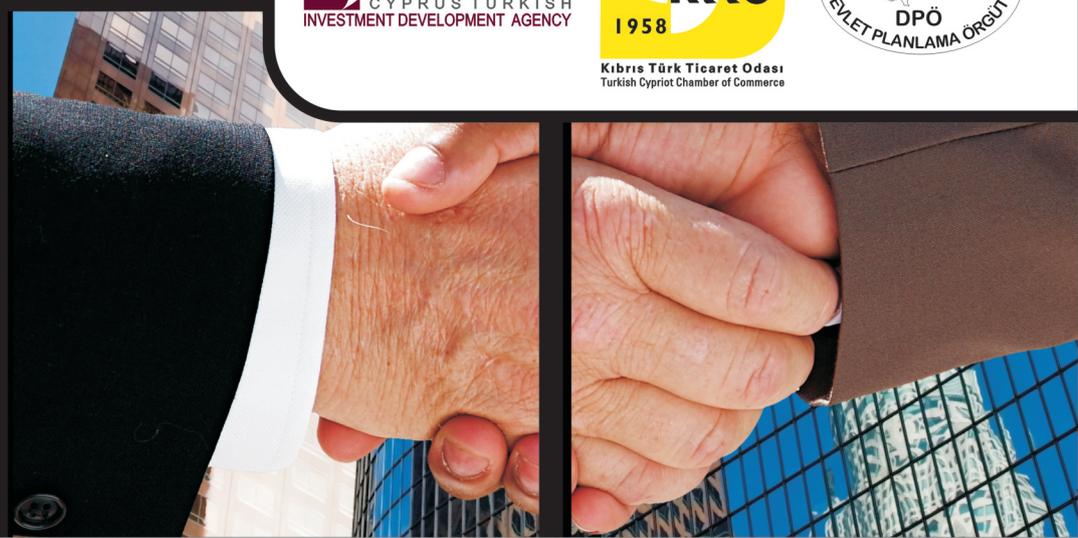
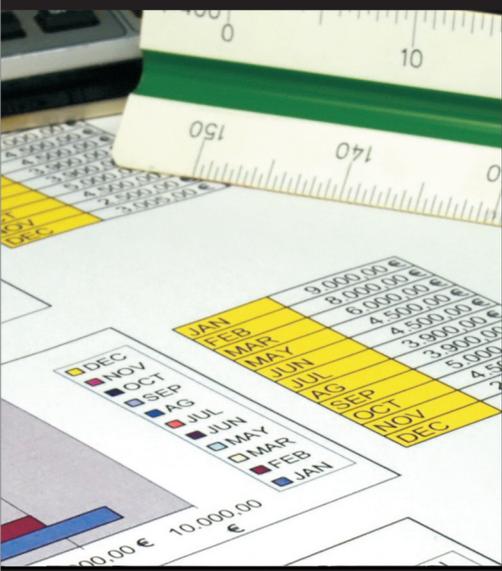


Competitiveness Report



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Turkish Cypriot Chamber of Commerce

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The Turkish Cypriot Competitiveness Report

by Dr. Yenal Sureç and Unal Akifler



Kibris Türk Ticaret Odası
Turkish Cypriot Chamber of Commerce



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I. Letter from the Competitiveness Report Advisory Committee

The members of the Competitiveness Report Advisory Committee are pleased to present the following analysis and recommendations on the competitiveness of the Turkish Cypriot economy. This report, which will help us better understand the obstacles hindering our development and solve the problems faced by our economy, is an excellent example of public-private cooperation.

The conference organized to discuss this report, as well as the findings stated in the report, are the result of significant efforts. A few months ago, the Turkish Cypriot Chamber of Commerce was contemplating a member survey to help it set priorities. However, the global financial crisis that coincided with the same period once more showed that the current structure of the Turkish Cypriot economy is not sustainable. Such developments pushed the “competitiveness” concept forward by making it an increasingly important issue.

This is how the Global Competitiveness Report of the World Economic Forum (WEF) came to our attention. This report included the kind of statistical data on other economies that we wanted to compile for our own economy. The WEF study covers 134 economies, big and small, rich and poor, and is refined by 30 years of experience. Such a study provides not only the information we need, but can also provide the economy with a mirror to see how it is performing. The main obstacle we faced was that neither the data nor the executive opinions that are the core of the WEF methodology had been compiled in the Turkish Cypriot community. The fact is that compiling the various micro and macro data required for the Global Competitiveness Report requires time and is costly. In this regard, we want to thank the United States Agency for International Development (USAID) for its funding through the Economic Development and Growth for Enterprises (EDGE) project that made it possible for us to conduct the research and surveys necessary to produce such a report.

The calculations done by the “Turkish Cypriot Investment Development Agency” (YAGA) using the methodology from the World Bank’s “Doing Business” reports have significantly contributed to our ability to collect data. Another important contribution came from the “State Planning Organization”, which helped obtain and calculate the missing macro-economic data. All the members of the Committee agree that the findings/results of this study should be shared with the wider public to benefit the Turkish Cypriot community. In addition to this, we hope that stakeholders will convene to establish priorities and recommendations based on the report’s findings.

Concerning recommendations, it is important to note that the recommendations contained within this report do not reflect the Committee’s perspective or that of any other specific organization, but rather provides the public with an opportunity for broader evaluation. To ensure this, the committee chose two respected economists who are academic experts on the topic to interpret the data – Mr. Akifler and Mr. Sureç. As a result of their work, this report is offered for your review and consideration. Apart from the contributions made in formatting as well as the wording in order to ensure better understanding by the reader, the opinions stated in this report belong solely to the authors and are not binding for the institutions or persons that supported the preparation of this report.

We believe that this “Turkish Cypriot Competitiveness Report” will contribute to the realization of the suggested recommendations and will thus lead to the implementation of necessary economic reforms. Additionally, we believe it will foster constructive dialogue between the various political, economic, social and educational stakeholders that have a stake in building competitiveness.

Regards,

Şua Saraçoğlu, President, “Turkish Cypriot Chamber of Commerce”

Ali Korhan, Undersecretary, “State Planning Organization”

Ayşe Dönmezer, Director, “Cyprus Turkish Investment Development Agency”

II. Executive Summary

Competitiveness is a very important indicator for those economies that are open to the world. Any economy that wants to compete in world markets can benefit from a competitiveness analysis to assess whether it is ready to do so, as well as to identify the areas where it has a competitive advantage as well as those where it lags behind other economies.

The Turkish Cypriot community has a limited economic relationship with the rest of the world, partly due to isolation and partly due to limited production capabilities. Moreover, the Turkish Cypriot community has never had the opportunity to be the subject of any study in this arena.

This study is an analysis of the Turkish Cypriot economy using the “Global Competitiveness Report” as its basis. This report is prepared annually by the World Economic Forum with contributions from more than 130 countries. The same methodology used by the World Economic Forum (WEF) was used for this study. This provides the opportunity to compare the Turkish Cypriot community with 134 economies around the world.

Consistent with the WEF methodology, the data for the report was collected from two sources: official statistics; and an Executive Opinion Survey that solicited input from business executives in every major economic sector. The Turkish Cypriot community’s competitiveness score was calculated using data from these two sources. Using this methodology, the Turkish Cypriot economy ranked 117th out of 135 economies included in the WEF study.

Under the WEF methodology, the participating economies are divided into three main categories, according to their per capita income: “factor driven”, “efficiency driven” and “innovation driven”. The Turkish Cypriot community is classified as “efficiency driven” in this report.

The report concludes that the Turkish Cypriot community ranks lowest in the following pillars: inefficient markets (including goods and services, financial and labor markets), technological

readiness, macroeconomic instability, and market size. The economy performed relatively better in the areas of health and primary education and security.

Setting aside the problems over which the Turkish Cypriot community has little control, such as the Cyprus problem and the related effects of isolation, the report offers recommendations to improve the situation in those areas where the economy is lagging behind but where reform is possible.

In order to allow for resource allocation to be done in the most rational way to increase economic efficiency, and thus competitiveness, legal and institutional reforms that enable the establishment of free market conditions should be accelerated. These may include:

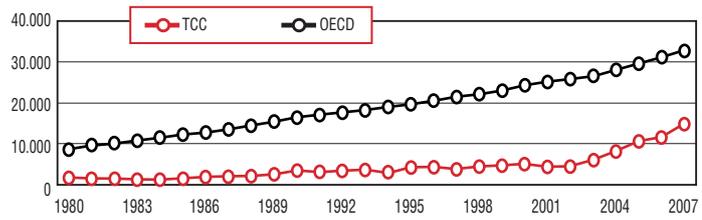
- Creating a more effective labor market by eliminating recruitment practices that distort the market;
- Accelerating the implementation of reforms to increase the quality and efficiency of public services;
- Taking measures to decrease costs;
- Changing the activities of the Development Bank that distort the credit market;
- Implementing policies that promote and encourage the use of cost and time-saving technologies in both the public and private sector;
- Improving the transportation and communication infrastructures; and,
- Implementing policies to help ensure macro-economic stability such as setting limits on public sector borrowing, creating more fiscal discipline, reforming the tax code and even converting to the Euro.

Turkish Cypriot Economy

Key indicators

Total population (thousands), 2007.....	268
GDP (US\$ billions), 2007.....	3.5
GDP (current prices) per capita, 2007.....	14,553
GDP (PPP) as share (%) of world total, 2007.....	0.016

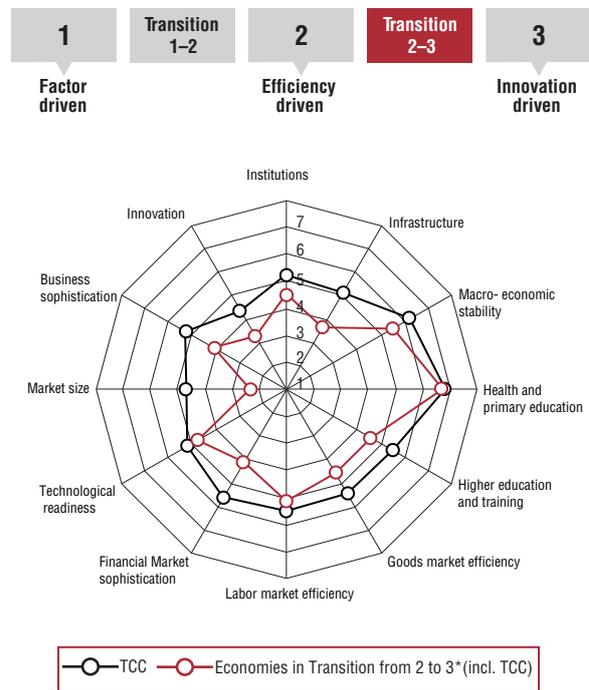
GDP (PPP US\$) per capita, 1980–2007



Global Competitiveness Index

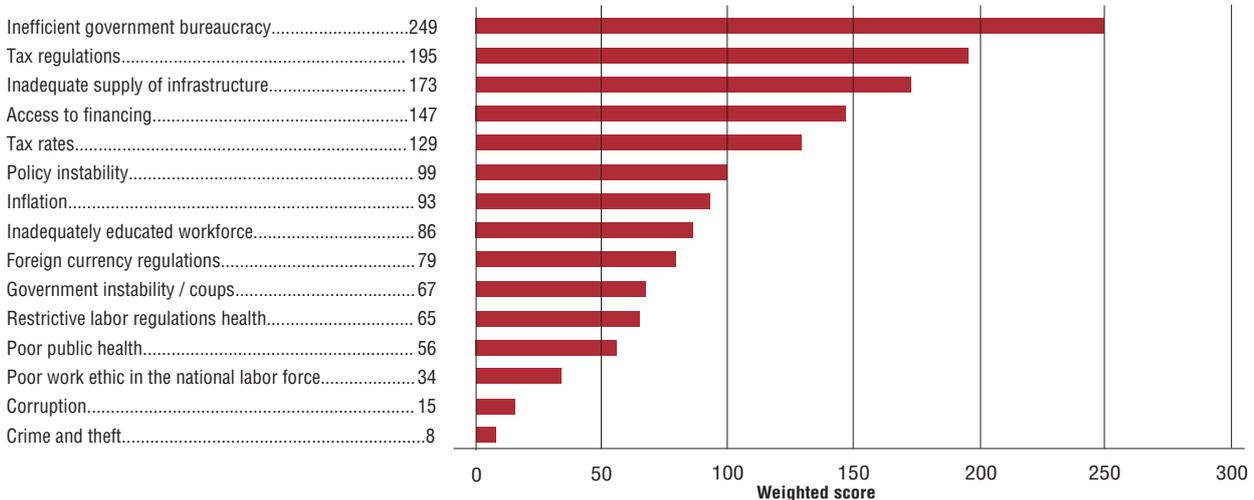
	Rank (out of 135)	Score (1-7)
Global Competitiveness Index 2008-2009	117	3.43
Basic requirements	91	4.10
1st pillar: Institutions.....	94	3.53
2nd pillar: Infrastructure.....	104	2.62
3rd pillar: Macroeconomic stability.....	99	4.51
4th pillar: Health and primary education.....	49	5.74
Efficiency enhancers	130	3.06
5th pillar: Higher education and training.....	92	3.54
6th pillar: Goods market efficiency.....	123	3.56
7th pillar: Labor market efficiency.....	100	4.09
8th pillar: Financial market sophistication.....	128	3.10
9th pillar: Technological readiness.....	47	3.73
10th pillar: Market size.....	132	1.30
Innovation and sophistication factors	133	2.66
11th pillar: Business sophistication.....	129	3.08
12th pillar: Innovation.....	132	2.23

Stage of development



*These economies include: Bahrain, Barbados, Chile, Croatia, Estonia, Hungary, Latvia, Lithuania, Poland, Qatar, Russia, Slovak Republic, Taiwan, Trinidad and Tobago, Turkey.

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.

Turkish Cypriot Economy

The Global Competitiveness Index in detail

INDICATOR		RANK/135	INDICATOR		RANK/135
1st pillar: Institutions			6th pillar: Goods market efficiency (continued)		
1.01	Property rights.....	119	6.11	Prevalence of foreign ownership.....	129
1.02	Intellectual property protection.....	102	6.12	Business impact of rules on FDI.....	126
1.03	Diversion of public funds.....	86	6.13	Burden of customs procedures.....	131
1.04	Public trust of politicians.....	74	6.14	Degree of customer orientation.....	84
1.05	Judicial independence.....	65	6.15	Buyer sophistication.....	99
1.06	Favoritism in decisions of government officials.....	110	7th pillar: Labor market efficiency		
1.07	Wastefulness of government spending.....	127	7.01	Cooperation in labor-employer relations.....	123
1.08	Burden of government regulation.....	126	7.02	Flexibility of wage determination.....	85
1.09	Efficiency of legal framework.....	121	7.03	Non-wage labor costs*.....	110
1.10	Transparency of government policymaking.....	125	7.04	Rigidity of employment*.....	18
1.11	Business costs of terrorism.....	25	7.05	Hiring and firing practices.....	13
1.12	Business costs of crime and violence.....	26	7.06	Firing costs*.....	19
1.13	Organized crime.....	35	7.07	Pay and productivity.....	109
1.14	Reliability of police services.....	60	7.08	Reliance on professional management.....	130
1.15	Ethical behavior of firms.....	81	7.09	Brain drain.....	129
1.16	Strength of auditing and reporting standards.....	133	7.10	Female participation in the labor force*.....	98
1.17	Efficacy of corporate boards.....	135	8th pillar: Financial market sophistication		
1.18	Protection of minority shareholders' interests.....	102	8.01	Financial market sophistication.....	116
2nd pillar: Infrastructure			8.02	Financing through local equity market.....	135
2.01	Quality of overall infrastructure.....	120	8.03	Ease of access to loans.....	133
2.02	Quality of roads.....	101	8.04	Venture capital availability.....	134
2.03	Quality of railroad infrastructure*.....	n/a	8.05	Restriction on capital flows.....	116
2.04	Quality of port infrastructure.....	132	8.06	Strength of investor protection*.....	86
2.05	Quality of air transport infrastructure.....	87	8.07	Soundness of banks.....	133
2.06	Available Seat Km*.....	88	8.08	Regulation of securities exchanges.....	133
2.07	Quality of electricity supply.....	117	8.09	Legal rights index*.....	16
2.08	Telephone lines lines*.....	31	9th pillar: Technological readiness		
3rd pillar: Macroeconomic stability			9.01	Availability of latest technologies.....	110
3.01	Government surplus / deficit.....	130	9.02	Firm- level technology absorption.....	104
3.02	National savings rate.....	95	9.03	Laws relating to ICT.....	134
3.03	Inflation.....	113	9.04	FDI and technology transfer.....	135
3.04	Interest rate spread.....	120	9.05	Mobile telephone subscribers*.....	2
3.05	Government debt*.....	122	9.06	Internet users*.....	28
4th pillar: Health and primary education			9.07	Personal computers*.....	22
4.01	Business impact of malaria.....	62	9.08	Broadband internet subscribers*.....	49
4.02	Malaria incidence*.....	1	10th pillar: Market size		
4.03	Business impact of tuberculosis.....	36	10.01	Domestic market size*.....	129
4.04	Tuberculosis incidence*.....	39	10.02	Foreign market size*.....	135
4.05	Business impact of HIV/AIDS.....	17	10.03	GDP Valued at PPP*.....	127
4.06	HIV prevalence*.....	1	10.04	Imports as percentage of GDP*.....	67
4.07	Infant mortality*.....	63	10.05	Exports as percentage of GDP*.....	135
4.08	Life expectancy*.....	55	11th pillar: Business sophistication		
4.09	Quality of primary education.....	82	11.01	Local supplier quantity.....	130
4.10	Primary enrollment*.....	1	11.02	Local supplier quality.....	125
4.11	Education expenditure*.....	15	11.03	State of cluster development.....	118
5th pillar: Higher education and training			11.04	Nature of competitive advantage.....	118
5.01	Secondary enrollment*.....	76	11.05	Value chain breadth.....	124
5.02	Tertiary enrollment*.....	12	11.06	Control of international distribution.....	92
5.03	Quality of the educational system.....	116	11.07	Production process sophistication.....	104
5.04	Quality of math and science education.....	95	11.08	Extent of marketing.....	124
5.05	Quality of management schools.....	121	11.09	Willingness to delegate authority.....	128
5.06	Internet access in schools.....	92	12th pillar: Innovation		
5.07	Local availability of specialized research and training services.....	135	12.01	Capacity of innovation.....	128
5.08	Extent of staff training.....	126	12.02	Quality of scientific research institutions.....	125
6th pillar: Goods market efficiency			12.03	Company spending on R&D.....	135
6.01	Intensity of local competition.....	108	12.04	University- industry research collaboration.....	133
6.02	Extent of market dominance.....	102	12.05	Government procurement of advanced technology products.....	124
6.03	Effectiveness of anti-monopoly policy.....	126	12.06	Availability of scientists and engineers.....	129
6.04	Extent and effect of taxation.....	128	12.07	Utility patents*.....	32
6.05	Total tax rate*.....	65	* Hard data		
6.06	Number of procedures to start a business*.....	125	Note: For further details and explanation, please refer to the section "How the Read the Economy Profile" in the appendix		
6.07	Time required to start a business*.....	94			
6.08	Agricultural policy costs.....	133			
6.09	Prevalence of trade barriers.....	135			
6.10	Trade-weighted tariff rate*.....	32			

IV. Introduction

What is competitiveness? Why is it important?

Competitiveness is a relative concept – in other words it is a concept that invites comparison. It is driven by the principle of increasing productivity in addition to absolute cost. At the firm level, it is a significant element in determining per capita income and therefore quality of life. Competitiveness encourages an economy to invest in both its physical infrastructure and its citizens to better enable it to bring its products and services to market in an ever more globalized and liberalized world by focusing on value and quality. This also increases incomes, creates employment, uses productive resources more efficiently, and supplies cheaper and better quality goods for local consumers. For all these reasons, competitiveness is a very important factor for the economy since it provides a healthy growth trend.

Shared goals between the private sector and the economy as a whole

One thing that is certain is that businessmen in the Turkish Cypriot community are trying to develop new and different business models in order to address current economic conditions. The business community is not a static entity. The structure of enterprises is to some degree dependent on the local, regional and international policy environment. In this sense, the most crucial factor to trigger rapid economic growth is the policy makers' ability to anticipate the needs of the business community and give priority to the implementation of policies that pave the way for the progress. However, sustaining the growth trend is as important as rapid growth – especially organizing production without exhausting the available natural resources in the long-term. The organization of production in this way will only be possible if the public sector restricts its role in the economy to the level of monitoring and regulating the free market mechanism rather than being an active producer. In other words, the public sector's role

is to create a framework within which competitiveness can occur. As long as production is based on the comparative and competitive advantages of the economy, sustainability will be achieved. The most rational and efficient usage of productive resources can be acquired only in this way. Healthy and continuous economic growth can stimulate an increase in the standard of living. A balanced and fair distribution of the increasing national income will not only improve the welfare but will secure healthy, democratic procedures for the country. Economic bubbles and sudden growth that outstrip the economy's sustainable potential may culminate in equally rapid, painful declines. This causes disruptions more severe than they might otherwise need to be and a lower overall growth rate in the longer term. Prevention of these fluctuations must be one of the foremost objectives of macroeconomic policies.

Methodology

As in every economy, businessmen in the Turkish Cypriot community also want to better understand their competitiveness in world markets. This kind of a comparative picture helps to highlight the strengths of an economy that can be further developed and exposes the weaknesses where reforms may be necessary to achieve sustainable growth.

For the purpose of analyzing the similarities and differences between economies, the World Economic Forum compares them by utilizing a standard methodology and set of indicators. Each economy is classified into three main categories largely according to their GDP per capita: "factor-driven", "efficiency-driven" and "innovation-driven". Scoring is based on a combination of hard data and the responses of business executives to a lengthy Executive Opinion Survey. There are 112 indicators in total, divided into 12 pillars. Each indicator is scored individually, which is then aggregated to provide a score by pillar and by category. Finally, an overall economy score or Global Competitiveness Index is calculated according to a weighting determined by the level of development. The Index numbers

range from 1 to 7 with 1 indicating the most problematic areas. Since the calculation method is standard for all economies, each economy can clearly determine its ranking.

Some of the answers to the questions under each pillar are obtained from hard data whereas others are based on a survey of the perceptions of senior business executives. Consequently, the index reflects the pulse of those economies' markets and expectations.

This research has been done for the Turkish Cypriot economy for the first time. The results help us to compare the Turkish Cypriot economy to the rest of the world, but more importantly, they help us to identify weaknesses in the economy and areas where further development is necessary.

Although the standard methodology used by all the other economies was applied in this research, surveys for the Turkish Cypriot community were conducted in the last months of the year whereas the surveys for the rest of the ranked economies were completed in the first half of the year. Since the full effect of the global economic crisis was not known until September 2008, it is likely that this led to survey responses that were lower than might otherwise have been expected. Two questions were added to the survey to try to calibrate this effect. According to the responses to those questions business executives in the Turkish Cypriot community indicated that they are, on average, 38% more pessimistic about the economy than they were earlier in the year. Another problem in the comparison of the Turkish Cypriot community with other economies was experienced in the selection of the group of peer economies in which the Turkish Cypriot community was to be included. Economies are classified into three main categories as stated above and there are two transition economy categories between each group. The Turkish Cypriot community is classified as a transition economy according to its 2007 GDP per capita of \$14,553. However, when the Turkish Cypriot community was compared to the other economies in the transition category, the statistics, other than GDP per capita, seemed to indicate that the "efficiency-driven" category

was more appropriate for calculating the weighting.

Another area which was thought to affect the results negatively was the perception of respondents accruing from the financial and psychological effects of the political recognition problem. Quantifying the direct effects of these results, however, is not in the scope of this research.

The ranking aside, this research has a crucial function since it helps identify weaknesses in the economy. Another objective of this report is to enable policy makers to take the results into consideration and systematically improve Turkish Cypriot competitiveness. Programs developed to address each low-performing indicator will carry the Turkish Cypriot economy one step closer to competitiveness.

V. Overview of competitiveness

Unfortunately, the growth of the Turkish Cypriot community has not been built on a sustainable foundation. Until now our economic structure and production has been based on exploiting the cyclical gaps and weaknesses in Turkey's economy rather than domestic comparative advantages and competitiveness. Following such a strategy led to short-term profits, but once the Turkish economy adjusted to the situation it often led to idle industrial capacity and problems that can give rise to a waste of resources in large amounts. For example, Turkish Cypriot businesses benefited during periods in which Turkey had a closed foreign trade regime by importing many products from East Asia under the name "shuttle trade" and then re-exporting them to Turkey. Similarly, casinos boomed in the Turkish Cypriot community following the cancellation of casino permits in Turkey at the end of the 1990's (however it gave rise to social costs which were higher than the economic return of that sector). And the growth of the higher education sector was created by the excess demand for higher education in Turkey and the poor supply to satisfy it. In this case, however, the inadequate improvement of quality and inefficient operations may inevitably result in a waste of resources.

Competitiveness in an economy is possible through a free market economy with appropriate rules and institutions, the discipline brought by foreign expansion, harmonizing investments with technology (moreover being a leader), and an educational system that takes the requirements of the economy into consideration.

The Turkish Cypriot community has shown poor performance in its competitiveness due to matters that are both outside and within its control. After 1974, policy makers tried to build a manufacturing industry operated by public enterprises. This was inappropriate to its structure because of the market size, lack of 'know how' in the area, transportation difficulties and costs. This continued for a long time and led to an unnecessary waste of resources while delaying the transfer of economic resources to

more appropriate areas.

The poor implementation of free market conditions and the lack of a law regulating and protecting competition gave rise to the development of monopolies and 'dumping' incidents, as well as cartels and collusive practices. Until limited access to the Greek Cypriot market was possible in 2003, the economy fell behind in integration with the world and exports were hit especially hard because of the 'isolation' and the additional costs arising from decisions made by European courts relative to direct trade with the European Union.

Macroeconomic instability caused by dependence on the Turkish Lira is another area largely outside our control. Sudden changes in interest rates, inflation and devaluation of the Turkish Lira directly affect the growth and stability of the Turkish Cypriot economy. The rate of interest and the risk premium it entails is another factor having a negative effect on investment and employment. Since the Turkish Lira has historically been unstable, interest rates, especially the real interest rate, are elevated in order to adjust for the risk factor. As a conclusion, although there is a high savings accumulation (3.5 billion USD), this capital resource is not invested in the Turkish Cypriot economy. Instead, the money flees to Turkey where it is used more effectively. This cycle affects the Turkish Cypriot community's private sector credit resources and investments negatively - indirectly inhibiting the ability to reach our full growth potential.

It can be said that one of the obstacles to the development of the competitiveness of the Turkish Cypriot community is the deficit created by the public sector and inefficient public services that are a burden on the shoulders of the private sector thereby inhibiting its dynamism. Bureaucratic red tape, the loss of time, a high tax burden and inconsistent policies also create uncertainty in the market - diminishing the private sector's incentives and motivation to take risks and make new investments. As a result of these issues, there are losses in the economy that affect the growth rate.

VI. Highlights from the analysis

Ranking

The Global Competitiveness Index results were calculated for a total of 134 economies in 2008. The same indicators were also calculated for the Turkish Cypriot community and the ranking was determined out of a total of 135 economies. Using the weighting applied to efficiency-driven economies, the overall competitiveness index score of the Turkish Cypriot community was 3.43 out of a possible 7 creating a ranking of 117 out of 135 economies. The USA scored highest in the general rating list with 5.74 while Switzerland ranked second with a score of 5.61 and Denmark held third place with a score of 5.58. The Turkish Cypriot community held a place in the list among the relatively low-income economies.

Possible reasons for this low ranking were outlined in the methodology section.

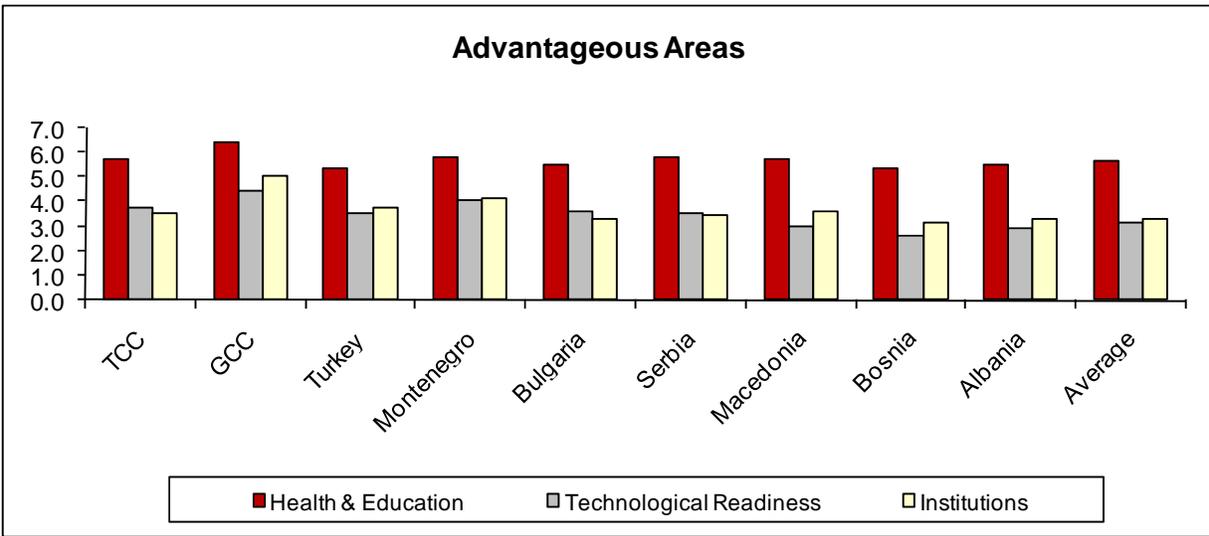
Comparison with peer group economies

We chose six other European economies from the Efficiency-Driven group plus Turkey and the Greek-Cypriot community in order to compare them with the Turkish Cypriot economy. The six economies are Albania, Bosnia Herzegovina, Bulgaria, Macedonia, Montenegro and Serbia.

The Turkish Cypriot community ranks last in this subset according to the total competitiveness index, but it scores higher than the average in pillars of Health and Primary Education, and several aspects of Labor Market Efficiency. The Turkish Cypriot community outperforms its overall score in the pillars of Higher Education and Training, Institutions and Technological Readiness. The Turkish Cypriot community is the worst performer in the group on the pillars of Macroeconomic Stability and Financial Market Sophistication.

The Turkish Cypriot Community 2008 Competitiveness Balance Sheet

Competitive Advantages		Rank/ 135
Pillars 4 & 5: Health and education		
4.10 Primary enrollment		1
4.02 Malaria incidence		1
5.02 Tertiary enrollment		12
4.11 Education expenditure		15
4.05 Business impact of HIV/AIDS		17
Pillar 7: Labor market efficiency		
7.05 Hiring and firing practices		13
7.04 Rigidity of employment		18
7.06 Firing costs		19
Pillar 9: Technological Readiness		
9.05 Mobile telephone subscribers		2
9.06 Internet users		28
9.07 Personal computers		22
Pillar 1: Institutions		
1.11 Business costs of terrorism		25
1.13 Organized crime		35
1.14 Ethical behavior of firms		60
1.05 Judicial independence		65
Pillar 2: Infrastructure		
2.08 Telephone lines		31
Competitive Disadvantages		Rank/ 135
Pillar 12: Innovation		
12.03 Company spending on R&D		135
12.04 University-industry collaboration		133
12.06 Availability of scientists and engineers		129
Pillar 8: Financial market sophistication		
8.04 Venture capital availability		134
8.07 Soundness of banks		133
8.03 Ease of access to loans		133
Pillar 11: Business sophistication		
11.09 Willingness to delegate authority		128
11.02 Local supplier quality		125
Pillar 7: Labor market efficiency		
7.08 Reliance on professional management		130
7.09 Brain drain		129
7.07 Pay and productivity		109
Pillar 9: Technological readiness		
9.04 FDI and technology transfer		135
9.03 Laws relating to ICT		134



VII. What we can control

Given the outcome of the analysis, it should be possible to improve specific indicators by choosing the right policies. The Turkish Cypriot economy scores poorly in certain areas due to external factors largely beyond its control, but even in these cases it may still be possible to improve the situation. The continuing Cyprus Problem and the uncertainty this creates for the Turkish Cypriot community in the international arena, plus the problems inherent in a tiny domestic market are examples of areas largely beyond the control of policy makers. However, the limitations caused by the small size of the market only affect the domestic market. If the access to external markets develops, the structure of the market can also expand. Such improvements are not only tied to a solution of the Cyprus Problem, but also to the vision of the business community and the formulation of the appropriate policies to reduce the impact of these constraints. For example, any high level linkages established with the European Union, such as direct trade or direct flights will enable more exports for the Turkish Cypriot community.

Efficient air transport is crucial for the tourism sector, which constitutes the most important service sector for most small island economies like Cyprus. What is meant here with the word `efficient` is a structure that could not only provide advantages in terms of cost but also

of time. However, when we analyzed the data, we saw that the seat capacity on scheduled flights is low. The leading reason for this is the fact that isolation limits direct flights which contributes to higher costs and longer hours thereby reducing demand. Despite all these limitations, however, it is possible to achieve more effective results in air and sea transportation by taking certain steps, which are outlined in detail in the recommendations section.

There are also some indicators related to the public sector that can be addressed. It seems possible to make improvements in areas such as education, health, security, the judicial system, and public administration independent of external factors. In particular, improvements in the quality of education, health and infrastructure as well as the effectiveness of the judicial system can be addressed directly. Some of these recommendations are discussed further in the next section.

The survey showed that the difficulties created by excess bureaucracy in the public sector are a particularly problematic area, but one that is within the control of policymakers. In most public departments, operations are slow, time consuming and involve multiple institutions. This, in turn, contributes to a decrease in overall productivity. For this reason, measures need to be taken to improve the public sector alongside the more traditional economic reforms that are urgently needed. It is a fact that alleviating the

state of inertia in the public sector will decrease costs as well as contribute to the improvement of private sector competitiveness.

Education is another area that must be addressed. Although most of the variables in this area are controllable, ineffective policies pursued in recent years and the inflow of population has caused a decline – not only in numbers, but also in quality. In particular, the developments taking place regarding primary school and secondary school education (an increase in the number of students per class and a decrease in the student/teacher ratio) affect the quality of education directly. Even in the European Union, which has an integrated structure, education policies fall within the autonomy of the respective countries, so this area is clearly within the control of the Turkish Cypriot community. The recommendations regarding the link between education and the economy are stated in the next section.

Higher education remains a special case for the Turkish Cypriot community. Higher education institutions not only provide services for the domestic market but also to Turkey and other countries, thus generating significant revenue. Due to the use of the Turkish Lira as legal tender, indicators like inflation, interest rates and devaluation are dependent on the economic situation in Turkey. Some macroeconomic indicators, however, like the budget deficit; public debt; and social security spending arise domestically. This being the case, they should be considered as controllable variables that require sound fiscal policies to improve. In light of these observations, recommendations to improve the higher education sector so that it can meet the needs of the Turkish Cypriot economy, as well as foreign demand, are outlined in the next section.

Another area in which partial control is possible is macroeconomic stability. It would be beneficial to review efforts to mitigate high interest rates caused by the perception of risk in the Turkish Cypriot economy along with interest rates on the Turkish Lira. Although high interest rates are expected to make a positive impact on savings, significant portions of deposits that go to Turkey decrease the benefits that normally

accrue from a high savings rate. This decreases investment in the Turkish Cypriot private sector, leads to increases in unemployment and causes investors who fall into difficulties to leave the market. Both domestic and foreign investments fail to revive the economy in the way anticipated. Another reason for this 'leakage' in the economy could be that the labor force from Turkey tends to save its income in Turkey rather than spending it within the Turkish Cypriot economy. This situation prevents the effective implementation of budgetary policies during a crisis and prevents those that are implemented from making the necessary impact.

VIII. Recommendations

The Global Competitiveness Report allows each economy to observe its position relative to other economies, but beyond that, it enables them to plan and organize how they can improve their situation. It also helps economies find ways to attract more investment, create more employment and produce more goods and services than their competitors. Due to this, it is important to evaluate the results in order to identify areas for improvement. The responsibility for this improvement does not just lie with the public sector, however, as businesses and the organizations that represent them must consider the private sector's interests as a whole rather than the interests of individual companies or sectors. Since this is the first report covering the Turkish Cypriot community, it will enable interested parties to monitor the change in the economic situation from one year to the next.

The recommendations outlined in this report were developed based on the results of the competitiveness analysis and they focus on three previously mentioned criteria: importance; "doability"; and the possible impacts on the Turkish Cypriot economy in the near to medium term. As mentioned in previous sections, economic and political isolation faced by the Turkish Cypriot community prevents the economy from reaching its maximum potential through its own efforts alone, but there are some areas that are under our control – even given the effects of isolation. These areas are explored in more detail below:

Legal and Institutional arrangements to improve the effectiveness of goods and services markets

- Pass the competition law as well as create an independent institutional structure to implement it
- Develop anti-dumping laws
- Reorganize the economy's incentive system
- Reform and update the tax system
- Eliminate the laws similar to the rent control law which restrict the implementation of a free market system

- Eliminate public monopolies

Public sector reform

- Introduce new initiatives to increase the efficiency and productivity of the public administration
- Decrease the role of the public sector in the market through privatisation
- Create independent and autonomous regulatory and monitoring institutions

Arrangements for efficiency of labor markets

- Implement a single type of social security system in order to break the attractiveness of public employment
- Deregulate public salaries, especially at the entry level, in order to normalize wage rates in the labor market
- Develop a more flexible labor market
- Create an environment where wages can be determined by market forces
- Introduce on-the-job training programs to enhance the competitiveness of the Turkish Cypriot community's workforce

Regulations for a better allocation of funds in financial markets

- Introduce measures that will lower the risk assessment levels of banks

Incentives to motivate and increase the use of more technology

- Encourage the production and use of technology with good public policies
- Support the infrastructure and human resources that will produce new technology or better integrate new technologies into the economy
- Improve the legal framework for cyber crimes and create institutional structures to oversee it

Improving the physical infrastructure

- Improve the technical and service quality in the area of shipping and aviation
- Improve the administrative structures at entry points to the Turkish Cypriot economy
- Improve service quality
- Create opportunities for the use of high-

technology communication facilities

Dynamic policy applications both in higher education and training

- Upgrade the quality of higher education
- Increase cooperation between industry and universities
- Reorganize the departments of universities according to the needs of both local industry and regional economic markets
- Improve on-the-job training facilities by inviting new trainers in all sectors

Macroeconomic stability

- Adopt the Euro as legal tender
- Identify areas where serious budget savings are possible
- Introduce strong restrictions on public borrowing
- Repay public loans
- Target aid and loans from Turkey into areas that lead to a more productive economy

Effectiveness of goods and services markets

Findings: The most important condition of economic growth is to enable the allocation of resources via market forces and to eliminate any barriers on the interaction of demand and supply. Implementation of a free market mechanism requires an institutional and legal basis on which to stand. This study discovered that the goods and services market is not operating efficiently, and therefore that resource allocation is not working efficiently. This causes inefficiency and low productivity as well as the waste of limited resources.

Tools for solution: For a better and more efficiently operating market for goods and services, both legal and institutional arrangements are required. A competition law and an anti-dumping law are missing and required urgently. In addition to these, independent and competent institutions are required as well. Laws that set prices and disrupt the free market mechanism, such as rent control, must be abolished. The general system of subsidies needs to be re-evaluated and only those that compensate for the disadvantages of isolation should be continued.

On the import side, tariffs and other import taxes should be restructured according to the needs and comparative advantages within the economy.

Doability: Most of the applications in this area can be implemented in the short term. Since some of the draft laws are waiting in the parliamentary commissions, the timeframe for their passage should be relatively short. For the establishment of specialized courts, close cooperation between the bureaucracy and the judicial bodies is required. Quick steps can be taken if all parties are willing. Funds are available in the budget for the incentives. What is required is the establishment of priorities for the allocation of funds.

Possible impacts: Restoring the free market mechanism will enable more efficient resource allocation in the markets and thus will improve competitiveness. Due to improvements in productivity, positive growth will occur throughout the whole economy. Any further steps in the direction of specialized courts will save time, as well as improve the quality of decisions. The shortening of time procedures in the judicial processes will create more predictability in the markets and enhance business ethics. A deregulated tariff and tax structure may cause a decline in costs due to cheaper imports.

Public Sector Reform

Findings: The public sector has become highly inefficient due to over-employment, the low quality of services provided and power struggles between departments. Political interventions have exacerbated the problem.

Tools for solution: Public administration reform based on performance criteria is required. This should include clearly defined job descriptions, responsibilities and fair criteria for promotion without any political intervention. This should also include the establishment of new and modern departments and sections that use new technologies and worker skills effectively.

Doability: Progress in this area will require political will. Having some reforms already in progress makes the success of any further

reform more viable. Aside from political will, public advocacy for this reform will increase the chance of its success.

Possible impacts: Public services are used intensively both by ordinary citizens and businesses. Therefore, improvement of the quality of these services is vital for the whole society. Not only will it create dynamism in the market, but an improvement in societal ethics will create positive expectations, which will culminate in productivity increases.

Labor market efficiency

Findings: Since labor is one of the most important production inputs, it is vital for an economy to have efficiently working labor markets. Flexibility of labor markets enables the allocation of the right skills, in the right place, at the right time. Although the survey results were relatively higher for labor market efficiency than for some of the other categories, they nevertheless highlighted some inefficiencies. Firstly, artificially high public salaries are negatively distorting wage rates. Additional advantages in the form of social benefits and leave policies provided to public sector employees exacerbated the problem by helping to draw away skilled individuals who might otherwise be productively employed in the private sector. These need to be reorganized. As a whole, public employees are highly unionized and resistant to change. One finding of the survey is that on-the-job training, both for public and private sector employees, is not sufficient

Tools for solution: Wage rates must be liberalized in the areas where there is a shortage of labor. Wage determination must be achieved in the markets and the starting salaries for public employees must be reorganized in order to decrease the “crowding out” effect that moves most highly skilled individuals toward the public sector. Taking measures to increase the efficiency of the public sector will encourage more skilled workers to become part of a productive private sector. Additional regulations are required to ensure the public sector uses skilled labor more intensively. On-the-job training must be

incentivized and supported.

Doability: Although reform in this area seems problematic due to the strength and influence of the unions, the current situation is unsustainable, so reform is inevitable. Confidence-building reforms in less controversial areas like workforce skills development and training can lead the way.

Possible impacts: Finding and developing the right skills is essential, but so too is paying a wage that accurately reflects demand for a particular skill level. Any measures that will correct the market distortions caused by excess public sector employment will create a better human resource pool for private businesses. Flexibility in labor markets will improve the efficiency of the market as a whole.

Improving financial markets

Findings: The financial sector is another area that contributes to efficient economic growth. Financial markets provide the funds required for businesses to operate and invest by allocating savings to productive activities. Those economies with efficient financial markets tend to grow faster than others in a similar stage of development. In this study, there is a strong perception that financial markets are not operating efficiently in the Turkish Cypriot community. This is particularly true in the area of access to capital. In addition, the lack of more efficient capital markets, facilitated by structures like a stock exchange, reduces the efficiency of the market.

Tools for solutions: New tools are required to bring down the cost of borrowing and enable funds to be reallocated to more productive areas. Businesses must be required to have realistic balance sheets and business plans, but banks should also be more willing to accept these documents with fewer collateral requirements. In addition, some tax and fee exemptions are required for assets used as a credit guarantee by banks. The distorting effects of the Development Bank on credit markets must be prevented. Consolidation in the banking sector should be encouraged. The establishment of more efficient capital markets and stock-exchange-like structures, together

with new financial instruments, must be supported. Public borrowing must be limited because it is crowding out the funds available for productive investment.

Doability: It is possible to improve the situation of the banking sector as it was successfully achieved after the banking crisis in 2000. This sector has the advantage of a skilled human resource base, but the proximity of additional skilled, Turkish-language resources in Turkey can help fill any gaps.

Possible impacts: The financial sector fuels the economy since it directly funds investment, production and employment within the business community. Any cost saving measures in this sector will directly influence economic growth. The implementation of more efficient capital markets and related instruments will accelerate the transformation of savings into credit and promote economic growth. The inefficient credit supply mechanisms of the Development Bank must be eliminated as they not only distort competition, but also lead to “moral hazard” (not collecting the credits provided encourages taking on additional debt that cannot be repaid). It also creates extra costs on borrowing by enforcing banks to purchase equity in the Development Bank as a percentage of the credits they provide.

Macroeconomic stability:

Findings: This is one of the worst scored areas of the Turkish Cypriot economy. It includes macroeconomic indicators such as public expenditures, debt, and inflation. In all these areas the economy performed either close to average or well below average. Some of the problems arise due to the use of the Turkish Lira which can cause external shocks to the economy, but there are other imbalances created domestically, such as budget deficits, public debt, wage rigidities and social security shortfalls.

Tools for solution: One of the most important areas that needs to be improved is the rationalization of current expenditures in the budget and the modernization of the tax system – both to make it fairer and to limit the leakage caused by tax evasion. The tax system

needs administrative reform that uses modern techniques and approaches, as well as a mechanism to create public awareness. These types of reforms will have a positive impact on both taxpayers and bureaucrats. Employing or training more qualified staff will increase efficiency and the quality of work. Fiscal policy, in a broader perspective, needs to adjust to the tax competition coming from both Turkey and the Greek Cypriot community. It must take income distribution into consideration as well. Replacing the use of Turkish Lira with the Euro is an alternative to escape the negative impacts of the Lira’s instability.

Doability: Although indicators like inflation, devaluation and interest rates are closely tied to the Turkish Lira, there may be some possibility for manoeuvre. This could include instilling more discipline in public expenditures, limiting new employment in the public sector and linking wage increases to productivity. Any kind of action on macroeconomic issues requires coordination with the departments of finance, economy and planning.

Possible impacts Moving away from dependence on the Turkish Lira is a widely discussed issue that always carries the risk of decreasing the amount of aid received from Turkey. Not only for this purpose, but for more stable planning and programming, aid and credits from Turkey must not be linked to political parties. Instead, they need to be determined autonomously and based on objective targets. An aid package in which the amounts and targets are clear will be more effectively implemented. It seems that changing to the Euro would be riskier politically than economically.

Improving infrastructure:

Findings: Physical infrastructure is the cornerstone of a productive economy. Transportation, communication and energy are vital to a competitive economy and transportation features heavily in the analysis. As an island economy, transportation is an essential link to the outside world for the Turkish Cypriot community. Conducting both

maritime and air transportation in a secure, speedy and economical way is important for competitiveness. There is a need to upgrade transportation networks both physically and administratively.

Tools for solution: Upgrading the quality of services provided at entry points to the Turkish Cypriot economy both administratively and technologically is necessary. Improving the technical capacity of the ports and airports is also needed to permit larger planes and ships to dock in the Famagusta harbor. This will improve the competitiveness of the ports and airports relative to those in the region.

Doability: It is possible to make many changes and improvements to the infrastructure through public investment from the budget or through public-private partnerships.

Possible impacts: Improving the port facilities both physically and operationally will enable more efficient cargo transportation, which should lower prices and enhance competitiveness. This may also have a positive influence on passenger traffic and tourism.

Improving higher education and training

Findings: The universities in the Turkish Cypriot community are a very important source of revenue, but there is no general policy framework or business strategy to improve these institutions. Without considering the human resource requirements of the Turkish Cypriot economy, students freely attend any department without sufficient consideration of the skills required in the workplace once they leave the university. University-industry partnerships and cooperation that enable technology transfer and other positive externalities are missing. Business must demand and engage in more of these kinds of relationships.

Tools for solution: Increasing the number of students admitted must not be the sole target of universities; improving the quality of education should be their primary objective. This can be supported through the employment of high quality teachers and the provision of better facilities such as modern laboratories

and libraries. Universities must design their programs according to the needs and requirements of regional economies like the Middle East, Balkans and Central Asia. Cooperation and contacts with business associations is vital in this regard. A fast and dynamic way of developing practical programs and curricula will lead to competitive advantages for the universities.

Doability: Since there is an institution responsible for the accreditation of universities and academic programs, it can speed up the process by re-focusing on quality. The individual efforts of universities in quality assurance and international accreditation will positively influence the process as well. Another positive factor should be the establishment of 'continuing education centers' in every university that can improve the skills of the existing workforce in the context of lifelong learning. Since the language medium is English, this creates an important advantage in accessing foreign student markets.

Possible impacts: It is clear that these procedures will influence productivity within the economy both directly and indirectly. Improving the skills of the local workforce, combined with the export of educational services, will positively influence economic growth. A renewal of the programs and educational materials in secondary education will improve the skills of students entering university. More research-based, applied education will have a long-term, positive effect on the economy.

Technological Readiness

Findings: This category is relatively better for The Turkish Cypriot community when compared with others, but the positive indicators come from hard data such as mobile telephone subscribers, internet and broadband users rather than the survey results. The indicators coming from the survey data are lower and reflect the perception of business executives. The lowest indicator in this area was the lack of legislation regulating information technology. Beyond the legal framework, the low use of technology by firms

is another weakness.

Tools for solution: Encouraging the adoption and commercialization of new technology by firms must become policy. In addition, having no legal framework or any institution regulating these areas creates opportunity for cyber crimes, so not only is a legal framework required, but an independent body fully equipped to regulate and monitor the information technology environment is needed. This independent body will require coordination and cooperation from of all related parties within the sector. Incentives are also needed to encourage technology transfer from abroad.

Doability: Since technology is a necessity for virtually any type and size of business, business associations must advocate for these reforms. An ongoing project encouraging more computer and internet-enabled services in the public sector could smooth the process, but more guidelines are needed to regulate this newer area of the Turkish Cypriot community's economy.

Possible impacts: Technology is used both in consumption and production and can increase both efficiency and productivity as long as it is used in the correct way. This is particularly true if it is used as a tool for increasing competitiveness abroad. The Turkish Cypriot community must learn to use technology much more intensively.

	Unit	Source / Method of Calculation	Amount	Implied GCR Rank	Comments / Reliability of Estimate
GDP valued at current prices	in millions of US dollars / 2007	SPO	3,547.22	125	
Population	in millions 2007	Census	.268	135	Estimated from 2006 census data
GDP (Current Prices) per capita	per capita in US dollars	SPO	14,553	43	
Available seat kilometers	Scheduled per week originating in country (in millions)	SRS Analyzer, Scheduled carrier analysis, economist analysis	54.7	88	This estimate is based on all scheduled flights from Ercan Airport plus 20% available seat kilometers (163.7) in the Greek - Cypriot Community since Turkish Cypriots can use those airports too.
Telephone Lines	per 100 population (2006)	SPO	40.4	31	
Government surplus/deficit	as a percentage GDP / 2007	SPO	-6.24%	130	
National savings rate	as a percentage GDP / 2007	SPO	16.6%	95	
Inflation	annual percent change in consumer price index / 2007 average	SPO	9.4%	113	
Interest rate spread	average interest rate	Bank analysis	11.6%	120	Source: Mid-sized, reputable bank 15% in TRY 6% in €, \$ or GBP. The percentage is a weighted average of 38% of the value of loans in foreign currency vs 62% in Lira.
Government debt	as a percentage of GDP	Finance ministry	100.47%	122	
Malaria Incidence	per 100,000 population	Health ministry	0	1	
Tuberculosis Incidence	per 100,000 population	Health ministry	19.6	39	51 persons
HIV prevalence	as a percentage of adults aged 15-49 years	Health ministry	.035%	1	
Infant mortality	per 1,000 live births	SPO	15	63	
Life expectancy	at birth years 2006	SPO	73.8	55	
Primary expenditure	net primary education enrollment rate	SPO	100%	1	35 persons total. Based on an estimated population of 15-49 yrs of 100,000
Education expenditure	as a percentage of GNI 2007	Budget Figures	6.5%	15	
Secondary enrollment (Hard Data)	gross secondary education enrollment rate/ 2006	SPO	84%	76	Ratio to the popular of age group 15-17
Tertiary enrollment	Gross tertiary education enrollment rate/2006	SPO	75%	12	Ratio to the popular of age group 18-22

	Unit	Source / Method of Calculation	Amount	Implied GCR Rank	Comments / Reliability of Estimate
Total tax rate	% of profit, labor tax, contribution and other taxes/2007	YAGA/Oxford Investment Research	44%	65	
Number of procedures required to start business		YAGA/Oxford Investment Research	18	125	
Time required to start a business	Numbers of days 2007	YAGA/Oxford Investment Research	42	94	
Trade-weighted tariff rate	The average rate of duty per imported value unit 2007		1.5%	32	Calculated based on total tariff revenue divided by total value of imports for that period
Non-wage labor costs	as a percentage of the worker's salary 2007	YAGA/Oxford Investment Research	29%	110	Includes Social Security and Provident Fund Contributions
Rigidity of employment	Index on a 0-100 (worst) scale- difficulty of hiring, rigidity of hours, difficulty of firing/2007	YAGA/Oxford Investment Research	17	18	
Firing Costs	in weeks of wages 2007	YAGA/Oxford Investment Research	12	19	
Female participation in the labor force	as a percentage of male participation 2007	EMU's Woman's Research Center	64%	98	
Strength of investor protection	index on a 0-10 (best) scale/2007	YAGA/Oxford Investment Research	4.3	86	
Legal rights index	index on a 0-10 (best) scale/2007	YAGA/Oxford Investment Research	6.5	16	
Mobile telephone subscribers	per 100 population /2006	SPO, Telsim, Turkcell	136	2	
Internet users	per 100 population /2006	UNDP Survey, economist analysis	47.8	28	A 2005 survey by UNDP found that 39% have access to the internet. We estimated a conservative growth rate of 7% for the three years to 2008
Personal computers	per 100 population /2006	UNDP Survey, economist analysis	50	22	A 2005 survey by UNDP found that 51% have computers – as this was a telephone interview we have discounted the number by 20% to account for the percentage without telephone access, and then conservatively estimated a growth rate of 7% for the three years to 2008
Broadband internet subscribers	per 100 population /2006	Telecommunications Ministry	3.9	49	Based on connections
Domestic market size index	GDP+ value of imports-the value of exports normalized on a 1-7 (best) scale	SPO	1.4	129	2006 figures (\$4.14 billion)
Foreign market size index	Value of exports of goods and services normalized on a 1-7 (best) scale/2007	SPO	.41	135	2006 figures (\$81.1 million)
GDP valued at purchasing power parity	in millions of international dollars/2007	YAGA	5,770	127	
Imports as a percentage of GDP	as a percentage of GDP/2007	SPO	43.3%	67	
Exports as a percentage of GDP	as a percentage of GDP/2007	SPO	43.4	135	
Utility patents	per million population	Registrar of Company and Patent Office	4.17	32	16 in 2007, includes foreign patents registered here

The three sections that follow are extracted courtesy of the World Economic Forum's Global Competitiveness Report 2008-2009 © World Economic Forum.

1. The extract from Chapter 1.1, The Global Competitiveness Index, outlines the thinking behind the analysis;
2. The extract from Chapter 2.1, The Executive Opinion Survey, describes the methodology of the survey portion of the analysis; and
3. The final extract explains how to read the Economy Profile presented in Chapter II of this document.

The complete report, including profiles of 134 economies, is available at:

<http://www.weforum.org/en/initiatives/gcp/Global%20Competitiveness%20Report/index.htm>

The Global Competitiveness Index: Prioritizing the Economic Policy Agenda

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After several years of rapid and almost unhampered growth, the global economic landscape is changing. Rising food and energy prices, a major international financial crisis, and the related slowdown in the world's leading economies are confronting policymakers with new economic management challenges. Today's volatility underscores the importance of a competitiveness-supporting economic environment that can help national economies to weather these types of shocks in order to ensure solid economic performance going into the future.

A nation's level of competitiveness reflects the extent to which it is able to provide rising prosperity to its citizens. Since 1979, the World Economic Forum's annual *Global 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, stimulating discussion on strategies to overcome them. For the past several years, the World Economic Forum has based its competitiveness analysis on the Global Competitiveness Index (GCI), a highly comprehensive index for measuring national competitiveness, 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 over 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 a high *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. For hundreds of years, economists have 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),¹ 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 and makes common sense. The central point, however, is that they are not mutually exclusive—so that 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.² This also can partly explain why, despite the present global financial crisis, we do not necessarily see large swings in competitiveness ratings, for example in the United States. Financial markets are only one of several important components of national competitiveness.

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 reality that we call competitiveness. We group all these components into *12 pillars of economic competitiveness*:

First pillar: Institutions

The institutional environment forms the framework within which individuals, firms, and governments interact to generate income and wealth in the economy. The institutional framework has a strong bearing on competitiveness and growth.³ It plays a central role in the ways in which societies distribute the benefits and bear the costs of development strategies and policies, and it influences investment decisions and the organization of production. Owners of land, corporate shares, and even intellectual property are unwilling to invest in the improvement and upkeep of their property if their rights as owners are insecure.⁴ Of equal importance, if property cannot be bought and sold with the confidence that the authorities will endorse the transaction, the market itself will fail to generate dynamic growth.

The importance of institutions is not restricted to the legal framework. Government attitudes toward markets and freedoms and the efficiency of its operations are also very important: excessive bureaucracy and red tape,⁵ overregulation, corruption, dishonesty in dealing with public contracts, lack of transparency and trustworthiness, or the political dependence of the judicial system impose significant economic costs to businesses and slow down the process of economic development.

Although the economic literature has mainly focused on public institutions, private institutions are also an important element in the process of creation of wealth. The significant corporate scandals that have occurred over the past few years, and the present global financial crisis, have 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.⁶ 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.⁷

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 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.⁸ 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 schools.

Effective modes of transport for goods, people, and services—such as quality roads, railroads, ports, and air transport—enable entrepreneurs to get their goods 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 decisions made by economic actors take into account all available relevant information.

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.⁹ 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. Firms cannot make informed decisions when inflation is raging out of control. The government cannot provide services efficiently if it has to make high-interest payments on its past debts. In sum, the economy cannot grow unless the macro environment is stable.

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.¹⁰

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, a workforce that has received little formal education can carry out only basic manual work and finds 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.

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.¹¹ 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 to be in place. For example, competitiveness is hindered by distortionary or burdensome taxes, and by restrictive and discriminatory rules on foreign ownership or foreign direct investment (FDI). 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. 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.

Eighth pillar: Financial market sophistication

The present global financial crisis has highlighted the critical importance of financial markets for the functioning of national economies. An efficient financial sector is necessary to allocate 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 the entrepreneurial or investment projects with the highest expected rates of return, rather than to the politically connected. A thorough 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. An efficient financial sector also ensures that innovators with good ideas have the financial resources to turn those ideas into commercially viable products and services. In order to fulfill all those functions, the banking sector needs to be trustworthy and transparent.¹²

Ninth pillar: Technological readiness

This pillar measures the agility with which an economy adopts existing technologies to enhance the productivity of its industries.¹³ 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,¹⁴ 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.

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. That is, it does not matter whether the personal

computer or the Internet was invented in a particular country. What is important is that these inventions are available to the business community. This does not mean that the process of innovation is irrelevant. However, 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 that shows 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.¹⁵

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.¹⁶ 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 variables on 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 last pillar of competitiveness is technological innovation. Although substantial gains can be obtained by improving institutions, building infrastructures, reducing macroeconomic instability, or improving the human capital of the population, 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 technological 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.¹⁷

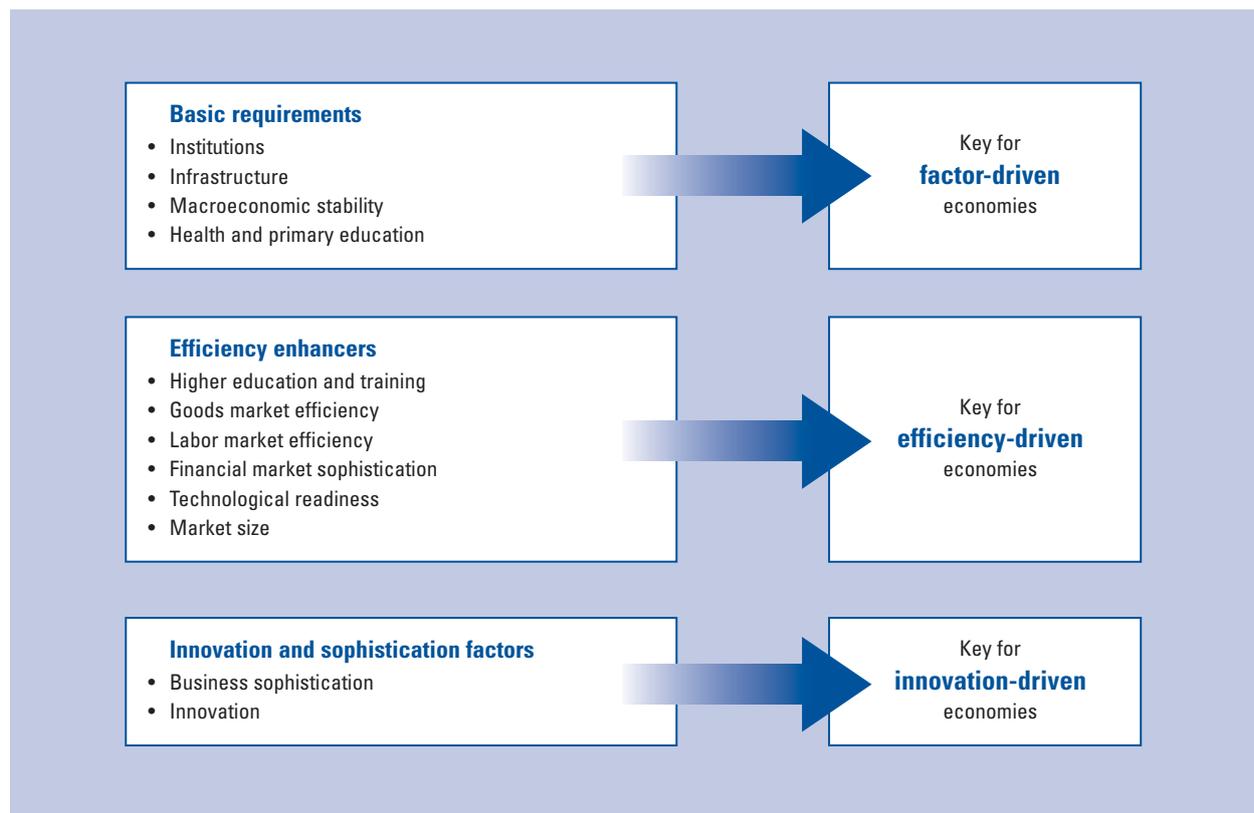
Although less-advanced countries can still improve their productivity by adopting existing technologies or making incremental improvements in other areas, for countries that have reached the innovation stage of development, this is no longer sufficient to increase productivity. Firms in these countries 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.

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 they are 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 poorly educated and poorly trained labor force (5th pillar), and will never take place 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.

Figure 1: The 12 pillars of competitiveness



Stages of development and the weighted Index

It is clear that different pillars affect different countries differently: the best way for Chad to improve its competitiveness is not the same as the best way for the United States. This is because Chad and the United States 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.¹⁸

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 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 importance of each one depends on a country's particular stage of development. To take this into account, the pillars are organized into three subindexes, each critical to a particular stage of development. The *basic requirements subindex* groups those pillars most critical for countries in the factor-driven stage. The *efficiency enhancers subindex* includes those pillars critical for countries in the efficiency-driven stage. And the *innovation and sophistication factors subindex* includes the pillars critical to countries in the innovation-driven stage. The three subindexes are shown in Figure 1.

Executive Opinion Survey: Capturing the Voice of the Business Community

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Harvard Business School

MERCEDES DELGADO, Institute for Strategy and Competitiveness,
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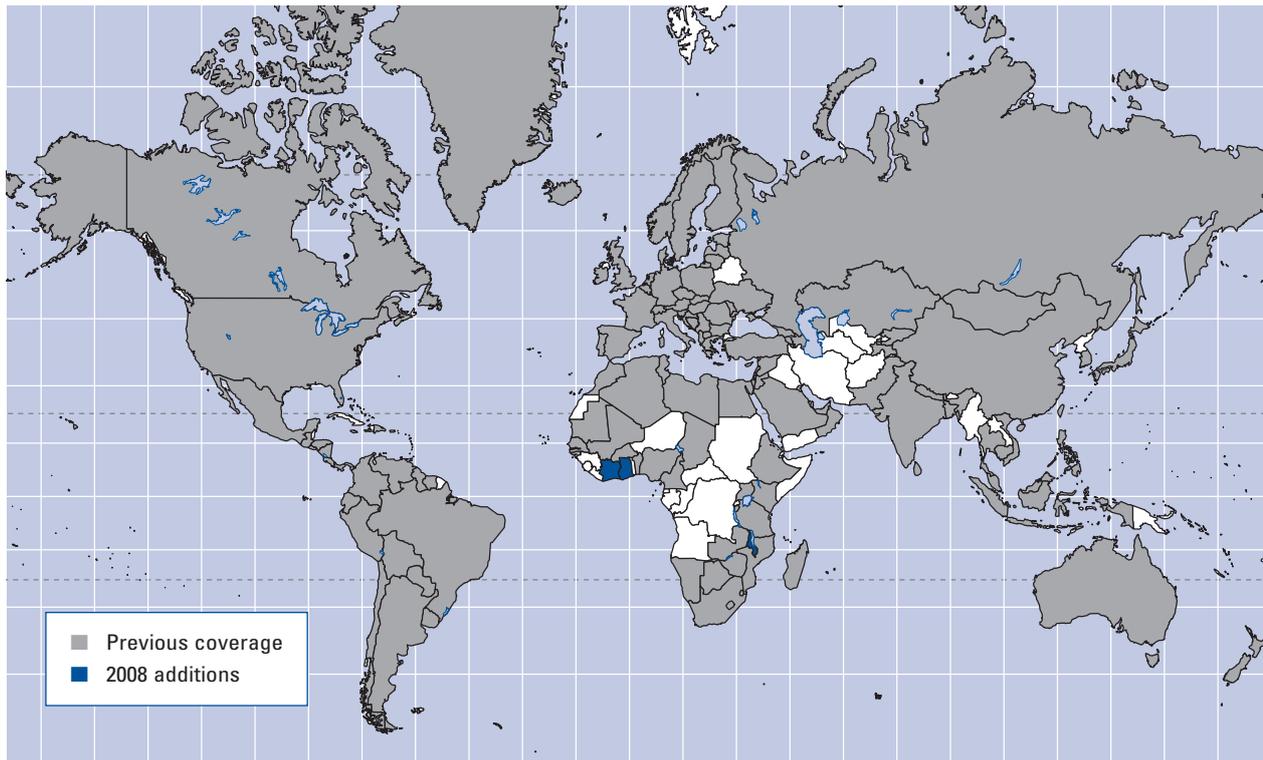
The main goal of *The Global Competitiveness Report* is to provide a picture of a nation's economic environment and its ability to achieve sustained levels of prosperity and growth. Capturing this information in an accurate way does not come without its challenges, given the breadth of issues that drive national competitiveness as well as the large number of national economies covered in the *Report* (many of which are from the developing world). The Executive Opinion Survey (Survey) meets the need for up-to-date and far-reaching data, providing valuable qualitative information for which hard data sources are scarce or nonexistent, and thus complementing the hard data derived from various international sources.

The World Economic Forum has conducted the annual Survey for nearly 30 years. This year, the Survey was completed by 12,297 top management business leaders—an all-time high—in 134 countries between January and May. This represents an average of 91 respondents per country. Table 1 shows key attributes of the Survey respondents for the 2008 dataset.

The Survey asks the executives to provide their expert opinions on various aspects of the business environment in which they operate. 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.

Geographic expansion

Since the first competitiveness report was released in 1979, Survey coverage has been expanded from 16 European countries to this year's record coverage of 134 economies from all of the world's regions (see Figure 1 for details). This year four new countries have been added: Brunei Darussalam, Côte d'Ivoire, Ghana (previously covered in 2003 and 2004), and Malawi (previously covered between 2003 and 2006). 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 countries, and also because some of the hard data sources are themselves not available for some countries. However, despite the fact that some countries are not included in the *Report*, these 134 economies account for more than 98 percent of the world's gross domestic product (GDP), demonstrating that the findings are indeed global in scope.

Figure 1: Country/economy coverage of the Executive Opinion Survey

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*. Because of the scope of the Survey's coverage, it is translated into more than 20 different languages.

Most questions in the Survey follow a structure that asks participants to evaluate, on scale of 1 to 7, the current conditions of their particular operating environment. At one end of the scale, 1 represents the worst possible operating condition or situation, and at the other end of the scale, 7 represents the best. See Box 1 for an example.

The Forum collaborates closely with a network of over 140 Partner Institutes that administer the Executive Opinion Survey at the national level.¹ Typically, the Partner Institutes are recognized economics departments of national universities, independent research institutes, or business organizations. This valuable collaboration helps to ensure that the Survey is conducted in a consistent manner across the globe. In addition, our partners help us in explaining the results at the national level. This better ensures that the findings are used as a tool for improving the competitiveness outlook in each country.

To this end, and in order to reach a representative sample of Survey responses from each economy, the Partner Institutes are each year required to follow a detailed set of guidelines. The process was reinforced this

Box 1: Example of a typical Survey question

Intellectual property protection in your country:

Is weak and not enforced < 1 2 3 4 5 6 7 > Is strong and enforced

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

year with the support 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. 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.² 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).³
3. Based on these lists, and in view of reducing survey bias, choose a random selection of these firms to receive the Survey.⁴

Despite the significantly increased complexity of the process this year, the 2008 Survey guidelines were followed by a large majority of Partner Institutes, improving the robustness of the sample. However, this year should be seen as a transition year, as some Partner Institutes were not yet able to implement the improved procedure fully. We expect to move much closer to a situation of full implementation in the coming year or two.

Beyond the sampling guidelines, the actual administration of the Survey to the selected group of companies is tailored at the national level to take into account differences in infrastructure, distance, cultural preferences, and other such issues. 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, and now represents 20 percent of all responses, with over 20 countries having an online usage above 70 percent. An improved online Survey was introduced this year, which allows for the inclusion of non-Latin-based languages, making the online Survey available in 13 languages.

Beyond the administration of the Executive Opinion Survey, the Partner Institutes act as the ambassadors of *The Global Competitiveness Report* and the report series. This often includes holding press events at the national level at the time of the launch, and explaining the Index findings to the public throughout the year.

Who else uses the Executive Opinion Survey?

The Executive Opinion Survey results serve as a major component of research by a number of international and national organizations, government bodies, and companies. Besides our Partner Institutes, some of our principal partners include the US Agency for International Development (USAID) for monitoring economic progress; Transparency International for their research on bribery and corruption; and Harvard University, in collaboration with the Forum’s Health Initiative, in their annual global review of business perceptions and their response to the HIV/AIDS epidemic. Moreover, reference to the Survey data is made by many other international and multilateral organizations, government research departments, and academic institutions.

Every year the World Economic Forum’s Global Competitiveness Network publishes a number of reports besides *The Global Competitiveness Report* for which the underlying data are taken from the Survey. From the Survey 2007, the Forum published a series of industry-specific studies, including the annual *Global Information Technology Report 2007–2008* and *The Travel & Tourism Competitiveness Report 2008*, as well as the first ever *Global Enabling Trade Report 2008* and *The Financial Development Report 2008*.

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,⁵ together with hard data indicators, then feed into the GCI, described in Chapter 1.1 of this *Report*.

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.⁶ 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. (See Box 2 for more detail.)

How to Read the Country/Economy Profiles

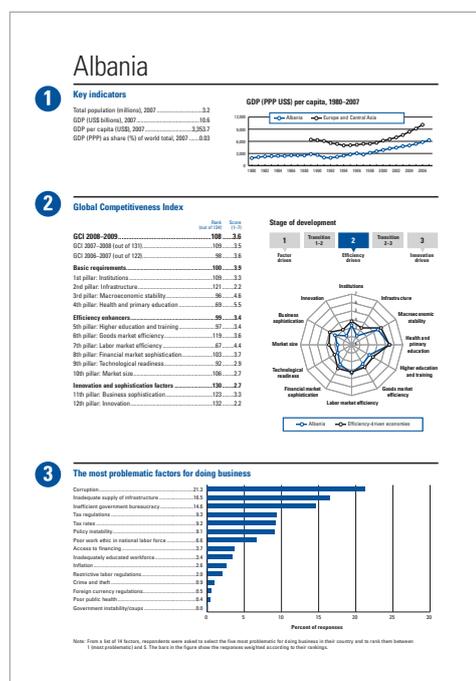
The Country Profiles section presents a two-page profile for each of the 134 economies covered by *The Global Competitiveness Report 2008–2009*.

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 2007*, the World Bank's *World Development Indicators 2008*, and the Economist Intelligence Unit's *CountryData Database*, as well as national sources.
- Macroeconomic data come from the April 2008 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 2007 (or the period for which data are available) for the economy under review (blue line). The source for these figures is the April 2008 edition of the IMF's *World Economic Outlook*. Note that no data are available for Montenegro and 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 (only available through 2006) are from the World Bank's *World Development Indicators Online Database* (data retrieved in August 2008).



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 between 1 and 10 are considered to be advantages. Any variables ranked below 10 are considered to be disadvantages. For instance, in the case of Switzerland which is ranked 2nd overall, its 3rd rank in the variable *Efficiency of the legal framework* makes this variable a competitive advantage, whereas the time required to start a business, on which it ranks 42nd, constitutes a competitive disadvantage for the country.
- For those economies ranked from 11 to 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 Malaysia, ranked 21st overall, its rank of 20th for the quality of scientific research institutions makes this variable a competitive advantage. On the other hand, the penetration rate of personal computers, in which Malaysia ranks 38th, represents a competitive disadvantage.
- For those economies ranked lower than 50 in the overall GCI, any individual variables ranked higher than 51 are considered as advantages. Any variables ranked lower than 50 are considered as disadvantages. For Vietnam, ranked 70th overall, variable *Extent of marketing* constitutes a disadvantage (98th), whereas the relatively narrow interest spread (3.7 percent) constitutes a competitive advantage (rank 39th).

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 Global Competitiveness Index in detail		Albania	
		Competitive Advantage	Competitive Disadvantage
INDICATOR	RANK	INDICATOR	RANK
1st pillar: Institutions			
1.01 Property rights	136	6.01 Intensity of local competition	127
1.02 Intellectual property protection	134	6.02 Extent of market dominance	126
1.03 Disclosure of public funds	90	6.03 Effectiveness of anti-monopoly policy	125
1.04 Public trust in politicians	100	6.04 Entry and exit of business	60
1.05 Judicial independence	121	6.05 Trade tax rates	77
1.06 Freedom of expression of government officials	88	6.06 Tax administration required to start a business*	46
1.07 Transparency of government spending	88	6.07 Time required to start a business*	46
1.08 Burden of government regulation	67	6.08 Agricultural policy credit	114
1.09 Efficiency of legal framework	117	6.09 Penetration of trade tariffs	66
1.10 Transparency of government policymaking	122	6.10 Trade-weighted tariff rate*	66
1.11 Business costs of crime and violence	77	6.12 Business impact of rules on FDI	116
1.12 Organized crime	101	6.13 Rapidity of customs procedures	102
1.14 Reliability of public services	81	6.14 Degree of customer orientation	107
1.15 Ethical behavior of firms	84	6.15 Buyer sophistication	109
1.16 Strength of auditing and reporting standards	109		
1.17 Ethical behavior of business	86		
1.18 Protection of minority shareholders' interests	101		
2nd pillar: Infrastructure			
2.01 Quality of coastal infrastructure	120		
2.02 Quality of inland infrastructure	114		
2.03 Quality of cultural infrastructure	109		
2.04 Quality of port infrastructure	104		
2.05 Quality of air transport infrastructure	76		
2.06 Air traffic and management*	117		
2.07 Quality of electricity supply	139		
2.08 Telephony lines*	80		
3rd pillar: Macroeconomic stability			
3.01 Government applicability*	113		
3.02 National savings rate*	110		
3.03 Inflation*	47		
3.04 Interest rate spread*	105		
3.05 Government debt*	94		
4th pillar: Health and primary education			
4.01 Business impact of malaria	62		
4.02 Malaria incidence*	7		
4.03 Business impact of tuberculosis	44		
4.04 Business impact of HIV/AIDS	27		
4.05 Business impact of hepatitis	26		
4.06 Infant mortality*	44		
4.07 Life expectancy*	76		
4.08 Quality of primary education	74		
4.09 Primary enrollment*	65		
4.10 Education expenditure*	66		
4.11 Education expenditure/teacher*	99		
5th pillar: Higher education and training			
5.01 Secondary enrollment*	89		
5.02 Tertiary enrollment*	80		
5.03 Quality of the educational system	80		
5.04 Quality of short and distance education	62		
5.05 Quality of management research	112		
5.06 Invention/innovation/technology	107		
5.07 Local readiness to research and training services	104		
5.08 Extent of staff training	71		
6th pillar: Financial market sophistication			
6.01 Financing through financial equity market	126		
6.02 Ease of access to bank	121		
6.03 Retail capital adequacy	101		
6.04 Restriction on capital flows	102		
6.05 Strength of investor protection*	123		
6.07 Soundness of banks	104		
6.08 Regulation of derivative exchanges	134		
6.09 Legal rights index*	3		
7th pillar: Technological readiness			
7.01 Firm-level technology adoption	104		
7.02 Firm-level technology absorption	101		
7.03 Firm-level technology transfer	101		
7.04 Firm-level technology transfer	101		
7.05 Mobile telephone subscribers*	74		
7.06 Internet users*	71		
7.07 Personal computer*	62		
7.08 Bandwidth of Internet connections*	117		
8th pillar: Market size			
8.01 Domestic market size*	69		
8.02 Foreign market size*	116		
9th pillar: Business sophistication			
9.01 Local supplier quality	131		
9.02 Local supplier quality	120		
9.03 Local supplier development	120		
9.04 Nature of competitive advantage	125		
9.05 New entrant exports	121		
9.06 Control of international distribution	91		
9.07 Production process sophistication	60		
9.08 Extent of marketing	92		
9.09 Willingness to delegate authority	117		
10th pillar: Innovation			
10.01 Quality of innovation	134		
10.02 Quality of scientific research institutions	133		
10.03 Company spending on R&D	122		
10.04 University/industry research collaboration	124		
10.05 Gov't procurement of advanced-tech products	119		
10.06 Availability of scientists and engineers	115		
10.07 Utility patent*	88		

*Half data
 Note: For further details and explanation, please refer to the section "How to Read the Country/Economy Profiles" at the beginning of this chapter.

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