

## **GLOBAL FOOD SECURITY & OPPORTUNITIES IN OIC<sup>1</sup> MARKETS**

**Rafi-uddin Shikoh<sup>2</sup>**

*According to the World Bank, there are over a billion malnourished people worldwide today. A multitude of factors are expected to cause continued food price increases as evidenced by World Bank's food price index in January 2011, which rose 29% above its level from a year earlier. From Egypt, Indonesia, Bangladesh, and Sudan, to Pakistan—many of the 57 OIC (Organization of Islamic Conference) member countries are facing some of the worst pains of this global food crisis. Ironically, it's these same economies who are some of the most agriculturally endowed in the world, but are less productive than other net food & agriculture exporters. This paper presents a unique OIC-wide, food & agriculture industry 'cluster' view of opportunities for growth and investments in this space, which would also have a major positive impact on global food security.*

### **1. Global Context:**

According to the World Bank, the 2008 food crisis riots that spread across Egypt, Bangladesh, Yemen and many other developing countries, added 119 million malnourished people world-wide, bringing the total to nearly one billion (967 million) people globally malnourished.

While food prices had come down somewhat since 2008, they are going up again and more so than ever. Between March 2010-11, sugar prices had increased 60%, soybeans, 41%, and wheat 24%. As a result, according to the World Bank Food Price Watch Report, just between June 2010 and Jan 2011, 44 million additional people went into extreme poverty.

The acuteness of these global crises increases knowing that demand for food is expected to grow as a result population growth, usage of bio-fuels, and rising incomes in developing markets. According to the FAO<sup>3</sup>, at current pace, 70% more food will be needed for an additional 2.3 billion people by 2050. All of this has to be accommodated while addressing current hunger and poverty, scarcity of natural resources and adapting to climate change.

---

<sup>1</sup> Organization of Islamic Cooperation (OIC) A body representing 57 mostly Muslim majority States.

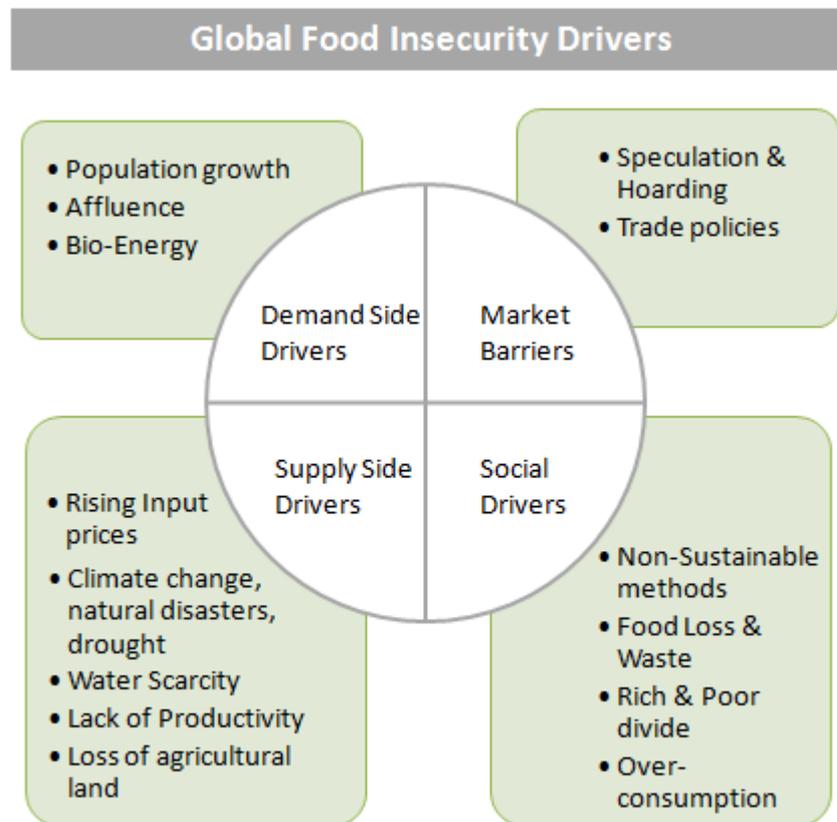
<sup>2</sup> CEO/ Managing Director, DinarStandard™, New York, USA. (A specialized business media, market research, and marketing advisory firm, focused on the Emerging Muslim Markets.) MBA, UNC-Charlotte, North Carolina, USA; BSc. Marketing, Southwest State University, Minnesota, USA. rafishikoh@dinarstandard.com

<sup>3</sup> "How to Feed the World in 2050", Food and Agriculture Organization of the United Nations (FAO) Oct 2009

## 2. Key Food Crisis Drivers

A variety of reasons, short-term and long-term are being attributed to the growing global food crisis. The extent of each reasons impact is widely debated; however it is clear these are all contributing to the crisis. Below is our summary of the key drivers that include demand-side fundamentals, supply-side fundamentals, market barriers related drivers, and finally one that is often not discussed — related social drivers.

### Demand Side Fundamentals



Copyright 2011 –DinarStandard Research & Advisory

### *Population growth*

According to latest UN estimates<sup>4</sup>, global population will increase from 7 billion in 2011 to 9.7 bill in 2050 which is 38% more people the world has to feed. Most all of this population increase will take place in developing and least developed countries which are already most affected by the food crisis and poverty.

---

<sup>4</sup> United Nations, Department of Economic and Social Affairs, Population Division (2011). World Population Prospects: The 2010 Revision, CD-ROM Edition.

### *Affluence of New Emerging Markets*

Another major factor in food demand is the growing affluence of major population centers India and China. This is increasing the demand for food as those populations increasing affluence increases overall consumption habits. In some developing countries there has been a doubling of per-capita meat consumption which in-turn also affects the feed demand for animals.

### *Bio-Energy*

Use of valuable land and growing edible crops for bio-fuels to address energy shortages is also having an adverse effect of food availability at least at some levels. Various studies show the impact to be at different levels, with estimates ranging from 75% of food price increase attributed to Bio-fuels to less than 3%.

## **Supply Side Fundamentals**

### *Rising Input prices*

High Oil prices have been attributed to short-term increases in food prices. As the oil prices subsided after 2008, food prices also came down. However, the continued fluctuation in oil and other energy prices continue to have an impact on food prices as well.

### *Climate change, natural disasters, drought*

Crop failure in Russia, Ukraine, Kazakhstan were attributed as triggers of the 2008 food crisis. Similarly, according to UN, the 2010 Pakistan floods submerged fifth of the land area destroying millions of hectares of farmland and killing 1.2 million livestock. This added much pressure to the domestic as well as on its export food markets.

### *Water Scarcity*

Given that only a few percent of world's water is suitable for human use, and given population growths and other demands, water shortages maybe even a bigger fundamental crisis than food. Food we eat of course involves much water use to produce. A FinancialTimes report cited that it takes 140 litres of fresh water to make just a single cup of coffee<sup>5</sup>! A hamburger requires 2,400 litres of water, counting the water that goes to irrigating the wheat and producing the cattle feed. Given the water scarcity concerns, Saudi Arabia has slowed its local agriculture development plans because of the massive water intake involved.

### *Lack of Productivity & Other Best practices*

Given all the factors affecting food availability, productivity of food production and delivery (in a sustainable manner) is a key contributor to addressing food crisis. According to a report by The Evaluation

---

<sup>5</sup> Fiona Harvey, "Water scarcity: We must wring more from each precious drop," Financial Times, October 14, 2010, available at: <http://goo.gl/MTSZf>

Cooperation Group (ECG), a network of independent evaluation units of multilateral development banks (MDBs)<sup>6</sup>, this productivity need is across the full agricultural value chain, that includes not only food production, but also access to water, access to credit, formalization of land rights, transportation, marketing, etc.

However, many of the OIC countries lag behind in productivity as well as investments in it. For example, a recent World Bank report<sup>7</sup> shows that across the Arab countries cereal production yields are currently only half of the average yield worldwide—and the gap is growing. The same report shows that investment in agricultural research and development, which despite average rates of return of 36 percent in Arab countries, receives less funding than in the rest of the world.

#### *Loss of agricultural land*

According to The Foresight Project report<sup>8</sup>, about 24% of 11.5 billion hectares of vegetated land has already undergone human-induced soil degradation. It warns that in the next 40 years, agricultural land will be lost to urbanization, desertification, sea level rise and increasingly salty water.

### **Market Barriers**

#### *Speculation & Hoarding*

While many of the fundamental drivers cannot be argued against as contributors to the growing food crisis, financial market speculation has emerged as another big driver. According to a well circulated report<sup>9</sup> by Olivier De Schutter, UN's special rapporteur on the right of food, "there is a reason to believe that a significant role was played by the entry into markets for derivatives based on food commodities of large, powerful institutional investors such as hedge funds, pension funds and investment banks, all of which are generally unconcerned with agricultural market fundamentals." According to the Report, this new phenomenon began given recent deregulations which allowed bankers to take large positions in grains as they liked, an opportunity that had mostly been available to only those who actually had something to do with the production of food.

The International Food Policy Research Institute ("IFPRI") reports that, "rising expectations, speculation, hoarding, and hysteria are among the additional factors that have played a role in the increasing level and volatility of food prices."

---

<sup>6</sup> ECG "With Recurring Food Crises, a Call to Boost Agricultural Productivity", January 31, 2011, available at: <http://goo.gl/iB8Fj>

<sup>7</sup> World Bank "Improving Food Security in Arab countries", World Bank, January 2009, available at: <http://goo.gl/lxSIF>

<sup>8</sup> "Foresight. The Future of Food and Farming" (2011), Final Project Report. The Government Office for Science, London. available at: <http://goo.gl/TC8kb>

<sup>9</sup> Olivier De Schutter, UN Special Rapporteur On The Right To Food, "Food Commodities Speculation and Food Price Crises", September 2010, available at: <http://goo.gl/L9qMy>

### *Trade policies*

The 2008 food crisis prompted widespread use of export controls in global trade. These controls added to the crisis because they tightened supplies. Crop failure in Russia, Ukraine, Kazakhstan were attributed as triggers of the 2008 food crisis when Russia put export controls on its production to preserve local food security.

### **Social Drivers**

#### *Food Loss & Waste*

The FAO's latest report<sup>10</sup> on food loss and waste has stated that about 1.3 billion tons of food is lost or wasted every year, which amounts to roughly one third of all the food produced for human consumption. According to the report, food losses occur as a result of inefficiencies in food production and processing operations that diminish supplies. Food waste, by contrast, is when retailers and consumers throw edible food in the trash. Consumers in rich nations waste a combined 222 million tons a year, according to the report. That's almost as much as all the food produced in sub-Saharan Africa.

#### *Rich & Poor divide*

It cannot be ignored that the in-equality in distribution of wealth, between rich and poor within a country and between countries, is also a contributor to the millions of people living under mal-nutrition. This is especially true in low-income countries where corruption by the ruling elites takes undue toll on the otherwise healthy national resources causing increased poverty. The recent uprisings in Tunisia and Egypt are a reflection of this divide.

#### *Over-Consumption?*

The World Health Organization has declared obesity as an epidemic. According to the International Association for the Study of Obesity, Adult obesity is now more common globally than under-nutrition, and is the third biggest cause of premature death and disability in the affluent world after smoking and high blood pressure. Also, excessive eating and indulgence in un-healthy food is a social values based issue for which both consumers and marketers in societies have to reflect upon.

#### *Unsustainable Methods*

Un-sustainability of various initiatives related to productivity and food security have known to have an adverse affect as well. GM (Genetically Modified) crops have been having serious negative repercussions around the world. In India, a wave of officially catalogued farmer suicides has been taking place. Over a million farmers have killed themselves between 1995

---

<sup>10</sup> FAO "Global Food Losses & Food Waste" (2011) Food and Agriculture Organization of the United Nations (FAO), available at: <http://goo.gl/OqBdZ>

and 2011<sup>11</sup>. Many of these have been reported in the area of Cotton farming as farmers took large debts to buy hybrid seeds, which were often unsuited to the Indian climate conditions resulting in low yields or loss of entire crop. Similarly, there are long-term soil degradation concerns as well as environmental impact issues.

### 3. Organization of Islamic Cooperation (OIC) Countries Impact

In this paper, we present the state of food security across the 57 member OIC countries with a primary focus to identify opportunity areas for businesses and investments. First, we look at the state of food crisis among these OIC countries.

Based on the Food & Agriculture Organization (FAO) of the UN report data<sup>12</sup>, an average of 15% of the total population of the 57 OIC countries is under-nourished. The more immediate human impact of this increase is most felt in low-income, food deficit countries.

#### *Definitions:*

*Food security: exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food*

*Undernourishment: describes the status of persons whose food intake regularly provides less than their minimum energy requirements*

*Source: FAO – Food and Agriculture Organization of the United Nations*

For citizens of low-income countries, average of 60-65% of income goes to food, whereas food is only 10-20% of income expenditure for developed countries. This in-turn creates other problems as families can no longer afford education for their children and medical care in order to put food on their tables.

In addition to the human hunger crisis, for the richer OIC countries who are net food importers the concern is in reliable food supply. Many commentators have also attributed rising food prices as one of the factors that sparked the Arab Spring especially in cases of low-income countries or where prosperity is unjustly usurped by corrupt leadership. Undoubtedly, the impact of food price increases is a critical issue.

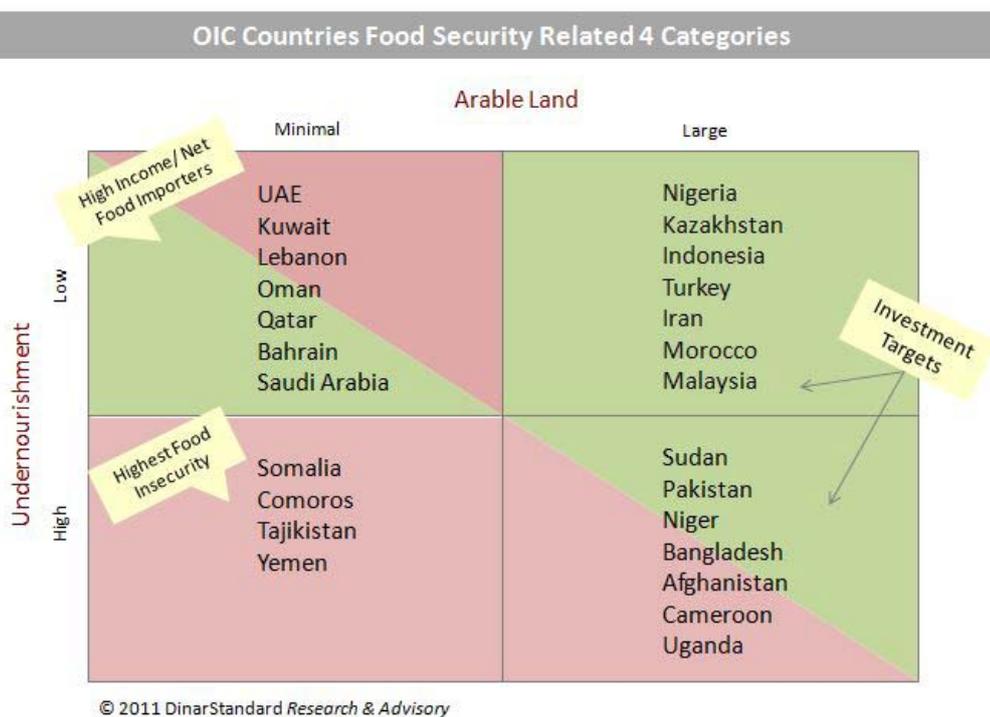
#### *4 Categories of OIC countries*

---

<sup>11</sup> "Wave Of Suicides Among Indian Farmers", November 18, 2011, Sky News, available at: <http://goo.gl/g5xEb>

<sup>12</sup> FAO "FAO Food Security 2011" Report, available at: <http://www.fao.org/publications/sofi/en/>

Within the OIC (Organization of Islamic Conference mostly Muslim majority 57) countries there are essentially four categories of countries who are exposed to the food crisis in different ways. Those suffering the most are facing high malnutrition and are also net food importers (e.g. Somalia, Tajikistan, Yemen). Then there are those with high malnutrition but ironically are also agriculturally endowed countries (e.g. Pakistan, Sudan.) The third category is of high-income OIC nations who are major importers of food and exposed to global food supply fluctuations (e.g. UAE, Saudi Arabia.) The final category is of those OIC countries who are major exporters of food while maintaining a healthy nutrition rate (e.g. Turkey, Malaysia.) and are relatively the most secure.



Among the four categories of OIC countries that are being affected by the Food crisis, **first are countries** that have disproportionately high undernourishment amongst the population. According to the 2010 FAO report, “State of Food Insecurity in the World,” amongst the OIC countries, Somalia has the highest percentage of population undernourished at 62%, whereas Pakistan has the highest number of undernourished people at 44 million (26% of the population.)

<b>HIGH INCOME - NET FOOD IMPORT COUNTRIES</b>		<b>MOST UNDERNOURISHED OIC COUNTRIES</b>	
Facing Food supply fluctuation		Facing immediate human crisis	
COUNTRY	Net Food Trade Balance, (USD thousand)	COUNTRY	Proportion of undernourished in population (2005-07)
Saudi Arabia	(\$9,782,137)	Somalia	62%
UAE	(\$6,932,653)	Comoros	46%
Kuwait	(\$2,061,772)	Mozambique	38%
Lebanon	(\$2,033,512)	Chad	37%
Libyan	(\$1,795,207)	Afghanistan	35%
Jordan	(\$1,399,942)	Sierra	35%
Oman	(\$1,163,893)	Yemen	31%
Qatar	(\$852,540)	Tajikistan	30%
Albania	(\$709,377)	Togo	30%
Bahrain	(\$450,717)	Djibouti	28%
Brunei	(\$272,279)	Bangladesh	27%
		Iraq	26%
		Pakistan	26%
		Sudan	22%
		Guinea-Bissau	21%

Source: ITC Trade Map Data 2009, FAO State of Food Insecurity, 2010, DinarStandard Analysis

Ironically, some of these most undernourished OIC countries have large areas of arable land led by Sudan (20.7 million hectares), Pakistan (20.3 million hectares), Bangladesh (7.9 million hectares), and Afghanistan (7.8 million hectares). These are **the second category** of countries. They are also major global food commodity producers. For example, Pakistan is world's 4th largest dairy manufacturer, Bangladesh is a major rice producer, Sudan is a major livestock (goat and sheep meat) producer etc. These countries present tremendous investment opportunities, requiring sustainable investment to boost productivity

**The third set of countries** affected by the food crisis are high-income OIC countries, some of whom are significant net importers of food, specially the one's with low arable lands. Pressured by uncertainty of food supplies and costs for imports, many of these countries are pursuing outside food and agriculture investments in order to control their food supply.

All six of the GCC countries (Saudi Arabia, UAE, Kuwait, Oman, Qatar and Bahrain) are the leading high-income, net food importers, from OIC countries. Others include Lebanon, Libya, Jordan, Albania, and Brunei. Except for Saudi Arabia, all of these countries also have small arable areas for agricultural development. For Saudi Arabia and many GCC states that do have arable land, water scarcity is a major limitation to agricultural effectiveness.

The UAE and the other GCC states are following steps taken by China and investing heavily in agricultural land internationally. According to a Gulf News report, by shipping the produce home and bypassing world markets, they can cut food costs by up to 25 per cent. According to the International Food Policy Research Institute (IFPRI), UAE ranked third in the amount of agricultural land obtained by selected investors between 2006 and 2009. In first and second places were China and South Korea.

However, such investments are coming under much scrutiny and have to be carefully pursued. Large-scale land acquisitions are known to cause land expropriation or unsustainable use, making foreign investments in agricultural land politically unpopular. Also, securing the interest of small farmers is a key component in creating a true win-win opportunity. Therefore such investments have to involve host governments, and the local people to ensure that these acquisitions/investments are properly negotiated, practices are sustainable, and benefits are shared. Besides land acquisitions, the investments are also looking at food processing, logistics and infrastructure investments that make a big part of food value chain costs.

**The final category** of OIC countries are the most food secure. These are low malnutrition, and agriculturally endowed countries who are either net food exporters or have large agriculture land that hasn't been utilized or needs to be made productive. While fairly mature in their production, they present attractive investment opportunities as well.

Overall, the response to the food crisis in OIC countries seems to be much more geared towards the security of high-income countries rather than the low-income ones that are agriculturally endowed but are in need of investments with shared benefits.

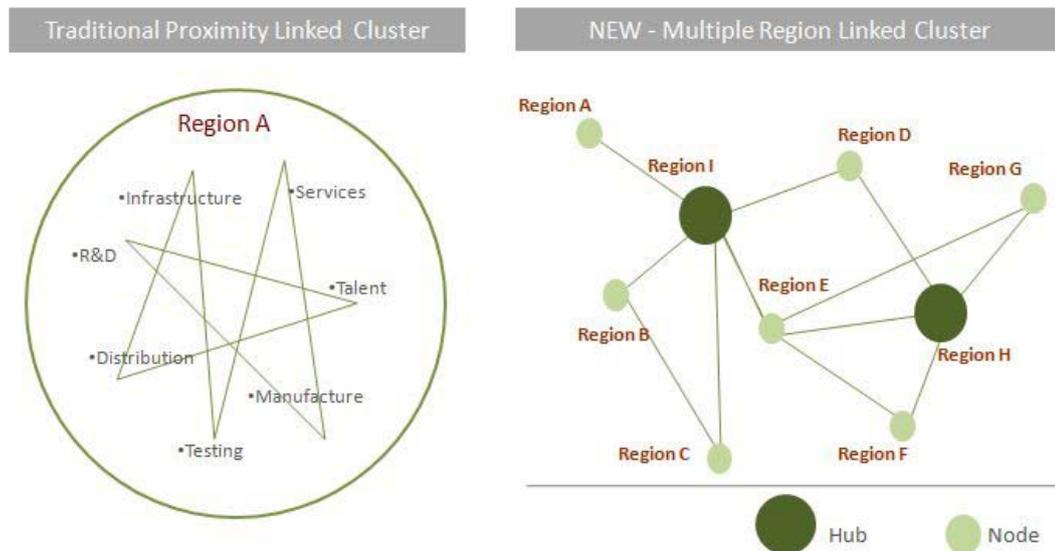
#### **4. FOOD & AGRICULTURE OPPORTUNITIES**

There are major national and regional policy implications to addressing food crisis among OIC member States which is relevant at governmental and regional policy influencer levels. However, since our focus is on the role and opportunities for the business sector, we look primarily at business and investment opportunities that also address OIC food security needs. We present here a unique OIC-wide food and agriculture cluster approach that identifies investment and growth opportunity areas for food industry related businesses and regional investment firms.

##### **Why a Region-Wide Cluster Approach?**

Given global technology and communication developments, complementary business operations no longer need to be in close proximity to each other (e.g. Silicon Valley). Rather, a complementary set of competencies within various regions combine to deliver a more robust Cluster. Global companies such as P&G, GE and most all of the innovative companies have different

operational setups across the world that come together to deliver world-class solutions.



Source: Based on 'New Economy Strategies' concepts by Richard Seline

Within such clusters, a Hub is a particular location that has sufficient critical mass to support driving development, while a Node is a location that can significantly support a Hub with complementary processes.

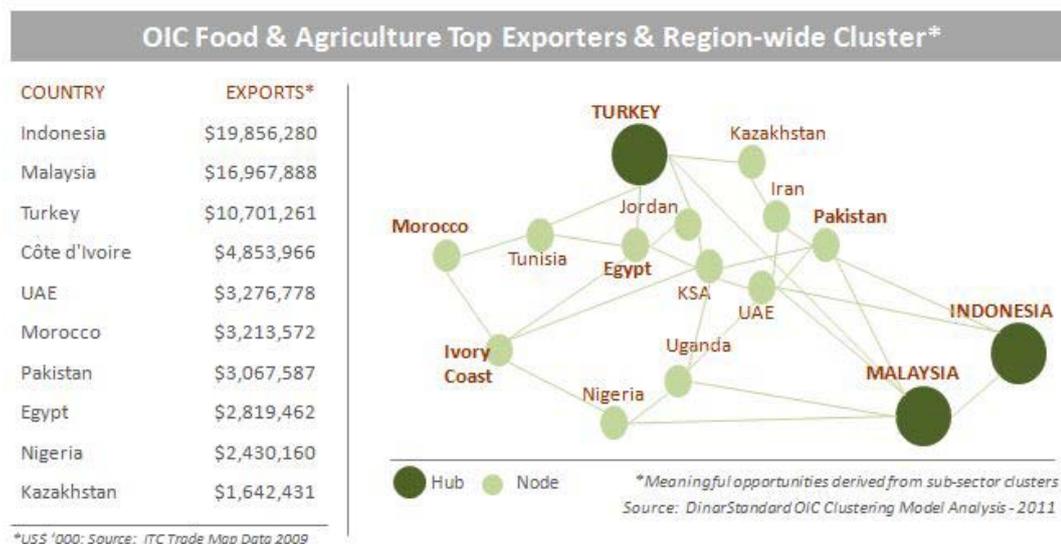
### The OIC Food & Agriculture Clusters

OIC countries' total food & agriculture trade balance stood at -\$40.1 billion in 2009 with imports worth \$126 billion (12% of global imports,) whereas its total exports were worth \$85 billion (8% of global exports.) (Source: UN's International Trade Center data.)

Based on our earlier description of the four categories of OIC countries and the nature of their resources, food supplies and demands, we see complementary opportunities among these markets. A OIC Food & Agriculture Industry Clusters Model has been developed, as described below, across OIC food supply and demand centers to identify unique investment and growth opportunities.

Within the OIC member countries, at the highest level and based on overall exports, the OIC Food & Agriculture hubs are Indonesia, Malaysia, and Turkey. Meanwhile, the nodes are Ivory Coast, Morocco, Pakistan, Egypt, Nigeria and

## Kazakhstan



The more meaningful view of the Cluster is at the specific sub-cluster level. 30+ subsector OIC clusters have been identified covering Animal & Animal Products, Vegetable products, Food processing/ manufacturing, and Services sub-sectors.



## OIC based food & agriculture companies

Supporting the premise of OIC based food & agriculture cluster potential is its local, vibrant private sector driven business activity. Many sophisticated, regionally and even globally competitive companies exist within the OIC

countries. Below is a select listing of 15 OIC based food and agriculture related conglomerates with annual revenues of over \$1 billion derived from DinarStandard Research database. These companies include private and government owned as well.

OIC based Companies (\$1bill+ annual rev.)	Key Food Brand	Country	Type
Koc Group	tat	Turkey	Diversified
Group ONA		Morocco	Diversified
Sime Darby		Malaysia	Listed
Astra International		Indonesia	Diversified
Ulker	Ulker	Turkey	Listed
IOI Group		Malaysia	Listed
Savola Group	Afia	KSA	Listed
Indofood	Indomie	Indonesia	Listed
Felda Holding		Malaysia	Private
KL Kepong Berhad		Malaysia	Listed
Turkiye Seker		Turkey	Govt owned
PPB Group		Malaysia	Listed
Americana Group	Americana	Kuwait	Private
AlMarai	Almarai	KSA	Listed
Yasar Holding	Pinar	Turkey	Private

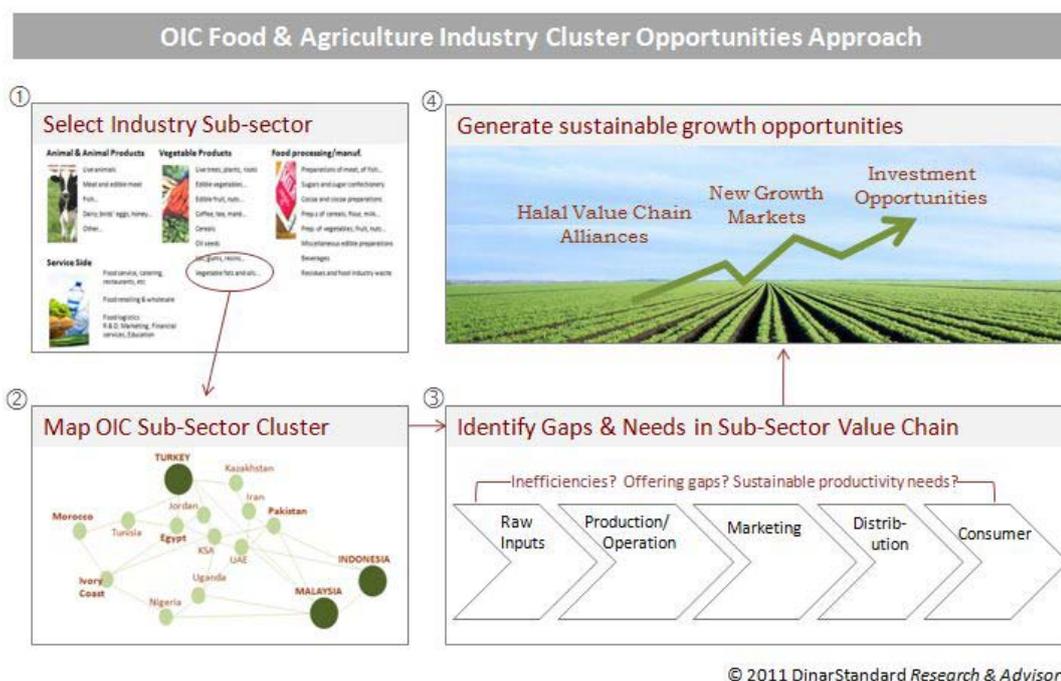
*Source: DinarStandard Research Database, Copyright DinarStandard 2011*

For investment purposes, another source of OIC and specifically of Halal food companies is the recently released SAMI Index which includes all Halal food and agriculture related companies that are listed across the OIC stock exchanges.

The Socially Acceptable Market Investments (SAMI) Halal Food Index is about companies involved in food processing, distribution, fishing, farming, and other sub-sectors. There are 270 plus companies with market capitalization of \$114 billion in the index derived from 15 OIC member countries. This index has been created by ThomsonReuters, in partnership with IdealRatings.

### **The OIC Food & Agriculture Cluster Based Opportunities**

With the above described OIC wide view of supply and demand as well as food and agriculture clusters, we can now look at Investment and business growth related opportunities. Value creation from amongst these OIC wide food and agriculture related Industry clusters is derived from finding inefficiencies, product/services gaps and sustainable productivity needs, within different part of the related industry value chain (see Diagram below).



Step 1 would be to identify a specific industry sub-cluster of interest. Let's take the example of “Animal, Vegetable fats and oils” sub-sector.

Next, using the OIC Industry clusters approach we would first identify the largest producing OIC markets for “Animal, Vegetable fats and oils”. This is a sub-sector in which OIC countries represent 40% of global exports driven primarily by Indonesia and Malaysia exports. Based on 2009 UN’s International Trade Center data and DinarStandard Research analysis, the leading net exporters with a positive trade balance in this sector are (in order): Indonesia, Malaysia, Tunisia, Côte d'Ivoire, Azerbaijan, and Oman. Other major markets in the sub-sector but with negative trade balance are Turkey and Pakistan. These major markets would form the baseline “OIC Industry Cluster” for that sub-sector.

Third, for this “OIC Industry Cluster”, the full sub-sector value chain would be evaluated from its raw inputs, production/ operation, marketing, and distribution ecosystem. Gaps in productivity improvements, supply chain processes, distribution and other gaps and needs would be identified. Such and other gaps can then generate opportunities in three areas: (See solutions)

1. **Investment opportunities:** M&A, technology investment, and Joint Venture opportunities are a primary areas of opportunities. Target Company capabilities can be strengthened through investments in productivity, marketing and research.
2. **Halal value chain alliances:** Given that the fast growing ‘Halal’ food market (\$650 billion in 2010 by DinarStandard Research estimates) is seeking ‘farm to fork’ Halal process verifications and improvements. This sub-clusters value chain would be evaluated to identify relevant Halal certified partners to improve efficiencies and competitiveness.

3. **New growth markets:** Finally for the select sub-sectors “OIC Industry Cluster”, net import OIC markets would be evaluated for growth opportunities where companies can expand into. This reflects the strong desire by the OIC bodies such as Islamic Development Bank Group to increase Intra-OIC trade with various favorable, supporting multi-lateral trade agreements.