Fast Expanding Markets
The revolution of the Real Economy

Sponsored by KPMG/ESCP Europe Chair Governance, Strategy, Risks, and Performance
The basic premise of the concept of BRIC is the size of their population.

Yet, other than India, population has not really grown substantially.
The world economy, at the same time, has grown to be more and more service-oriented.

Structure of the World Economy in 1991
- Agriculture: 5%
- Industry: 34%
- Services: 61%

Structure of the World Economy in 2010
- Agriculture: 3%
- Industry: 27%
- Services: 70%

There is a chance that BRIC countries are losing out.

Source: WDI and Institute for Competitiveness Analysis
With the exception of China, BRIC countries are neither importing nor exporting as many liked to believe

Source: WTO and Institute for Competitiveness Analysis
While BRIC countries are growing, they are not really growing at high rates.

Source: IMF and Economist Intelligence Unit for 1970-2005, Economist Intelligence Unit forecasts for 2006-20
With the exception of China, BRIC countries are not attracting that much investment from abroad.

All of these evidence suggest that the concept of BRIC could have become obsolete – we need a new unit of analysis.

Source: WDI and Institute for Competitiveness Analysis
A new unit of analysis is fast expanding markets
Our first outings
FEM represent pockets of rapid growth which can lead to enormous impacts on economic activity and policies of any country.

What Are FEMs?

- Any rapidly growing opportunity in which the market is the focal point
- Industries or products that are experiencing rapid growth; **at least 15 percent growth over a 3 – 5 year period**
- Extremely lucrative markets that many people are unaware of or have overlooked
- Rapidly growing pocket of excellence often undetected given the fixation on terms such as “emerging” and “developing” economies
- Growing business opportunities that have yet to contribute substantially to a country’s GDP

Impacts of FEM

- Drive sources of revenue diversification that can lead to more long-lasting economic advantages
- Develop in any country or region, regardless of national economic performance
- Grow in either a predictable, or unpredictable manner, so the application of traditional market and economic theories is often inappropriate
- Enable investors, entrepreneurs, and government organizations to explore markets at a more granular level
- Catch **pockets of growth** that can be exploited for their economic potential to branch off and develop new clusters

“Emerging Economies” or “Emerging markets” differ from Fast Expanding Markets, since these terms:

1) Focus only on markets at the country level
2) Are obsolete if not misleading
3) Are overwhelmingly focused on the macroeconomic context
The Fast Expanding Market – Model

Background

- The FEM model is a general framework for gaining insights into how FEMs are generated, developed and how they can be predicted to impact the economic landscape
- This model provides a guideline for investors, entrepreneurs and government organisation that are looking for new strategies to detect economic growth
- It provides an analytical approach to facilitate the identification and creation of FEMs

Explaining The Model

- The model encompasses all aspects of the FEM cycle, from initiation to the possible future outcomes. Furthermore, it depicts the defining characteristics of FEMs: Speed, growth, and consistency; which together give us a structure for promising FEM discovery

Explaining The Factors

- The FEM model is a general framework for gaining insights into how FEMs are generated, developed and how they can be predicted to impact the economic landscape
- According to the analysis of FEM evolution, these factors have shown to be key in establishing and cultivating new business opportunities
- To derive these factors, a bottom-up approach was applied, analyzing the common macro-trends that fostered favorable conditions and resulted in the astonishing growth exhibited by all three of the researched FEMs
The Fast Expanding Market – Model
After 3 – 5 years FEM’s establish themselves for possible future growth

1. Raising awareness for a “Issue”
2. Evolving “Trend”
3. Occurrence of an “Event”

Factors are the initial starting point for increasing awareness.

The factors are further influenced by:
- Government actions,
- Media influence

The FEM Cycle
- Society or Government embraces the “Trend”
- Fast Expanding Market “FEM”
- Industry/Spillover Effect

Potential Future Routes
1. Existing FEM
2. Phase out of the FEM
3. Growth is either on par with GDP or exceeding it
4. Growth is less than the country’s GDP
5. Development of a new FEM

Potential Benefits
- Innovation and R&D
- Economic Diversification
- Growth of middle class
- Transformation into an industry

An existing FEM could potentially drive the growth of a developing FEM.
A FEM can theoretically be only a short-term market.

Market transitions are determined by its maturity.

Dynamic stability

Given the occurrence of necessary factors, FEMs are developed through a cyclical process which can lead to cluster formation or FEM phase out.
Fast expanding market 1: Adult diapers on Japan

- **Market Size**
  - ¥172 billons ($≈ US$2 billion USD) is estimated for factory shipping based revenue with 5% of average annual growth rate since 2007

- **Remarkable Phenomena**
  - Adult Diaper Market exceeded Baby diaper market for the first of the history in 2012

Source: Yano Research Institute (2012)
Fast expanding market 2: Mobile money transfer in Kenya

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<thead>
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<tbody>
<tr>
<td>Kenya</td>
<td>41.6</td>
<td>40%</td>
<td>66%</td>
<td>&gt; 50%</td>
<td>US$17.5 Billion</td>
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<table>
<thead>
<tr>
<th></th>
<th>Number of transactions (000)</th>
<th>Value of transactions (billion US$)</th>
<th>Number of Registered users</th>
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<td>Dec'2010</td>
<td>28816</td>
<td>0.36</td>
<td>1683713</td>
</tr>
<tr>
<td>Dec'2011</td>
<td>87481</td>
<td>1.41</td>
<td>2879968</td>
</tr>
<tr>
<td>INCREASE</td>
<td>204%</td>
<td>292%</td>
<td>71%</td>
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</table>
Fast expanding market 2: Mobile money transfer in Kenya (cont’d)

Growth of mobile phone money transfer services

- **Value & Number of transactions**
- **Total number of transactions (bil)**
- **Total value of transactions (Ksh billion)**
- **Total number of agents**

- **2007**
- **2008**
- **2009**
- **2010**
- **2011**

- **Number of agents**

- **Total number of transaction (bil)**
- **Total value of transactions (Ksh billion)**
- **Total number of agents**
Fast expanding market 3: Growth of organic production in Spain

**Growth of Organic Production in Spain**

**Fast Expanding Market**

**Increase in Value of Organic Production**

442%

**Government Policy**

To increase awareness and validity of organic goods domestically

- Population: 46.22 M
- Unemployment: 22.9%
- Domestic Consumption: 3%

**GDP Per Capita Growth**

**Development Organic Area**

**Growth in Demand**

- WTP
- Product Image of Reliability
- Increase in Market Presence
- Increase in Organic Land

**Future**

- Create Employment & Wealth
- Positive Foreign Trade Balance
- Support Rural Areas & Environmental Protection
Fast expanding market 5: Mobile banking in France

MOBILE BANKING

Regional Rollouts

What is mobile banking?

- Money transfers
- Geolocation
- Mobile payments
- Mobile phone top up
- Balance transfers
- Check balances
- Transaction history

- 85% Growth in compatible mobile phone models
- 70% Growth in mobile banking users in 2012
- $38.8 billion Projected gross transaction value of mobile payments in France by 2016

A Future with Smartphones

Smartphone users, just 35% of the total mobile population, accounted for nearly 70 percent of mobile banking users.

New Initiatives

Drivers of Growth

- Infrastructure
- Mobile phone compatibility
- Smartphone adoption

- Financial Institutions and Government
- Manufacturers
- Consumers

FRANCE
Fast expanding market 7: American baked goods and bakeries in Italy

**American Baked Goods and Bakeries**

- **100,000** Unique customers per month
  - California Bakery, Milan

- **23%** Growth in employees from 130 to 160 between 2011-2012
  - California Bakery and the Bagel Factory, Milan

- **$200,000** First-year sales
  - Carlie’s, Florence

- **70%** of customers are Italian
  - Carlie’s, Florence

Bakeries are expanding their operations in addition to cheesecake, chocolate chip cookies, brownies, apple pie, cupcakes, donuts, shortbread, and bagels. Bakeries now offer baking classes, weekend brunches with pancakes, and holiday meals like Thanksgiving dinner.
Fast expanding market 8: Vitamin D testing in Italy

- Over the last 4 years there has been a boom in the number of clinical tests for measuring the level of Vitamin D

Worldwide Vitamin D test market: 2007-2011E

- Worldwide market has grown with a CAGR of 76.7%, reaching $350 mln value
- Involved mainly US, Australia, France, Belgium, Denmark
- Other markets (EU countries, Brazil) are starting the growth phase
- Countries like China and Japan are still far behind
- The number of players in the market is limited: the market leader (DiaSorin) has a market share greater than 50% (51% in US, 98% in Israel)

Source: DiaSorin, Company report
Fast expanding market 8: Vitamin D testing in Italy (cont’d)

VITAMIN D TESTING

DiaSorin, Global market leader in Vitamin D testing

Saluggia, Italy

51% U.S. Market

98% ISRAEL Market

$350M
Worldwide sales of Vitamin D tests

24.7%
Growth in Vitamin D supplement markets

32.4%
Estimated CAGR in Global Vitamin D Testing Market for 2013-2018

56.3% CAGR 2007-2011E

76.7% CAGR 2007-2010
Fast expanding market 9: Chia seeds in USA

**CHIA SEEDS IN USA**

**A. BENEFITS OF THIS SUPERFOOD**

- Nutritional: Omega 3, fiber, protein, calcium, antioxidants
- Health: reduces cholesterol, heart disease, risk of cancer & improves digestion
- Functional: usage in food & supplements

**B. # OF RELATED PRODUCTS LAUNCHED 2007-2010**

- 18
- 103

**C. GROWTH OF CHIA PRODUCTS 2011-2012**

- 1000%
- 350%
- 90%

**D. WHY WAS IT UNDETECTED?**

- Niche for athletes
- Natural food awareness
- Higher usage of corn & wheat

**E. A BRIGHT FUTURE... FROM 70MS TO $1 BILLION**

- People are more health conscious
- Trend against gluten

**SALES GROWTH IN 2012**

- 239%
Fast expanding market 10: Western style cheese in India

**Facts**
- 31% of Indians are vegetarians
- Amul – world’s largest vegetarian cheese producer
- India - largest milk producer worldwide
- 50% of the buffaloes and 20% of the cattle in the world are found in India

**Company Shares of Cheese (%) in 2013**

- Paneer: 38%
- Mozzarella: 11%
- Reconstituted cheese: 40%
- Cream cheese: 2%
- Others: 9%
- **Milky Mist**: 4.04%
- **Britannia Amul**: 15.35%
- **Amul The Taste of India**: 47.57%
Fast expanding market 11: Champagne in Nigeria

CONSUMPTION TRENDS
- Wealth driven by oil exports and real estate
- Richest 10% accounts for 41% of GNI
- Champagne culture influenced by celebrities, hip hop, movie industry "Nollywood"
- Elite upper class obsessed with status symbols associated with high-end champagne consumption

CHAMPAGNE CONSUMPTION IN NIGERIA

DISTRIBUTION
- Restaurants & Nightclubs
- Supermarkets
- Roadside stores
- Online distribution

CONSUMPTION AND GROWTH FORECAST

GROWTH OF PARALLEL MARKETS

CAGR
07-13 CAGR
13-17
GDP 10.4% 6.0%
Food 10.6% 3.0%
Beverage 17.1% 9.1%
Wine 25.2% 9.3%
Champagne 26.4% 12.3%

KEY CITIES
Lagos
Abuja
Kano
Kaduna
Onitsha
Port Harcourt

POPULAR PRODUCTS
- Cristal
- Dom Perignon
- Moet
- Veuve Clicquot
- Duval-Leroy
- Laurent Perrier
- Chandon

27% Increase in French Champagne Exports to Nigeria in 2012

CONCLUSIONS
1. Upper class will carry the growth
2. High consumption = opportunities for investment in production & distribution
3. Rising imports = rising prices = extra value along supply chain
4. Growth of interrelated market clusters
5. New international entrants (Import Brands)
6. Lack of alcohol regulations = strain on healthcare
7. Disparity of value creation for society at large
Fast expanding market 12: Food truck in the US

32% of Americans eat at a food truck at least once a week.

Annual Revenues

2011: 518 million
2012: 650 million
2017: 2.7 billion

Within 5 years: 3-4% of all restaurant revenue from food trucks.

91% of consumers believe food trucks have staying power.

"Food Truck" hits on Google:
2009: 83K
2012: 28.2 million

Menu
- Local
- Fresh
- Authentic
- Organic
- Hip
- Speedy
- Convenient
- Exciting
- Unique
- Personalized
Fast expanding market 13: Technology cluster in Greece

TECHNOLOGY CLUSTERING

MICROSOFT
Opened a Microsoft Innovation Center in Akradi, Greece

TAXIBEAT
Operates in 5 countries

TAXIBEAT
€1,000,000 raised

CORALLIA
Micro-electronics cluster of 60 companies and 30 universities

CONSTELEX
4-year-old company acquired for €650M

BUGSENSE
Used by 5% of all Android apps

PINNATTA
500,000 end users by end of 2013

UPSTREAM
Sales cover 40 export markets

PINNATTA
Received funding from US, Greece, Russia, and Taiwan

LOCAL TALENT
Founded with $100,000 seed funding

LOW COMPETITION

Cumulative exports from 2011-2013: $250M

Growth in revenues: 23%
Fast expanding market 14: Use of Internet in Greece

**Use of internet in Greece, as a FEM**

Internet users have grown 30% between 2006-2010 in Greece
5,043,549 Internet users as of 2010, which is 46.2% of the population
Mobile Broadband today growing in Europe with 422 million subscriptions
68% penetration
33% CAGR (2010-2013)

**Barriers of E-Commerce**

- Lack of credit cards: 25%
- Lack of internet transactions trust: 23%
- Lack of knowledge/skills: 21%
- Prefer to talk to salesmen prior to purchase: 19%
- Set up cost too high

**Trends for Internet & E-Commerce**

- European economic and social cohesion objective
- Internet is more flexible and cheaper
- Reduces isolation and eliminated hardships of rural life
- Reinforces new forms of social and business interaction

**In the works**

#1. Better service to citizens and firms, through modernization of state operation, and greater access and transparency

#2. Creating educational system adapted by digital age

#3. Encouraging the use of new technologies in mass media

#4. Regulatory reforms in telecommunications

#5. Protecting citizens
Fast expanding market 15: Photoval energy in Portugal

**Installed PV growth vs. GDP growth**

**Trends**
- Increase national energy while decreasing energy bill
- Aim to make country more independent
- Reduce greenhouse gases

**Barriers to Growth**
- Licensing procedures
- Bureaucratic factors - time & money
- Difficulty and distance to implement
- Expertise required
- Uncertain variables

**What's Driving Growth**
- Municipalities accepting these projects will receive 2.5% monthly fee
- Cost declines improve cost position against other renewables
- Kyoto Protocol
- Flexibility of sites targets broader audience
- Independent Power Producer law sets feed-in-tariffs
- Risk profile of fossil fuel generation

**Value Chain PV installation**
- Suppliers of materials
- Solar cell manufacturers
- Module manufacturers
- Civil engineering companies
- Wholesalers
- Installers

**CAGR of Evolution of Installed PV (MW)** 99.96%
Fast expanding market 16: Video game industry in Turkey

Expected market size increase 2012-2017: 224.1% (or 26.5% CAGR)

Big success story

Largest and fastest-growing gaming company focused on the markets of Turkey & MENA

Revenue growth in 2012: +300%

Main focus

Monthly active users: 25mil

Sources: Passport by Euromonitor, NewZoo market research, Peak Games website
Fast expanding market 17: Microbrews in Italy

Italy already has a reputation for high quality food products. Beer has the potential to join wine and olive oil as in demand quality product.

Growth Potential

Without the constraints of traditional beer culture, Italian microbreweries can experiment with flavors and ingredients more than more established markets.

Increase in female consumption of beer

Beer tourism

# of microbreweries in Italy

270% Gross Margin

% Total Value Growth

English Ale  Wheat Beer  Other Dark  Stout  Overall
Fast expanding market 18: Japanese art islands

Japanese Art Islands

86%
Increase Infrastructure Investment in Depressed Area

156%
Local Product Sales

$132M
Festival Economic Impact

8sq Kilometer Island
43% > 65 Years Old
40% Decrease in Pop.
Heavy Metal Wasteland

DEPRESSED AREA

< 1985

ARCHITECT: Tadao
Benesse House
Oval House
Outside Exhibition

ART
1992

Community Deal
with Benesse
Corporation
1985

FAST EXPANDING MARKET

157%

Local Sales Growth: 156%
Government Expenditure: 26%
Rice-Growing Project

CLUSTER

200 Islands
Identified by
Japan Government

21 Islands
Archipelago

MODEL EXPANSION

1M VISITORS
2013

0.93M VISITORS
2010

International Setouchi Art Festival

Ancient Greece

WORLD MODEL:
Greece
Korea
Scandinavia
...
Fast expanding market 19: Medical tourism in Malaysia

1. **WHY FEM? 30% CAGR**
   - In 2012, the economy of Malaysia was the 3rd largest economy in South East Asia.
   - GDP growth 4.5% (2012 est.)
   - GDP per capita $16,922 (PPP. 2012 est.)
   - GDP by sector:
     - Agriculture (11.9%)
     - Manufacturing (41.2%)
     - Services (46.8%)

2. **EVIDENCE**
   - **MEDICAL TOURISM INDUSTRY** 183m USD Total Value
   - >> Cost advantage over competitors
   - >> Advanced healthcare infrastructure
   - >> Highly skilled professionals
   - >> Visa benefits
   - >> Government support
   - >> High English proficiency

3. **WHAT?**
   - The main healthcare services:
     - Medical treatment (41.3%)
     - Cosmetic procedures (20.3%)
     - Medical check-ups (14.5%)
     - Surgical procedures (7.2%)

4. **SOURCE OF GROWTH**
   - 24th GCI ranking
   - 32% Healthcare Growth
   - 15.2% Medical Tourism Travellers Growth

5. **FAST & FURIOUS**
   - **HEALTHCARE TRAVELLERS 2007-2012**
     - 341,288 People 2007
     - 671,727 People 2012

6. **FUTURE**
   - **INDUSTRY PROJECTION 2013-2019**
     - **MALAYSIA** 25% CAGR
     - **GLOBAL** 17.9% CAGR

7. **IMPACT**
   - **HEALTHCARE GLOBAL MARKET**
     - >> Economic growth: Develop tourism of Malaysia
     - >> Impact on peripheral sectors such as transportation, communications
     - >> Reduction of brain drain through growth, technology & incomes
     - >> Global Competitiveness = Promoting cost effectiveness & efficiency

8. **UNDETECTED**
   - >> Brand itself to Middle Easterners and Europeans
   - >> Develop overlapping clusters
   - >> Improve level of front line service and quality
   - >> Global strategic alliances and networks with global medical organisations
Fast expanding market 20: Medical marijuana in the US

Why legalized?
- reduced nausea & vomiting from chemo
- treating negative effects of HIV/AIDS
- effective treatment of chronic pain caused by neuropathy, fibromyalgia & arthritis
- relieve of spasticity due to multiple sclerosis
- reduce effects of Alzheimer's, diabetes, etc
- others: price sensitivity, WOM & policy

Marijuana Milestones

1. IL, NH / 2013
2. CT, MS / 2012
3. D.C, AZ / 2010
4. NM / 2007
5. 2008 / NC, MU
6. 2011 / DL
7. VT, MT / 2004
8. 2006 / RI
9. ME / 1999
10. 2000 / CO, NV, HA
11. 1998 / AK, OR, WA
12. 1996 / CA

Growth & Projected Revenues

- 2011: $1.7B
- 2014: $3.0B
- 2018: $10.2B

Growth between 2012-2014: 46% - 64%
Fast expanding market 20: Medical marijuana in the US (cont’d)
Fast expanding market 21: Tablet in India
Fast expanding market 22: Milk consumption in China

1. CONSUMPTION TRENDS
   - More attention to health + milk as important to basic diet
   - Improvement of quality in supply chains = increase in affordability and availability
   - 2013, policy change allowing couples to have 2 children
   - Westernization of China - American influence (Starbucks, coffee shops, etc)

2. DEMAND
   - GDP in US Trillions
   - Dairy Consumption

3. PRODUCTION
   - China’s raw milk production increase:
     - 2000: 8.3m tons
     - 2006: 32.5m tons
   - Largest Dairy companies:
     - Mengniu
     - Yili
     - Sanlu
     - Bright

4. DISTRIBUTION
   - Distrib. channels are fragmented
   - Better retail structure is evolving
   - Dairy companies are expected to benefit from improved retail infrastructure

5. LIFE CYCLES
   - 2006-2009: Improvement of agricultural infrastructure, 500 grams speech (Wen Jimbao)
   - 2009-2015: Trade agreements between China and other countries + huge GDP growth

6. SHARED VALUES
   - social
     - Health
     - Nutrition
     - Calcium
     - Vitamin D
     - Phosphorous
     - Potassium
     - Proteins
     - Bones & Skin
     - Bone Density
   - economic
     - Benefit local farmers
     - Vendors
     - Packaging
     - Distribution
     - Equipment

7. CONCLUSION
   - Cost associated to infrastructures + distribution channels = large barriers BUT also creates great opportunities for companies to invest.
   - Rapid growth of milk consumption shows it is a Fast Expanding Market.
Fast expanding market 23: Virtual stores in Korea

- **2009** the first *virtual store* was launched in a subway station in Seoul, South Korea by Tesco, a UK-based supermarket
- The results from the four week campaign of Tesco’s *virtual store* demonstrates the viability as a revenue generator for a retailer
  - Increase of customers 76%
  - Increase of revenue 130%
  - More than 65,000 registered users¹.
  - 900,000 people downloaded the Homeplus App.
Fast expanding market 24: Solar water heaters in India

Strong growth in SWH industry even when India is experiencing a decline; growth spike can be seen especially in the last couple of years.

- **CAGR GDP: 8.2%**
- **SWH CAGR: 25%**

Area in square meters of installments almost doubled from 2009-2011.
Fast expanding market 25: Call centers in South Africa

- **85%** growth from 2007 to 2010
- **55%** of outsourcers revenue is derived from international clients
- 10,000 people currently employed
- By 2015… **40,000** expected
- Market valued at $1.08 billion in 2010… $3.06 billion expected by 2016
Fast expanding market 26: Quinoa market in Bolivia

- Quinoa represents 18% of the agricultural export in Bolivia
- CAGR is 26.51%
- Increase of production: 2010 / 2012: 22,000 tons to 44,000 tons
- Agriculture represents 12% of the GDP but represents 40% of the labor force

Fast expanding market 27: Charter school in the US

Top 10 Districts With The Highest Growth of Public Charter School Students between 2009 and 2011*

<table>
<thead>
<tr>
<th>Rank</th>
<th>School District</th>
<th>State</th>
<th>% Growth in Charter Enroll</th>
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<tbody>
<tr>
<td>1.</td>
<td>Orange County Public Schools</td>
<td>FL</td>
<td>42%</td>
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<td>2.</td>
<td>Memphis City Schools</td>
<td>TN</td>
<td>41%</td>
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<td>3.</td>
<td>New York City Department of Education</td>
<td>NY</td>
<td>29%</td>
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<tr>
<td>4.</td>
<td>Mesa Public Schools</td>
<td>AZ</td>
<td>27%</td>
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<tr>
<td>5.</td>
<td>Baltimore City Public Schools</td>
<td>MD</td>
<td>26%</td>
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<tr>
<td>6.</td>
<td>New Orleans Public Schools</td>
<td>LA</td>
<td>23%</td>
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<td>7.</td>
<td>Alpine School District</td>
<td>UT</td>
<td>22%</td>
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<tr>
<td>8.</td>
<td>San Antonio Independent School District</td>
<td>TX</td>
<td>21%</td>
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<tr>
<td>9.</td>
<td>Indianapolis Public Schools</td>
<td>IN</td>
<td>20%</td>
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<tr>
<td>10.</td>
<td>Los Angeles Unified School District</td>
<td>CA</td>
<td>19%</td>
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<tr>
<td></td>
<td>The School District of Philadelphia</td>
<td>PA</td>
<td>19%</td>
</tr>
</tbody>
</table>

* A Growing Movement: America’s Largest Charter School Communities
Fast expanding market 28: Waster to energy in Sweden

- Organic growth of waste export to Sweden is 40% annually
- In 2010 Sweden imported 800,000 tons/year of trash
- Forecasted volume of imported waste to Sweden by 2016 is **2 million tons**
- Value of market is **€100 million**
- Win-Win situation for both – export country and Sweden
- Cheaper to export trash to Sweden than to process it internally
1948: Cadbury starts operations in India 1 year after independence
- Importing
- Gradual manufacturing due to high tariffs (30-45%)

2006 - 2007
2008: Second Growth Spike (of 27% p.a.) was due to a combination of factors:
1) Advertising showed increased effect
2) Increase in raw material prices (especially sugar) which made traditional sweets slightly more expensive
3) Shift away from traditional sweets to chocolate:
   - Preferences
   - Rising income
   - Seen as healthier choice
   - Seen as a part of a “Western Lifestyle”
   - Ease of use

Size of Indian chocolate industry: USD$ 418 million

2007: First growth initiated due to main factor:
1) Chocolate advertising rose by 30% from the big chocolate producers
Top Advertisers:
- Cadbury (66%)
- Nestle (27%)
- Others (7%)

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   - Ease of use

Size of Indian chocolate industry: USD$ 418 million

2009: Size of Indian chocolate industry: USD$ 857 million

2010: Aggressive strategy of Kraft

Growth rate expected between 25% to 35% p.a.

2011: Size of Indian chocolate industry: USD$ ~ 2.1-2.8 billion

2015: Size of Indian chocolate industry: USD$ ~ 2.1-2.8 billion

2010: Aggressive strategy of Kraft
Fast expanding market 29: Chocolate market in India (cont’d)

TRIVIA:
Diwali 2011: Chocolate consumption up by 30% while mithai down by 33% due to changes in gifting patterns, emulation of western lifestyle and health-related issues.

TRIVIA:
India became world’s largest milk producer in 2011, 84 MM Tons, and in 2008 it had its peak cocoa imports at 16.86 k Tons

TRIVIA:
India has a suitable climate for cocoa production (hot and humid) India accounts for less than 2% of the World production of cocoa

TRIVIA:
-MNC Investment could improve distribution and accessibility
-Current Market Penetration is 6-7% of households, 2% in cities, 15% nationally.
-75% are impulse buys could be converted to needs
-Growing middle class
-Rapid urban development (70% pop)
Fast expanding market 30: Ceramic teeth in Lichtenstein

Global Dental Implant & Prosthetics Growth (from 2009 to 2012 in Millions of USD$)

- **CAGR +9.5%**
- **Market Value in Millions of $'s**
  - 2009: 6,781.70
  - 2014: 10,562.20

Market Expansion Chart showing growth from 2009 to 2014 with a CAGR of +9.5%.
Fast expanding market 31: LED in Japan

LED Penetration Rate is to be of 60% in Japan in 2015

Current penetration rate: 2% of light market

The ratio to previous year

Sales of LED in Japan by unit

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity (k pcs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>179</td>
</tr>
<tr>
<td>2003</td>
<td>237</td>
</tr>
<tr>
<td>2004</td>
<td>306</td>
</tr>
<tr>
<td>2005</td>
<td>307</td>
</tr>
<tr>
<td>2006</td>
<td>325</td>
</tr>
<tr>
<td>2007</td>
<td>359</td>
</tr>
<tr>
<td>2008</td>
<td>600</td>
</tr>
<tr>
<td>2009</td>
<td>1,270</td>
</tr>
<tr>
<td>2010</td>
<td>3,913</td>
</tr>
<tr>
<td>2011</td>
<td>10,491</td>
</tr>
<tr>
<td>2012</td>
<td>185%</td>
</tr>
</tbody>
</table>
Fast expanding market 32: Shale gas in Pennsylvania

Pennsylvania Natural Gas Gross Withdrawals from Shale Gas

Million Cubic Feet
150,000
100,000
50,000
0
Jan '07 Jul '07 Jan '08 Jul '08 Jan '09 Jul '09 Jan '10 Jul '10 Jan '11 Jul '11

Source: U.S. Energy Information Administration
Fast expanding market 33: Cosmetic in Columbia

Exports increased by 6 times in the past ten years
Main Drivers that Catalyzed the Quinoa FEM
Predominant factors that have pushed the growth and development

**Factors**

1. **Lifestyle**
   - Health conscious culture
     - Obesity became an issue
     - Word of mouth about health benefits/weight loss
     - Attention to food allergies (i.e. gluten intolerance)
     - Healthy habits and organic product become Fashion

2. **Media**
   - The power of media used to influence the society
     - High-profile individuals such as celebrities and politicians show to the audience why they change lifestyle
     - Documentaries (i.e. Supersize Me) describing the consequences of being obese through real stories
     - TV program with famous trainers (i.e. The Biggest Loser)
     - Media advertisements are used to “push” products into the new market

3. **Government Action**
   - USA & EU Government
     - Government’s fear of increased medical expenditures and decreased national productivity of population
   - Bolivia Government
     - $10m in loans available to organic quinoa producers (2011)
     - Launch of a “Quinoa trail” for tourists to follow (2013)
     - $5m in credits to 70,000 quinoa producers to industrialize the production (2013)
     - Subsidizes for R&D projects related with food security

**Outcomes**

- Change in behavioral actions towards sustainable way of living
- Demand for a more balanced diet and food consumption in US and EU
- Staying healthy becomes a “Need”, increasing market opportunities
- Growing presence of health-food and organic stores
- Extensive television and media campaigns to raise awareness about overweight and unhealthy lifestyle issue
- Introduction of “healthy menu” in public programs like school breakfasts
The LED Market in Japan is Driven by the Following Factors
“Government intervention” and “Events” being the strongest drivers for growth

<table>
<thead>
<tr>
<th>Factors</th>
<th>Description</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macroeconomic</td>
<td>Regulations and Policies</td>
<td>• Accelerated the adoption of energy-efficient lighting</td>
</tr>
<tr>
<td>Factors</td>
<td>• Top-Runner Program 2009</td>
<td>• Market-pull incentives</td>
</tr>
<tr>
<td>1 Government</td>
<td>• Strategic Energy Plan 2010</td>
<td>• Led to a “re-thinking” about sustainable energy usage</td>
</tr>
<tr>
<td>Action</td>
<td>• Uniform Energy Saving Label 2006</td>
<td>• Change in behavioral actions towards sustainable energy usage</td>
</tr>
<tr>
<td></td>
<td>• Trade Agreements</td>
<td>• Payback time in the LED market has shortened</td>
</tr>
<tr>
<td>Microeconomic</td>
<td>External Events</td>
<td>• Invention of new solutions increase market opportunities</td>
</tr>
<tr>
<td>Factors</td>
<td>• Slowdown in global and regional economic growth</td>
<td></td>
</tr>
<tr>
<td>2 Events</td>
<td>• Events like the earthquake in Fukushima and the nuclear power plant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>breakdown (2011) influence the market</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Green Thinking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Increasing awareness about reducing the overall energy consumption –</td>
<td></td>
</tr>
<tr>
<td></td>
<td>“Save the Planet”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Reduce the number of nuclear power plants</td>
<td></td>
</tr>
<tr>
<td>3 Life-Style</td>
<td>Decreasing Production Costs</td>
<td></td>
</tr>
<tr>
<td>Change</td>
<td>• Increasing competition and improving manufacturing processes resulted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>in declining costs of production</td>
<td></td>
</tr>
<tr>
<td>4 Efficiency</td>
<td>Improving Technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Innovations leveraged the expansion of the product base</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Increasing usage of technological devices</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improving Technology</td>
<td></td>
</tr>
<tr>
<td>5 Technology</td>
<td>• Innovations leveraged the expansion of the product base</td>
<td></td>
</tr>
<tr>
<td>Development</td>
<td>• Increasing usage of technological devices</td>
<td></td>
</tr>
</tbody>
</table>
The Waste to Energy Market in Europe is Driven Primarily by Government Intervention as a Reaction to Events

<table>
<thead>
<tr>
<th>Factors</th>
<th>Description</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Action</td>
<td>Regulations and Policies</td>
<td>• Pushed forward the development of WtE</td>
</tr>
<tr>
<td></td>
<td>• EU waste directive priority puts emphasis on the reduce, reuse, recycle before WtE</td>
<td>• Made WtE attractive waste management system</td>
</tr>
<tr>
<td></td>
<td>• High tax on landfill makes WtE more attractive</td>
<td>• Led to exploration of WtE as a means to address both increasing trash and alternative energy</td>
</tr>
<tr>
<td>Events</td>
<td>External Events</td>
<td>• Change in behavioral actions towards trash management</td>
</tr>
<tr>
<td></td>
<td>• Industrial revolution</td>
<td>• Increased the amount of electricity/heat generated from the process</td>
</tr>
<tr>
<td></td>
<td>• World War II</td>
<td>• Discovery of new ways to dispose of waste and treatment such as bottom ash</td>
</tr>
<tr>
<td></td>
<td>• Energy Crisis 1970s</td>
<td>• Development of infrastructure</td>
</tr>
<tr>
<td>Life-Style Change</td>
<td>Green Thinking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Environmental awareness</td>
<td></td>
</tr>
<tr>
<td>Efficiency</td>
<td>Increasing Process Output</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Research and development pushes the output of energy with the same amount of waste</td>
<td></td>
</tr>
<tr>
<td>Technology Development</td>
<td>Improving Technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Technology development creates new processes of waste treatment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Expansion of WtE as alternative sources of energy</td>
<td></td>
</tr>
</tbody>
</table>