Automotive Africa – Mega Trends
An Industry Paper highlighting the key trends impacting the future growth of African continent and its Automotive Industry

Authored for Automechanika Dubai 2014

"50 Years of Growth, Innovation and Leadership".
June, 2014
INTRODUCTION – AFRICAN CONTINENT OVERVIEW
Top 10 Fast Forward Facts for Africa: Did You Know That....

1. By 2020, about **43%** of the people living on the African continent will live in **urban areas**.

2. Africa as a region will account for **15% of the world’s urban population by 2020**.

3. The African **middle class** population will be approximately **360.0 million by 2020**.

4. **220 million Africans** are only able to **meet basic needs** now, but **will become consumers** by 2017.

5. The **combined spending power** from the continent’s **top 18 cities** by 2020 will be $1.3 trillion.

6. **Regional Trade Integration** in Africa will bring about $216.00 billion in trade value from Intra-Trade.

7. **Mobile penetration** in Africa will reach 90% by 2020 with **internet penetration** also exceeding 60% rate by 2020.

8. **Mobile Transactions** to account for **75% of all banking transactions by 2020**.

9. **e-Government Initiatives** will receive $9.60 billion in investments from the African Governments over the next decade.

10. **Renewable energy capacity of Africa** will reach **12,000 MW by 2017**.

Source: Frost & Sullivan analysis.
Top Mega Trends in Africa

- Urbanisation
- Regional Integration
- Renewable Energy
- Innovating to Zero
- Connecting the Unconnected
- Responsible Revolution
- New Business Models
- Future Infrastructure

Photo Credits: Dreamstime. Source: Frost & Sullivan analysis.
Three Main Trends in Urbanisation: Development of Mega Cities, Mega Regions, Mega Corridors

MEGA CITIES
City with a minimum population of 8.0 million and a GDP of $250.00 billion in 2025 (14 Mega Cities in 2013 and 25 Mega Cities in 2025)

EXAMPLE: Cairo

MEGA REGIONS
Cities combining with suburbs to form regions (Population over 15.0 million)

EXAMPLE: Lagos and Kinshasa

MEGA CORRIDORS
The corridors connecting two major cities or Mega Regions (60 km or more apart, and with a combined population of 25.0 million or more)

EXAMPLE: North-South Corridor

Photo Credits: Dreamstime. Source: Frost & Sullivan analysis.
By 2020 Africa Will Account for 15% of the World’s Urban Occupants; Africa’s Resources Will Remain the Primary Driver of Urbanisation

Global Urban Population by Region, 2010-2050

Source: UN Department of Economic & Social Affairs, Frost & Sullivan analysis.
Corridors will Unlock Economic Potential of Landlocked Countries Leading to Better Inter-Dependence Among Cities and Regional Growth

- **The Greater Ibadan Lagos Accra (GILA) Corridor**
  - Combined population >18.0 million
  - Contributes combined GDP of $127,592,000.

- **The North Delta Region**
  - Combined population of 77.0 million
  - Three emerging corridors: Cairo-Suez, Cairo-Alexandria, Cairo-Ismailia.

- **North-South Corridor**
  - Facilitate inter-regional trade from Cape to Cairo.
  - Free trade area comprising 533.0 million people.
  - Combined GDP of $833.00 billion or 58% of Africa’s GDP.

- **Trans-Cunene Corridor**
  - Will link the Democratic Republic of Congo (DRC) with South Africa through Angola and Namibia.

- **1,000 km Abidjan-Ouagadougou Corridor**

- **900 km Kampala-Nairobi-Mombasa urban corridor**

Source: UN-Habitat, 2010; Frost & Sullivan analysis.
Markets with 80% Broadband Penetration are More Than Twice as Innovative as Countries with 40% Penetration

Annual Growth Rate of 9% till 2020 will allow Africa to reach Mobile Penetration Rate Close to Market Saturation

Mobile Phone Subscriptions
- In 2010, African mobile penetration is just less than 50%
- That said, several countries have reached saturation
- By 2020 we expect 90% mobile penetration rate

Mobile subscribers 2011
550.0 million

Mobile subscribers 2020
1,170.0 million

$80.00 billion investment in networks
Low cost mobile phones
Value-added Services

Source: Frost & Sullivan analysis.
Transport Route Integration Across the African Continent will increase Inter-Continental Trade and Drive Economic Growth

Numerous projects are aimed at improving Africa’s transport infrastructure.

### Transport Projects in Africa

- **Southern Sudan Roads**
  - Current rail projects: $225.0
  - Future road projects: $2,952.0

- **Uganda Roads**
  - Current road projects: $548.8
  - Future road projects: $2,952.0

- **Kenya Roads**
  - Current road projects: $807.0
  - Future road projects: $313.0

- **Kenya Ports**
  - Current rail projects: $332.0

Transport projects in Africa will drive down the current high cost of transport, which is hindering growth and is among the highest globally...

### Transport Costs (US cents per km)

- **West Africa**: 11c
- **China**: 5c
- **East Africa**: 8c
- **France**: 5c
- **Southern Africa**: 6c
- **USA**: 4c

*Source: World Bank; Frost & Sullivan analysis.*
Africa’s Largest Economies and Engines of Growth to 2020

<table>
<thead>
<tr>
<th>Country</th>
<th>GDP 2020</th>
<th>GDP 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>$620 billion</td>
<td>$357.2 billion</td>
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<tr>
<td>Egypt</td>
<td>$448.9 billion</td>
<td>$218.84 billion</td>
</tr>
<tr>
<td>Nigeria</td>
<td>$510.5 billion</td>
<td>$206.6 billion</td>
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<tr>
<td>Algeria</td>
<td>$310 billion</td>
<td>$158.9 billion</td>
</tr>
<tr>
<td>Morocco</td>
<td>$175 billion</td>
<td>$91.7 billion</td>
</tr>
<tr>
<td>Angola</td>
<td>$201 billion</td>
<td>$86 billion</td>
</tr>
<tr>
<td>Sudan</td>
<td>$162.3 billion</td>
<td>$65.9 billion</td>
</tr>
<tr>
<td>Kenya</td>
<td>$81.0 billion</td>
<td>$32.4 billion</td>
</tr>
<tr>
<td>Ghana</td>
<td>$47.5 billion</td>
<td>$18.0 billion</td>
</tr>
</tbody>
</table>

*Note: The figure denotes GDP at market prices in 2020*

*The figure in brackets denotes GDP at market prices in 2010*

*Source: Frost & Sullivan and International Monetary Fund Database, 2010*

- 1 out of 5 buses sold in Sub-Saharan region is from China

China-Africa Bilateral Trade, 2002-2022

- Bilateral trade involves export of minerals, oil and gas and other related materials which are critical for Chinese growth.

Foreign Investment
Increasing Foreign Investment Especially from China to Influence the Economical and Political Environment in African Nations;
Dedicated Vehicles Being Developed for African Terrain

Flat-pack OX truck

http://www.independent.co.uk/life-style/motoring/features/sir-torquil-norman-has-designed-a-flatpack-ox-truck-for-the-developing-world-8617814.html

Mobius Motors - Expected launch price 10k

http://www.mobiusmotors.com/vehicles/
Same vehicle, multiple functions
AFRICAN AUTOMOTIVE MARKET OVERVIEW
**African Automotive Market Characteristics**

A Battleground for Market Share and Customers in a low Volumes Market

| 4x4’s, SUV’s and Pickups continue to dominate across Africa | Government & corporate sales for major industries remain dominant channels | European & US brands are leading in North Africa but now Chinese and Korean are increasing their dominance | Japanese & Korean brands occupy top spots across West and Sub-Saharan Africa | Competition is intense across the continent with new entrants from emerging brands from China and India |
More than 21.6 million vehicles operational in Africa
The Top 4 account for more than 65% of all vehicles in Africa

- North Africa = nearly 11.0 Million
- Sub-Saharan Africa (excluding South Africa) = 10.6 million

In Sub-Saharan countries more than 30 year old vehicle are still available in UIO

Key 4 markets contributes nearly 65.5%

Base Year 2013; Source: Frost & Sullivan Analysis
These vehicles generate demand for nearly $7.68 billion*

Average cost of repair in North Africa = $423 per vehicle/year
Average cost of repair in Sub-Saharan Africa = $285 per vehicle/year

- North Africa = nearly $4.65 billion (60.6%)
- Sub-Saharan Countries (excluding South Africa) = $3.03 billion (39.4%)

(*) this does not include tires, batteries and lubricants
African New Car Market Dynamics
Countries outside of Top 5 delivering higher growth rates; competition between manufacturers and importers across the continent intensifying

MANUFACTURER ACTIVITY
Manufacturers are taking direct action to grow their presence across the regions in anticipation of market growth with Honda setting up West African office in Nigeria in 09/13

IMPORTER ACTIVITY
New businesses are entering the African market e.g. in Kenya the sale of CMC Group to UAE-based Al-Futtaim Group was concluded in March 2014

Angola New Car Volumes
- 2010: 17,695
- 2011: 23,436
- 2012: 29,980
- 2013: 32,505

Kenya New Car Volumes
- 2011: 49,667
- 2012: 60,792
- 2013: 76,122

Mozambique New Car Volumes
- 2011: 4,891
- 2012: 5,527
- 2013: 6,522

Note: All figures are rounded. The base year is 2012. Source: Frost & Sullivan Analysis
Leading Vehicle Brands across Africa
Korean & Japanese brands dominant in the West and South; European & US brands better placed in the North and East

Market Leader (New Car Sales)
Parts Distribution Overview

After Market Distribution Structure

- Local parts production is limited to a few North African countries
- Algeria, Egypt and Morocco are self-sustained markets, where Algeria is driven by strict regulations
- Limited impact of government legislation/regulation in most of the Sub-Saharan countries; Nigeria is the largest market for Grey Imports
- Grey Imports include domestic parts, spurious/fake parts

Note: Revenue share by distribution level

Source: Frost & Sullivan Analysis
More than 8 channels for parts distribution  
Sub-Saharan Africa is the largest market for Grey Imports;  
We expect nearly 55-60% market to be driven by Grey Imports

<table>
<thead>
<tr>
<th>Channel</th>
<th>Particulars</th>
<th>Type of Channel</th>
<th>Estimated Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel 1</td>
<td>Authorised Parts - Going to <strong>Vehicle Authorised Dealer</strong> (for own vehicle servicing)</td>
<td>Authorised Channel</td>
<td></td>
</tr>
<tr>
<td>Channel 2</td>
<td>Authorised Parts - Going to <strong>Vehicle Authorised Dealer</strong> (for wholesale purpose)</td>
<td>Authorised Channel</td>
<td></td>
</tr>
<tr>
<td>Channel 3</td>
<td>OES/VMs <strong>Second Brand</strong> (low end) Genuine parts going to aftermarket</td>
<td>Authorised Channel</td>
<td></td>
</tr>
<tr>
<td>Channel 4</td>
<td><strong>OEM (Part Manufacturer)</strong> who is supplying in after market as Authorised dealers</td>
<td>Authorised Channel</td>
<td></td>
</tr>
<tr>
<td>Channel 5</td>
<td>Tier 1 suppliers e.g. Bosch. TRW Part providers like part Mart who does a job of integrator and logistic company which means they get parts from local Korean/Japanese/Chinese suppliers, import them in Africa and sale it to aftermarket</td>
<td>Authorised &amp; Unauthorised Channel</td>
<td>Authorised Channel is nearly 40-45% and Unauthorised Channel accounts for the rest (Spurious and fake products = nearly 40%)</td>
</tr>
<tr>
<td>Channel 6</td>
<td><strong>Fake Parts</strong> - completely fake, spurious parts</td>
<td>Unauthorised Channel</td>
<td></td>
</tr>
<tr>
<td>Channel 7</td>
<td><strong>Domestic parts</strong> - back channel e.g. direct import of OES parts from manufacturing country without involving OES local office, these parts will come in boxes which will have local language e.g. for Toyota, Nissan it will be written in Japanese</td>
<td>Unauthorised Channel</td>
<td></td>
</tr>
<tr>
<td>Channel 8</td>
<td>Domestically Assembled/Manufactured parts supplied in aftermarket through 2 tier/3 tier or 4 tier channels</td>
<td>Authorised &amp; Unauthorised Channel</td>
<td></td>
</tr>
</tbody>
</table>

Source: Frost & Sullivan Analysis
Key Trends in Distribution

- National network coverage, either fully owned or operated in partnership
- Multi-brand showrooms are the norm across
- Revenues from new car sales form big chunk of the business...and increasingly parts sales (non branded)
- Warranty is a main issue due to huge claims - Service / parts facilities & trained professional is key factor
- Used car sales and leasing has become important sales channels
Key Conclusion

Asian OEMs are expected to play critical role in the future. This is a result of the huge potential demonstrated by the market.

Future infrastructure development to drive vehicles and parts demand

Sustained economic growth and sound fiscal and monetary policies

Share of Chinese OEMs expected to increase in short-medium term

Increased urbanisation will necessitate the need for efficient transport systems

African markets offering potential for assembly/manufacturing activities
ABOUT FROST & SULLIVAN
Who is Frost & Sullivan?
50 years of partnering Global Companies helping Accelerate Growth

- Founded in 1961
- Offer the exclusive Growth System including:
  - Growth Consulting and Growth Implementation Services
  - TEAM Research & Reports, Custom Research
- Over 2,000 Consultants & Analysts across 43 global locations
- 10,000+ clients worldwide including emerging companies, the global 1000, and the investment community

How We Support You

- Megatrend and impact analysis on your business
- Growth and New Business Opportunity Assessments
- Business Plan & Change Management
- Implementation and Mid-Top Management Training
- Expansion and Partnership Selection Strategy
- Competitive Environment Analysis
Automotive Practice Team

A regional team (MENASA) of **25 automotive analysts, consultants and research experts** manage two functional areas complimented by global teams functioning seamlessly to provide global automotive expertise.

A team of **300 + automotive analysts, consultants and research experts** across the globe specialize in 8 program areas.
Product Offerings for Automotive across Value Chain

Core functions

CEO office
- Growth Strategy
- Geographic Expansion
- Partner identification
- Merger & Acquisition
- Techno Economic Feasibility Studies

Vendor Sourcing
- Vendor / supplier identification
- Vendor satisfaction

R&D Technology
- Regulatory Analysis
- Technology assessment
- Product clinic
- Technical insights

Manufacturing
- Manufacturing Excellence

Sales & Marketing
- Market entry strategy
- Econometric analysis
- Dashboard – market information

Channel Management
- Dealer Development
- Spare part pricing
- Dealer benchmarking
- Dealer Training

Customers
- Usage & Attitude
- Brand Equity
- Cost of Ownership
- Product Clinic
- Customer Satisfaction
- Mobility Tracking

Support functions

Finance Administration Human Resources Information Technology Quality Assurance Corporate Communication Legal Compliance Logistics

Fund Raising
- Company Due Diligence
- Salary benchmarking
- Management Systems
- Awards
- Brand Protection
- Infrastructure assessment
Frost & Sullivan Leverage on Expertise of Regional and Global Trend Experts in 45 F&S offices in 30 Countries

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