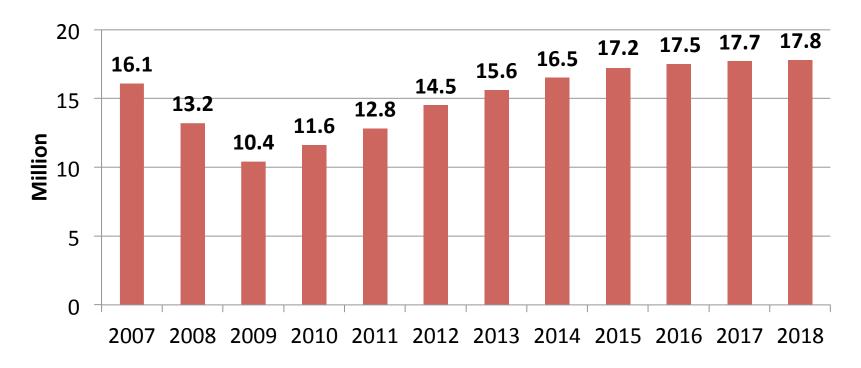
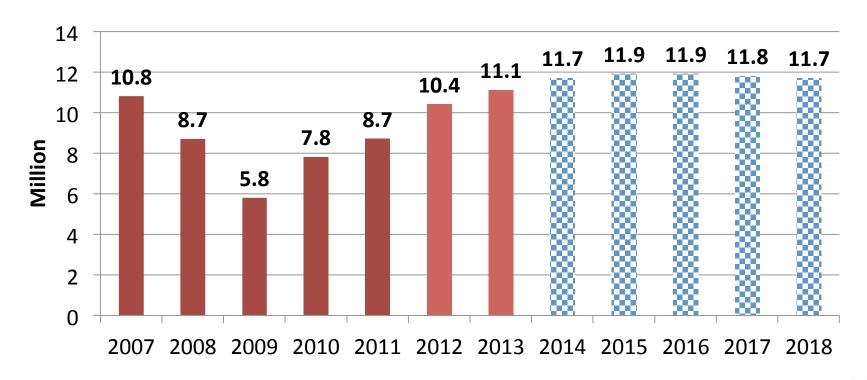


## **U.S. Sales growing slowly**





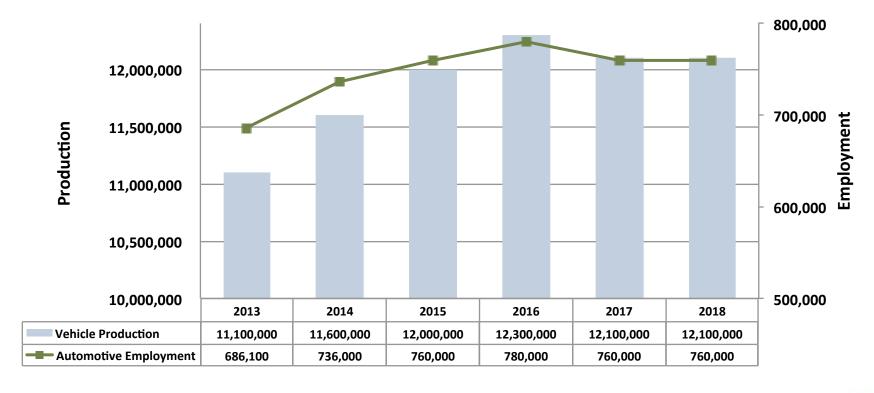
## **U.S. Vehicle Production remains steady**



HWA Analytics LLC Ann Arbor, Michigan

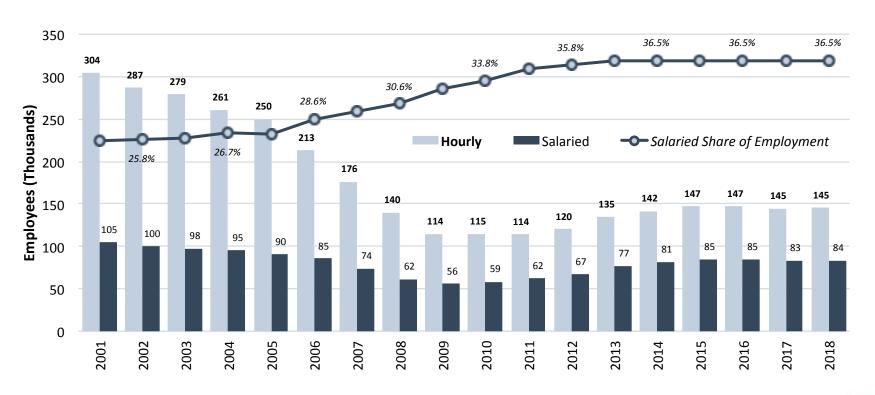
Source: Wards, Auto News

## **Employment tied to production**



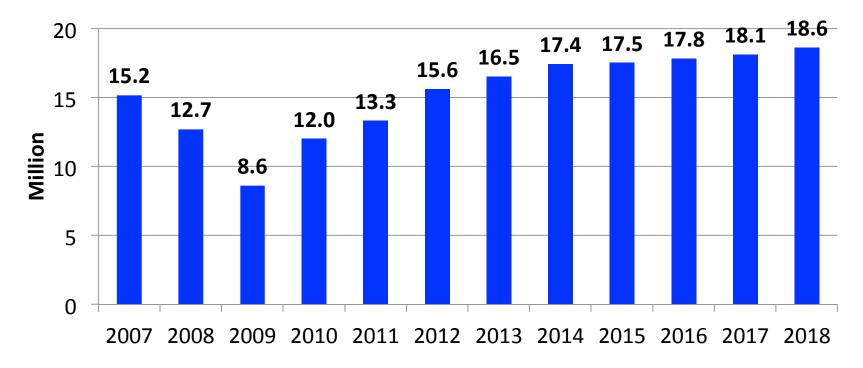


## **Detroit 3—losing hourly jobs**





# North American production grows—in Mexico 2 million unit increase between 2012-2018

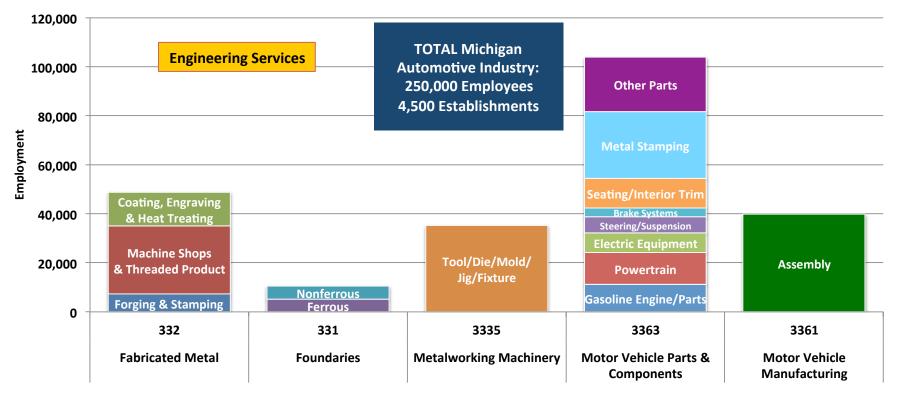


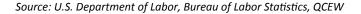


Source: Auto News, Wards

## What is Auto Manufacturing?

#### **Automotive Employment and Establishments in Michigan**







### **Contributions**

- Nationally, 6-8 multiplier—entire company/industry
- Assembly plant—10 or higher
- In-state, between 3-5 multiplier (automotive states—14)
- \$500 billion compensation, \$70 billion tax revenue, nationally
- Jobs supported throughout entire economy—direct, indirect and induced



## **Effects of investment**

- Suppliers—1<sup>st</sup> and lower tiers add jobs, build facilities
- Sequencing facilities
- Supply chain and logistics configurations
- Many service provider jobs—legal, finance, education, healthcare



## And, major contributions across many sectors

- Manufacturing
- Professional and Technical Services
- Administration and Services
- Wholesale Trade
- Retail Trade
- Transportation and Warehousing
- Finance and Insurance
- Management of Companies
- Other Non-Manufacturing





## **South Carolina woos Volvo**

- \$500 million plant investment by Volvo
- No unions—actively prohibit (legal staff involvement)
- Port of Charleston—overseas exports
- Labor force and training
- Experience in High-tech manufacturing
- Attractive investment environment (business-friendly)
- Has \$50—\$120 million bond-borrowing power (no legislative approval needed)
- Incentive package estimated to be upwards of \$200 million

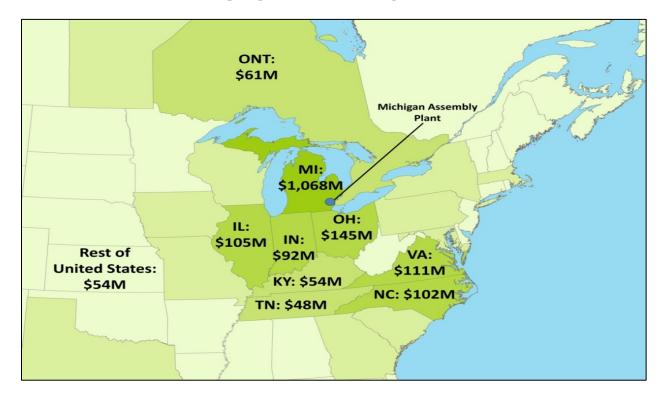


## Missouri dances with Ford

- Ford Motor Company has major plant in KC
- Company needed to upgrade plant for new product (Transit) and revamp current (F-150)
- Major investment needed, not much public support
- Ford began looking at other options
- Gov. called legislature into special session
- Package of bills approved, creating large fund to support investment by "major transportation manufacturing companies" (\$200 million)
- Ford immediately announced new product, later upgrade and new investment for F-150



## One assembly plant spends a lot of \$\$

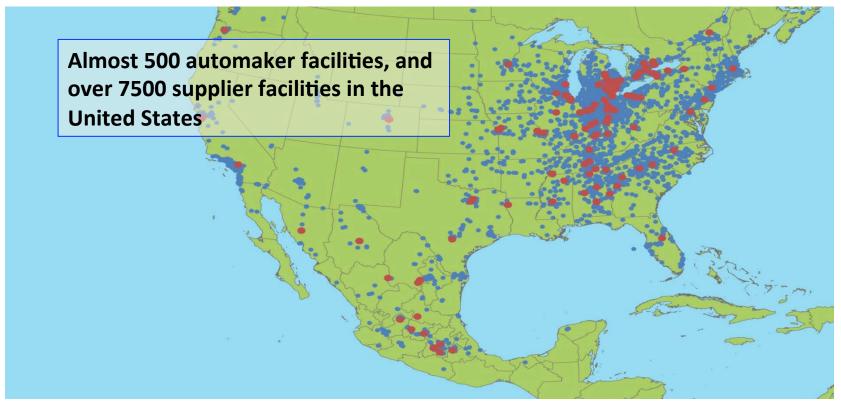




Source: CAR report

## The North American automotive industry:

Its all about the labor pool availability and capability





## Shift in manufacturing

- No new plants in U.S. since 2009
  - S.C. plant undersized—likely a CKD
- Major MX investments-9 new announced
- Ontario and Canada, mixed bag—currency exchange, higher wages, tough union, distance
- Retention of existing facilities becomes main priority in states across the country and in Canada
- Near-border states will see impact
  - (southern +, northern -)



#### What's affecting sales mix

- Gas prices—not going up for a while
  - Pickups, SUVs are hot sellers
    - Ford sells 71,000+ F-series in August
  - Small cars, electrics—not





- VW
  - Are you kidding me???
  - Diesel stock just went down
  - No comparable in the industry



### What affects production

#### Supplier capacity

 Carmakers went through major restructuring and the supply base went through massive restructuring, as well

"It just takes one supplier not having the capacity and you can't build a vehicle or a powertrain," Joe

Hinrichs (Ford) says

#### Supply chain interrupts

- West coast ports impacted auto for six months
- Especially Asian assemblers in U.S.

#### New materials

- Availability
- Processing







## A short look forward

- Mexico is a big play
  - Major investment in vehicle production facilities
  - FCA moving small, less profitable vehicles there, large trucks etc., into U.S.
  - Ford moving Focus out of MI, GM Sonic next?
- Alternative fuel vehicles are tough sell
  - Without stiff regulations, mandates
  - \$2.50 gas
- China slowdown having positive effect on U.S. industry
  - Commodities prices have fallen as China demand wanes—copper, steel, oil, etc..



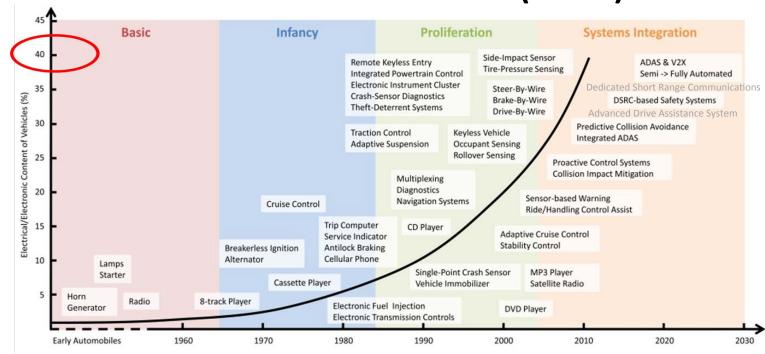
## What's the future of the car?

- A Kodak moment—the least important players are the manufacturers
- Electronics becoming soul of the vehicle
- Entry of IT in a big way
  - Apple—cat's out of the bag
  - Google—hires Krafcik
  - Uber—Tech center in Pittsburgh
- New Jeep pickup?
- Who wants a new car anyway? Average income of new car buyer= \$80,000
- Average age new car buyer=51.7 years, average age of U.S. population=36.8 years





### **Growth in Electronics (>40%)**



- An average vehicle contains around 60 microprocessors to run electric content
  more than 300 million lines of software code
- CISCO estimates 90% of new value will be software-related



#### That darned consumer

- NADA predicts GDP through 2019 less than 3%
- Gas below \$2.50/gallon long term
- Lights trucks at 56.8% in August 2015, up 8.6% from same period a year ago
- Top 3 vehicles- F-series, Silverado, Ram (all trucks)
- 4<sup>th</sup> vehicle, Accord sold 41,000 in August, F-series sold 71,000



### Factors that affect sales—a mixed bag

- Labor force participation—historic low
- However, full-time employment drives up auto sales
- Household wealth effect
- Low interest rates
- Increasing household financial burdens—Apple wants a piece of monthly payments (phone lease plan)
- Household budget outlays are shifting
- Student debt burden—graduate with negative equity
- Motor vehicle price is rising—average price above \$31,000
- Youth movement to cities—demand alternative transportation



# Thank you

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