

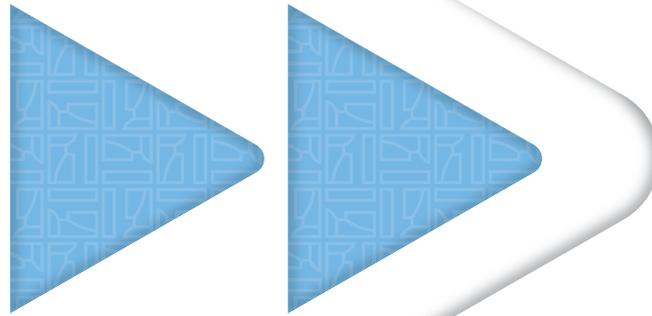


الهيئة الاتحادية  
للتنافسية والإحصاء  
FEDERAL COMPETITIVENESS  
AND STATISTICS AUTHORITY



# Policy in Action

Economic Growth, Productivity and Competitiveness



**Fast-Forwarding the Nation**

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# Policy in Action Series

The Policy in Action Series is published by the Federal Competitiveness and Statistics Authority (FCSA). The series is intended to raise public awareness and stimulate discussion on key areas of competitiveness & policy work related to the United Arab Emirates (UAE).

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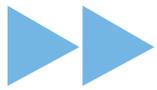


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## I. Introduction

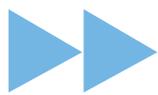
*Synopsis: The most important determinant of a country's future prosperity is its ability to achieve and maintain high productivity levels. In their pursuit of higher prosperity, several countries across the world are embracing competitiveness as a framework for improving their national growth and development. Governments have considerable influence on the productivity performance of their countries as their policies largely shape the business environment companies operate in. In this issue of Policy in Action we examine the concepts underlying competitiveness at the national level and how it is related to economic growth and productivity. Likewise, we explore why governments are developing competitiveness policies, programs and institutions to support their development, and outline, at a broad level, some of the main policy tools employed towards promoting competitiveness and long-term sustainable growth and prosperity.*

The rapidly changing global economic environment has created an impetus for nations to be competitive at an international level making it more important than ever to increase the level of productivity countries derive from their resources. Under the leadership of His Highness Sheikh Mohammed bin Rashid Al Maktoum, UAE Vice-President and Prime Minister and Ruler of Dubai, the UAE institutionalized its competitiveness drive in May 2009, by launching the Emirates Competitiveness Council (ECC). The ECC was created with a view to formalizing the UAE's competitiveness strategy and leveraging its comparative advantages towards becoming a leading economy in an increasingly competitive global environment.

Competitiveness as a framework for economic development is generally tied to, and measured by, a country's productivity, and is considered to be an essential driver to improve living standards.<sup>1</sup> With high and rising productivity, a country is able to support a strong currency, attractive returns to capital and high wage levels, which translates into wealth generation supporting high living standards. This article explores the conceptual framework for competitiveness, its relation to productivity and economic growth, and its importance for promoting sustained growth rates. It also examines the broad range of policy tools that governments adopt to promote competitiveness.

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<sup>1</sup> A few economists, including Paul Krugman, recipient of the 2008 Nobel Memorial Prize in Economics, question the notion of national Competitiveness. Krugman has argued that competitiveness exists at the level of firms, but not at the country-level, as countries do not compete in the same way as companies. When two companies compete, the gain of one company is the loss of the other. However, international trade is not a zero-sum game, since when two countries trade both benefit. It appears that Krugman's view focuses quite narrowly on international trade and not in the broader aspects and dimensions of competitiveness such as the business environment. Proponents of competitiveness theory present the counter argument that countries do not compete solely on the basis of trade; they also compete through the policies they choose to promote higher growth and standards of living including through providing environments that are favorable for business, investment and for attracting global talent. In other words, countries compete by proxy through companies they host. For more, see Krugman "Competitiveness: A Dangerous Obsession", in Dong-Sung Cho, From Adam Smith to Michael Porter: Evolution of Competitiveness Theory, 2000.



## II. Why Are Governments Articulating Competitiveness Policies?

Increasingly, policymakers in countries around the world are articulating competitiveness policies—and developing related programs and institutions—in an attempt to boost their economic growth. There are a variety of reasons for countries' competitive agendas. Here we highlight the three main drivers for countries to adopt a competitive posture:

### 1. **Pressures of Globalization**

Fundamental changes in international commerce and finance, such as lower transport costs, advances in telecommunications technology, and the decline in trade barriers have fueled a rapid increase in global economic integration over the past twenty-five years. This has led to heightened competition amongst companies in both national and international goods and services markets. Governments have tended to view this exposure to competition more as a threat to manage than an opportunity to seize.

Indeed, increased economic globalization presents a potential threat since companies within a country's borders are now subject to much broader and sometimes cheaper competition. On the other hand, it potentially presents significant opportunities, as increased trade levels and the greater wealth of many economies creates new market opportunities. To illustrate the intensified level of competition in the world economy, one only needs to consider that total world exports from 1993 to 2009 increased from US\$3.6 trillion to US\$12 trillion, a rise of 213%.<sup>2</sup>

Regardless of whether policymakers view globalization and its accompanying competition as a threat or an opportunity, several governments have responded proactively through a competitiveness approach.

### 2. **Insufficiency of Macroeconomic Policy**

Perhaps more importantly than the challenges and opportunities stemming from globalization, is the realization on the part of governments that in order to develop sustainably over the long-term, traditional approaches to economic growth aimed at macroeconomic stabilization leading to increased output are not sufficient. Indeed, policy makers have identified the need for a more robust, cross-cutting approach to support sustained rates of economic growth and increasing prosperity.

Broadly speaking, policymakers use a set of policy levers to manage their economic development. These are macroeconomic policy (*see inset 1*), microeconomic policy (*see inset 2*) and industrial policy (*see inset 3*). Through these different policy levers governments play an important role in shaping the business environment in which companies operate. A competitiveness policy would aim to make that business environment conducive for companies to increase their productivity and wage levels, allowing capital and labor to constantly increase the returns they earn.

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<sup>2</sup> World Trade Organization (<http://www.wto.org>)

**Macroeconomic policies** are concerned with the overall health of a country's economy. Governments use four main macroeconomic tools consisting of fiscal policy, monetary policy, exchange rate control and income policy. We illustrate these below:

Inset 1: Macroeconomic Policy Levers	
Policy Lever	Examples
<p><b>1. Fiscal Policy</b> is concerned with the government's revenue generation and spending policy.</p>	<ul style="list-style-type: none"> <li>Examples of fiscal policy from the United States include two laws of the Bush administration to lower taxes in the country and thus provide a stimulus to the US economy: <ul style="list-style-type: none"> <li>The Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA)<sup>3</sup> and the Jobs and Growth Tax Relief Reconciliation Act of 2003 (JGTRRA).<sup>4</sup> These laws were enacted with sunset provisions that made them expire in 2010, however, the Obama administration has extended these laws.</li> </ul> </li> <li><b>The UAE's has a liberal tax policy, as there is neither a personal nor a corporate income tax and this has been recognized as a competitive advantage for businesses that operate in the country. In the absence of these taxes, businesses have more capital to reinvest in their businesses and thus drive productivity.</b></li> </ul>
<p><b>2. Monetary policy</b> consists in adjusting the supply of money in the economy and controlling its growth rate.</p> <p>It is generally controlled by a regulatory body such as a central bank that adjusts the prime interest rate.</p>	<ul style="list-style-type: none"> <li>In the United States, the Federal Reserve typically increases the interest rate when the economy grows too fast, in order to control "overheating" and inflation. It would decrease it in case of economic slowdown, by making government bonds less attractive and prompting investors to inject money in the economy. The primary objective of monetary authorities is to maintain price stability in their respective economies.</li> </ul>
<p><b>3. Exchange rate</b> regime is the policy by which governments determine the value of their country's currency relative to foreign currencies.</p>	<ul style="list-style-type: none"> <li>China's trading partners have argued that it controls the Yuan Renminbi at an artificially low level to boost the level of Chinese exports via price competitiveness.<sup>5</sup></li> <li><b>The UAE's currency is pegged to the US dollar as most of its trade is conducted in US dollars. This benefits foreign investors, as it eliminates currency risk in their operations, allowing for long-term planning and more accurate business forecasting.</b></li> </ul>
<p><b>4. Income policy</b> is generally an austerity measure which aims to control wages or income in order to curb inflation. Wage or income controls are often accompanied by price control measures. The effectiveness of this policy is inconclusive.</p>	<ul style="list-style-type: none"> <li>In 1983, Australia, in consultation with the Unions, introduced the Prices and Income Accord. With this policy, wage hikes were capped at the Consumer Price Index. At the same time, the government committed to expand spending on education and to enhance welfare measures.</li> </ul>

<sup>3</sup> US Government Printing Office, Public Law 107 – 16, June 2001 (<http://www.gpo.gov/fdsys/pkg/PLAW-107publ16/pdf/PLAW-107publ16.pdf>)

<sup>4</sup> US Government Printing Office, Public Law 108 – 27, May 2003 (<http://www.gpo.gov/fdsys/pkg/PLAW-108publ27/pdf/PLAW-108publ27.pdf>)

<sup>5</sup> US Department of Treasury, Report to Congress on International Economic and Exchange Rate Policies, February 2011 (<http://www.treasury.gov/resource-center/international/exchange-rate-policies/Documents/Foreign%20Exchange%20Report%20February%204%202011.pdf>)

**Microeconomic policies** refer to policies directed to achieve improvements in economic efficiency, either by eliminating or reducing distortions in individual sectors of the economy or by reforming the economy, rather than other goals such as equity or employment growth. The following six areas are illustrative.

Inset 2: Microeconomic Policy Levers	
Policy Lever	Examples
<b>1. Trade Policy</b>	<ul style="list-style-type: none"> <li>The North American Free Trade Agreement (NAFTA) and the Mercado Común del Sur (Mercosur) agreements have created two trade blocs in North and South America intended to provide larger input and product markets to their companies, which are now able to reap economies of scale, tap into larger capital pools, and thus improve their productivity.</li> <li><b>The UAE has concluded a number of trade agreements and is negotiating a number of others. Such agreements provide a legal framework which increases trade and economic cooperation between trading partners. The UAE has recently signed two Free Trade Agreements (FTAs) with Singapore and the European Free Trade Association (EFTA) Countries (Norway, Iceland, Switzerland and Liechtenstein). As part of the GCC, the UAE is also currently negotiating FTAs within with several countries including Japan and Australia, India and China to foster strategic bilateral relationships.</b></li> </ul> <p><b>In 2004, the UAE signed a Trade and Investment Framework Agreement (TIFA) with the United States to provide a formal framework for dialogue on economic reform and trade liberalization. TIFAs promote the establishment of legal protection for investors, improvements in intellectual property right protection, more transparent and efficient customs procedures, and greater transparency in government and commercial regulations.<sup>6</sup> Over the years the country has developed a robust enabling environment and has become an active player in global trade. As a result the UAE is currently ranked 16<sup>th</sup> in the World Economic Forum's 2010 Global Enabling Trade Index.<sup>7</sup></b></p>
<b>2. Foreign Direct Investment (FDI) Regulations</b>	<ul style="list-style-type: none"> <li>Depending on their economic strategies, priorities, and needs, countries will usually place FDI regulations to access capital, labor skills, and foreign technology. Policies range from ownership limits and incentives to capital flow regulations and they often differ by sector and with a view towards the expected impact of the investment in the national economy.</li> <li><b>The UAE is one of the most FDI-friendly nations from the perspective of repatriation of funds as it allows free capital and income repatriation. By 2009 the inward FDI stock (accumulated FDI) for the UAE reached over US\$73 billion.<sup>8</sup> The UAE ranked 11<sup>th</sup> globally in the 2010 FDI confidence index<sup>9</sup> reflecting the country's ability to attract FDI .</b></li> <li><b>The UAE has engaged a strategy to attract FDI to develop economic clusters in dedicated Free Zones. Examples include twofour 54,<sup>10</sup> a world class media cluster in Abu-Dhabi and Dubai International Financial Centre (DIFC)<sup>11</sup> a leading international financial center in Dubai.</b></li> </ul>

<sup>6</sup> UAE Ministry of Foreign Trade (<http://www.moft.gov.ae/en/>)

<sup>7</sup> World Economic Forum, Global Enabling Trade Index, 2010 ([http://www.weforum.org/docs/WEF\\_GlobalEnablingTrade\\_Report\\_2010.pdf](http://www.weforum.org/docs/WEF_GlobalEnablingTrade_Report_2010.pdf))

<sup>8</sup> United Nations Conference on Trade and Development (<http://unctadstat.unctad.org>)

<sup>9</sup> AT Kearney, FDI Confidence Index, 2010 ([http://www.atkearney.com/images/global/pdf/Investing\\_in\\_a\\_Rebound-FDICI\\_2010.pdf](http://www.atkearney.com/images/global/pdf/Investing_in_a_Rebound-FDICI_2010.pdf))

<sup>10</sup> Twofour54 (<http://www.twofour54.com/en>)

<sup>11</sup> Dubai International Financial Centre (<http://www.difc.ae>)

<p><b>3. Nationalization</b> is the process of taking an industry or assets into the public ownership of a national government or state. <b>Privatization</b> is the opposite operation whereby ownership of government owned assets is transferred to the private sector.</p>	<ul style="list-style-type: none"> <li>• To ensure economic stability, in 2008 the UK government partially nationalized the ailing banks Royal Bank of Scotland and HBOS Lloyds TSB.</li> <li>• The liberalization of certain economic industries has often led government to sell utility companies, in particular telecom companies. Such instances include a wave of liberalization of incumbent telecom service providers in Europe with British Telecom in 1982, Deutsche Telekom in 1996 and the Swedish Sonera in 2000. Privatization not only brings revenues to the government but dynamizes the stock market, creating highly value stock market leaders.<sup>12</sup></li> </ul>
<p><b>4. Public investment to correct market failures</b></p>	<ul style="list-style-type: none"> <li>• Most telecommunication or utility companies such as water services and electricity have been initially developed by governments since they require massive investments that the private sector deems too risky to undertake. Governments thus intervene to correct these market failures to ensure universal access to essential goods.</li> </ul>
<p><b>5. Competition policy</b> goes hand in hand with economic regulations in order to avoid industry monopolies to the detriment of consumers, and maintain healthy competition in the market.</p>	<ul style="list-style-type: none"> <li>• The US has in place antitrust regulation measures to prevent anti-competitive behavior. For instance, it applied antitrust laws to dismantle the Standard Oil Company in 1911 and AT&amp;T in 1982 on the grounds of their dominant market positions.</li> <li>• In 2003, the European Union prevented the GE–Honeywell merger in a preemptive move to avoid the creation of a monopolistic company. In 2004 it fined Microsoft €497 million for abuse of its dominant position.<sup>13</sup></li> <li>• Australia has established the National Competition Council to enforce competition between companies and better serve the economy.</li> </ul>
<p><b>6. Subsidies,</b> either direct or through tax breaks constitute an important microeconomic tool.</p>	<ul style="list-style-type: none"> <li>• In 2007, the US government passed legislation that would end more than US\$14 billion in subsidies and tax breaks for oil companies and earmarked that money to help develop renewable energy, alternative fuels and conservation technologies.<sup>14</sup></li> </ul>

<sup>12</sup> Meginson, Boutchkova, The Impact of Privatization on Capital Market Development and Individual Share Ownership, (<http://www.oecd.org/dataoecd/11/39/2668393.pdf>)

<sup>13</sup> European Commission, Competition: Making Markets Work Better (<http://ec.europa.eu/competition>)

<sup>14</sup> Congressional Research Service, Report for Congress, Energy Efficiency and Renewable Energy Legislation in the 110th Congress, May 2007

Finally, **industrial policy** levers are those in support of specific industry sectors identified as strategic to a country's prosperity. Industrial policy may include a combination of—though not limited to—the microeconomic and macroeconomic levers described.

### Inset 3: Industrial Policy

One of the ways in which governments have sought to sustain their economic growth is through industrial development policy. This consists essentially in direct involvement to support certain sectors and companies considered to be important to the country. Policy may be designed to support or restructure old, struggling sectors, such as steel or textiles, or to try to construct new industries, such as heavy-industry or nanotechnology. Experience from countries around the world has produced mixed results, with some successes and many more spectacular and costly failures.

It is generally accepted that there is a need for governments to help business with straightforward measures, such as research and development or fostering high-tech skills. But there is no commonly accepted framework yet for policy favoring specific sectors and companies.

The evidence suggests that the more it is aligned with a national or local economy's comparative advantage, and areas where it has a natural interest, the more likely industrial policy is to succeed. Drives to spur high-tech entrepreneurship in areas of where the main economic activity is natural resource extraction, for instance, may face challenges. For example, Chile, where industrial policy was applied successfully, moved from basic industries such as mining, forestry, fishing and agriculture to aluminum smelting and salmon farming thanks to a number of government initiatives. Industrial policy works best when a government is dealing with areas where it has natural interest and competence, and is focused on long-term goals.<sup>15</sup>

The UAE's support to aerospace is an example of policy to develop an industry that it considers important for its economic development. In its bid to become a significant player in the aerospace industry Abu Dhabi is collaborating with aerospace's major players including Boeing and Lockheed Martin through its investment vehicle Mubadala Development Co. Planned manufacturing of aerostructures will enhance UAE technical, design and engineering capability, while R&D is intended to provide an avenue by which academics and chemical engineers in the UAE can apply their expertise to advanced materials.<sup>16</sup>

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<sup>15</sup> Adapted from Economist, "Picking Winners, Saving Losers," Aug 5th 2010 (<http://www.economist.com/node/16741043>)

<sup>16</sup> Mubadala (<http://www.mubadala.ae/>)

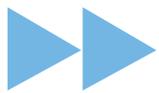
In order to be competitive and improve the overall economic performance of the country, policymakers are recognizing the need to combine traditional macroeconomic policy with a microeconomic approach. To achieve and sustain economic growth and prosperity calls for a coherent set of policies and actions. Along with these policies, governments that seek to be competitive aim to develop the relevant enabling hard and soft infrastructure, including transportation and communications infrastructure, and health and education systems.

A competitiveness approach includes developing sophistication of business strategy through efforts to integrate clusters based on industry sectors. Importantly, there is a need to align the skills and capabilities of the workforce with the requirements of the private sector both in the short term through improved training and re-skilling programs and in the long run through appropriate education policy. Such a comprehensive cross-cutting set of policies is understood as “competitiveness policy.”

### **3. Promoting Sustainable Growth**

Governments have recognized the need to grow sustainably over the long term. Economies can grow expansively, simply by increasing factors of production such as labor and capital. However, this approach is not sustainable as labor and capital are limited resources and countries cannot multiply them endlessly. Additionally, these inputs are subject to diminishing marginal returns once a certain level is reached. This concept will be illustrated in more detail in the section below.

For the three main reasons outlined above, many governments are conceiving a competitiveness approach to their development in order to promote sustainable growth and prosperity into the future.



## III. Economic Growth and Productivity

In this section we look at the underlying theory of productivity and economic growth and outline ways in which policy is used to enhance a country's productivity and therefore its competitiveness. We conclude with an examination of stages of economic development and the relationship between productivity and prosperity.

### Country-Level Productivity

At the country level, gross domestic product (GDP) is the key measurement of the total output of an economy. On the supply side, GDP depends on three factors of production used to produce goods and services: Capital (K), Labor (L), and technology (T), which determines the relative efficiency with which the former are utilized in the production process.

### Increasing Economic Output by Increasing Inputs

The overall output of an economy can be increased in several ways. One seemingly straightforward approach to raising output is to increase one or more of the input factors in the economy. For instance, through particular financial market policies, governments can increase the amount of capital (K) in the economy by increasing the availability of funds for companies to produce goods and services thus enabling them to reach higher levels of production. Similarly, policies that stimulate an inflow of capital into the country would be another way to increase the supply of capital. Production can also be boosted by increasing the amount of labor (L)—i.e. the number of people in the workforce available to produce goods and services. Incentives for enabling labor force growth may include initiatives for greater participation by women, options for flexible types of employment (such as term contracts, part time work or seasonal labor) and measures to ease labor market frictions (i.e. simplifying recruitment and job cutting processes). Relaxing immigration controls is another example of how some governments can use policy to increase the supply of labor to contribute to an overall increase in output.

There are however limits to the approach of simply increasing production inputs such as capital and labor. This is because neither capital nor labor is a resource that exists in infinite supply. Additionally, factor inputs are subject to what economists describe as decreasing marginal return. Beyond a certain point adding more production inputs affects the cost structure and leads to overpriced goods and services. In the current global economic context companies will likely face competition from many other firms willing to provide the same goods and services at a better price. Overpriced goods and services will put the company at a distinct disadvantage and undermine its market. This limitation means that companies cannot add production assets indefinitely.

### The Role of Technology in Enhancing Productivity

These limitations on adding production inputs make it necessary to increase the yield of the inputs—and make production assets more fruitful: This relates to how efficiently a business converts capital and labor into goods and services. A company with higher productivity creates more with the same amount of labor and capital than its rivals. It can therefore price its product at a lower cost and still make greater profit, or better still, charge the same or even higher prices than the competition and offer better quality. Technology (T) the third factor of production, and in a broadest sense, innovation, is critical as it improves the overall efficiency of production, and is an enabler to achieve higher productivity.

The Organization for Economic Co-operation and Development (OECD) has adopted Schumpeter's (1934) five categories of innovation:

- Product innovation
- Process innovation
- Market innovation (finding a new market to an existing product)
- Development of new sources of inputs
- Change in organizational models

“Technology (T)” captures the business processes, tools and practices that affect capital productivity. Technology includes management practices, business processes, use of technology, financial capabilities, and ease of trade, to name a few. Total factor productivity captures the efficiency with which an economy transforms labor and capital into output. It encompasses all the enablers that

contribute to that process. Technology is the main driver, with the view that it corresponds to all methods that contribute to help firms. Technology does not just cover science and information technology, but it also covers, management and organizational methods, financial tools, as well as trade (*see inset 4*).

#### Inset 4: Dubai Trade: A Case of Technology-Enabled Competitive Trade Policy

The UAE is committed to an open, competitive and encouraging environment for international trade and has seen an impressive rise in trade over the past several years. The country witnessed a 98% increase in exports from 1995 to 2004 and a 133% rise in imports.<sup>17</sup> Currently, the UAE ranks among the world’s top three countries for enabling trade across borders according to the World Bank’s ‘Doing Business’ report 2011. This is a leap from the 5th position in 2010 and 13th rank in 2009.

The country’s policies to ease trade are accompanied by leadership in developing technology systems to support it, as illustrated by Dubai Trade. Dubai Trade is an integrated IT platform to facilitate trade and logistics operations in Dubai in an unparalleled effort to become the world’s best practice model. On the front end it is a customer portal, on the back end it is supported by Mirsal, a comprehensive electronic Customs declaration system developed by Dubai Customs that streamlines customs processes.

Dubai Trade Portal is Dubai Trade’s single sign on, single window channel to the online services of the major stakeholders in the trade and logistics operations providing streamlined flow of goods and services into the country.<sup>18</sup> The portal includes services for traders, shipping lines and agents, clearing and forwarding agents, and free zone licensees as well as invoicing and payment services.<sup>19</sup> The portal’s electronic trade processing has reduced costs to importers, exporters, and the freight community, and has greatly facilitated the movement of goods to and from the UAE. As a result customs transactions are being handled more efficiently as reflected in World Bank Ease of Doing Business. It takes only 7 days and 4 documents to export a container, making the UAE one of the most efficient trade platforms in the world.<sup>20</sup> In addition, the customs advanced systems have contributed to the country’s ease of non-oil trading.

<sup>17</sup> UAE Trade Office (<http://uaetrade-usa.org/index.php?page=uae-us-relations&cmsid=64>)

<sup>18</sup> These include DP World, one of the largest marine terminal operators in the world, Dubai Customs, Economic Zones World, and Dubai Multi Commodities Center, the marketplace for Diamond, Gold, precious metals and commodities.

<sup>19</sup> Dubai Trade (<https://dubaitrade.ae>)

<sup>20</sup> World Bank, Doing Business Report, 2011 (<http://www.doingbusiness.org>)

## IV. Towards Prosperity

In summary, economic development is often measured as the output (the amount of goods and services) that a country generates. Most economists use GDP as a measurement of an economy's aggregate output and GDP per capita as a measure of performance.

The World Economic Forum has identified three stages through which countries evolve, to reach the highest level of economic performance: **Factor**, **Efficiency** and **Innovation-driven stages of development** (see *Inset 5*). In general the more advanced countries have the highest GDP per capita. Countries do not reach advanced level of business sophistication immediately. Rather, economies typically progress through a journey that may take decades to move from a factor based economy to an innovation driven one. At the third stage, to become sustainable, countries need to ensure that the economic performance translates into prosperity as this enables the key drivers of a knowledge based economy.<sup>21</sup> Knowledge based economies are characterized by a good healthcare system, a highly performing education system and proper policies and regulations. In other words the innovation driven economies are the ones with the highest levels of prosperity.

To grow in a sustainable manner, a government needs to determine the appropriate policies in order to balance both the supply and demand sides of the GDP equation. To sustain a given level

of consumption, citizens need to earn wages on par with their purchasing expectation. To earn these wages, they need to find jobs paying high enough wages. To offer highly compensated jobs, companies need to be competitive and sell goods or services more efficiently than their competitors. This relationship between productivity and prosperity is at the core of a competitiveness policy.

While higher levels of output (GDP) remain a valid policy objective, economies can only accomplish this sustainably and on a long-term basis if the economic growth results in higher real wages. There are two drivers that explain this. First, firms can only become more competitive, if they rely on knowledge and technology to drive up their output rather than pure labor increases—hence requiring more skilled and higher-compensated workers. As GDP grows (demand side) the supply side needs to be adjusted and wages need to go higher so that workers can fuel consumption (or savings) and maintain the system in balance. Finally, it is the purpose of a government to provide its citizens and inhabitants with a more prosperous life, namely developing better schools, healthcare and even leisure facilities, while enabling them to consume more. The appropriate policies therefore facilitate the population to be better educated and in better physical health and disposition, and therefore able to be even more productive. In this way, productivity and prosperity reinforce each other.

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<sup>21</sup> See Policy in Action, UAE in the Knowledge Based Economy, Emirates Competitiveness Council, January 2011 (<http://www.ecc.ae/en/downloads.aspx>)

<sup>22</sup> World Economic Forum, The Global Competitiveness Report 2010-2011 ([http://www3.weforum.org/docs/WEF\\_GlobalCompetitivenessReport\\_2010-11.pdf](http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2010-11.pdf))

## Inset 5: Productivity and Stages of Development

Countries can provide enabling environments and infrastructures for companies to maximize the returns from their factors of production making them competitive. In an international market countries compete through their ability to provide such enabling environments in which businesses can thrive and achieve higher levels of productivity vis-à-vis their international competitors. Countries tend to progress along a path towards building their economies to be driven by innovation and technology. The World Economic Forum for instance proposes a framework of three main stage of development<sup>22</sup> along which countries generally evolve over time. These are:

**Factor-driven economies** rely predominantly on natural resources and direct labor and on the primary sector (agriculture, forestry, fishing, mining etc.) as a base for their competitiveness. Companies in factor driven economies offer commodities or basic products and typically compete on low prices they can reach thanks to their low cost labor structures. In these types of economies the government tends to be most efficient in providing basic infrastructures (roads and a stable environment to best support the economy). India, Moldova, and Ethiopia are examples of countries that are factor-driven economies.

**Efficiency-driven economies** have generally achieved some level of industrialization and compete on providing quality goods. The government focus is then to create efficient factor markets, namely a smooth labor market (as often times frictions arise with industrial unions) and an efficient financial market to ensure proper allocation of capital to the most profitable products and industries. China, Brazil, South Africa and Bulgaria fall in this category.

**Innovation-driven economies** rest their economic power on the ability of their populations to provide advanced goods and services. Companies in innovation-driven have to continuously innovate and bring to market enhanced or new products and services. The tertiary sector often times accounts for a large share of the economy. Most countries in this category are OECD members. Government policies in innovation-driven economies should promote innovation and market sophistication through for instance strong consumer protection laws or an emphasis on creating an environment conducive to business in particular for the small and medium enterprises (SMEs). It is noteworthy that the UAE is ranked in this category and is the only Arab country included in this group.

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