Imagine a future in which oil is no longer the main source of energy in the world. Such a future is not cataclysmic—and is even brighter—for oil exporters, if they pursue true economic diversification. To achieve this, however, they must change the prevailing economic model. Despite the complex choices involved, it is paramount for oil-dependent economies to become innovative economies.

In the past, countries such as Brazil, Korea, Malaysia, and Singapore have made major strides in diversifying their economies, and this book—edited by IMF Deputy Managing Director Min Zhu and IMF economists Reda Cherif and Fuad Hasanov—distills lessons from their experiences to help guide the Gulf countries today. Their stories reveal that incentives for firms and workers need to be realigned to develop technologically sophisticated export-oriented industries. More important, their stories show that standard growth policy prescriptions may not be enough and the task of changing incentives for firms and workers falls primarily on the shoulders of the state.

Breaking the Oil Spell sheds light on what constitutes true economic diversification and the role of the state in achieving it. Ultimately, this book aims to demonstrate that the great aspirations of the people of the Gulf countries and other oil exporters can become a reality.
Imagine a future in which oil is no longer the main source of energy in the world. Such a future is not cataclysmic for oil exporters, if they pursue true economic diversification. To achieve this, however, they must change the prevailing economic model. Despite the complex choices involved, it is paramount for oil-dependent economies to become innovative economies. In the past, countries such as Brazil, Korea, Malaysia, and Singapore have made major strides in diversifying their economies, and this book distills lessons from their experiences to help guide the Gulf countries today. Their stories reveal that incentives for firms and workers need to be realigned to develop technologically sophisticated export-oriented industries. More important, their stories show that standard growth policy prescriptions may not be enough.

*Breaking the Oil Spell* sheds light on what constitutes true economic diversification and the role of the state in achieving it. Ultimately, this book aims to demonstrate that the great aspirations of the people of the Gulf countries and other oil exporters can become a reality.
ON THE NEED FOR ECONOMIC DIVERSIFICATION

Economic diversification is a crucial subject for Kuwait and the other countries in the Gulf Cooperation Council. We need to step up efforts to diversify economic activities in order to reduce dependence on oil as the main source of output, exports, and public revenues, and to provide the high and growing number of newcomers into the labor market with productive jobs.

Kuwait’s growth model has delivered substantial improvements in living standards over the past several decades. It has also ensured a sufficient level of infrastructure and high-quality public services. However, this growth model has incurred large costs. The public sector wage bill as a percentage of public spending is very high, and subsidizing basic goods is a heavy burden on our state budget. Non-oil public revenues were never an important part of total government revenue. The participation of national labor in the private sector is very low, and, above all, limited progress has been made on economic diversification.

Kuwait has initiated a number of steps to expand and enhance the business environment and to encourage the private sector to lead development and create jobs. As a matter of fact, one of the main goals of the economic development plan is for the private sector to lead the development of the economy. Public-private partnerships through the Partnership Technical Bureau and entrepreneurship through the National SME Fund are possible channels to spearhead development and diversification.

Yet, this is only the beginning of the process to diversify our economy. There is still a long way to go. While some of the reforms needed to promote private sector growth are complex and will take some time to pay off, we need to be persistent in our efforts, and make sure that the door is open to national and foreign private sector initiatives. We can learn from the experiences of other countries and apply the lessons to take the diversification agenda forward.

His Excellency Anas Al-Saleh
Minister of Finance
Kuwait
BREAKING THE OIL SPELL

THE GULF FALCONS’ PATH TO DIVERSIFICATION

EDITORS
Reda Cherif
Fuad Hasanov
Min Zhu

INTERNATIONAL MONETARY FUND
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Natural-resource-rich economies face a peculiar development dichotomy. The natural resource wealth helps increase living standards, both directly and indirectly, in the latter case via the additional government revenues that are transferred to the population in the form of social and infrastructure services, while avoiding, at least in part, the tax levies that are needed to provide those services in other economies. At the same time, these economies face the adverse development effects highlighted in a now extensive literature on the “Dutch disease,” giving rise to what has been called the “natural resource curse.”

Some of the adverse effects are institutional in character: the strong reliance on the state for income and employment discourages the risk taking necessary to develop new activities, and rather promotes “rent-seeking” behavior by entrepreneurs who can benefit from overtly generous government contracts—and in the worst case, from corruption. Others are of a distributional nature, and relate to how natural resource assets (land, mines, and oil and gas wells) are distributed and/or how the opportunities to access the natural resource revenues captured by the state are distributed across different social groups.

This book underscores, however, the strictly economic issues highlighted in the Dutch disease literature, particularly those associated with the difficulties of diversifying the production base into new high-technology activities. I would add the interlinked problems posed by the adverse effects on domestic production structures of commodity price booms. These effects can be called the structural and the cyclical dimensions of the Dutch disease.

The structural problems are related to the fact that the high profitability of natural resource sectors in these economies reduces the incentives to invest in other tradable sectors, including high-technology manufactures and services that are the clue to economic growth at high-middle-income levels and, even more, at high-income levels. This problem is reflected, in particular, in de-industrialization, lack of industrialization and, more generally, the reduced opportunities to develop the non-natural resource tradable sectors, which is structural in character but is enhanced by commodity price booms. This problem, it can be added, is particularly severe in high-income oil- and gas-rich countries, such as the Gulf countries, on which this book focuses.

This aspect of the problem is frequently linked with a phenomenon that has received significant attention in development debates in recent years: the “middle-income trap,” which in the case of the region this book looks at can be called the “resource-rich high-income trap.” The basic problem in this case is the incapacity to develop the higher-technology tradable sectors that are essential to continue to increase productivity at higher levels of development. I would add that this problem is compounded by the challenges faced by “latecomers” into any activity; entering into new activities to diversify the production structure...
is made more difficult by the entry costs associated with technological learning and the need to capture markets from other firms, most probably sacrificing profit margins. Smallness is a further complication—and most of the Gulf countries are small by international standards—when activities are characterized by scale economies and/or the external economies provided by the development of complementary activities, a typical problem in manufacturing activities.

The structural challenges are formidable in very rich natural resource economies. This is why the “leading hand of the state”—the editors’ terminology in this volume—is a *sine qua non* of any diversification strategy, and should focus on the development of “sophisticated tradables” that are critical for productivity growth at high-income levels. This involves an array of policy instruments, which, to quote from the concluding chapter of the volume, include “subsidies to support exporters and taxes on firms in the nontradables, access to financing and business support services through venture capital funds, development banks, and export promotion agencies, and the creation of special economic zones, industry clusters, research-and-development centers, and start-up incubators.” This is an excellent summary, not only of the different authors’ contribution to this volume, but of an extensive literature on industrial policies in emerging market and developing economies. This involves exploiting the forward and backward linkages of the commodity sectors, to use Albert Hirschman’s terminology, but also developing entirely different activities, which are essential for a strong diversification—vertical and horizontal diversification, in the terminology of this book. Skills and human capital are essential but, as some chapters in this volume point out, they can be created through the diversification process, indeed as part of the broader learning that successful development of alternative economic activities require.

Let me also underscore the *cyclical* dimensions associated with the management of commodity price cycles, and particularly those cycles of longer duration, such as that experienced with the commodity boom of the 1970s (including, in the case of oil, the two oil shocks) and the collapse, first for non-oil commodities in the early 1980s and later for oil in 1986, which lasted for almost two decades. The new boom started in 2003–04, lasted for about a decade, and came to an end—sharply so in the case of oil. Indeed, as both cycles show, one of their major features has been the tendency for oil prices to experience stronger booms, but also stronger busts.

The management of these cycles requires extraordinary countercyclical policies to avoid an excessive expansion of aggregate demand during booms, which would tend to increase the relative prices of nontradables, generating a real exchange rate appreciation that would hurt non-resource-based tradable activities, either for export or competing with imports. If the latter effect is strong, firms active in those tradable activities may go bankrupt during commodity booms, with lasting effects on structural diversification and productivity, to the extent that the latter is associated with production experience (that is, learning). Furthermore, unless there are explicit policies to diversify production activity, the incentives to do so during commodity booms would be very limited. In either case, the economy would destroy or fail to create the sectors that are likely to provide the growth engines when commodity prices weaken.
This means that the management of commodity booms must count, first of all, on strong instruments to increase savings, and keep them abroad. This is what natural-resource-rich countries have learned to do with the creation of sovereign wealth funds and the accumulation of massive foreign exchange reserves. However, in the case of the Gulf countries, these countercyclical savings were insufficient during the boom of the 1970s and early 1980s, leading to what the editors of this book call the “Greatest Depression”: the fact that per capita consumption fell by about 20 percent after the boom and did not recover to previous levels until the late 2000s. But, as pointed out in the previous paragraph, aside from savings there must be explicit policies to use the resources generated by the natural resource boom to promote new economic activities; otherwise the economy would lack growth engines when commodity prices collapse. Promoting new activities is, of course, a must during the periods of weak commodity prices, but the crisis conditions that then prevail and the reduced resources available may not be the best environment to promote new activities.

The Gulf economies, the focus of this book, have experienced these challenges in a remarkable way, as is reflected in the already mentioned “Greatest Depression” but also in the related fact that their per capita incomes relative to those of developed countries fell massively in the 1980s and 1990s before catching up only marginally during the recent commodity boom. Furthermore, efforts to diversify have only been partially successful in these economies. But the problem is broader, as the analysis of other regional experiences in this book indicates. The East Asian experience is the success story, as the review of the cases of Korea, Malaysia, and Singapore indicate, of which the latter two are more directly relevant to the Gulf countries, given that Malaysia is a commodity-rich country and Singapore is a small economy. As Chapter 6 describes, the Latin American experience is a less successful one, particularly during the era of market reforms that started in the 1980s (in the 1970s in a few countries), because the region has experienced “premature de-industrialization,” that is, de-industrialization at lower per capita income levels than those at which it started to take place in developed countries. This is despite some success stories in terms of designing policy instruments, such as the development bank of Brazil (BNDES), as explained in Chapter 9.

I congratulate the editors and authors of this book for their contribution to the analysis of these issues, which have become even more important because of the major challenges that all commodity-dependent economies now face as a result of the end of the 2004–2013 super-cycle of commodity prices. It should inspire the design of new policy frameworks, difficult as it may be to implement them under crisis conditions.

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Acknowledgments

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As shown throughout the book, the importance of investment in human capital to succeed in diversification cannot be overemphasized. In this respect, the establishment of the CEF has enabled the IMF to scale up the provision of training in the Arab region at a crucial juncture as many countries in the region undergo an economic transition. The Center works closely with the IMF, which provides technical assistance, and partners with other international organizations to strengthen policymaking institutions and capacity in the region. In the short period since its establishment, the CEF has become a center of intellectual leadership and has enriched the debate on the economic challenges of the region.

We would like to thank the government of Kuwait for its generous funding and tremendous support of the CEF, which plays an active role in disseminating high-quality training to the Arab region.

We are very grateful to His Excellency Anas Al Saleh, Minister of Finance of Kuwait, Badr Al Saad, Managing Director of the Kuwait Investment Authority, Ahmad Bastaki, the Executive Director of the Kuwait Investment Authority, His Excellency Muhammad Al Jasser, Minister of Economy and Planning of Saudi Arabia at the time of the conference and currently Minister at the Royal Court, and Fahad Alshathri, the IMF Executive Director for Saudi Arabia, for their generous support and contributions. Their participation and the support provided made the conference a success and paved the way for this book.

This book is also the product of tremendous support received from many IMF colleagues. In particular, we would like to thank Alfred Kammer, Deputy Director of the Strategy, Policy, and Review Department, and Tim Callen, Chief of the GCC Division of the Middle East and Central Asia Department (MCD), whose strong leadership, commitment to promote an open intellectual dialogue, and continuous support made the whole project possible. We are also indebted to Tarhan Feyzioglu, Advisor, Office of the Managing Director, for his strong support and help throughout the project.

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\(^1\) For more details, see http://www.imf.org/external/np/seminars/eng/2014/mcd/.
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Lastly, we would like to thank our prominent contributors and speakers at the conference, who made this event lively, insightful, and stimulating, and without whom we would not have this volume: Philippe Aghion to Jose Miguel Benavente, Iftekhar Hasan, Clement Henry, Huck-ju Kwon, Mohamed Lahouel, Julio Ramundo, Ahmad Tajuddin, Meredith Woo, and Philip Yeo.

We hope that this collection of essays can serve as a starting point for policymakers to undertake diversification, one of the most challenging and pressing issues facing oil exporters.
Introduction

TIM CALLEN, REDA CHERIF, AND FUAD HASANOVA

Creativity always comes as a surprise to us; therefore we can never count on it and we dare not believe in it until it has happened. In other words, we would not consciously engage upon tasks whose success clearly requires that creativity be forthcoming. Hence, the only way in which we can bring our creative resources fully into play is by misjudging the nature of the task, by presenting it to ourselves as more routine, simple, undemanding of genuine creativity than it will turn out to be.

Albert Hirschman, “The Principle of the Hiding Hand”

Economic development can be thought of as a chain of hard challenges, complex choices in the face of uncertainties, and creative solutions. Policymakers see high standards of living and sustainable and equitable growth as the ultimate goals of economic policy. Yet in pursuit of these goals, they probably do not consciously look for challenges. Rather, people are “apt to take on and plunge into new tasks because of the erroneously presumed absence of a challenge—because the task looks easier and more manageable than it will turn out to be” wrote Albert Hirschman in his famous essay “The Principle of the Hiding Hand.” In Hirschman’s formulation, the entrepreneur undertakes the project while perceiving the project as not risky—the hiding hand principle. As obstacles are discovered midway, without the possibility of turning back, the only way forward is to overcome them. So it is on the path to economic development and diversification. Economic development is a complex process, and policymakers may hesitate to plunge themselves into this challenging endeavor, especially in the presence of large oil revenues. However, as this book shows, the countries of the Cooperation Council for the Arab States of the Gulf (commonly referred to as the Gulf Cooperation Council or GCC) and most oil exporters cannot escape tackling these challenges.

The quest for the grail of economic development and growth is far from over. One of the major difficulties in identifying the factors contributing to development or the lack thereof is the wealth of historical experiences, institutional arrangements, and policies, making it hard to isolate the most important determinants. To paraphrase Leo Tolstoy, all developed economies are alike and each underdeveloped economy is underdeveloped in its own way.

In the universe of development experiences, oil exporters represent a particularly interesting group, lacking a diversified production base despite large oil income flows. Although oil revenues brought high living standards to many of these countries, even the high-income oil exporters are lagging technologically and are not economically diversified enough. Most of their export and fiscal revenues are coming from oil or oil-related products. Non-oil output consists overwhelmingly of nontradables, in particular of low-skilled services (such as restaurants, transportation, telecommunications), while most of the tradables are
imported. Many oil exporters need to upgrade technologically and diversify their production base.

The decline of oil prices between the summer of 2014 and the fall of 2015 (while this book was being prepared) reinforced the importance and urgency of diversification for oil-exporting countries. During this period, oil prices fell by more than 50 percent and remained low, raising the specter of a return of the oil slump of the 1980s to 1990s. Citizens and policymakers from oil-exporting nations still remember the ordeal their countries went through at that time. The promise of easy and swift development brought by large oil revenues failed to materialize, resulting in unemployment, falling living standards, and heavy indebtedness. Oil exporters went through what can be described as the “Greatest Depression,” which has lasted for about 30 years. Real consumption per capita on average fell by about 20 percent from 1980 and recovered to the same level only in the late 2000s as oil prices increased substantially. History does not repeat itself, but it should not be ignored.

Dealing with low oil prices in the current context of increased government spending and rising expectations about the provision of jobs and income transfers is even more challenging. Having learned from experience, many oil exporters accumulated large sovereign wealth funds during the years of high oil prices in the 2000s. Yet the funds only provide a temporary cushion. With a gathering momentum in investment in renewable energy, fuel efficiency, fracking and other technologies to exploit unconventional sources of oil and gas, and increasing use of electric cars, a secular decline in oil prices cannot be ruled out. Whether oil prices will stay low or rise again in the near future, it is high time to ask fundamental questions about the nature of oil-exporting economies. The key question is how to break the dependence on oil exports and pave the way for sustainable growth.

Despite the episodes of steep downturns in oil prices, many observers seem to consider that technological upgrade and economic diversification should not be a priority in high-income countries with long horizons of oil reserves. According to most of the recent literature, the main issues to tackle for resource-rich countries fall within three broad categories. In the first category, the main problem stems from a lack of redistribution, where wealth does not trickle down to all citizens. The argument goes that if such states were to relinquish their hold on revenues from natural resources and transfer rents directly to households, living standards would improve markedly. In the second category, the main issue facing natural resource exporters is the conduct of fiscal policy to manage volatility and provide for intergenerational equity.

In the third category, the missing ingredients of the standard recipe for growth represent the main challenge. The standard recipe includes, for example, financial deepening, openness to trade and capital flows, privatization, infrastructure development, flexibility in the labor market, and lifting legal and regulatory barriers to doing business. In short, market distortions, mostly due to the government, are preventing countries from taking off. The much-discussed topic of diversification in oil exporters is usually framed within this context, that of an enabling environment to support growth and private sector development.
In contrast, this book argues for placing diversification at the top of the policy agenda for oil exporters and traces the path to achieving it beyond the confines of the standard growth recipe. Although redistributing oil wealth and managing volatility and intergenerational equity are important, finding solutions for these problems would not prevent exporters from continuing the “secular decline” they have witnessed over the past several decades. Indeed, as shown in Chapter 1, the relative income of most oil exporters—and in particular the GCC countries—has fallen dramatically in the past 30 years, typically from above U.S. income per capita to a fraction of it. Even high oil prices would not counteract this decline. It is argued in the same chapter that the standard growth recipe is not sufficient, and the lack of sustainable growth is attributed to the lack of a dynamic tradable sector. This book focuses on the GCC countries, especially because their experience represents a quasi-natural experiment with important implications for development theory and practice. These countries have managed to achieve relatively high indicators along many standard dimensions of binding constraints on growth—for instance, availability of quality infrastructure, free mobility of capital and labor, including skilled labor, and low tariffs and taxes. Yet their productivity growth has been anemic and even negative for the past decades and the non-oil tradable sector has barely developed. Market failures are the main impediment to creating a dynamic export sector and, ultimately, sustainable growth. To correct these distortions, governments need to intervene, in particular to encourage the private sector to endeavor where it would not.

This book provides historic experiences and theoretical and empirical analyses of how different economies managed to spur long-term growth. It brings together the views of academics and policymakers. Chapters cover such regions as the Middle East, East Asia, and Latin America, and combine perspectives from various disciplines such as economics, history, political science, and social development. It is hoped that this interdisciplinary and interregional study can offer practical advice for the future while shedding new light on the past.

Part 1 discusses diversification attempts in the Middle East and North Africa region. Chapter 1 is an overview chapter presenting the case of the GCC countries to illustrate that policymakers need to consider the diversification of tradables as a policy priority. The GCC countries face the difficult task of refocusing their growth models toward creating more diversified economies, with less reliance on hydrocarbons to support growth as well as less reliance on the public sector to absorb new entrants in the job market. The chapter argues that a sustainable growth model requires a diversified tradable sector that is lacking in the GCC countries. It draws lessons from the diversification experiences of oil exporters, in particular from the few relatively successful ones—Indonesia, Malaysia, and Mexico. Success or failure appears to depend on implementing appropriate policies ahead of the fall in oil revenues.

Because export diversification takes a long time, it must start now. In contrast with the previous literature, the chapter argues that the standard policy advice—implementing structural reforms, improving institutions and the business environment, creating infrastructure, and reducing regulations—while necessary, is
Introduction

insufficient due to fundamental market failures stemming from Dutch disease; that is, the crowding out of the non-oil tradable sector by the income generated from oil exports. To overcome these barriers, the GCC countries need to change the incentive structure for workers and firms. The study of country experiences suggests that successful strategies mix vertical diversification (in specific sectors) to create linkages in existing industries and horizontal diversification (across sectors) beyond the comparative advantage, with an emphasis on exports and technological upgrading. Investment in skills and social development transforms the worker incentives.

Chapter 2 examines successes and failures in the Middle East and North Africa region, in particular Algeria and Saudi Arabia, the two countries that pushed most with industrialization in the 1970s. Through their experiences, the chapter discusses the mix of policies that might foster a sustainable diversification of the region’s hydrocarbon-based economies. The human capital and education aspect is critical in developing a sophisticated export base. Attempts by the two most populous Arab oil states, Algeria and Saudi Arabia, to develop industry starting with limited resources of human capital is particularly instructive. Their experiences suggest that achieving a high human capital stock before industrialization is not a requirement or an obstacle.

Part 2 examines the experiences of East Asia and Latin America. Chapter 3 narrates the extraordinary transformation of Singapore since the mid-1960s from a poor port city to one of the richest countries in the world. Singapore’s experience can be divided into five development phases, being labor intensive in the 1960s, skill intensive in the 1970s, capital intensive in the 1980s, technology intensive in the 1990s, and finally a knowledge and innovation economy since the 2000s. The chapter summarizes key policies that helped the transition from one phase to another as well the role of multinational corporations. In particular, it explores four different themes in the government’s approach to developing its exports through the examples of four industries: electronics (creating value added), precision engineering (building around the value chain), chemicals (developing clusters), and biotechnology (focusing on research and development).

Chapter 4 studies the development path followed by Malaysia and the factors that contributed to its success. Malaysia is a particularly interesting case because it is one of the very few resource-rich developing economies that has managed to build a sizable and sophisticated manufacturing export base. The chapter provides an account of the country’s social, political, and economic challenges and how they were overcome. The chapter further explains the rationale of the strategies devised to develop Malaysia’s industrial and scientific capabilities that would take the country further down the development path in the decades to come.

Chapter 5 analyzes the experience of development in East Asian countries, with a particular emphasis on Korea. The chapter anchors the discussion in an historical context and helps explain how the general prescriptions suggested in Chapter 1 were pursued in Korea and how obstacles encountered along the way were overcome. The chapter offers an account of the actual constraints, relations with the private sector, incentives, and the real objective behind its industrialization strategy.
Chapter 6 explores the Latin American experience of diversification. The chapter argues that although many Latin American countries did well in the past decade or so, they rode the wave of a commodity boom. The stagnation of productivity in the region rings an alarm bell. The chapter discusses types of policies such as public inputs and market interventions along the horizontal or vertical dimensions of diversification. It concludes with the role of science, technology, and innovation in Latin American countries.

Part 3 explores some of the key policies to support diversification. Chapter 7 brings an important contribution to the theory of development in general and to natural resource exporters in particular. It tackles the key issue of how to overcome the middle-income trap. The chapter discusses potential determinants of productivity and productivity growth in firms. It also considers potential barriers to growth in the size of firms. The chapter revisits the role of vertical targeting (or sectoral policies) and proposes some elements of a new growth strategy for middle-income countries.

Chapter 8 studies the effect of diversification beyond the GDP measure, in particular poverty alleviation, technological innovation, capital flows, women’s empowerment, and entrepreneurship. The results indicate that industrial diversification greatly improves the economy’s output in all of these nonconventional measures. Illustrating the importance of diversification, the chapter then studies the different government programs used in Organisation for Economic Co-operation and Development countries to support innovation in certain industries. In particular, it provides evidence of the effectiveness of the U.S. Small Business Innovation Research Program and its equivalents in Europe.

Chapter 9 provides the practitioner’s vision of industrial development in Brazil. It descends from a bird’s-eye view of Brazil’s industrialization toward the specifics of the role played by the Brazilian Development Bank in Brazil’s growth over the past decades. It briefly provides an overview of the country’s past industrial policies, their successes and failures, and the return of new industrial policies in the 2000s, followed by the discussion of policies and instruments that the bank has implemented as a development-oriented venture capitalist.

Chapter 10 examines the Saemaul Undong movement in Korea, arguing that it can provide a missing link between market- and state-oriented development policies. Saemaul Undong contributed to social and economic development in Korea not only as a self-help community movement but also as a mechanism of social inclusion. Its success was based on grassroots participation supported by the government and a social structure that was made more open to upward mobility by the land reform of the 1950s. For the Saemaul Undong “was in a sense, a movement for spiritual reform of Korean people, and has achieved a lot in this respect. It changed people’s attitude from laziness to diligence, from dependence to self-reliance, and from individual selfishness to cooperation with others.”

Chapter 11 takes a look at lessons for today and the way forward. The book concludes with the transcript of a conversation between His Excellency Muhammad Al Jasser, former Minister of Economy and Planning of Saudi Arabia and currently Minister at the Royal Court, and Min Zhu, Deputy Managing Director of the IMF, on the theme of diversification challenges in developing economies.
A CONVERSATION ON DIVERSIFICATION CHALLENGES

MR. KAMMER: We had a very rich discussion over the last one-and-a-half days, setting out a number of elements that are important for oil exporters to diversify their economies and to create sustainable non-oil growth. We heard from academics about the important elements of a development strategy. We heard from policymakers about case studies of what worked and what did not work in particular countries.

It is now a great opportunity to hear from a policymaker from the region, who has been designing and implementing development strategies and diversification agendas, Minister Al Jasser, and from Min Zhu on the IMF’s global perspective on these issues.

We heard that the GCC region has made great progress in terms of human development. But we also heard that its relative economic performance fell. The non-oil sector expanded and became more diverse within the nontradable sector, but at the same time, total productivity growth declined and became negative. One of the main elements coming out of the conference was a strong drive in successful countries to develop the tradable sector. Why is the tradable sector so important for a successful diversification strategy? What does it actually bring to sustainable growth in the long term?

MR. ZHU: Diversification is very much a process, and the tradable sector plays a very important role in this process. When we talk about diversification, we talk about industrialization, and there are a few important elements. First, we have to stick to a market-based approach where market signals are not ignored. This approach allows us to introduce competition in international markets. The tradable sector plays a very important role in bringing international competition to the local market. We need to let the local economy and local companies compete with international companies. The tradable sector transforms skills and experience, and drives the process of climbing the “quality ladder” in the local economy.
It is also very important to facilitate improvements in productivity. When we talk about diversification, the key issue we learn from the global experience is that sustainable growth is very much driven by a sustainable increase in productivity. The tradable sector contributes most to the sustainable productivity increase. Many studies show that in the tradable sector the productivity increase is much larger than in the nontradable sector. I think one explanation has to do with introducing international competition.

When we talk about diversification, we need to think about opening up the economy, using a market-driven approach, introducing international competition, and expanding the tradable sector.

MR. KAMMER: So open up and the tradables will come. From the experiences that seem to have worked in some countries, there is a role for the government to come in to support vertical and horizontal diversification and to create clusters of knowledge.

The GCC, including Saudi Arabia, have worked along these lines to jump-start the tradable sectors. Economic cities were created; certain industries were targeted and supported; and entrepreneurship through the establishment of small and medium enterprises was given full support. Yet, the tradable sector has not emerged in full force.

What is your experience in Saudi Arabia? What is working? What are the lessons to take away and the obstacles you are running into in developing the tradable sector?

MR. AL JASSER: Let me take a step back and look at this issue from an historical perspective. The initial conditions and the cultural setting cannot be overlooked. Otherwise, the development strategy and processes will invariably face significant obstacles.

Before the 1970s, the GCC countries were very underdeveloped. In the early 1970s, life expectancy in Saudi Arabia—and I think probably for the GCC as a whole it was not much different—was about 53 years. Now, it is 75 years. We have come a long way, and that is a product of education, health care, awareness, better food, and many other developments.

We were totally dependent on the export of crude oil, and people started saying, well, that is not enough value-added. We moved into refining and extracting. As a result, other ingredients of the development process came along—training, expertise, knowledge transfer and accumulation, and sophistication of the labor force and a large share of local workers in these industries. For example, Aramco has about 85 percent to 90 percent local workers.

We continued in our approach of expanding value-added activities. We were flaring associated gas that was coming out of the ground during the oil extraction. The government, out of its own budget, initiated a gas-gathering project, which was implemented by the government rather than the oil company. The gas was gathered, and that is how SABIC [the Saudi Basic Industries Corporation] and the petrochemical industry were born. This is another stage of development,
and with all the associated activities, learning and the transfer of knowledge were made possible. Yet, as SABIC was created in 1976, we did not start very early on to take the production process further down the value chain as much as we could have. The secondary industries that could have sprung out of this venture decades ago did not. Now we are catching up. The government established a new corporation for industrialization. Its task is to take the products, the basic products of SABIC and others, and see how to go further down the value chain.

Over the years, diversification has taken place but of course, it is not enough. Leaving oil exports aside and looking at non-oil exports, even though there are petrochemicals in there (which is still manufacturing industry), the growth rate of non-oil exports has been about 17 percent per year since 2001, growing from 31 billion riyals to 204 billion riyals at end-2013. This is an important achievement.

Coming back to the main question, why do we want tradables and exports? Take our non-oil exports as a ratio of our imports. How much of my imports can I finance through my non-oil exports? It has risen to 34 percent of our imports from about 25 percent in 2001, even though our imports have increased substantially.

In a way, the governments in the GCC have tried to emulate The Entrepreneurial State, the title of the recently published book. I think this is a concept that has been applied in the GCC. The governments have felt that one way to deploy large revenues from oil, or from the other extractive industries, and how to use them more effectively, was to push the development process much faster. We are trying to build the downstream industries, where there are higher value added, employment opportunities, and diversity of knowledge, expertise, and management skills that can be transferred.

I will mention another example of the entrepreneurial state. In Saudi Arabia, we did not develop our mineral resources except oil. Now, the Saudi Mining Company, created only about 10 years ago, is developing huge deposits of phosphates in northern Saudi Arabia, and bauxite for aluminum in the central region of the country. We have built, for the first time, a huge railroad network to transfer the ore from the mines to a new seaport on the east coast to refine those products—phosphoric acid fertilizers, and aluminum with all of its varieties—and ship them to markets, particularly in Asia. Out of this initiative, we see a potential development of the auto industry cluster. Why do we think so? We will produce a special type of aluminum that can be used for the car body at a very reasonable cost.

We are now riding this wave of industrialization and the development of tradables. We are trying to bring in foreign direct investment, not because we need capital, which is the case in many other countries, but because for us, it is the transfer of knowledge and expertise.

One final point I will say on the challenge we have faced all along—and this may be peculiar to the GCC countries—is that we have relied, particularly in

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1 The Entrepreneurial State: Debunking Public vs. Private Sector Myths by Mariana Mazzucato (Anthem Press, 2013).
the private sector industries, on foreign labor. My concern is not remittances but
the brain drain that leaves the country as the accumulation of knowledge that
occurred in our lands is gone after the contract expires. We go back to square zero.
It is critical that we start accumulating knowledge. It is not the leakage of money
that is significant but the leakage of expertise and the accumulation of knowledge.
This is where we need to concentrate.

Diversification is not an end in itself; it is really the accumulation of knowl-
edge that will make us, as societies, more self-reliant, with time, on our local
labor force. Nothing can happen overnight. In order to ensure that we become
knowledge-based societies, all the knowledge that we acquire, or that passes
through our countries, our institutions, and our factories, does get accumulated
in the country.

Tying this point to productivity, to my mind, the most important element of
productivity is the knowledge content. The knowledge content is not only tech-
nical skills, but also is the work ethic, the discipline, and all of the elements that
make a person and the labor force productive. Only through our own labor force
can we achieve this productivity growth. If we achieve it, then diversification will
become a by-product of this process.

MR. KAMMER: I think this is a very important point—accumulating knowl-
edge, improving skills, and building up human capital—and we will come back
to it. On the role of the state, usually we see that the role of the state is to create
a climate to let the private sector flourish and correct market failures. How much
should the state be a venture capitalist?

MR. ZHU: What we learned from the examples of Algeria, Brazil, Malaysia,
South Korea, and Singapore, we see there is a role for the state to play. Yet this role
of the state has also been evolving over time. I feel, today, it may play a slightly
different role.

The typical prescriptions we give is to provide the enabling environment for
the market—physical infrastructure, the legal framework, tax policies, incentives,
education, etc. These elements are important. Yet I would say that in addition
to this list, since we are not starting from scratch, other issues have also become
relevant.

With the role of the state to promote diversification and sustainable growth,
the first issue is reform, that is, to clean the house. For example, whether the
government is able to manage the wage bill for the public sector is absolutely
important. If the public sector wage bill is very high, it will be very difficult to
attract workers into the private sector and to attract the foreign investors in the
industries because the best people prefer to go to the public sector. Other issues
such as accountability and transparency are important, too. By leveling the play-
ing field, companies can move in to compete with each other.

As to how much the government should play a role of a venture capitalist, it is
important for the states to be careful as to what to choose. I would still emphasize
the first point is to open the door, let foreign companies into the market, and
encourage them to compete with each other. The second point is that even if governments do the planning, the governments could pick the sector or the industry, but not winners. The government is not in a good position to sort out winners.

In addition, talking about this role of a venture capitalist, it is not about funding the industry; rather, it is about funding entrepreneurship. If the government can spend resources and design policies to facilitate and promote entrepreneurship rather than pick a sector, it will make the development process even better.

In today's world of the Internet and globalization, countries can tap the world markets, access the global knowledge, and attach to the supply and value chains. The government has to be careful in picking sectors and should let the market play a role.

MR. KAMMER: So pick a sector, but be careful. Did Saudi Arabia go further as a venture capitalist?

MR. AL JASSER: I mentioned the examples such as the Saudi Mining Company, SABIC, the new industrialization company, the clusters program we have initiated, and the auto industry. The government is playing an entrepreneurial role, particularly since many of these companies will be IPOed and privatized. In fact, this is what happened—for instance, SABIC has been IPOed.

We claim in the GCC that our economies are market economies, even though there is a role for the entrepreneurial state. One of the most significant roles of the state is setting and enforcing regulations. Regulations need to be transparent, understood, and anti-monopolistic. In Saudi Arabia, we have a competitiveness council that has been reorganized, and now it is pushing the issues of anti-competition and anti-monopoly practices. It should evolve, with time, to become a significant landmark in the regulatory framework of the country.

The government has also started shifting, at least in terms of discourse, away from the employer of the first resort, and we now hear more about entrepreneurship. Every one of our sons or daughters should not think first of having a government job, or just even a job. They should be thinking, “Can I create a job for myself? And, if I do, can I create jobs for others?” This change in the state of mind is very significant.

The role of the state is significant in many ways, not just in picking winners or sectors, but also creating clusters. The clusters program does not comprise only basic industries or petrochemicals, mining from bauxite and phosphates or fertilizers and the like, but also the auto industry. Its linkages—let’s say, spare parts and the other components that go into this industry—are very much needed in other industries. Until there is the connectivity with other industries within a society, there is no cascade effect that is going to push the economy to higher levels of productivity, of competitiveness, and hence—not as a target but as an outcome—of diversification.

MR. KAMMER: You mentioned the importance of changing the mindset, of bringing out the importance of entrepreneurship. One of the issues the GCC
countries are struggling with is that wages in the public sector are very high, and therefore they make it very difficult for nationals to go to the private sector and participate in this tradable sector revolution. What can we do about it?

MR. AL JASSER: In fact, if you ask those that are very educated and very skilled, they no longer want to be in the government. We have problems attracting very qualified citizens to work in the government. In a way, it is a positive development because many of them want to be entrepreneurs or work in the private sector. At the lower level of qualification, the attractiveness of the public sector is still high. The new labor ministry is going to examine how to rationalize the labor market on a market-based methodology. For instance, the Nitaqat system is a market-based system. Every sector was examined for local versus foreign labor, and a line was drawn, below which companies would need to catch up to increase the share of local workers. This has resulted in a lot of catching up and even the average Saudization ratio has started rising. In the next round, we are going to start looking at wages. The more productive the worker is, then the higher will be the premium paid by the employer and by the government, and workers will have market-based incentives to be more productive and to be more engaged in the labor market.

MR. KAMMER: A recurring theme is building up human capital. The theme of the tradable sector, the knowledge gained, and keeping the knowledge in the country comes from the production side. On the education side, it is about the importance of good and broad primary education, open and competitive education at the university level, and perhaps even sending people abroad to get the knowledge. Saudi Arabia has been doing a lot on this front. About 180,000 students have been sent outside the country to study. What have your experiences been?

MR. AL JASSER: We reached 185,000 students all over the world, in the United States, Canada, China, Korea, and Europe. But there was also a push on the other front, universities within the country. Now we have 30 public universities. All of the new universities emphasize basic sciences, medicine, engineering, IT, and business administration.

The discourse on education within our society is changing. It is no longer, “Oh, my son or daughter knows how to read and write.” Rather, parents are asking schools: What problem-solving skills and critical-thinking concepts do you teach our kids? I recall Paulo Freire in his book, *The Pedagogy of the Oppressed*, talking about how dialogical education is very important. This is what we need. Modern education should help our kids develop skills that will make them proud of themselves and also make them productive in the society. We have a very young population (61 percent of the population between ages 15 and 64 and 35 percent below age 15). We have a national labor force that is entering the market that needs to be accommodated. We as the government cannot fall into the trap of trying to create jobs to take them in instead of giving them all the skills they deserve and need to be productive citizens.
MR. ZHU: To add a point on education, on one hand, education needs to start early and be broad, and it is the main conduit to train and nurture the generation of tomorrow. It should be more open-minded, more creative, and more widely available. I think this has become even more important now. Meanwhile, on the other hand, training is also important to provide the current generation with the skills for today. The two approaches have to go in parallel. We need new generations to become more open and more creative. We also need training for the specific skills and needs of the industries.

MR. AL JASSER: Our work to transition to a knowledge-based society and a knowledge-based economy is far from done, and we need to domicile the knowledge content. The 185,000 students we have overseas, the 30 universities concentrating on basic sciences, the King Abdullah City for Atomic and Renewable Energy, the King Abdulaziz City for Science and Technology, King Abdullah University for Science and Technology, King Fahd University of Petroleum and Minerals, and the Tech Valley next to it, will help us in this transition. In the Tech Valley, foreign companies are setting up shop to develop research, hiring graduates from the Saudi universities, and building up those cadres of basic and applied research. For example, GE is building generating turbines in Saudi Arabia, and we have some of the advanced electronics built by the Saudi Advanced Electronics Company.

All of these efforts are just starting to snowball. We are building up our capabilities to make what we need instead of relying totally on foreign expertise. We are accumulating knowledge. Engineers and other specialists working in the advanced sectors would support this process and even if they leave their companies, they will start new industries or join other industries that are on the cutting edge of technology. The knowledge accumulation process and the process of domiciling the knowledge is taking place. We should work harder on getting there.
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