Strategic Outlook of the Turkish Medium-Heavy Duty Commercial Truck and Bus Market in 2013

Medium-Heavy Commercial Vehicle Sales to Exceed 75 Thousand by 2020

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Idil Donmez, Consulting Analyst, Automotive & Transportation

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Today’s Presenters

Mohamed Mubarak Moosa,
Program Manager
Frost & Sullivan

A Consultant with about 7+ years of experience in strategy consulting and research across Automotive sector. My current focus areas are related to tracking next generation distributive business models & innovations, megatrends impacting Automotive sector, urban mobility, and the markets in emerging countries. Based in Istanbul, I currently manage the research and consulting activities of Frost & Sullivan, Turkey.

Idil Donmez,
Consulting Analyst
Frost & Sullivan

A consulting analyst for more than 2 years in consulting and research field in Automotive and Transportation business unit. My current working focus is related to Commercial Vehicle and Construction Equipment Market in Turkey, considering the role of technology and forecasting new market opportunities. I currently work in consulting and research activities of Frost & Sullivan, Turkey.
Agenda

1. Global Commercial Vehicle Market
2. Mega Trends related to Commercial Vehicle Market
3. Commercial Vehicle Market in Turkey
4. Key Conclusions
Objective of Frost & Sullivan’s Global Commercial Vehicle Growth Partnership Services

T.E.A.M Research to Offer Mission Critical Growth Strategy Development and Execution Support

“Our industry-focused research, combined with extensive experience in all aspects of the commercial vehicle industry, helps our clients find areas where they can grow despite the challenges of technology, price, competition, and regulation.”
The Last Word—Three Big Predictions

1. Of all vehicle segments considered in the study, HD truck and mini- and heavy-bus segments expected to double in sales over the 2012-2020 period. Total 2020 sales for these categories of commercial vehicles projected to reach 65 Thousand by 2020, while foreign sales of trucks and buses made in Turkey expected to rise faster over the next 4-5 years.

2. Turkey poised to emerge as a major sales and production hub of medium-duty trucks and buses, with both local market and Middle East, Africa and Europe sales potential. European OEMs expected to increasingly leverage Turkey to manufacture commercial vehicles destined for Eastern and also Western European markets. OEMs surveyed in this study indicated a potential to reduce manufacturing costs by almost 10-20 percent for several platforms that are now manufactured in Western Europe.

3. Turkish bus manufacturers are expected to develop strategic partnerships with foreign OEMs in developing intra-city midi- and mini-buses both for local and foreign markets. Turkish bus OEMs expected to rapidly develop foreign market focused product portfolios over the next 2-5 years.

Source: Frost & Sullivan analysis.
2013 Global GDP and Commercial Truck Market Growth Outlook:
Growth in BRIC and Next 11 economies are expected to offer strength to global truck demand.

<table>
<thead>
<tr>
<th>Region</th>
<th>GDP Growth Estimates: 2013 (%)</th>
<th>MCV Growth (YoY%)</th>
<th>HCV Growth (YoY%)</th>
<th>Overall CV Growth (YoY%)</th>
<th>Market Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>2–2.5</td>
<td>8</td>
<td>5.9</td>
<td>6.8</td>
<td>Moderate</td>
</tr>
<tr>
<td>South America</td>
<td>4–5</td>
<td>4.6</td>
<td>7.2</td>
<td>6.3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Europe</td>
<td>0.5–1</td>
<td>(3.0)</td>
<td>(7.9)</td>
<td>(6.9)</td>
<td>Low</td>
</tr>
<tr>
<td>China</td>
<td>8–8.5</td>
<td>2.0</td>
<td>3.5</td>
<td>3.1</td>
<td>Moderate</td>
</tr>
<tr>
<td>India</td>
<td>5.5–6.5</td>
<td>1.5</td>
<td>3.5</td>
<td>2.5</td>
<td>Moderate</td>
</tr>
<tr>
<td>Russia</td>
<td>4–6</td>
<td>3.0</td>
<td>13.5</td>
<td>11.1</td>
<td>High</td>
</tr>
<tr>
<td>Next 11</td>
<td>6–7</td>
<td>11.1</td>
<td>10.9</td>
<td>11.0</td>
<td>High</td>
</tr>
<tr>
<td>RoW</td>
<td>4–5</td>
<td>15.5</td>
<td>9.5</td>
<td>12.7</td>
<td>High</td>
</tr>
<tr>
<td>Global</td>
<td>3–3.5</td>
<td>5.6</td>
<td>3.6</td>
<td>4.3</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Next 11 Markets:
Indonesia, Turkey, Mexico, and Egypt offer strong growth potential in 2013, as these economies expect rapid economic development, leading to freight movement expansion.

Global CV Outlook 2013: Unit Sales Forecast—Next 11: 2013

As the most populous Arab nation, Egypt offers an attractive opportunity for truck OEMs, as its focus has shifted toward modernizing the economy. Investment in infrastructure is necessary to drive demand for new trucks.

Indonesia is set to double its demand for MCV and HCV by 2018.

The Mexican CV demand is set to triple over the 2011 to 2018 period. Economic growth and rise in construction activity, coupled with the need for replacement of aging fleet vehicles, will drive growth.

Turkey will experience a rising demand for MCVs and HCVs in 2013, which is based on both export-oriented production and local sales.

Unit Sales

Note: All figures are rounded; the base year is 2012. Bangladesh data is not present, owing to lack of availability at the time of publication of this study. Source: Frost & Sullivan analysis.
Overview of Urbanization in Turkey: Mega City

Turkey is to Strengthen Transportation Infrastructure with Plans of Building 5,600 km of Highway, 15,000 km of Dual Carriageway and Construction of World ‘s Fourth Longest Bridge by 2025.

Urbanization Rate of Highly Urban States and Mega Cities in Turkey in 2025

Mega Cities in 2025
- Cities over 4 million population in 2025
- Cities over 2 million population in 2025

<table>
<thead>
<tr>
<th>City</th>
<th>Urbanization Rate</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Istanbul</td>
<td>98.9%</td>
<td>15.2 million</td>
</tr>
<tr>
<td>Ankara</td>
<td>97.2%</td>
<td>5.5 million</td>
</tr>
<tr>
<td>Kocaeli</td>
<td>93.5%</td>
<td>2.1 million</td>
</tr>
<tr>
<td>Bursa</td>
<td>88.6%</td>
<td>3.4 million</td>
</tr>
<tr>
<td>Konya</td>
<td>73.8%</td>
<td>2.2 million</td>
</tr>
<tr>
<td>Adana</td>
<td>88.1%</td>
<td>2.2 million</td>
</tr>
<tr>
<td>Izmir</td>
<td>91.3%</td>
<td>4.5 million</td>
</tr>
<tr>
<td>Antalya</td>
<td>70.4%</td>
<td>2.6 million</td>
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</table>

Note: Mega City is defined as a city with population of over 8 million and GDP of $250 billion or more.

The Figures in % represent the urbanisation rate.

Source: Turkstat and Frost & Sullivan
Top Ten Regions* to Contribute 60 Percent ($1,287.3 Billion) of Turkey GDP in 2025: Two regions to Advance One Rank in 2025

1. Istanbul (Cross Industries)  
   2011 - $218.00 billion  
   2025 - $482.10 billion

2. Ankara (Cross Industries)  
   2011 - $67.31 billion  
   2025 - $147.91 billion

3. Bursa-Eskisehir-Bilecik (Automotive, Textile and Furniture Industries Hub)  
   2011 - $54.19 billion  
   2025 - $131.05 billion

   2011 - $49.94 billion  
   2025 - $119.68 billion

5. Izmir (Cross Industries)  
   2011 - $50.90 billion  
   2025 - $108.49 billion

6. Antalya-Isparta-Burdur (Tourism and Food Industry Hub)  
   2011 - $30.63 billion  
   2025 - $68.14 billion

7. Adana-Mersin (Food and Chemical Industries Hub)  
   2011 - $30.68 billion  
   2025 - $60.22 billion

8. Aydin-Denizli-Mugla (Textile Industry, Mining and Tourism Hub)  
   2011 - $27.96 billion  
   2025 - $58.82 billion

9. Manisa-Afyon-Kutahya-Usak (Mining and White Goods Industry)  
   2011 - $27.97 billion  
   2025 - $55.99 billion

10. Tekirdag-Edirne-Kirklareli (Textile and Food Industries Hub)  
    2011 - $22.28 billion  
    2025 - $54.90 billion

*Statistical Regions by type of economic activity according to Turkstat

Note: The figures denote GDP at current prices. Arrows denote movement in ranking in 2025 compared to 2011. These statistical regions (IBBS) were established to reduce development differences among territorial regions and serve as a reference for the collection, development and harmonization of regional statistics and for socio-economic analyses of the regions. At IBBS 2 level, 26 territorial units have been determined according to the size of population by regarding economic, social, cultural, geographical and other factors.

Source: Turkstat, and Frost & Sullivan Analysis
Case Study: Istanbul – Izmir Industrial Corridor to Generate 40 Per cent of Turkish Manufacturing Output by 2025

Estimated investment for 377 km length highways: $10 billion
Investment for 300 kilometres of high speed railway: $1.5 billion

85% of Automotive Component Manufacturers hosted
40% of Turkish manufacturing output to be generated

65% of Turkey’s Foreign Trade is handled by 4 port bays
59 Organized Industry Zones will be connected

Image source: Google images
Turkey to Spend $175 billion on Infrastructure Improvements between 2011 and 2023

$45 billion of Will be Spent on High Speed Rail Projects

$45 Billion
Investment for 10,500 km of High Speed Railways

$125 Billion
Investment in 5,600 km of Highway and 15,000 km of Dual Carriageway

$3.6 Billion
Investment for 100 km of Tunnels

$1.1 Billion
Investment in construction of World ‘s 4th Longest Bridge

430 Planes
Carrying 60 Million Passenger per Year

4,000 km
Conventional Railways

Source: Ministry of Transport, Frost & Sullivan

Photo Credits: Dreamstime, Frost & Sullivan
Ownership Cycle and Vehicle Age Analysis
Proportion of New Vehicles to Increase Steadily Resulting in Declining Average Vehicle Age.

M&HD Truck and Bus Market: Age Analysis of New Vs Used Vehicles, Turkey, 2012-2020

Market Share (%)

2012
- Bus: 95% Used Vehicle, 5% New Vehicle
- Truck: 20% Used Vehicle, 80% New Vehicle

2020
- Bus: 88% Used Vehicle, 12% New Vehicle
- Truck: 79% Used Vehicle, 21% New Vehicle

M&HD Truck and Bus Market: Average Vehicle Age, Turkey, 2012-2020

Average Vehicle Age

2012
- Truck: 14.5
- Bus: 11

2020
- Truck: 13
- Bus: 10.2

Source: Frost & Sullivan.
Turkish M&HD Truck and Bus Density by Region

Istanbul-Izmir-Sakarya Triad to Account for Most Vehicle Population in Turkey Mainly Due to Rapid Urbanization and Industrialization Infrastructure Development Planned Around the Mega Corridor

M&HD Truck and Bus Market: Vehicle Density by Region, 2012

Istanbul - Izmir Mega Corridor Combines Istanbul, Tekirdag, Kocaeli, Sakarya, Bursa, Balikesir, Manisa and Izmir

Source: OSD, Frost & Sullivan analysis.

Turkish Truck and Bus Parc 2012-2020

- > 50,000 vehicles
- > 30,000 vehicles
- > 10,000 vehicles
Overall Turkish MCV-HCV Market Unit Shipment Snapshot:
Rapid Urbanisation and the need for people movement drives the demand for intra-city buses

M&HD Truck and Bus Market: Unit Shipment Forecast, Turkey, 2012 – 2020

Sales: 42,189 units

Sales: 75,709 units

Note: All figures are rounded. The base year is 2012. Source: Frost & Sullivan analysis.
Medium-Heavy Duty Truck Market

HD trucks to dominate with 87% of the total M&HD truck market which is expected to reach a sales volume of 56,112 units by 2020.

M&HD Truck Market: Frost & Sullivan Scenario Analysis, Turkey, 2012-2020

- M&HD Truck Market: Unit Sales, Turkey, 2012

Source: Frost & Sullivan.
Bus and Midi-bus Market:
Rapid Urbanisation and the need for people movement drives the demand for intra-city buses

M&HD Truck and Bus Market: Unit Shipment Forecast, Turkey, 2012 – 2020

Sales: 5,619 units
Sales: 7,123 units
Sales: 11,213 units

2012
2015
2020

Note: All figures are rounded. The base year is 2012. Source: Frost & Sullivan analysis.
Foreign Players like Daimler, Iveco and Ford Dominate the Medium-Heavy Duty (M&HD) Truck and Bus Market. Whereas, Otokar, a Local Player, is the Largest Market Share Holder in Midi-Bus Market.

Source: Frost & Sullivan.
CV Manufacturing Locations in Turkey
Most of the Truck and Bus Manufacturers and Suppliers are Located In and Around Marmara Region, however the Main Bus producers such as Mercedes and Temsa are in Anatolian Side.

Source: Frost & Sullivan
Total Commercial Vehicle Market — Production Forecast

Demand for People movers increases with the rapid urbanization

M&HD Truck and Bus Market: Production Forecast, Turkey, 2012-2015

- **Midi Bus**: 2012: 4,106, 2015: 6,575, CAGR 17%
- **Bus**: 2012: 6,631, 2015: 8,947, CAGR 10%
- **Medium-duty Truck**: 2012: 5,477, 2015: 7,506
- **Heavy-duty Truck**: 2012: 26,280, 2015: 41,701, CAGR 16%

Note: All figures are rounded. Source: OSD, Frost & Sullivan analysis.
Mercedes Benz’s Market Leadership Can be Attributed to its Strong Product Portfolio and Sales in Both Truck and Bus Markets

M&HD Truck and Bus Market: Market Share Analysis, Turkey, 2012

Note: All figures are rounded. The base year is 2012. Source: OSD, Frost & Sullivan analysis.
Key Conclusions

Urbanization in Turkey coupled with its geopolitical significance and centrality in European and Middle Eastern markets stoking commercial vehicle market.

Heavy-truck, midi-bus and heavy-bus segments to grow at the fastest pace. In all 3 categories sales to almost double within the next 7 years.

Turkish CV market sales to grow at 7% CAGR during 2012-2020 forecast period.

Old truck parc creating high replacement demand which is supported by government scrap incentives and strengthening regulatory environment.

Demand for CNG and accessible buses set to increase in short to mid-term.

Foreign OEMs are expected to continue and expand dominance in the market. Local OEMs experiencing competitive threat with some such as BMC filing for bankruptcy.

Both foreign and local OEMs, and also leading tier-1 suppliers set to benefit from a fledging aftermarket as advanced trucks and buses proliferate the market. Also both parties to benefit from presence in Turkey as it emerges as a regional production hub.
Global Market Experts in Automotive including Commercial Vehicle

- Sandeep Kar, North America
- Lisa Whalen, North America
- Michel Johanson, LATAM
- Franck Leveque, Europe
- Dominik Buszta, CEE
- Masaki Honda, Japan
- Jason Huang, China
- Vivek Vaidya, APAC
- Idil Donmez, Turkey
- Kudzanayi Bangure, Africa
- V G Ramakrishnan, India
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