125
5.08 Extent of staff training.....	110
6th pillar: Goods market efficiency	
6.01 Intensity of local competition.....	117
6.02 Extent of market dominance.....	96
6.03 Effectiveness of anti-monopoly policy.....	81
6.04 Extent and effect of taxation.....	123
6.05 Total tax rate*.....	71
6.06 Number of procedures to start a business*.....	129
6.07 Time required to start a business*.....	92
6.08 Agricultural policy costs.....	128
6.09 Prevalence of trade barriers.....	130

	Competitive Advantage	Competitive Disadvantage
6.10 Trade-weighted tariff rate*.....	33	
6.11 Prevalence of foreign ownership.....	127	
6.12 Business impact of rules on FDI.....	126	
6.13 Burden of customs procedures.....	121	
6.14 Degree of customer orientation.....	71	
6.15 Buyer sophistication.....	73	

7th pillar: Labor market efficiency

7.01 Cooperation in labor-employer relations.....	106
7.02 Flexible wage determination.....	65
7.03 Rigidity of employment*.....	19
7.04 Hiring and firing practices.....	18
7.05 Firing costs*.....	27
7.06 Pay and productivity.....	88
7.07 Reliance on professional management.....	129
7.08 Brain drain.....	108
7.09 Female participation in the labor force*.....	104

8th pillar: Financial market sophistication

8.01 Financial market sophistication.....	101
8.02 Financing through local equity market.....	112
8.03 Ease of access to loans.....	90
8.04 Venture capital availability.....	79
8.05 Restriction on capital flows.....	118
8.06 Strength of investor protection*.....	90
8.07 Soundness of banks.....	126
8.08 Regulation of securities exchanges.....	129
8.09 Legal rights index*.....	83

9th pillar: Technological readiness

9.01 Availability of latest technologies.....	108
9.02 Firm-level technology absorption.....	113
9.03 Laws relating to ICT.....	102
9.04 FDI and technology transfer.....	122
9.05 Mobile telephone subscribers*.....	8
9.06 Internet users*.....	48
9.07 Personal computers*.....	43
9.08 Broadband internet subscribers*.....	71

10th pillar: Market size

10.01 Domestic market size*.....	127
10.02 Foreign market size*.....	132
10.03 GDP Valued at PPP*.....	127
10.04 Imports as percentage of GDP*.....	69
10.05 Exports as percentage of GDP*.....	115

11th pillar: Business sophistication

11.01 Local supplier quantity.....	120
11.02 Local supplier quality.....	116
11.03 State of cluster development.....	106
11.04 Nature of competitive advantage.....	79
11.05 Value chain breadth.....	92
11.06 Control of international distribution.....	97
11.07 Production process sophistication.....	93
11.08 Extent of marketing.....	104
11.09 Willingness to delegate authority.....	114

12th pillar: Innovation

12.01 Capacity of innovation.....	72
12.02 Quality of scientific research institutions.....	104
12.03 Company spending on R&D.....	82
12.04 University- industry research collaboration.....	95
12.05 Government procurement of advanced technology products.....	79
12.06 Availability of scientists and engineers.....	102
12.07 Utility patents*.....	32

* Hard data

Note: For further details and explanation, please refer to the section "How to Read the Economy Profile" in the appendix

Introduction

The Turkish Cypriot Economy

Competitiveness in a Globalizing World

World Economic Forum and Global Competitiveness Index

Methodology, the Stages of Development and the Ranking of the Turkish Cypriot Economy

The Turkish Cypriot Economy

According to published statistics, the Turkish Cypriot economy's gross domestic product (GDP) in 2008 was close to US\$4 billion, or around US\$15,000 per capita. At this level, the Turkish Cypriot economy is considered a high-income developing economy. However, a closer look reveals that deep structural problems, due in large part to the unresolved "Cyprus issue," make economic growth unsustainable.

One of the consequences of the unsettled political situation is that the Turkish Cypriot Community (TCC) lacks access to international markets for goods, services and capital. The Turkish Cypriot economy is dominated by services, including a large public sector, and is characterized by a low productivity and economic growth due to its weak macroeconomic foundation, small market size and limited natural and human resources. Although private sector consumption and investment, particularly in tourism, higher education and construction, have become important sources of economic growth since 2000, the public sector continues to constitute a large share of the economy.

The TCC, which has not adopted the *acquis* of the European Union (EU), has an underdeveloped legal and institutional infrastructure. Large budget deficits, an inadequate tax system, social security funding shortfalls and an inefficient public sector further weaken the already fragile economy. As a result of these and other problems, the Turkish Cypriot economy has not been able to attain sustainable economic growth. It is therefore crucial to identify the various factors undermining the economy's ability to achieve sustainable growth and develop policies to address them.

Against this backdrop, a study of the Turkish Cypriot economy's competitiveness was undertaken in 2009, resulting in this second annual competitiveness report. The first section of the report includes an explanation of the concept of competitiveness; a description of the Global Competitiveness Index (GCI) prepared by the World Economic Forum (WEF); and an analysis of the Turkish Cypriot economy's performance according to the GCI criteria.

The second section of the report presents an assessment of the competitiveness of the Turkish Cypriot economy, focusing specifically on changes experienced over the last year. The third section takes a holistic approach in analyzing the competitiveness of the Turkish Cypriot economy. The report's final section lays out detailed policy recommendations and strategies aimed at enhancing the competitiveness of the Turkish Cypriot economy.

Competitiveness in a Globalizing World

Competitiveness is the ability of an economy to produce goods and services that meet the demand of domestic and international markets while its citizens earn a standard of living that is both rising and sustainable over the long run. An economy's competitiveness is directly linked to its productivity growth, which enables sustainable improvements in living standards.

Competitiveness can be defined at the firm, sector and economy level. At the firm level, competitiveness reflects the ability to produce goods and services in an efficient manner in order to sell them in domestic and international markets. Firm level competitiveness is strongly influenced by the firms' ability to incorporate innovations based on the most recent research and development (R&D). A firm's competitiveness is enhanced by the availability of production inputs, such as financial, physical and human capital. At this level, firm competitiveness is measured by profitability, market share and export performance. An economy's competitiveness depends on firms' ability to compete at home and abroad.

Sector-level competitiveness is the ability to capture dominant market position through the sale of products and services that are both high quality and competitively priced. In order to be competitive, sectors must rely on state-of-the-art technology and a skilled labor force. Sector-level competitiveness can be measured by the sector's relative share in the economy, as well as its share of domestic and international sales.

Competitiveness and concern over stagnant and falling living standards have taken on an increased importance in light of increased global interdependence. Productivity, based on the efficient use of production factors, is critical to enhancing an economy's competitiveness. Other factors include the availability of modern machinery and equipment, high skilled workers and effective marketing.

Technological developments and innovation have reinforced the process of globalization in recent years, raising competitiveness as a key priority in economies around the world, including in the EU. For example, the aim of the Lisbon Strategy, adopted in 2000, was to make the EU a most competitive, dynamic and knowledge-based economy by 2010.

Globalization has raised the challenge of maintaining and enhancing an economy-wide competitiveness. Firms must produce high quality goods and services and sell them at competitive prices in local and international markets. Resources must be allocated efficiently in order to stimulate productivity, which in turn will enable wages and living standards to rise.

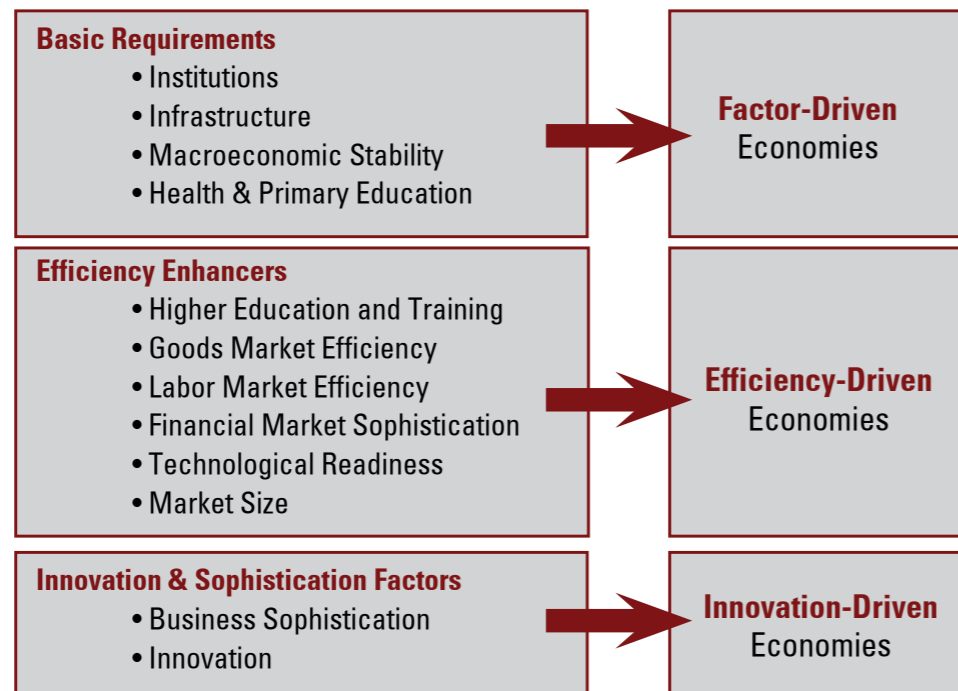
World Economic Forum and Global Competitiveness Index

The WEF began conducting and publishing systematic research on the competitiveness of countries in 1979. Since then, the academic circles have been contributing to the WEF's research on competitiveness and launch of new concepts, including the GCI that was introduced in 2004. The GCI measures the competitiveness of over 130 economies based on a sophisticated and versatile methodology that enables a comparative analysis. The index allows economies to evaluate their competitiveness on a global basis. This in turn can help policymakers understand their economy's strengths and weaknesses and reveal barriers to sustainable improvements in living standards. Such information can be invaluable to policymakers as they design and implement new policies. Large and small economies can all benefit from analyzing their competitiveness according to the GCI. For example, the index is as useful to the Turkish Cypriot economy as it is to the developed economies of the United States and Europe.

Based on a methodology developed by Professor Xavier Sala-i-Martin at WEF, the GCI conveys an economy's current competitiveness and sustainable growth potential. The index also provides information on the competitiveness of its labor, capital and other economic and institutional factors. The index can also be used to help policymakers design policies and prioritize their implementation.

Methodology, the Stages of Development and the Ranking of the Turkish Cypriot Economy

Productivity of capital and labor, in addition to the efficiency of public and private institutions and policy reforms, serve as the basis for measuring an economy's competitiveness. The GCI measures competitiveness within 12 pillars. Figure 1 presents these 12 pillars rearranged according to three levels of economic development. Economies are first classified by their level of development prior to analyzing the various competitiveness factors.

Figure 1: The 12 Pillars of Competitiveness

Two variables are used to determine an economy's level of development – the level of GDP per capita and a measure of the extent to which an economy is factor-driven. Economies are classified under three main categories -- factor-driven, efficiency-driven and innovation-driven. The economies falling in between two of the three stages of development are considered to be "in transition".

Responses of business executives to the "Executive Opinion Survey" are also used to calculate the economy-wide competitiveness score. The survey is comprised of 130 questions, organized according to the 12 pillars of competitiveness. In addition to the survey, published economic and social statistics are also utilized. Survey results are calculated according to each pillar, which in turn are the basis for the final score. The GCI is based on a scale of 1 to 7, representing the lowest to the highest level of competitiveness. This common methodology enables comparisons among economies. It is the second year this

methodology was used to measure the competitiveness of the Turkish Cypriot economy.

The first step in calculating its competitiveness index for 2009-2010 was to determine the Turkish Cypriot economy's level of development. Table 1 compares the Turkish Cypriot economy and its level of development with a select group of others including that of Greek Cypriot (GCC). Using the 2008 data, the Turkish Cypriot economy, with its US\$15,000 income per capita, is classified under the transition group between efficiency- and innovation-driven economies. By contrast, the economy is classified as efficiency-driven when both survey results and published statistics are considered. However, the Turkish Cypriot economy compares less favorably to other economies in the transition category. As a result, the Turkish Cypriot economy is considered at the efficiency-driven level of development for the purposes of this report.

² A more detailed description of the methodology is presented in Appendix 3.

³ Estimates are used when official statistics are not available.

⁴ Similar adjustments were made for Kuwait, with a real per capita income of US\$40,000, and Saudi Arabia, with a real per capita income of US\$20,000 in the WEF 2008-2009 Competitiveness Report. Both of these economies were classified under the transition category between factor-driven and efficiency-driven level of development.

Table 1: Economies Based on Level of Developments

Level of Development	1 Factor-Driven	1-2 Transition	2 Efficiency-Driven	2-3 Transition	3 Innovation-Driven
Economies	Bangladesh Kenya Pakistan Tanzania	Algeria Egypt Kuwait Saudi Arabia	Bosnia-Herzegovina Macedonia Serbia TCC	Croatia Mexico Poland Turkey	Belgium GCC Switzerland Malta

The competitiveness index for the Turkish Cypriot economy is calculated based on the WEF-defined efficiency enhancers subindex (50 percent), basic requirements subindex (40 percent) and innovation and sophistication factors subindex (10 percent). Based on these weights, the Turkish Cypriot economy will need to place higher priority on improving the efficiency of both factor markets and production processes in order to increase its competitiveness. Among the key factors for this accomplishment are raising the necessary sector-specific human resources through higher education; producing goods and services that are competitive in local and international markets; enhancing labor market flexibility; and ensuring efficient financial markets. Furthermore, the competitiveness of the Turkish Cypriot economy can significantly increase by overcoming the challenge of limited scale and by widening the use of updated technologies in the production.

The Status and Assessment of the Turkish Cypriot Economy's Competitiveness

The Competitiveness of the Turkish Cypriot Economy

Comparison with Other Economies

Performance of the Turkish Cypriot Economy against 12 Pillars of Competitiveness

A Two-Year Comparison of the Turkish Cypriot Economy's Competitiveness

The Competitiveness of the Turkish Cypriot Economy

The WEF report for 2009-2010 includes GCIs for 133 economies. The competitiveness of the Turkish Cypriot economy has also been measured by applying the same methodology to allow comparison. Eighty percent of those firms surveyed for this year's report were included in the last year's report. Thus this year's report can also be used to analyze changes in business perceptions.

The overall competitiveness score for the Turkish Cypriot economy was calculated to be 3.66 out of a maximum score of 7.00. This score ranks the Turkish Cypriot economy at a 99th place out of 134 economies. As reported in the WEF's 2009-2010 Competitiveness Report, Switzerland ranks first with a score of 5.6. The United States falls one place to second position, with weakening in its financial markets and macroeconomic stability. These economies are followed in ranking order by Singapore (5.55), Sweden (5.51) and Denmark (5.46). Recent EU members, such as small economies of Estonia and Slovenia, rank in the 30s. Similarly, the Greek Cypriot economy was ranked 34th. By contrast, Greece ranked 71st. The emerging economies of India, Brazil, Mexico and Russia rank between 50th and 60th place. Turkey, which has some similarities with the Turkish Cypriot economy and is its largest trading partner, ranks 61st. The lowest rankings are Chad (2.87), Zimbabwe (2.77) and Burundi (2.58).

⁵Moldovia is not included in the 2009-2010 report due to insufficient data.

Table 2: The Performance of the Turkish Cypriot Economy in the Global Competitiveness Index

	Score (1-7)	Ranking
GCI 2009-2010 (Out of 134)	3.66	99
GCI 2008-2009 (Out of 135)	3.43	117

These indices are very sensitive to the timing of the surveys. Much of the improvement in the 2009-2010 GCI score of the Turkish Cypriot economy and its overall ranking can be explained by the timing of the Executive Opinion Survey in relation to the occurrence of the global financial crisis and subsequent economic downturn. The survey used in the 2008-2009 report was conducted much later in the Turkish Cypriot economy than in other economies, when the affects of the global crisis were more apparent. This negatively affected the business community's perceptions of the economy at that time and hence resulted in a lower GCI and ranking.

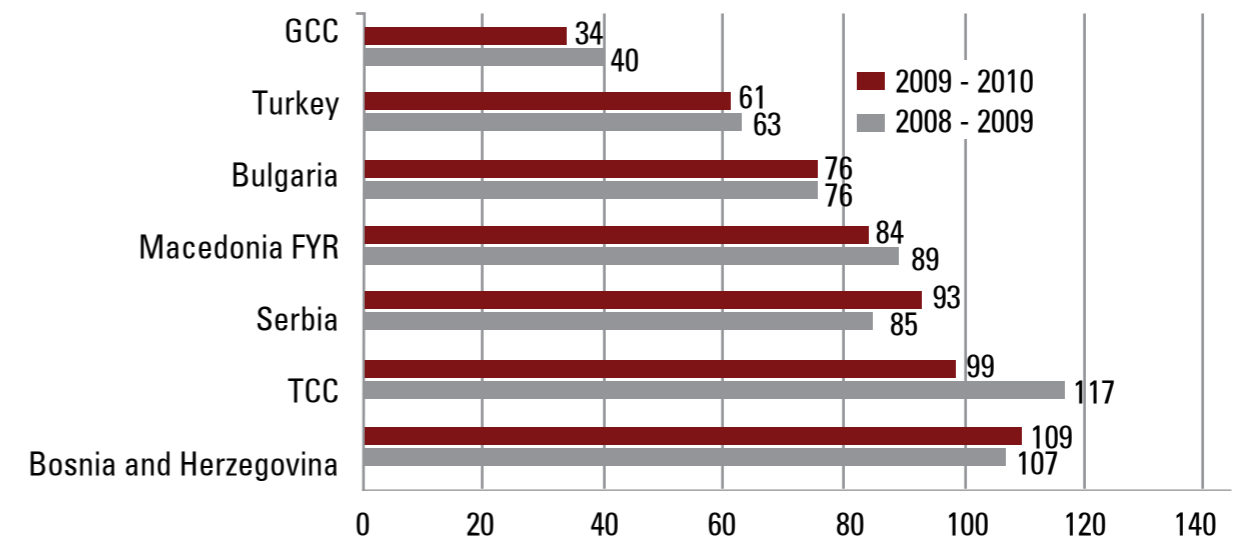
By contrast, most economies conducted the 2009-2010 survey at the same time and under similar economic conditions. According to the 2009-2010 GCI, the Turkish Cypriot economy ranks 99th out of 134 economies, still falling behind the vast majority of economies. In fact, at this score, the Turkish Cypriot economy is comparable to the economies of Kenya, Nigeria and Tanzania, which

record real per capita income in the range from US\$1,000 to US\$2,000. This finding confirms that the Turkish Cypriot economy has many structural problems, among them scale, low capacity, inefficiency and poor infrastructure.

Comparison with Other Economies

In order to better understand its performance, the competitiveness of the Turkish Cypriot economy is compared with that of similar economies, such as Bosnia and Herzegovina, Bulgaria, Macedonia and Serbia. The comparison also includes Turkey, the Turkish Cypriot economy's largest trading partner, and the Greek Cypriot economy (see Figure 2.) With the exception of Bosnia and Herzegovina, the Turkish Cypriot economy is the least competitive of this subgroup of economies. In fact, the competitiveness rankings for Turkey and the Greek Cypriot economies are significantly higher than the ranking of the Turkish Cypriot economy.

Figure 2: Select Comparison of Competitiveness Rankings



Based on published statistics, the Turkish Cypriot economy has the highest per capita income among this group of economies, except for the Greek Cypriot economy. By contrast, the Turkish Cypriot economy's

low competitiveness score and ranking reflect the need to focus on its sources of growth and macroeconomic stability.

Performance of the Turkish Cypriot Economy against 12 Pillars of Competitiveness

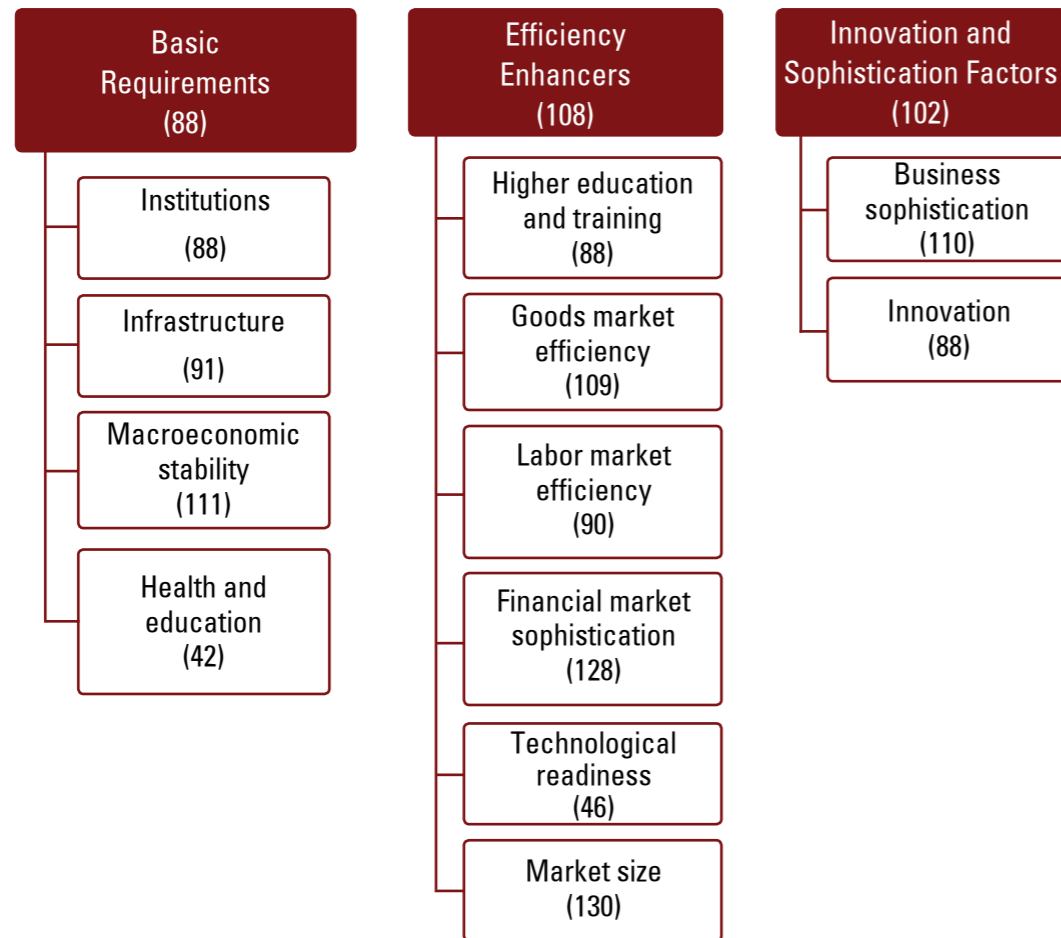
The performance of the Turkish Cypriot economy across the 12 pillars, grouped under the three main subindices of the competitiveness index, reveals that its economy faces significant challenges. For example, the Turkish Cypriot economy ranked 88th under the *basic requirement subindex*, 108th under the *efficiency enhancers subindex* and 102nd under the *innovation and sophistication factors subindex*. The *efficiency enhancers subindex* contains factors such as market efficiency, financial market sophistication and market size which are all problematic factors in the economy. Policy makers will need to focus on increasing the efficiency of these factors in order to improve the economy's competitiveness. Only through such means can the Turkish Cypriot economy become more productive and achieve sustainable growth.

Fair and well-functioning public institutions, improved infrastructure, a stable macroeconomic environment and an educated labor force are necessary not only for an

economy to be classified as factor-driven, but also for all economies in order to become more competitive. Based on its score under the basic requirements subindex, the Turkish Cypriot economy is not competitive even for these pillars. According to survey responses, institutions and infrastructure, both primary factors of growth, were ranked 88th and 91st respectively. The factor with the worst ranking is the macroeconomic stability. This low ranking is a result of the Turkish Cypriot economy's large public budget deficit, massive public debt, high inflation and high interest rates.

The major problems inhibiting the competitiveness of the Turkish Cypriot economy are, in order of importance, the small size of its market (ranked 130th), troubled financial markets (ranked 128th), macroeconomic instability (ranked 111th), unsophisticated businesses (ranked 110th) and an inefficient goods market (ranked 109th) (see Figure 3.) These findings clearly reveal the challenges confronting the potential competitiveness of the Turkish Cypriot economy.

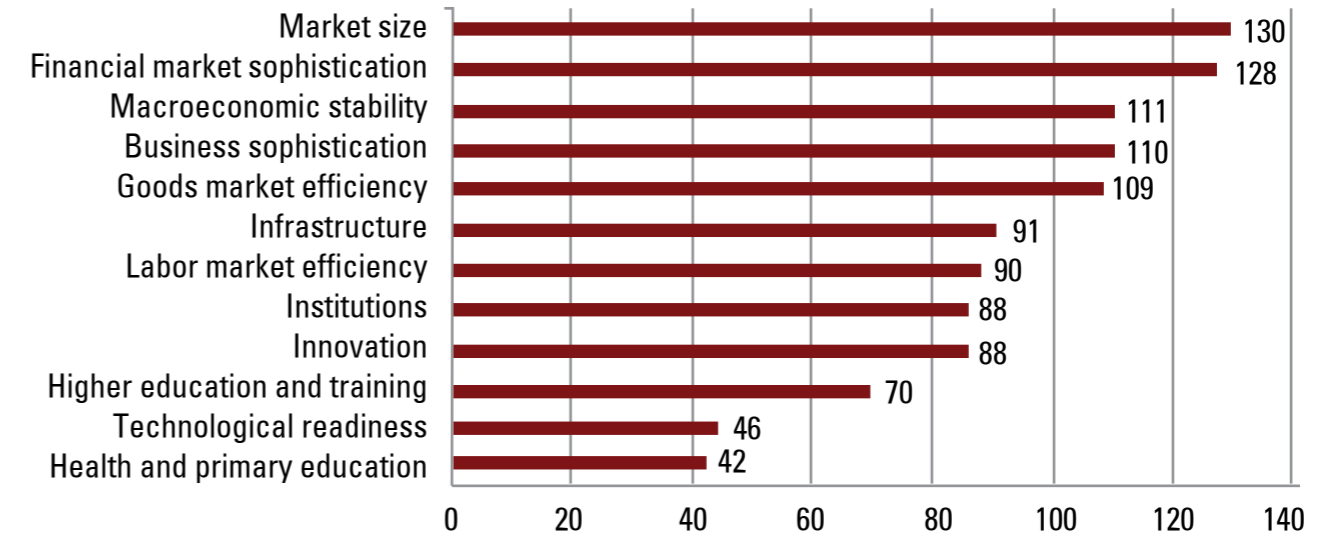
Figure 3: The Ranking of the Turkish Cypriot Economy According to the Three Competitiveness Subindices (the lowest ranking is 134)



According to the survey results, access to finance is among the most problematic factors encountered in the operation of businesses (see the Economic Profile page.) Survey

respondents also identified inefficient public bureaucracy, tax regulations and rates and policy instability as obstacles to economic growth and competitiveness.

Figure 4: The Ranking of the Turkish Cypriot Economy across 12 Pillars of Competitiveness (the lowest ranking is 134)



Although the Turkish Cypriot economy performs well in areas such as health and primary education, technological readiness and higher education and training, weak performance in other categories causes its competitiveness index to be ranked very low (see Figure 4).

to 14.5 percent. The financial market sophistication score declined by 2 percent. However, despite this decline in business perception, as measured by the survey, the GCI ranking for this factor remained at 128 (see Table 3).

A Two-Year Comparison of the Turkish Cypriot Economy's Competitiveness

The Turkish Cypriot economy's competitiveness score increased from 3.43 in 2008-2009 to 3.66 in 2009-2010, causing its ranking to improve from 117 to 99. The increase in the competitiveness score reflects improvements in all of the categories under the 12 pillars, except for macroeconomic stability and financial market sophistication.

The 14 percent decline in the macroeconomic stability score can be explained by the deterioration in the budget deficit, from 7.1 percent of GDP to 9.3 percent of GDP, an expansion in debt, from 100 percent of GDP to 115 percent of GDP, and an increase in annual inflation, from 9.4 percent

Table 3: The Comparison of Competitiveness over a Two-Year Period (2008-2009 and 2009-2010)

	2008-2009 SCORE	2009-2010 SCORE	% CHANGE	IMPROVE (↑) DECLINE (↓)	2008-2009 RANKING /134	2009-2010 RANKING /134	CHANGE IN RANK	IMPROVE (↑) DECLINE (↓) IN RANKING
Pillar 1: Institutions	3.50	3.55	1%	↑	94	88	6	↑
Pillar 2: Infrastructure	2.62	3.03	16%	↑	104	91	13	↑
Pillar 3: Macroeconomic stability	4.51	3.88	-14%	↓	99	111	-12	↓
Pillar 4: Health and primary education	5.74	5.79	1%	↑	49	42	7	↑
Pillar 5: Higher education and training	3.54	3.90	10%	↑	92	70	22	↑
Pillar 6: Goods market efficiency	3.56	3.74	5%	↑	123	109	14	↑
Pillar 7: Labor market efficiency	4.09	4.15	1%	↑	100	90	10	↑
Pillar 8: Financial market sophistication	3.10	3.02	-2%	↓	128	128	0	—
Pillar 9: Technological readiness	3.73	4.14	11%	↑	47	46	1	↑
Pillar 10: Market size	1.30	1.71	32%	↑	133	130	3	↑
Pillar 11: Business sophistication	3.08	3.36	9%	↑	129	110	19	↑
Pillar 12: Innovation	2.23	2.94	32%	↑	132	101	31	↑

The 32 percent increase in the score on innovation represents the greatest improvement among all the pillars. The business survey results suggested significant improvements in various areas within the innovation pillar, including the quality of research institutions and R&D expenditures, university-industry research collaboration and the public use of advanced technology. The score

for technological readiness, which is closely related to the innovation pillar, increased by 11 percent over the prior year. The areas of improvement within this pillar include regulations on information and communication technologies, foreign direct investment (FDI) and technology transfer and an increase in the number of Internet users. Survey respondents suggested that there

were improvements in the economy's infrastructure (pillar 2), including the quality of roads, ports, air transport and the supply of electricity.

The overall competitiveness index for the Turkish Cypriot economy in 2009-2010 remains very low, despite improvements in these specific areas. In order to become more competitive, the Turkish Cypriot economy needs to concentrate on expanding the size of its market, increase the sophistication of the financial market and businesses, achieve macroeconomic stability and expand its infrastructure.

Economic Development and Competitiveness Index of the Turkish Cypriot Economy

Having a real per capita income of over US\$15,000 and a low competitiveness score raise two questions: First, how does an economy with such a low competitiveness score attain such a high-income level? Second, why do business executives rate the economy so low, as reflected in the Executive Opinion Survey, while the economy experienced more than a threefold increase in real per capita income over the past 10 years? Previous WEF experience has found that there can be some differences between the actual economy and the perceptions of the business executives. As WEF's chief economist Xavier Sala-i Martin has stated, in some countries business executives' responses were optimistic and portrayed a more competitive picture of their economies. Whereas, in other countries pessimistic answers swung the results in a negative way. With this in mind, this section deepens the analysis by comparing the competitiveness scores with the economy's general structure, developments and indicators.

The analysis shows that the Turkish Cypriot economy is very vulnerable, as it has suffered an economic crisis approximately every 6 years over the past 35 years. This vulnerability is caused by deep-seated structural macroeconomic weaknesses that negatively affect the economy's competitiveness and hamper growth. Overall economic growth does not derive from sectors in which the economy has competitive advantages. Until early 2000's the economy was predominantly driven by a few sectors developed with considerable public aid. Limited access to international goods and financial markets also contributed to lack of standard market forces that could enhance competitive advantages. Furthermore, lack of effective and successful resource management in the private and public sectors has also contributed to a lack of desired free market conditions. As a result, the economy fails to grow and achieve scale.

Since the beginning of the 2000's the Turkish Cypriot economy has expanded as a result of increased stability in Turkey's key economic indicators, such as the exchange rate, interest rate and inflation rate. In addition, positive developments towards the settlement of the "Cyprus problem" have improved perceptions of both local and foreign investors. As a result, the private sector strengthened, especially as increased foreign demand enhanced economic growth. Although this improvement was not based on productivity gains, the outward orientation of the Turkish Cypriot economy enabled it to experience a large increase in income over a very brief period. This development is not exactly a direct result of an

increased competitiveness. Failure of public expenditure and investment being utilized efficiently in the productive areas, and as stated above, the lack of a private sector development based on competition, prevented the Turkish Cypriot economy from increasing its competitiveness.

Structural problems, such as large budget deficits, high dependency on foreign aid to improve the infrastructure, an increasing public debt, the inefficiency in resource utilization and problematic market conditions have continued to exist during periods of economic growth, thus preventing an improvement in the economy's competitiveness. At the same time, high interest rates, inefficiencies within the tax system and the tax rates, high transportation and customs costs, as well as the additional costs resulting from an inefficient public sector continue to hamper the private sector competitiveness. Despite all these problems, the Turkish Cypriot economy has experienced some improvement.

The income increase, as experienced in the Turkish Cypriot economy, does not reflect increases in productivity growth. This helps explain the anomaly that per capita income can rise while other competitiveness indicators deteriorate. As a result, the improvement in living standards is not sustainable.

All of these factors negatively affect the perception of business people and can lead to outright pessimism in some areas. As also found last year, survey respondents point to access to finance as one of the most problematic barriers to doing business in the Turkish Cypriot economy. The 129th place for Turkish Cypriot economy, among the bottom five economies, under the financial market sophistication pillar is a reflection of this problem. The lack of a solution to the "Cyprus problem" prevents businesses from accessing financial markets abroad and keeps interest rates high at home. Domestic macroeconomic imbalances and changes in the value of the Turkish Lira have created a large interest rate spread, further undermining business perceptions.

Some banking publications might suggest that the situation may not be as dire as it seems. While comparable in rankings, the Turkish Cypriot financial market is not considered to be as unsophisticated as those in Madagascar (ranked 126th) and Ethiopia (ranked 127th). This is partly due to higher scores in the categories of loan opportunities, system sophistication and overall soundness

of the banks. As demonstrated by the macroeconomic indicators in Appendix 1, the ratio of loans to savings has exceeded 50 percent since 2005, and reached as high as 64 percent in 2008. Furthermore, after removing loans to individuals and public institutions, only one-fourth of total lending is provided to the private sector. Widespread use of credit cards and development of Internet banking also suggest that the system has improved and financial market institutions have become sounder over the past few years. Based on these findings, it appears that survey responses regarding financial market sophistication reflected a negative bias.

Unlike other economies, over the last two years, the Turkish Cypriot economy's competitiveness score and ranking improved, despite an almost 3 percent decline in real GDP per capita income. In addition, as mentioned earlier, the 2008-2009 Executive Opinion Survey of Turkish Cypriot private sector executives was performed after the global crisis impact was fully manifested, making the results more pessimistic than in other economies. This bias was reduced in this year's survey since it was conducted at the same time as in other economies. In addition, the improvement in the Turkish Cypriot economy's competitiveness ranking (not score) is also due to relatively weaker performance in other economies due to the global crisis.

Business executives' opinion of the Turkish Cypriot economy's infrastructure was improved by 16 percent between 2008 and 2009. In addition, the survey found that increased use of mobile phones, computers and the Internet resulted in a 10 percent improvement in the technological readiness score. Based on its score, the ranking of the macroeconomic stability pillar dropped from 97 to 111, due to an increase in inflation rate and public debt, combined with a decline in the GDP. Despite a decline in imports, the increase in exports, due in part to the inclusion of services this year resulted in a slight increase in the overall rank for market size. Nevertheless, the Turkish Cypriot economy continues to rank as one of the lowest (130th out of 134 economies) under the category of market size.

The Turkish Cypriot economy experienced a recession in 2008-2009, revealing once again the vulnerabilities of the economy to both internal and external developments. It is therefore even more important for the private and public sectors to work together in order to produce the necessary synergies to break the Turkish Cypriot economy free from its current unsustainable path.

Policy for Action: Policy Recommendations to Increase Competitiveness

This analysis provides some insight into how the Turkish Cypriot economy performs relative to itself and to others. Based on a score of 3.66, the Turkish Cypriot economy ranked 99th among 134 economies in 2009. This low score suggests that the Turkish Cypriot economy most embark on a more “responsible” attitude regarding competitiveness. The economy’s vulnerability to factors within and outside its control, as well as its inefficient use of resources and below par performance in many indicators regarding competitiveness, clearly indicate that the economy will not enjoy sustainable growth and improvements in living standards. Efforts must be taken to increase awareness throughout the society about the economy’s competitiveness and ways to improve it. Policy makers will need to abandon short-sighted interests and focus on developing and implementing long-term policies to ensure an efficient and effective use of the economy’s resources, in order to improve the community’s prosperity. Creating a private-public dialogue between the various economic stakeholders may be a first step to start this process.

The following policy recommendations are derived from the analysis of the Turkish Cypriot economy’s competitiveness. These policy recommendations are based on the following criteria: the degree of the challenge and its significance to the economy; the potential effectiveness in improving competitiveness; and the ease of implementation given current economic and political conditions. As stated above, the Turkish Cypriot economy is significantly impacted by the “Cyprus problem,” and without a doubt a political solution would provide a great opportunity to improve the economy’s competitiveness. However, there are several areas – independently from and in anticipation of the solution of the political issue – where the Turkish Cypriot economy can improve.

Establish a public-private dialogue to promote social responsibility and prepare for a common future

- Establish a dialogue among the business community, policy makers, union representatives and academia
- Identify a common vision and objectives, as well as economic targets
- Develop detailed policy recommendations

Increase market efficiency and productivity by improving free market conditions

- Implement and enforce the competition law
- Restructure public-aid, incentives and subsidies
- Remove barriers to business startups

- Improve the judicial system to help resolve trade disputes in a more timely manner (introduction of commercial courts)

Increase resources in the economy by improving financial market efficiency

- Establish a credit guarantee fund for Small- and Medium-size Enterprises (SMEs)
- Improve financial statements to meet international standards
- Streamline collection of receivables through the improvement of the judicial system
- Limit the public sector’s access to private capital
- Liberalize credit from Turkish commercial banks to the private sector within the TCC
- Determine liquidity positions for the banks at a more accurate level to allow for interest rate offerings that are at more consistent with the economy

Achieve macroeconomic stability

- Institutionalize macroeconomic management
- Implement performance-based guidelines for public expenditure
- Expand social security coverage in phases
- Restructure income and consumption taxes
- Reduce the size of the informal economy

Gain micro level improvements

- Improve private sector capacity for economic development
- Design SME development policies
- Encourage product development and specialization
- Increase marketing expertise
- Provide incentives for entrepreneurs to institutionalize and formalize their businesses.

Improve labor market efficiency

- Minimize public sector intervention in the labor market
- Establish differentiated minimum wages according to skills, talents and sectors
- Develop vocational programs in collaboration with the universities based on market needs

Improve the physical infrastructure

- Increase and expand public-private sector partnerships and expand build-operate-transfer arrangements
- Privatize utilities, especially electricity generation
- Reduce the cost of trade by lowering port fees, improving

- management effectiveness and increasing the use of technology
- Improve communication facilities and decrease cost structures

Increase public sector efficiency

- Establish independent supervisory organizations to increase transparency
- Reduce turnover of public officials and improve public governance
- Implement performance-based promotions and salary adjustments
- Collaborate with labor unions to implement on-the-job training for public servants to update their skills

Harmonize regulations to accelerate the adoption of international standards

- Harmonize laws and regulations with the EU acquis communautaire
- Gain support of policy makers for the harmonization process

1. Establish a public-private dialogue to promote social responsibility and prepare for a common future

a. Findings

The Turkish Cypriot economy’s lack of competitiveness and poor macroeconomic management affirm that structural problems continue to exist despite economic growth. This reflects the lack of a common vision and action plan to resolve these problems among the economy’s stakeholders, which hinder effective policy making.

b. Recommendations

It is critical to establish a public-private dialogue with a clear vision and common goals. With such a dialogue formed among the private sector, policy makers, the labor unions and academia it will be possible to collaborate to provide solutions and recommendations to address structural problems and to make policy recommendations that will lead to sustainable economic development. Such public-private dialogue would keep all participants liable in their role as major stakeholders in the economy. The collaboration among the stakeholders will ensure a balanced economic growth, keep social responsibility on the agenda and significantly contribute to increasing the quality of life. Establishment of this dialogue will not only have a positive effect on the competitiveness of the

economy but it will also be a crucial precondition for the success of the recommendations stated below.

2. Increase market efficiency and productivity by improving free market conditions

a. Findings

The effective and efficient use of resources is a foundation for an economy's competitiveness. The study has shown that there is inefficiency and waste of resources in the Turkish Cypriot economy. In addition, there is limited local market accessibility for Turkish Cypriot entrepreneurs, and public activities in several areas of the economy, including the financial markets, dominate the economy. Furthermore, public aid and subsidies that are not subject to any selection criteria or control create market distortions and result in unfair competition by affecting the prices. Due to the limited access to international markets, the Turkish Cypriot economy has also not been able to increase exports and thus ranks among the lowest economies in the GCI.

b. Recommendations

In order to fully establish free market conditions an appropriate legal, regulatory and institutional framework must be formed. The recently passed competition law should be implemented and enforced. Furthermore, a competition council, independent of policy makers, should be established. The public aid, incentives and subsidies should be restructured as incentives to increase foreign direct investment. The advance payment of VAT by TCC businesses on goods when they are imported creates a price disadvantage in comparison to the same goods offered in the Greek Cypriot market. The VAT and other tax policy adjustment will create a positive impact on the Turkish Cypriot economy.

There will be some relief in the economy that already suffers from sufficient scale if necessary deregulation and privatization are implemented in sectors where public is in full control, such as the utilities and transportation.

Competitiveness of the economy will be enhanced also by removing the barriers that exist to market entry and exit and by restructuring of the market function. One of the potential areas to contribute to this effort is an establishment of "one-stop shop" services to facilitate the domestic and foreign investment into the Turkish Cypriot economy. Other areas include a restructuring of legal system to promote foreign and local investment, improve business dealings, and expedite trade dispute resolutions. This will reduce the cost of doing business, and thus contribute

to overall competitiveness. Such reform measures will remove some of the barriers in the economy, resulting in a better utilization of resources and market expansion. More efficient markets will also improve the competitiveness.

3. Increase resources in the economy by improving the financial market efficiency

a. Findings

Access to financing is identified as the most problematic barrier to doing business in the Turkish Cypriot economy according to this year's Executive Opinion survey. Lack of variable financial instruments, insufficient credit markets, lack of stock exchanges and other intermediary financial institutions in the economy all result in inefficient financial markets. As a result, businesses have difficulty in accessing financial resources and cannot expand their operations, further resulting in lagging private sector development.

b. Recommendations

A series of measures should be undertaken in order to increase the resources in the economy by improving the financial market efficiency, by easing access to finance and by lowering the cost of credit. First and foremost, enterprises should be required to prepare financial statements following international standards, as well as rigorous business plans when applying for credit. In return, banks should evaluate such documentation when evaluating credit applications. There should be incentives for Turkish Cypriot businesses to adopt internationally accepted accounting and financial reporting standards. More than 90% of businesses are SMEs that lack collateral. To overcome this problem, a "credit guarantee fund" for SMEs can be established to ease access to finance at affordable interest rates.

In order to increase private sector's access to finance, the existing financial instruments that allow excessive public sector access to private capital should be restructured. Furthermore, the liquidity positions of the banks need to be valued at a more accurate level to allow for interest rate offerings that are more consistent with the economy.

In addition to credit market adjustments, measures aimed at streamlining collection of receivables through improvement of the judicial system also reduces risks in the financial market as well as normalizes interest rates. Last but not least, the "Development Bank" needs to be restructured in order to reduce its irrational credit offerings which create unfair competition in the economy. Such

measures will improve the investment climate and ensure the efficient allocation of funds; this will consequently contribute to the improvement of competitiveness of the Turkish Cypriot economy.

4. Achieve macroeconomic stability

a. Findings

In 2008, the economic downturn that had been felt in the Turkish Cypriot economy for a few years turned into a real economic crisis. The budget deficit, public debt and general savings rate of the economy worsened, and the annual inflation rate increased to 14.5%, all of which contributed to a lower competitiveness score. The lack of fiscal discipline renders the most necessary fiscal policies to be ineffective during times of economic crises, just when they are most needed. This in turn causes the Turkish Cypriot economy to be vulnerable and unable to defray the high cost of the crises during economic downturns. The economy could not achieve stability since macroeconomic management is not institutionalized, while policy implementation lacks any continuity. Economic instability hampers investment and doing business, results in unsophisticated markets and obstructs private sector development.

b. Recommendations

The primary condition to achieve economic stability is the design and implementation of long term policies. The first recommendation above, the establishment of a public private dialogue, would set the stage for an advisory committee to provide necessary vision and common objectives. Upon determination of the vision and the objectives, an institutional capacity should be developed for the implementation.

A strong public finance function is required to effectively manage an economy. Policy makers should allocate public resources in an effective and efficient manner, always taking into account performance as a basis for public expenditures and utilizing performance-based budgeting systems at all levels (income, current expenditure and investment). Furthermore, in order to reduce the social security deficit, which causes a significant burden for the budget, the mandatory age and years of service of those within the social security system should be gradually increased. This will reduce the negative effect of the transfer of this deficit to the coming generations.

The revenue generation of the public finance function is one of the most important problems that the Turkish Cypriot economy has to overcome. The unsound tax

policy and inefficient tax administration have increased informal economy, which in turn resulted not only in loss of income but also in unfair competition. In order to decrease the level of informal economy, income tax must primarily be restructured and an efficient and acceptable rate should be established to achieve a broader tax base. Subsequently, efficient tax administration, auditing and the enforcement of higher fines will increase the number of the tax payers. Furthermore, there is a need for a legal framework and efficient monitoring to be put in place in order to prevent the public servants from having second, private jobs, which also adds to informal economy. The implementation of the measures provided above would reduce the informal economy to a great extent, and thus increase public revenues.

Another recommendation to increase macroeconomic stability is to abolish the multi-scaled VAT, and to start using a 3-scale (0%-5%-15%), which would ease its application and eventually reduce the evasion. Furthermore, the elimination of tax amnesties will stop tax evasions and help achieve a fairer taxation. Through the implementation of these recommendations the economy will end up with stronger public finances, be able to better control budget deficits, and public debt. Additionally, it will pave the way to implement efficient fiscal policies to minimize instability that is caused by the usage of Turkish lira or by other internal economical issues.

5. Strengthen the private sector through firm level policies

a. Findings

Private sector competitiveness is a major contributing factor to achieve competitiveness in an economy. The private sector performance of the Turkish Cypriot economy scored low in the GCI. This can be attributed to the private sector's inability to access financial markets as well as high level of informal sector. The fact that private sector, which should be the engine for value added economic activity in an economy, is experiencing problems continuously shows that they lack the necessary strength to be more productive.

b. Recommendations

Appropriate SME development policy should be in place in order to increase the private sector capacity. Economic development of the economy should be based on increased capacity and the productivity of the private sector and increased level of exports. In order to achieve these, product development and specialization at the firm level should also be encouraged.

Private sector in the Turkish Cypriot economy should focus on producing niche, high value-added, high-quality goods and services that are not price-elastic (niche products in tourism, higher education, health, etc.). To accomplish this, SME development policy should be implemented aimed at improving business capacity. Special incentive policies should encourage product development, diversification and specialization, and marketing activities for enterprises. These firm-level policies will not only provide incentives for entrepreneurs to formalize their businesses, but also increase their value-added contribution to the economy, thus resulting in increased market sophistication and competitiveness.

6. Improve the efficiency of the labor market

a. Findings

The prerequisites to increase productivity and efficiency in an economy include integrated usage of high technology, low input costs, flexible labor market policies, and skilled human resources. The Turkish Cypriot economy is characterized by excessive benefits to the public sector employees in terms of job security, social security, wages, and liberal working hours, resulting in distorted labor market. Additionally, the failure of structuring the educational sector in accordance with the demands of the economy and deficiency in planning has resulted in a skills mismatch and structural unemployment within the economy.

The lack of vocational labor and specialized labor force in certain sectors has a negative impact on the productivity of the Turkish Cypriot economy. In addition, there are limited on-the-job training opportunities created for labor force, and neither is the labor force utilized efficiently. Both of these factors negatively affect the general resource allocation in the economy. Although the results of the study on competitiveness indicate positive responses from business environments with regards to "labor flexibility" responses also indicate that executives observe major problems in finding skilled employees and that there are important problems with regards to income and productivity within the economy.

b. Recommendations

Reducing the public sector's interventions in the area of wage determination within the labor market will enable the wages to be determined according to the market conditions and provide laborers with fair wages. Furthermore, it is recommended that the single minimum wage application that is currently effective in the Turkish Cypriot economy is

replaced with a sectoral minimum wage application that is based on skills, talents, education and certification of each employee. Thus, wages can be determined in accordance with a sector-based demand and supply for labor.

Higher education should be planned and shaped in line with the medium and long-term labor needs of the economy to especially prevent resource waste and to curb structural unemployment in the economy. Scholarships can be offered and different incentives can be provided in necessary sectors to increase the capacity of the human capital to a required level, and to prevent brain drain. Over time, vocational training programs, on-the-job training opportunities can be created to allow labor force to increase their skills and be marketable when faced with changing labor market requirements. Such training and continuous education programs need to be organized in collaboration with the universities and in consultation with the labor unions.

7. Improve the physical infrastructure

a. Findings

The Turkish Cypriot economy needs strong infrastructure in order to improve its investment climate and competitiveness. The economy's infrastructure score in the competitiveness study puts Turkish Cypriot economy at the 91st place among 134 economies. Infrastructure has a direct influence on production costs and quality of life. Although the data for this report has shown that no serious problems are perceived in the technology and communication related areas, which are in fact offered by the private sector, major deficiencies are identified especially in the areas of ports, roads and energy.

b. Recommendations

In today's business environment, where the private sector's capabilities to run large projects have increased and the public budget deems insufficient to run such projects, public-private partnerships (PPPs) are even more desirable and necessary to improve infrastructure. The PPPs arrangements should be encouraged to implement "build, operate and transfer" arrangements. These arrangements would lay the ground for infrastructure development to increase the economy's competitiveness performance.

Utilities should be privatized to produce these services at more affordable prices. The cost of trade should be reduced by lowering the port fees and improving port management. The quality of these services will undoubtedly increase

with effective management and increased use of technology. Investments in the infrastructure that is required to improve high-speed communications, which are demanded by businesses and especially universities, should be made in collaboration with the private sector to increase the efficiency of these services.

8. Improve Public Sector Efficiency

a. Findings

Based on the business executive's responses to the survey, inefficient public bureaucracy is among the most problematic factors when it comes to doing business in the Turkish Cypriot economy. This observation indicates that the services provided by the public lack quality and efficiency. This situation definitely reduces the level of trust towards public administration and erodes tax base.

b. Recommendations

Recently, a new law has passed with regards to performance based promotion system for public employees. This has been a crucial step on the way to improving efficiency in the public sector. However, an independent supervisory body must be established to monitor the public sector and increase transparency. Furthermore, to clarify role and authority, job descriptions and responsibilities should be created for each public servant position.

Frequent turnover of public officials, as a result of frequently held elections, makes the management difficult and creates unrest among public servants. Thus, reducing turnover of public officials and improving public governance will reduce cost of the public sector, resulting in better tolerance of bureaucracy by the community.

Labor market can also be made more efficient by providing training to the staff. Collaboration with labor unions to implement on-the-job training for public servants to update their skills will also support the goal of achieving public sector efficiency. When the public servants receive on-the-job training to make them more marketable in changing labor markets, and work in fair work environments, their productivity and effectiveness will increase and the public sector will be able to provide better services to the community.

9. Harmonize regulations to accelerate the process of adaptation of international standards

a. Findings

Many improvements can be made to increase the Turkish

Cypriot socio-economic life and living standards. Turkish Cypriots face several challenges during their daily lives, business related or not, that originate from lack of standards. This reality reflects in their quality of life. As a result, Turkish Cypriots enjoy a lower level of standard of living that their earnings would buy them had there been standards.

b. Recommendations

Globalization requires production of goods and services that comply with certain international standards in order to be competitive in international markets. Accordingly, the Turkish Cypriot economy must harmonize the laws and regulations with the EU *acquis communautaire*. The Turkish Cypriots have chosen to be part of the EU. Therefore, the EU *acquis* should be used as a guideline for the existing laws and regulations to be adjusted accordingly. This harmonization must take place regardless of the current peace talks between the leaders of the two communities in Cyprus, but with an attempt to better the living standards of the Turkish Cypriots. Therefore, support of the policy makers must be gained in the process of harmonization and the policy makers should embrace this process. The harmonization process will assist liberalization of the markets, increase competitiveness, and contribute to better utilization of the resources in the economy.

The recommendations stated above are all important factors to increase the competitiveness of the Turkish Cypriot economy. When these recommendations are implemented, new opportunities for labor will be created and income in the economy will increase. On the other hand, the Turkish Cypriot economy will be closer to creating a sustainable structure.

Conclusion

The second annual competitiveness report of the Turkish Cypriot economy provides a comprehensive review of the micro- and macroeconomic indicators to determine the strengths and weaknesses of the economy. This assessment has identified the existing barriers to competitiveness and recommended policy measures to overcome them. The methodology based on an executive business survey has further revealed the real state of the Turkish Cypriot market economy.

The 2009 competitiveness assessment ranks the Turkish Cypriot economy at a 99th place among 134 economies, which is a marked increase over the 117th place a year ago. Although some improvements have been noted, the Turkish Cypriot economy ranked similarly as some of the economies with a significantly lower per capita income and living standards, such as those of Kenya, Nigeria, Tanzania and Pakistan. This indicates that the performance of the Turkish Cypriot economy is still at a very low level.

The report identified the following key weaknesses to the competitiveness of the Turkish Cypriot economy: small market size due to limited scale; macroeconomic instability; lack of business sophistication; and the inefficiencies of the goods market. While some of these weaknesses are related to the unresolved political status, the Turkish Cypriot community can markedly improve the competitiveness of its economy – independently from the solution of the political issue - by implementing comprehensive and targeted reforms.

This finding requires active steps to be taken by the whole of the Turkish Cypriot community to support needed economic reforms. With the right management, the existing factors of production and human resources of the Turkish Cypriot economy can be utilized more productively to make the economy stronger and more competitive. Furthermore, a multi-stakeholder forum needs to be established to promote the public-private dialogue among the public authorities, businesses, unions, educational institutions and other stakeholders in reaching a common vision and reform roadmap. This will not only increase their responsibility and accountability but also ensure efficiency in the design and implementation of the needed policies. In this sense, this competitiveness study and report may be considered as the first vital step in the establishment of public-private dialogue.

ANNEX I

Annex 1: Macroeconomic Indicators

Macroeconomic Indicators	2004	2005	2006	2007	2008
Real Growth Rate (% change)	14.2	13.8	12.7	2.8	-2.9
GDP (Million TL)	2,456	3,070	3,988	4,604	5,079
GDP per capita (Current prices, US\$)	7,934	10,325	11,522	14,553	16,005
Consumer Price Index (CPI, %)	11.6	2.7	19.2	9.4	14.5
Exchange Rates (TL/€)	1.77	1.67	1.8	1.78	1.94
Exchange Rates (TL/\$)	1.42	1.35	1.44	1.29	1.28
Total Deposits (Million, TL)	3,229	3,632	46,812	4,937	5,563
Total Deposits / GDP (%)	131	118	117	107	110
Total Loans (Million, TL)	1,172	1,569	2,321	2,734	3,431
Total Loans / GDP (%)	48	51	58	59	68
Loan / Deposit Rate (%)	36	43	50	55	62
Balance of Public Budget / GDP (%)	-6.1	-7.9	-10.1	-7.1	-9.3
Public Debt Stock / GDP (%)	122	89	79	100	116
Foreign Trade Balance (Surplus + / Deficit -) (Million US\$)	-791	-1,187	-1,308	-1,455	-1,597
Foreign Trade Balance / GDP (%)	-32	-39	-33	-32	-31
Current Account Balance (Surplus+ / Deficit -) (Million US\$)	-14	-276	-203	-250	-323
Current Account Balance / GDP (%)	-1	-9	-5	-5	-6
Total Employment (SPO Household Labor Survey)	86,914	85,583	91,815	89,787	91,223
Public Administration Employment (Including Education and Health)	27,900	28,903	29,106	28,289	27,893
Active Insured Persons	43,958	52,154	65,689	72,385	70,115
Number of Unemployed (SPO Estimation)	9,678	7,665	9,552	9,361	9,881
Active Registered Unemployed (Employment Office)	3,779	2,328	2,447	3,287	3,353
Number of Work Permits for Foreigners	12,429	46,010	53,030	42,779	33,619
Minimum Wage (TL)	627	720	860	950	1,190
Source:	"State Planning Organization"				
	"Banking Authority"				
	Finance Authority				
	Employment Office				

Annex 2 : Technical Notes and Sources for Competitiveness Report Hard Data

	Unit	Source/Method of Calculation	Amount	Implied GCR Rank	Comments/Reliability of Estimate
GDP valued at current prices	in millions of US dollars/2008	Calculated by Economist using data from the "SPO"	3.958	125	\$/TL: 1.2835 GDP valued at current prices (2008): 5,079,907,679 TL
Population	in millions/ 2008	"SPO"	0.274	133	Population: 274,462
GDP (current prices) per capita	per capita in US dollars/2008	Calculated by Economist using data from the "SPO"	16,005	44	Population for per capita GDP calculation : 247,283
Available seat kilometers	Scheduled per week originating in the economy (in millions)/2008	Calculated by Economist using data from the Civil Aviation Office	20.03	110	This estimate is based on all scheduled flights from "Ercan Airport" plus 20% of the available seat kilometers in the Greek-Cypriot Community since Turkish Cypriots use those airports too
Telephone lines	per 100 population -2008	"SPO"	38.6	33	
Public surplus/ deficit	as a percentage GDP/2008	Calculated by Economist using data from the Finance Authority	-9.34%	132	Budget Deficit (2008): 474,386,821 TL
National savings rate	as a percentage GDP/2008	Calculated by Economist using data from the "SPO"	16.40%	89	2007 savings rate has been used
Inflation	annual percent change in consumer price index/ 2008 average	"SPO"	14.50%	113	
Interest rate spread	average interest rate	Calculated by Economist	10.24%	106	Mid-sized, reputable bank spread calculated as 12.58% in TRY, 6.78% in €, \$ and GBP. The percentage is a weighted average of the value of deposits (57.2% in TRY and 42.8% in foreign currency) and loans (63.1% in TRY and 36.9% in foreign currency)
Public debt	as a percentage of GDP/2008	Calculated by Economist using data from the Finance Authority	115.82%	129	Public debt in current prices (2008): 5.9 billion TRY
Malaria Incidence	per 100.000 population/2008	Calculated by Economist using data from the Health Authority	0	1	Malaria incidence (2008): none
Tuberculosis Incidence	per 100.000 population/2008	Calculated by Economist using data from the Health Authority	9.5	21	Tuberculosis Incidence(2008): 26 persons
HIV prevalence	as a percentage of adults aged 15- 49 years/2008	Calculated by Economist using data from the Health Authority	0.04%	1	HIV prevalence(2008): 6 persons
Infant mortality	per 1000 live births/2008	"SPO"	14.3	61	
Life expectancy	at birth years /2008	Calculated by Economist using data from the "SPO"	74.05	53	Life expectancy; male: 71.7% female 76.4%
Primary enrollment	net primary education enrollment rate	"SPO"	100%	1	
Education expenditure	as a percentage of GNI	Calculated by Economist using data from the Finance Authority	6.40%	16	
Secondary enrollment (hard data)	gross secondary education enrollment rate/ 2006	"SPO"	84%	80	Ratio to the population age group 15-17

Annex 2 : Technical Notes and Sources for Competitiveness Report Hard Data (Continued)

	Unit	Source/Method of Calculation	Amount	Implied GCR Rank	Comments/Reliability of Estimate
Tertiary enrollment	Gross tertiary education enrollment rate/2006	"SPO"	75%	12	Ratio to the population age group 18-22
Total tax rate	%of profit tax, labor tax, contribution and other taxes/	"YAGA" Northern Cyprus Doing Business Report 2009	44%	71	
Number of procedures required to start a business		"YAGA" Northern Cyprus Doing Business Report 2009	19	129	
Time required to start a business	number of days/	"YAGA" Northern Cyprus Doing Business Report 2009	35	92	
Trade-weighted tariff rate	the average rate of duty per imported value unit /2008	Calculated by Economist using data from the Trade Office and Finance Authorities	1.20%	33	Calculated based on total tariff revenue divided by total value of imports for that period. Total tariff revenue at current prices (2008):26,932,907 TL. Import of goods(2008): 1,680,657,180 \$
Rigidity of employment	index on a 0-100 (worst) scale- difficulty of hiring, rigidity of hours, difficulty of firing	"YAGA" Northern Cyprus Doing Business Report 2009	14	19	
Firing costs	in weeks of wages/	"YAGA" Northern Cyprus Doing Business Report 2009	14	27	
Female participation in the labor force	as a percentage of male participation/	Calculated by Economist using data from the "SPO"	58%	104	Female participation in the labor force: 36.2% Male participation in the labor force: 62.7%
Strength of investor protection	index on a 0-10 (best) scale/	"YAGA" Northern Cyprus Doing Business Report 2009	4.33	90	
Legal rights index	index on a 0-10 (best) scale/	"YAGA" Northern Cyprus Doing Business Report 2009	4	83	
Mobile telephone subscribers	per 100 population/2008	"SPO"	149	8	
Internet users	per 100 population/2008	Economist Analysis	33.33	48	
Personal computers	per 100 population/2008	Economist Analysis	21.61	43	
Broadband Internet subscribers	per 100 population/2008	Economist Analysis	2.37	71	
Domestic market size index	(GDP+ value of imports- the value of exports) normalized on a 1-7(best) scale/2008	Calculated by Economist using data from the "SPO"	1.46	127	
Foreign market size index	value of exports of goods and services normalized on a 1-7(best) scale/2008	Calculated by Economist using data from the "SPO"	2.45	132	
GDP valued Purchasing power parity (GDP at PPP)	in millions of US dollars/2008	Calculated by Economist using data from the "SPO"	5,145	127	PPP conversion factor estimated as 1.3. For this estimation, Turkish economy was taken into consideration.
Imports as a percentage of GDP	as a percentage of GDP/2008	Calculated by Economist using data from the "SPO"	42.46%	69	Imports of goods (2008): US\$1,681 million
Exports as a percentage of GDP	as a percentage of GDP/2008	Calculated by Economist using data from the "SPO"	23.42%	115	Export of goods and services (2008): US\$ 927 million
Utility patents	per million population/2008	Calculated by Economist using data from the Registrar of Company and Patent Office	43.80	22	Patents registered (2008): 12

The Global Competitiveness Index 2009–2010: Contributing to Long-Term Prosperity amid the Global Economic Crisis

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The global economy continues to weather the most difficult climate in generations. What began as a financial crisis in the United States and the United Kingdom quickly turned into the largest global recession in decades. World GDP is expected to contract by a record 2.5 percent in 2009 as the financial crisis continues to spill over into the real economy,¹ engendering massive declines in consumer demand, rising unemployment, and mounting protectionist pressures worldwide. Although the developing world at first seemed to be spared from the fallout of this crisis, many countries are now facing slumping demand for their export products; this decline is coupled with falling commodity prices and significant reductions in foreign investment and remittances. Moreover, a global liquidity shortage has negatively impacted access to finance for companies and governments alike.

In this context, policymakers are being confronted with new economic management challenges. All over the world governments have taken an active stance in addressing the crisis and the ensuing recession. Banks have been bailed out or nationalized on an unprecedented scale to buffer the immediate impact of the financial system's collapse. These emergency measures have been complemented by large stimulus packages and countercyclical policies intended to support the economy and facilitate recovery. These developments have led observers to question the prevailing paradigm regarding the optimal level of state involvement in the economy.

Today's difficult economic environment underscores the importance of not losing sight of long-term competitiveness fundamentals amid short-term urgencies. Competitive economies are those that have in place factors driving the productivity enhancements on which their present and future prosperity is built. A competitiveness supporting economic environment can help national economies to weather business cycle downturns and ensure that the mechanisms enabling solid economic performance going into the future are in place.

For the past three decades, the World Economic Forum's annual competitiveness reports have examined the many factors enabling national economies to achieve sustained economic growth and long-term prosperity. Our goal over the years has been to provide benchmarking tools for business leaders and policymakers to identify obstacles to improved competitiveness, thus stimulating discussion on strategies to overcome them. In the current challenging economic environment, our work serves as a critical reminder of the importance of taking into account the consequences of our present actions on future prosperity.

Since 2005, the World Economic Forum has based its competitiveness analysis on the Global Competitiveness

Index (GCI), a highly comprehensive index, which captures the microeconomic and macroeconomic foundations of national competitiveness.

We define *competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country*. The level of productivity, in turn, sets the sustainable level of prosperity that can be earned by an economy. In other words, more-competitive economies tend to be able to produce higher levels of income for their citizens. The productivity level also determines the rates of return obtained by investments in an economy. Because the rates of return are the fundamental drivers of the growth rates of the economy, a more-competitive economy is one that is likely to grow faster in the medium to long run.

The concept of competitiveness thus involves static and dynamic components: although the productivity of a country clearly determines its ability to sustain its level of income, it is also one of the central determinants of the returns to investment, which is one of the key factors explaining an economy's growth potential.

The 12 pillars of competitiveness

The determinants of competitiveness are many and complex. Economists have long tried to understand what determines the wealth of nations. This attempt has ranged from Adam Smith's focus on specialization and the division of labor to neoclassical economists' emphasis on investment in physical capital and infrastructure and, more recently, to interest in other mechanisms such as education and training, technological progress (whether created within the country or adopted from abroad),² macroeconomic stability, good governance, the rule of law, transparent and well functioning institutions, firm sophistication, demand conditions, market size, and many others. Each of these conjectures rests on solid theoretical foundations. The central point, however, is that they are not mutually exclusive—two or more of them could be true at the same time. Hundreds of econometric studies show that many of these conjectures are, in fact, simultaneously true.³ This also can partly explain why, despite the present global economic crisis, we do not necessarily see large swings in competitiveness rankings, particularly among countries that have already put into place many of the elements driving productivity.

The GCI captures this open-ended dimension by providing a weighted average of many different components, each of which reflects one aspect of the complex concept that we call competitiveness. We group all these components into

12 pillars of competitiveness:

First pillar: Institutions

The institutional environment is determined by the legal and administrative framework within which individuals, firms, and governments interact to generate income and wealth in the economy. The importance of a solid institutional environment has become even more apparent during the current crisis, given the increasingly direct role played by the state in the economy of many countries.

The quality of institutions has a strong bearing on competitiveness and growth.⁴ It influences investment decisions and the organization of production and plays a central role in the ways in which societies distribute the benefits and bear the costs of development strategies and policies. For example, owners of land, corporate shares, or intellectual property are unwilling to invest in the improvement and upkeep of their property if their rights as owners are insecure.⁵

The role of institutions goes beyond the legal framework. Government attitudes toward markets and freedoms, and the efficiency of its operations, are also very important: excessive bureaucracy and red tape,⁶ overregulation, corruption, dishonesty in dealing with public contracts, lack of transparency and trustworthiness, and the political dependence of the judicial system impose significant economic costs to businesses and slow the process of economic development.⁷ Proper management of the public finances is also critical to ensuring trust in the national business environment. We include indicators capturing the quality of government management of the public finances to complement the measures of macroeconomic stability captured by pillar 3 below.

Although the economic literature has mainly focused on public institutions, private institutions are also an important element in the process of wealth creation. The recent global financial crisis, along with numerous corporate scandals, has highlighted the relevance of accounting and reporting standards and transparency for preventing fraud and mismanagement, ensuring good governance, and maintaining investor and consumer confidence. An economy is well served by businesses that are run honestly, where managers abide by strong ethical practices in their dealings with the government, other firms, and the public.⁸ Private-sector transparency is indispensable to business, and can be brought about through the use of standards as well as auditing and accounting practices that ensure access to information in a timely manner.⁹

Second pillar: Infrastructure

Extensive and efficient infrastructure is an essential driver

of competitiveness. It is critical for ensuring the effective functioning of the economy, as it is an important factor determining the location of economic activity and the kinds of activities or sectors that can develop in a particular economy. Well-developed infrastructure reduces the effect of distance between regions, with the result of truly integrating the national market and connecting it at low cost to markets in other countries and regions. In addition, the quality and extensiveness of infrastructure networks significantly impact economic growth and reduce income inequalities and poverty in a variety of ways.¹⁰ In this regard; a well-developed transport and communications infrastructure network is a prerequisite for the ability of less-developed communities to connect to core economic activities and basic services.

Effective modes of transport for goods, people, and services such as quality roads, railroads, ports, and air transport enable entrepreneurs to get their goods and services to market in a secure and timely manner, and facilitate the movement of workers to the most suitable jobs. Economies also depend on electricity supplies that are free of interruptions and shortages so that businesses and factories can work unimpeded. Finally, a solid and extensive telecommunications network allows for a rapid and free flow of information, which increases overall economic efficiency by helping to ensure that businesses can communicate, and that decisions made by economic actors take into account all available relevant information. This is an area where the crisis may prove to have positive longer-term effects, given the central role of infrastructure development in many of the national stimulus packages in countries such as the United States and China.

Third pillar: Macroeconomic stability

The stability of the macroeconomic environment is important for business and, therefore, is important for the overall competitiveness of a country.¹¹ Although it is certainly true that macroeconomic stability alone cannot increase the productivity of a nation, it is also recognized that macroeconomic disarray harms the economy. The government cannot provide services efficiently if it has to make high-interest payments on its past debts. Running fiscal deficits limits the government's future ability to react to business cycles. Firms cannot operate efficiently when inflation rates are out of hand. In sum, the economy cannot grow in a sustainable manner unless the macro environment is stable. It is important to note that this pillar focuses only on macroeconomic stability, so it does not directly take into account the way in which public accounts are managed by the government. This qualitative dimension is captured in the public institutions sub-pillar described above.

Fourth pillar: Health and primary education

A healthy workforce is vital to a country's competitiveness and productivity. Workers who are ill cannot function to their potential and will be less productive.

Poor health leads to significant costs to business, as sick workers are often absent or operate at lower levels of efficiency. Investment in the provision of health services is thus critical for clear economic, as well as moral, considerations.¹²

In addition to health, this pillar takes into account the quantity and quality of basic education received by the population, which is increasingly important in today's economy. Basic education increases the efficiency of each individual worker. Moreover, workers who have received little formal education can carry out only simple manual work and find it much more difficult to adapt to more advanced production processes and techniques. Lack of basic education can therefore become a constraint on business development, with firms finding it difficult to move up the value chain by producing more-sophisticated or value-intensive products.

For the longer term, it will be essential to avoid significant reductions in resource allocation to these critical areas, given that government budgets in many countries will need to be cut to reduce public debt brought about by the present stimulus spending.

Fifth pillar: Higher education and training

Quality higher education and training is crucial for economies that want to move up the value chain beyond simple production processes and products.¹³ In particular, today's globalizing economy requires economies to nurture pools of well-educated workers who are able to adapt rapidly to their changing environment. This pillar measures secondary and tertiary enrollment rates as well as the quality of education as assessed by the business community. The extent of staff training is also taken into consideration because of the importance of vocational and continuous on-the-job training—which is neglected in many economies—for ensuring a constant upgrading of workers' skills to the changing needs of the evolving economy.

Sixth pillar: Goods market efficiency

Countries with efficient goods markets are well positioned to produce the right mix of products and services given supply-and-demand conditions, as well as to ensure that these goods can be most effectively traded in the economy. Healthy market competition, both domestic and foreign, is important in driving market efficiency and thus business productivity, by ensuring that the most efficient

firms, producing goods demanded by the market, are those that thrive. The best possible environment for the exchange of goods requires a minimum of impediments to business activity through government intervention. For example, competitiveness is hindered by distortionary or burdensome taxes and by restrictive and discriminatory rules on foreign direct investment (FDI) limiting foreign ownership—as well as on international trade. The economic slowdown, with the consequent drop in trade and rise in unemployment, has increased the pressure on governments to adopt measures to protect domestic firms and jobs. Yet limiting global trade would not only amplify the current downturn, but in the longer term it would also reduce growth—in particular in developing countries.

Market efficiency also depends on demand conditions such as customer orientation and buyer sophistication. For cultural reasons, customers in some countries may be more demanding than in others. This can create an important competitive advantage, as it forces companies to be more innovative and customer oriented and thus imposes the discipline necessary for efficiency to be achieved in the market.

Seventh pillar: Labor market efficiency

The efficiency and flexibility of the labor market are critical for ensuring that workers are allocated to their most efficient use in the economy and provided with incentives to give their best effort in their jobs. Labor markets must therefore have the flexibility to shift workers from one economic activity to another rapidly and at low cost, and to allow for wage fluctuations without much social disruption.¹⁴ Efficient labor markets must also ensure a clear relationship between worker incentives and their efforts, as well as the best use of available talent which includes equity in the business environment between women and men.¹⁵

Eighth pillar: Financial market sophistication

The present economic crisis has highlighted the central role of a sound and well-functioning financial sector for economic activity. An efficient financial sector allocates the resources saved by a nation's citizens as well as those entering the economy from abroad to their most productive uses. It channels resources to those entrepreneurial or investment projects with the highest expected rates of return, rather than to the politically connected. A thorough and proper assessment of risk is therefore a key ingredient. Business investment is critical to productivity. Therefore economies require sophisticated financial markets that can make capital available for private-sector investment from such sources as loans from a sound banking sector, well-regulated securities exchanges, venture capital, and other

financial products. This has been once again underscored by the liquidity crunch experienced by businesses and the public sector in developing and developed countries in recent times. In order to fulfill all those functions, the banking sector needs to be trustworthy and transparent, and—as has been made so clear recently—financial markets need appropriate regulation to protect investors and other actors in the economy at large.

Ninth pillar: Technological readiness

This pillar measures the agility with which an economy adopts existing technologies to enhance the productivity of its industries.¹⁶ In today's globalized world, technology has increasingly become an important element for firms to compete and prosper. In particular, information and communication technologies (ICT) have evolved into the "general purpose technology" of our time,¹⁷ given the critical spillovers to the other economic sectors and their role as efficient infrastructure for commercial transactions. Therefore ICT access (including the presence of an ICT-friendly regulatory framework) and usage are included in the pillar as essential components of economies' overall level of technological readiness.

In this context, whether the technology used has or has not been developed within national borders is irrelevant for its effect on competitiveness. The central point is that the firms operating in the country have access to advanced products and blueprints and the ability to use them. Among the main sources of foreign technology, FDI often plays a key role. In this respect, it is particularly worrisome that, after four years of solid growth resulting in a record global FDI stock of US\$1.9 trillion in 2007, FDI has declined by an estimated 15 percent in 2008 with further deterioration expected for 2009, especially for developing countries. This development is due to shortages in finance and a more risk averse attitude of businesses.¹⁸

It is important to note that, in this context, the level of technology available to firms in a country needs to be distinguished from the country's ability to innovate and expand the frontiers of knowledge. That is why we separate technological readiness from innovation, which is captured in the 12th pillar below.

Tenth pillar: Market size

The size of the market affects productivity because large markets allow firms to exploit economies of scale. Traditionally, the markets available to firms have been constrained by national borders. In the era of globalization, international markets have become a substitute for domestic markets, especially for small countries. There is vast empirical evidence showing that trade openness

is positively associated with growth. Even if some recent research casts doubts on the robustness of this relationship, the general sense is that trade has a positive effect on growth, especially for countries with small domestic markets.¹⁹

Thus, exports can be thought of as a substitute for domestic demand in determining the size of the market for the firms of a country.²⁰ In today's highly interdependent world, recovery from the present downturn will require that countries increase the amount of goods that they purchase from each other, thus spurring demand. Further lowering barriers to trade would support this process.

By including both domestic and foreign markets in our measure of market size, we give credit to export driven economies and geographic areas (such as the European Union) that are broken into many countries but have one common market.

Eleventh pillar: Business sophistication

Business sophistication is conducive to higher efficiency in the production of goods and services. This leads, in turn, to increased productivity, thus enhancing a nation's competitiveness. Business sophistication concerns the quality of a country's overall business networks as well as the quality of individual firms' operations and strategies. It is particularly important for countries at an advanced stage of development, when the more basic sources of productivity improvements have been exhausted to a large extent. The quality of a country's business networks and supporting industries, which we capture by using indicators of the quantity and quality of local suppliers and the extent of their interaction, is important for a variety of reasons. When companies and suppliers from a particular sector are interconnected in geographically proximate groups ("clusters"), efficiency is heightened, greater opportunities for innovation are created, and barriers to entry for new firms are reduced. Individual firms' operations and strategies (branding, marketing, the presence of a value chain, and the production of unique and sophisticated products) all lead to sophisticated and modern business processes.

Twelfth pillar: Innovation

The final pillar of competitiveness is innovation. Although substantial gains can be obtained by improving institutions, building infrastructure, reducing macroeconomic instability, or improving human capital, all these factors eventually seem to run into diminishing returns. The same is true for the efficiency of the labor, financial, and goods markets. In the long run, standards of living can be expanded only with innovation. Innovation is particularly

important for economies as they approach the frontiers of knowledge and the possibility of integrating and adapting exogenous technologies tends to disappear.²¹

Although less-advanced countries can still improve their productivity by adopting existing technologies or making incremental improvements in other areas, for those that have reached the innovation-driven stage of development, this is no longer sufficient to increase productivity. Firms in these countries must design and develop cutting-edge products and processes to maintain a competitive edge. This requires an environment that is conducive to innovative activity, supported by both the public and the private sectors. In particular, this means sufficient investment in research and development (R&D) especially by the private sector, the presence of high-quality scientific research institutions, extensive collaboration in research between universities and industry, and the protection of intellectual property. In this time of crisis, it will be important to resist pressures to cut back on the R&D spending both at the private and public levels that will be so critical for sustainable growth going into the future.

The interrelation of the 12 pillars

Although the 12 pillars of competitiveness are described separately, this should not obscure the fact that they are not independent: not only are they related to each other, but they tend to reinforce each other. For example, innovation (12th pillar) is not possible in a world without institutions (1st pillar) that guarantee intellectual property rights, cannot be performed in countries with a poorly educated and poorly trained labor force (5th pillar), and is more difficult in economies with inefficient markets (6th, 7th, and 8th pillars) or without extensive and efficient infrastructure (2nd pillar). Although the actual construction of the Index will involve the aggregation of the 12 pillars into a single index, measures are reported for the 12 pillars separately because offering a more disaggregated analysis can be more useful to countries and practitioners: such an analysis gets closer to the actual areas in which a particular country needs to improve.

Stages of development and the weighted Index

It is clear that different pillars affect different countries differently: the best way for Burkina Faso to improve its competitiveness is not the same as the best way for Switzerland. This is because Burkina Faso and Switzerland are in different stages of development: as countries move along the development path, wages tend to increase and, in order to sustain this higher income, labor productivity must improve.²²

According to the GCI, in the first stage, the economy is factor-driven and countries compete based on their factor endowments: primarily unskilled labor and natural resources. Companies compete on the basis of price and sell basic products or commodities, with their low productivity reflected in low wages. Maintaining competitiveness at this stage of development hinges primarily on well-functioning public and private institutions (pillar 1), well-developed infrastructure (pillar 2), a stable macroeconomic framework (pillar 3), and a healthy and literate workforce (pillar 4).

As wages rise with advancing development, countries move into the efficiency-driven stage of development, when they must begin to develop more efficient production processes and increase product quality. At this point, competitiveness is increasingly driven by higher education and training (pillar 5), efficient goods markets (pillar 6), well-functioning labor markets (pillar 7), sophisticated financial markets (pillar 8), a large domestic and/or foreign market (pillar 10), and the ability to harness the benefits of existing technologies (pillar 9).

Finally, as countries move into the innovation-driven stage, they are able to sustain higher wages and the associated standard of living only if their businesses are able to compete with new and unique products. At this stage, companies must compete through innovation (pillar 12), producing new and different goods using the most sophisticated production processes (pillar 11). The concept of stages of development is integrated into the Index by attributing higher relative weights to those pillars that are relatively more relevant for a country given its particular stage of development. That is, although all 12 pillars matter to a certain extent for all countries, the relative importance of each one depends on a country's particular stage of development. To take this into account, the pillars are organized into three sub-indexes, each critical to a particular stage of development.

The basic requirements sub-index groups those pillars most critical for countries in the factor-driven stage. The efficiency enhancers' sub-index includes those pillars critical for countries in the efficiency-driven stage. And the innovation and sophistication factors sub-index includes the pillars critical to countries in the innovation-driven stage.

Table 1: Weights of the three main sub-indexes at each stage of development

Sub-Index	Factor driven stage (%)	Efficiency driven stage (%)	Innovation driven stage (%)
Basic requirements	60	40	20
Efficiency enhancers	35	50	50
Innovation and sophistication factors	5	10	30

To obtain the precise weights, a maximum likelihood regression of GDP per capita was run against each sub-index for past years, allowing for different coefficients for each stage of development.²³ The rounding of these econometric estimates led to the choice of weights displayed in Table 1.

Implementation of stages of development: Smooth transitions

Countries are allocated to stages of development based on two criteria. The first is the level of GDP per capita at

market exchange rates. This widely available measure is used as a proxy for wages, as internationally comparable data for the latter are not available for all countries covered. The precise thresholds are shown in Table 2. A second criterion measures the extent to which countries are factor driven. We proxy this by the share of exports of mineral goods in total exports (goods and services) and assume that countries that export more than 70 percent of mineral products (measured using a five-year average) are to a large extent factor driven.²⁴

Table 2: Income thresholds for establishing stages of development

Stage of development	GDP per capita (in US\$)
Stage 1: Factor driven	< 2,000
Transition from Stage 1 to Stage 2	2,000–3,000
Stage 2: Efficiency driven	3,000–9,000
Transition from Stage 2 to Stage 3	9,000–17,000
Stage 3: Innovation driven	> 17,000

Countries falling in between two of the three stages are considered to be “in transition.” For these countries, the weights change smoothly as a country develops, reflecting the smooth transition from one stage of development to another. By introducing this type of transition between stages into the model—that is, by placing increasingly more weight on those areas that are becoming more important

for the country’s competitiveness as it develops—the Index can gradually “penalize” those countries that are not preparing for the next stage. The classification of countries into stages of development is shown in Table 3.

Table 3: List of countries/economies at each stage of development

Stage 1	Transition from 1 to 2	Stage 2	Transition from 1 to 2	Stage 3
Bangladesh	Algeria	Albania	Bahrain	Australia
Benin	Azerbaijan	Argentina	Barbados	Austria
Bolivia	Botswana	Armenia	Chile	Belgium
Burkina Faso	Brunei Darussalam	Bosnia and Herzegovina	Croatia	Canada
Burundi	Egypt	Brazil	Hungary	Cyprus
Cambodia	Georgia	Bulgaria	Latvia	Czech Republic
Cameroon	Guatemala	China	Lithuania	Denmark
Chad	Indonesia	Colombia	Mexico	Estonia
Côte d’Ivoire	Jamaica	Costa Rica	Oman	Finland
Ethiopia	Kazakhstan	Dominican Republic	Poland	France
Gambia, The	Kuwait	Ecuador	Romania	Germany
Ghana	Libya	El Salvador	Russian Federation	Greece
Guyana	Morocco	Jordan	Turkey	Hong Kong SAR
Honduras	Paraguay	Macedonia, FYR	Uruguay	Iceland
India	Qatar	Malaysia		Ireland
Kenya	Saudi Arabia	Mauritius		Israel
Kyrgyz Republic	Syria	Montenegro		Italy
Lesotho	Venezuela	Namibia		Japan
Madagascar		Panama		Korea, Rep.
Malawi		Peru		Luxembourg
Mali		Serbia		Malta
Mauritania		South Africa		Netherlands
Mongolia		Suriname		New Zealand
Mozambique		Thailand		Norway
Nepal		Tunisia		Portugal
Nicaragua		Ukraine		Puerto Rico
Nigeria				Singapore
Pakistan				Slovak Republic
Philippines				Slovenia
Senegal				Spain
Sri Lanka				Sweden
Tajikistan				Switzerland
Tanzania				Taiwan, China
Timor-Leste				Trinidad and Tobago
Uganda				United Arab Emirates
Vietnam				United Kingdom
Zambia				United States
Zimbabwe				

The Executive Opinion Survey: Capturing the Views of the Business Community

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The Global Competitiveness Report has, over the last three decades, become one of the world’s most respected assessments of national competitiveness, providing a mirror image of a nation’s economic environment and its ability to achieve sustained levels of prosperity and growth. In view of presenting an image that is as close to reality as possible, the World Economic Forum draws its data from two sources: international hard data sources and the Executive Opinion Survey (Survey). The Survey is a unique tool for capturing timely and vital information that is not available on a global level. It captures the perception of business executives about the environment in which they operate, thus imparting a unique source of insight about the competitiveness of their economy.

The World Economic Forum has conducted the annual Survey for 30 years. The Survey has evolved over time to capture new data points essential to the Global Competitiveness Index and several other projects. The Survey has also expanded in its scope of completion, achieving this year a record sample of over 13,000 surveys from 133 countries between January and May 2009. Following the editing process (see below), a total of 12,614 surveys were retained. This represents an average of 95 respondents per country. Table 1 shows key attributes of the Survey respondents for the 2009 dataset.

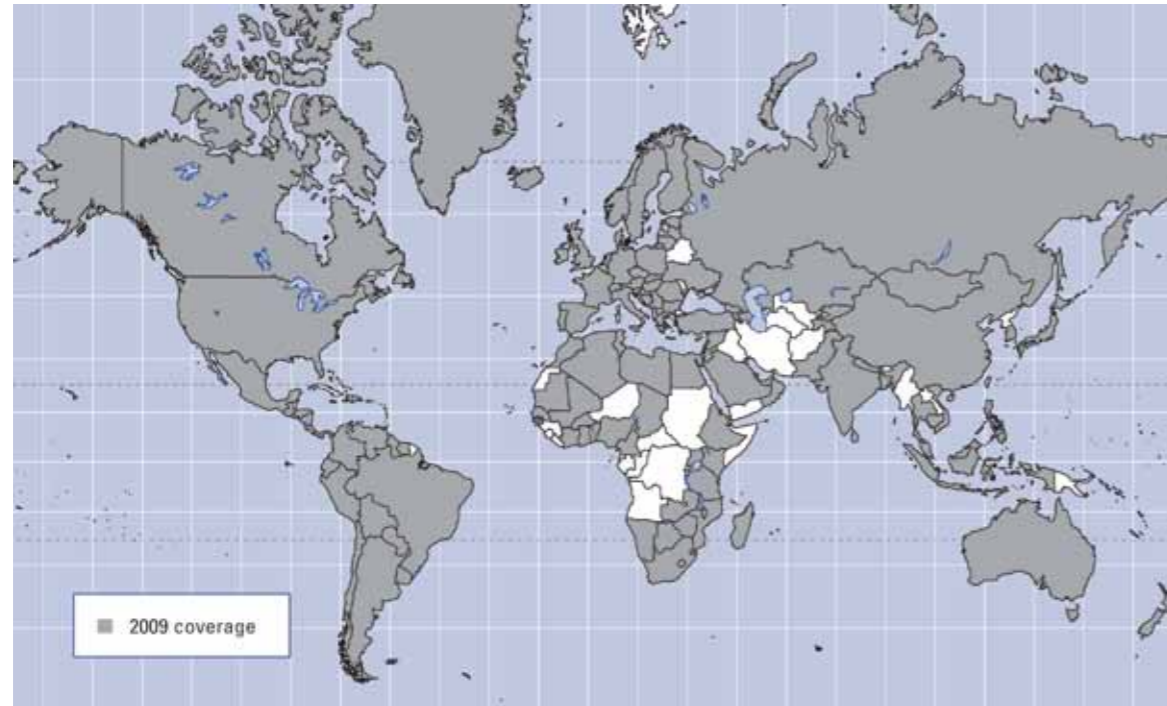
The Survey is divided into 13 sections related to the 12 pillars of the Global Competitiveness Index, and includes a general “About your company” section capturing information about the respondent’s company as well. The data gathered thus provide a unique source of insight and a qualitative portrait of each nation’s economic and business environment, and how it compares with the situation in other countries. Given the scope of the Survey’s coverage and in order to maximize its outreach, it is translated into more than 20 languages.

Geographic expansion

In 1979, on the occasion of the Forum’s 10th anniversary, the first competitiveness report using survey data covering just 16 European countries was launched. Thirty years later, the Survey is conducted in 133 economies from all the world’s regions (see Figure 1 for details). This year the Report does not, for the first time in many years, include any new countries although continued efforts are made to cover those not yet included.¹ Although the Forum aims to present comprehensive international coverage, expansion to additional countries may be constrained by the absence of adequate infrastructure to support the Survey process in some areas, and also because some of the hard data sources are themselves not available for some countries. Furthermore, the first quarter of 2009 was a difficult time for conducting a

survey given the business executives' concerns related to the global economic downturn. Nonetheless, the 133 economies included in the Report account for more than

98 percent of the world's total gross domestic product, demonstrating that the findings are indeed global in scope.



Survey structure and methodology

The Survey is reviewed and streamlined every year to reflect the variables captured in the Global Competitiveness Index (GCI), which is at the heart of this Report. The 2009 Survey was very much aligned with the previous edition.

Most questions in the Survey follow a structure asking participants to evaluate, on a scale of 1 to 7, one particular aspect of their operating environment. At one end of the scale, 1 represents the worst possible situation, and at the other end of the scale, 7 represents the best (see Box 1 for an example).

In view of reaching out to business executives at national level, the Forum has established a close collaboration with its network of over 150 Partner Institutes that administer the Executive Opinion Survey in their respective countries. The Partner Institutes are, for the most part, recognized economics departments of national universities, independent research institutes, or business organizations.² The valuable collaboration helps to ensure that the Survey is conducted in a consistent manner across the globe. In addition, the Partner Institutes also take an

active part in disseminating the findings of the various competitiveness report series by holding events or press conferences to explain the results at the national level. The further dissemination outreach allows the Report's findings to be used as a tool for improving the competitiveness outlook in each country, whether by the policymaker or the business executive.

Box 1: Example of a typical Survey question

How would you rate the intellectual property protection, including anti-counterfeiting measures, in your country?

Very weak < 1 2 3 4 5 6 7 > Very strong

Circling 1....means you agree completely with the answer on the left-hand side

Circling 2....means you largely agree with the left-hand side

Circling 3....means you somewhat agree with the left-hand side

Circling 4....means your opinion is indifferent between the two answers

Circling 5....means you somewhat agree with the right-hand side

Circling 6....means you largely agree with the right-hand side

Circling 7....means you agree completely with the answer on the right-hand side

To this end, and in order to obtain a representative and comparable sample of Survey responses from each economy, the Partner Institutes are each year required to follow a detailed set of guidelines. The process has been in constant review with the advice of an internationally renowned survey consultancy and in collaboration between the World Economic Forum and the Institute of Strategy and Competitiveness at the Harvard Business School.³ In this way, the process is moving toward a best practice procedure, ensuring greater data accuracy and allowing for more robust comparison across economies.

The Survey sampling follows a dual stratification based on the size of the company and the sector of activity.⁴ Specifically, the Survey sampling guidelines ask the Partner Institutes to carry out the following steps:

1. Prepare a "sample frame," or large list of potential respondents, which includes firms representing the main sectors of the economy (agriculture, manufacturing industry, non-manufacturing industry, and services).
2. Separate the frame into two lists: one that includes only large firms, and a second list that includes all other firms (both lists representing the various economic sectors).⁵
3. Based on these lists, and in view of reducing survey bias, choose a random selection of these firms to receive the Survey.⁶

An additional feature of the 2009 Executive Opinion Survey process was to ask the Partner Institute to collect a

combination of random respondents with some repeat respondents for further comparative analysis. Despite the significantly increased complexity of the process this year, the 2009 Survey guidelines were carefully followed by a large majority of Partner Institutes, improving the robustness of the sample.

Beyond the sampling guidelines, the actual administration of the Survey to the selected group of companies is tailored at the national level to differences in infrastructure, distance, cultural preferences, and other such factors. For example, in some instances, the Partner Institute may deem that face-to-face interviews with business executives are the most effective method, as opposed to a mailing or telephone interview method, or offering the online version as an alternative.

Over the past year, the online completion of the Survey has increased further. Specifically, this year there has been an increase of 7 percentage points—online participation now represents 27 percent of all responses, with over 10 countries using the online system solely and 27 percent of countries having an online usage above 70 percent. The online Survey is available in 15 languages.

Who else uses the Executive Opinion Survey?

The Survey data used for the calculation of the Global Competitiveness Index as the backbone of The Global Competitiveness Report is also used as a prime data source for the Forum's industry-specific reports, including The Global Information Technology Report, The Travel & Tourism Competitiveness Report, The Global Enabling Trade Report, The Gender Gap Report, and The Financial Development Report. The data are also used extensively for regional studies. Most recently, the Forum published The Mexico Competitiveness Report, The Brazil Competitiveness Report, The Africa Competitiveness Report, and The Lisbon Review.

In addition, the Executive Opinion Survey data have long served a number of international and national organizations, government bodies, academia, and private-sector companies for their policy or strategy review. For example, the data are used for the elaboration of the renowned Corruption Perceptions Index and the International Bribe Payers Index published by Transparency International and for the global review of business perceptions and the response to the HIV/AIDS epidemic produced by Harvard School of Public Health in collaboration with the Forum's Global Health Initiative, as well as a number of academic publications.

Finally, an increasing number of national competitiveness reports that make use of or refer to the Executive Opinion Survey data are being published worldwide.

Data treatment and score computation.

The previous sections described how the Survey is actually conducted and the data collected. The following pages describe in detail how the data are then processed to arrive at country-level scores. These results,⁷ together with hard data indicators, then feed into the GCI, as well as other projects as described above.

Data editing

The collected respondent-level data are subjected to a careful editing process. The first editing rule consists of excluding those surveys with a completion rate inferior to 50 percent.⁸ This is because partially completed surveys likely demonstrate a lack of sufficient focus on the part of the respondent. In a second step, a multivariate outlier analysis is applied to the data using the Mahalanobis distance technique. This test assesses whether each individual survey is representative, given the overall sample of survey responses in the specific country, and allows for the deletion of clear outliers

How to Read the Country/Economy Profiles

The Country Profiles section presents a two-page profile for each of the 133 economies covered by The Global Competitiveness Report 2009–2010.

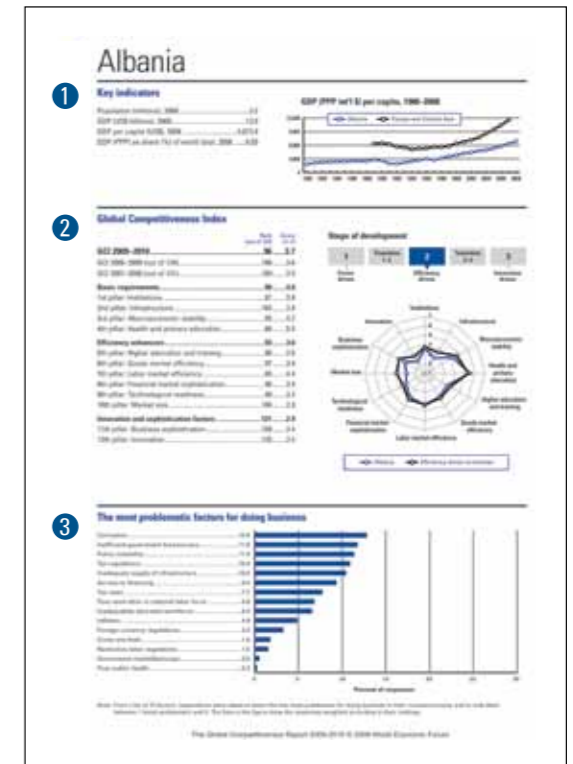
Page 1

1 Key indicators

The first section presents a selection of key indicators:

- Population figures come from the United Nations Population Fund (UNFPA)'s State of World Population 2008 and the Economist Intelligence Unit's Country Data Database.
- Macroeconomic data come from the April 2009 edition of the International Monetary Fund (IMF)'s World Economic Outlook.

- The chart on the upper right-hand side displays the evolution of GDP per capita adjusted for purchasing power parity (PPP), from 1980 through 2008 (or the period for which data are available) for the economy under review (blue line). The source for these figures is the April 2009 edition of the IMF's World Economic Outlook. Note that no data are available for Puerto Rico. The black line plots the aggregate performance of the group of economies to which the economy under review belongs. We draw on the World Bank's classification of economies, which divides the world into six regions ("East Asia and the Pacific," "Europe and Central Asia," "Latin America and the Caribbean," "Middle East and North Africa," "South Asia," and "Sub-Saharan Africa") and two income groups ("high-income OECD" and "other high income"). In some cases, a different comparator than the economy's corresponding group is used. GDP aggregates (available only through 2007) are from the World Bank's World Development Indicators Online Database (data retrieved in August 2009).



2 Global Competitiveness Index

This section details the country's performance on the various components of the Global Competitiveness Index (GCI). The first column shows the country's ranks among the 133 economies, while the second column presents the scores. For more information on the methodology and results of the GCI, please refer to Chapter 1.1 of this Report. On the right-hand side, a chart shows the country's performance in the 12 pillars of the GCI (blue line) measured against the average scores across all the countries in the same stage of development (black line).

3 The most problematic factors for doing business

This chart summarizes those factors seen by business executives as the most problematic for doing business in their economy. The information is drawn from the 2009 edition of the World Economic Forum's Executive Opinion Survey. From a list of 15 factors, respondents were asked to select the five most problematic and to rank those from 1 (most problematic) to 5. The results were then tabulated and weighted according to the ranking assigned by respondents.

4 The Global Competitiveness Index in detail

This page presents the rank achieved by a country on each of the indicators entering the composition of the GCI. Indicators are organized by pillar. Please refer to the appendix of Chapter 1.1 for the detailed structure of the GCI. Next to the rank, a colored square indicates whether the indicator constitutes an advantage (blue square) or a disadvantage (black square) for the country. In order to identify variables as advantages or disadvantages, the following rules were applied:

- For those economies ranked in the top 10 in the overall GCI, individual variables ranked from 1 through 10 are considered to be advantages. Any variables ranked below 10 are considered to be disadvantages. For instance, in the case of the United States—which is ranked 2nd overall—its 3rd rank in the variable Local availability of specialized research and training services makes this variable a competitive advantage, whereas the Number of procedures required to start a business, on which it ranks 26th, constitutes a competitive disadvantage for the country.

- For those economies ranked from 11 through 50 in the overall GCI, variables ranked higher than the economy's own rank are considered to be advantages. Any variables ranked equal to or lower than the economy's overall rank are considered to be disadvantages. In the case of United Arab Emirates, ranked 23rd overall, its rank of 11th for Quality of overall infrastructure makes this variable a competitive advantage. On the other hand, Tertiary enrollment, for which United Arab Emirates ranks 81st, represents a competitive disadvantage.

- For those economies ranked lower than 50 in the overall GCI, any individual variables ranked higher than 51 are considered to be advantages. Any variables ranked lower than 50 are considered disadvantages. For Vietnam, ranked 75th overall, variable Burden of government regulation constitutes a disadvantage (106th), whereas the variable Telephone line (which shows 32.7 per 100 populations, 36th rank) constitutes a competitive advantage.

For indicators allocated a half-weight in the GCI, only the first instance is shown on this page. For further analysis, the Data Tables in the following section of the Report provide detailed rankings and scores for all the variables of the GCI.

The screenshot shows the 'Albania' page of the Global Competitiveness Index (GCI) report. It features a table with columns for 'Indicator', 'Rank', and 'Status' (Advantage/Disadvantage). The indicators are grouped into four pillars: Innovation, Infrastructure, Efficiency, and Competitiveness. The table lists various indicators such as 'Innovation: New patents registered' and 'Infrastructure: Quality of infrastructure', each with its corresponding rank and status. A blue square indicates an advantage, and a black square indicates a disadvantage.

Notes

- IMF 2009a.
- Schumpeter 1942; Solow 1956; and Swan 1956.
- See, for example, Sala-i-Martin et al. 2004 for an extensive list of potential robust determinants of economic growth.
- See Easterly and Levine 1997; Acemoglu et al. 2001, 2002; Rodrik et al. 2002; and Sala-i-Martin and Subramanian 2003.
- See de Soto 2000.
- See de Soto and Abbot 1990.
- In this pillar, one Survey-based variable capturing the efficiency of the legal framework for (1) settling disputes and (2) challenging the legality of government actions and/or regulations has been replaced by two variables, each capturing one of the issues more specifically.
- See Shleifer and Vishny 1997; Zingales 1998.
- See Kaufmann and Vishwanath 2001.
- See Aschauer 1989; Canning et al. 1994; Gramlich 1994; and Easterly 2002.
- See Fischer 1993.
- See Sachs 2001.
- See Schultz 1961; Lucas 1988; Becker 1993; and Kremer 1993.
- See Almeida and Carneiro 2009; Amin 2009; and Kaplan 2009 for country studies demonstrating the importance of flexible labor markets for higher employment rates and, therefore, economic performance.
- Data previously included in this pillar measuring non-wage labor costs have been excluded this year, as they are no longer collected by the World Bank Doing Business group.
- See Aghion and Howitt 1992 and Barro and Sala-i-Martin 2003 for a technical exposition of technology-based growth theories.
- A general purpose technology (GPT), according to Trajtenberg (2005), is one which in any given period makes a particular contribution to overall economy's growth thanks to its ability to transform the methods of production in a wide array of industries. Examples of GPTs have been the invention of the steam engine and the electric dynamo.
- See UNCTAD 2009.
- See Sachs and Warner 1995; Frenkel and Romer 1999; Rodrik and Rodriguez 1999; Alesina et al. 2005; and Feyrer 2009.
- This is particularly important in a world in which economic borders are not as clearly delineated as political ones. In other words, when Belgium sells goods to the Netherlands, the national accounts register the transaction as an export (so the Netherlands is a foreign market of Belgium), but when California sells the same kind of output to Nevada, the national accounts register the transaction as domestic (so Nevada is a domestic market of California).

21 See Romer 1990; Grossman and Helpman 1991; and Aghion and Howitt 1992.

22 Probably the most famous theory of stages of development was developed by the American historian W. W. Rostow in the 1960s (see Rostow 1960). Here we adapt Michael Porter's theory of stages (see Porter 1990). Please see Chapter 1.1 of The Global Competitiveness Report 2007–2008 for a complete description of how we have adapted Michael Porter's theory for the present application.

23 Some restrictions were imposed on the coefficients estimated. For example, the three coefficients for each stage had to add up to one, and all the weights had to be non-negative.

24 In order to capture the resource intensity of the economy, we use as a proxy the exports of mineral products as a share of overall exports according to the sector classification developed by the International Trade Centre in their Trade Performance Index. In addition to crude oil and gas, this category also contains all metal ores and other minerals as well as petroleum products, liquefied gas, coal, and precious stones. The data used cover the years 2003 through 2007. Further information on these data can be found at the following site: <http://www.intracen.org/menus/countries.htm>.

