

# Macro-Industrial Working Group 2

*Macro section*



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*Macro-Industrial Working Group*

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Russ Tarver, and Vipin Aurora*

*September 11, 2012 | Washington, DC*

**WORKING GROUP PRESENTATION FOR DISCUSSION PURPOSES  
DO NOT QUOTE OR CITE AS RESULTS ARE SUBJECT TO CHANGE**

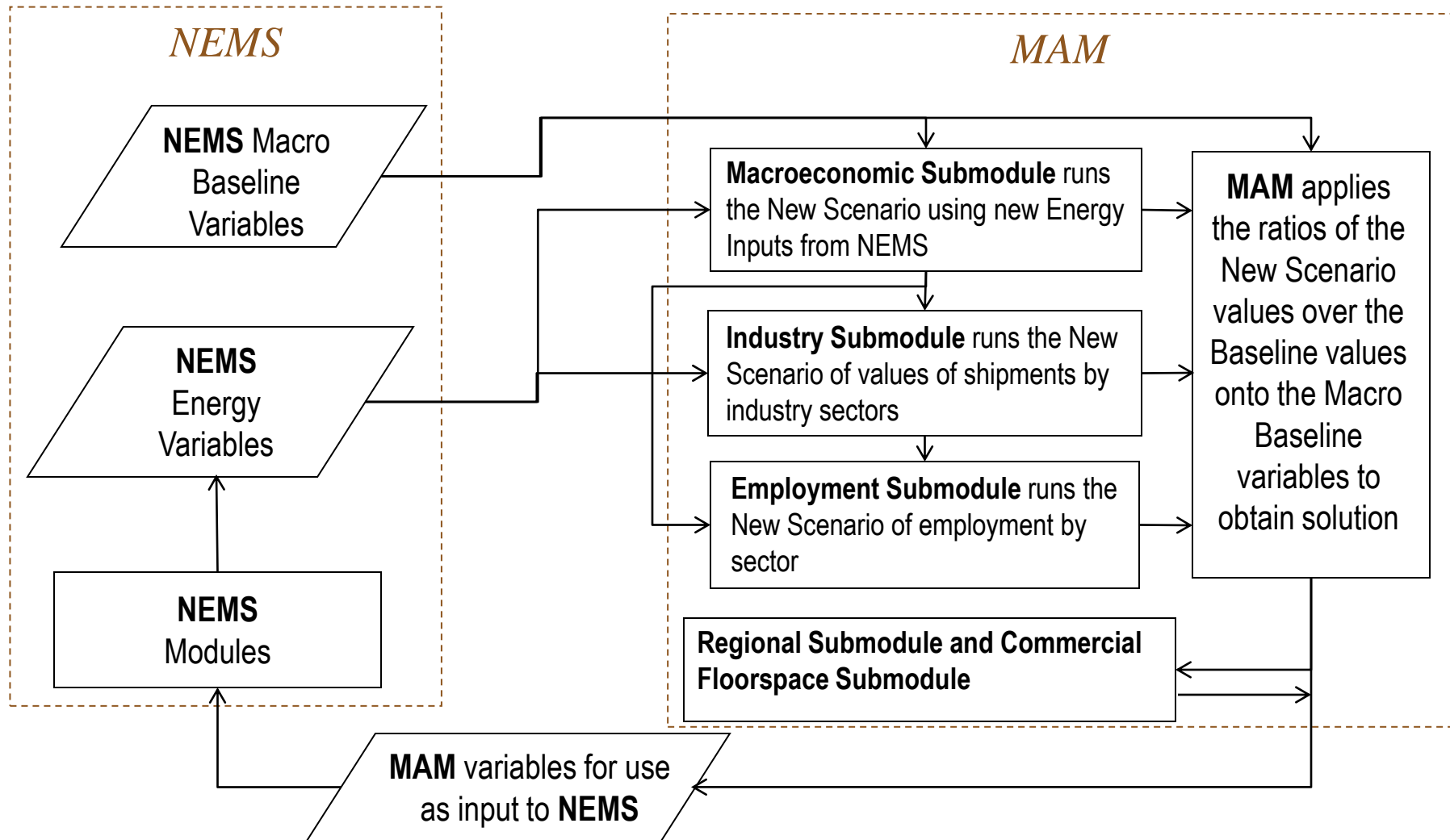
# Overview

- The overall macroeconomic outlook
- The detailed industrial production outlook
- Summary employment and commercial floor space outlook
- Concluding remarks

# Macroeconomic Explanations for Industrial Output Growth

- Exports grow faster than imports so more of industrial output satisfied domestic demand
- Compared to AEO2012, imports grow more slowly than exports. In the AEO2012, imports grow by 4.3 percent (2012 to 2040), while exports grow by 5.7 percent. For the preliminary AEO2013, imports grow by 3.9 percent while exports grow by 5.5 percent. So compared to the AEO2012, this year more of the industrial output again satisfies domestic demand.
- More detailed inclusion of increased unconventional natural gas impacts on other industries, primarily concentrated in bulk chemicals, primary metals and metal based durables.

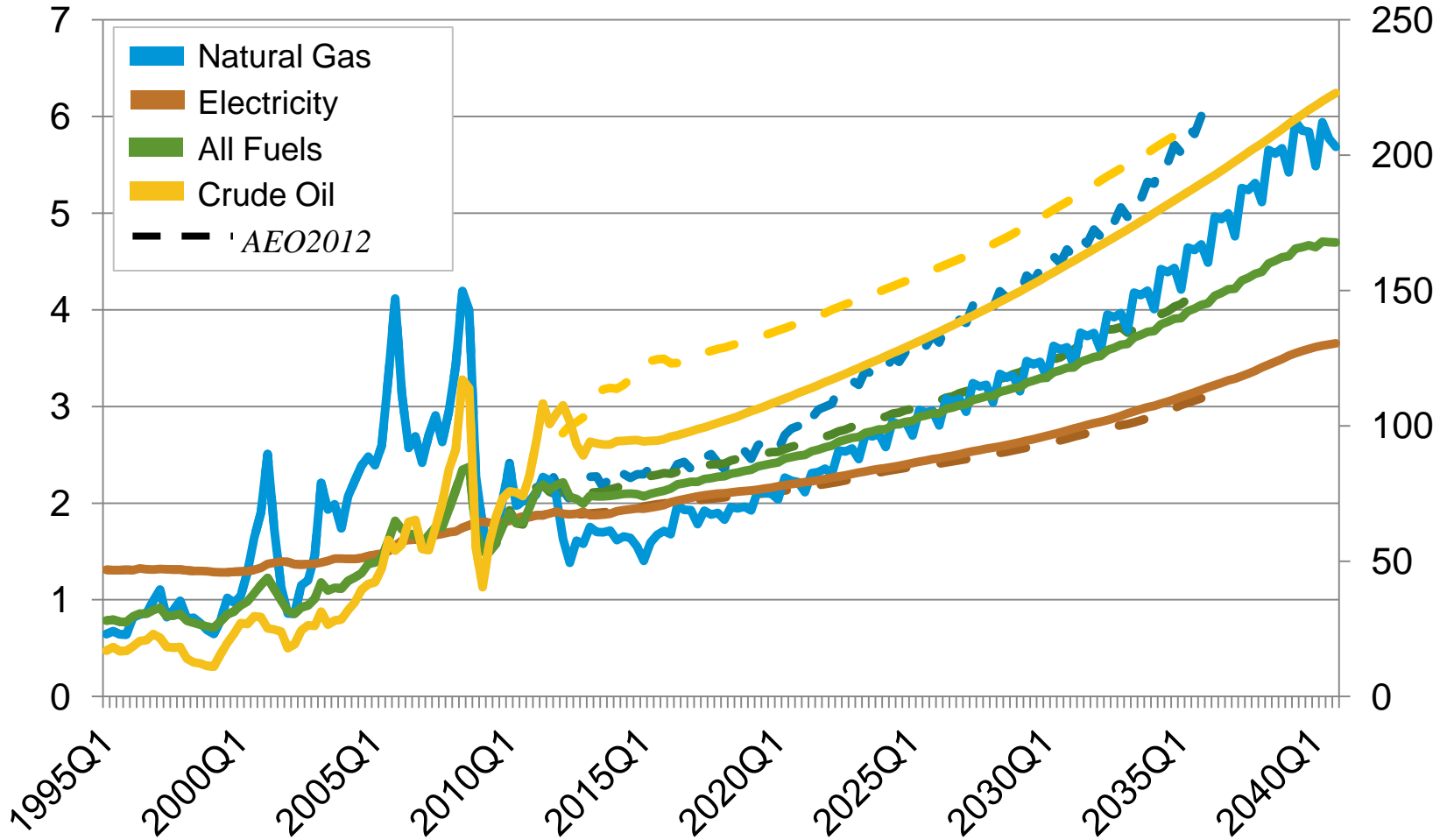
# National Energy Modeling System (NEMS) Macroeconomic Activity Module (MAM)



# Preliminary prices

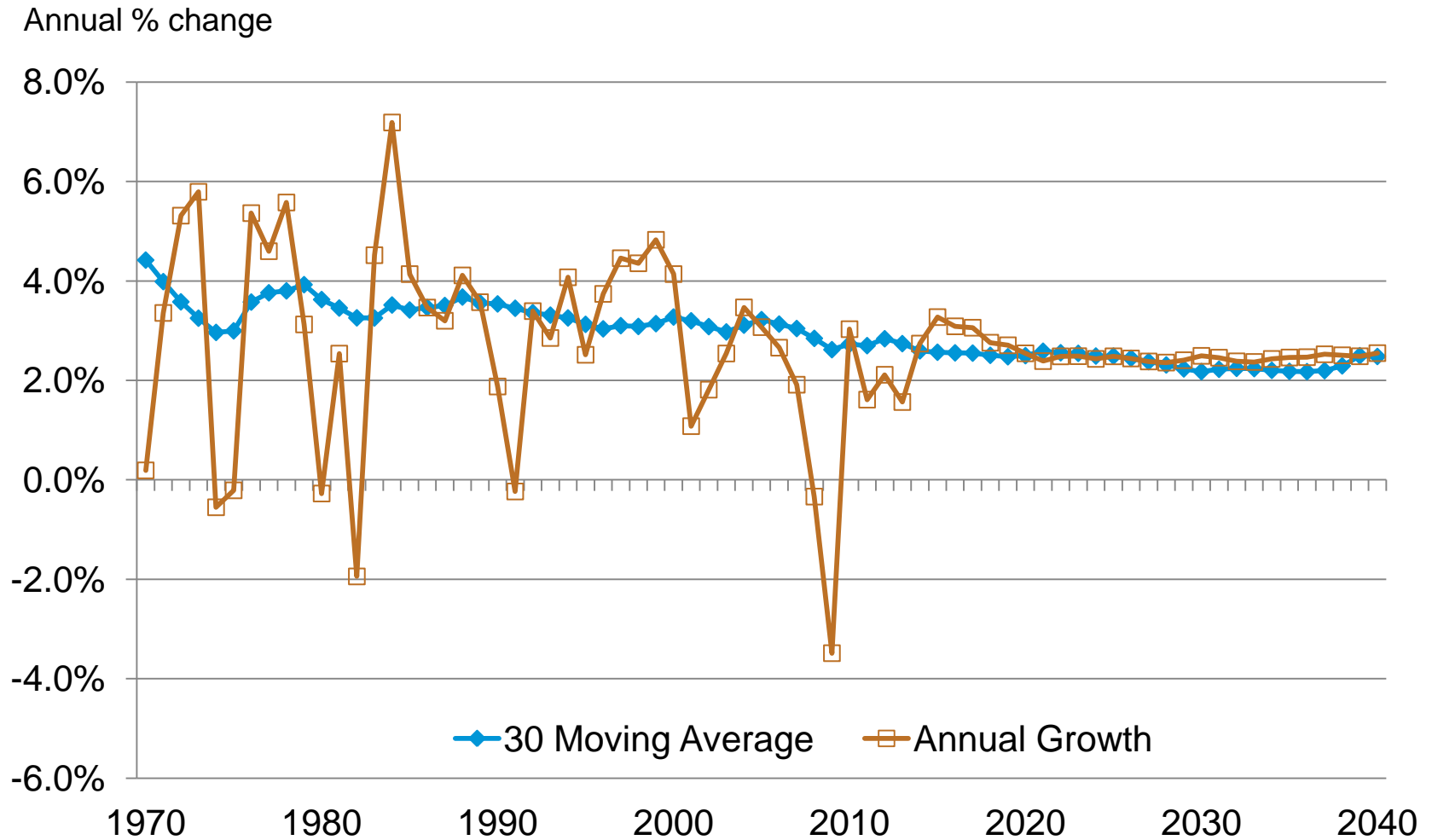
Price Index (1982=1)

Average crude oil price (\$ per barrel)



Source: ref2012/d020112c and ref2013/d090612a

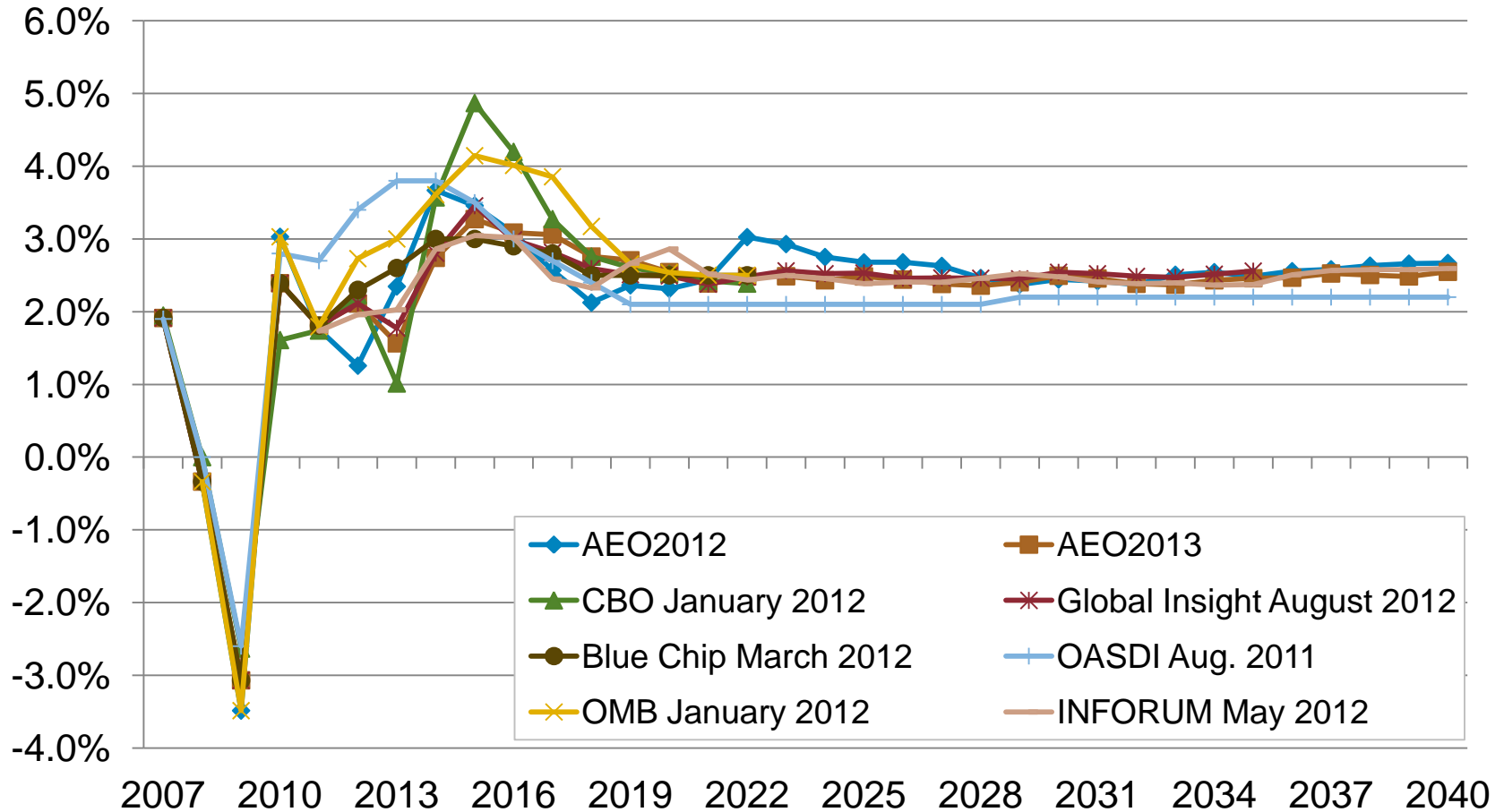
# U.S. GDP growth rates



Source: BEA and ref2013/d090612a

# U.S. GDP comparison with other forecasts

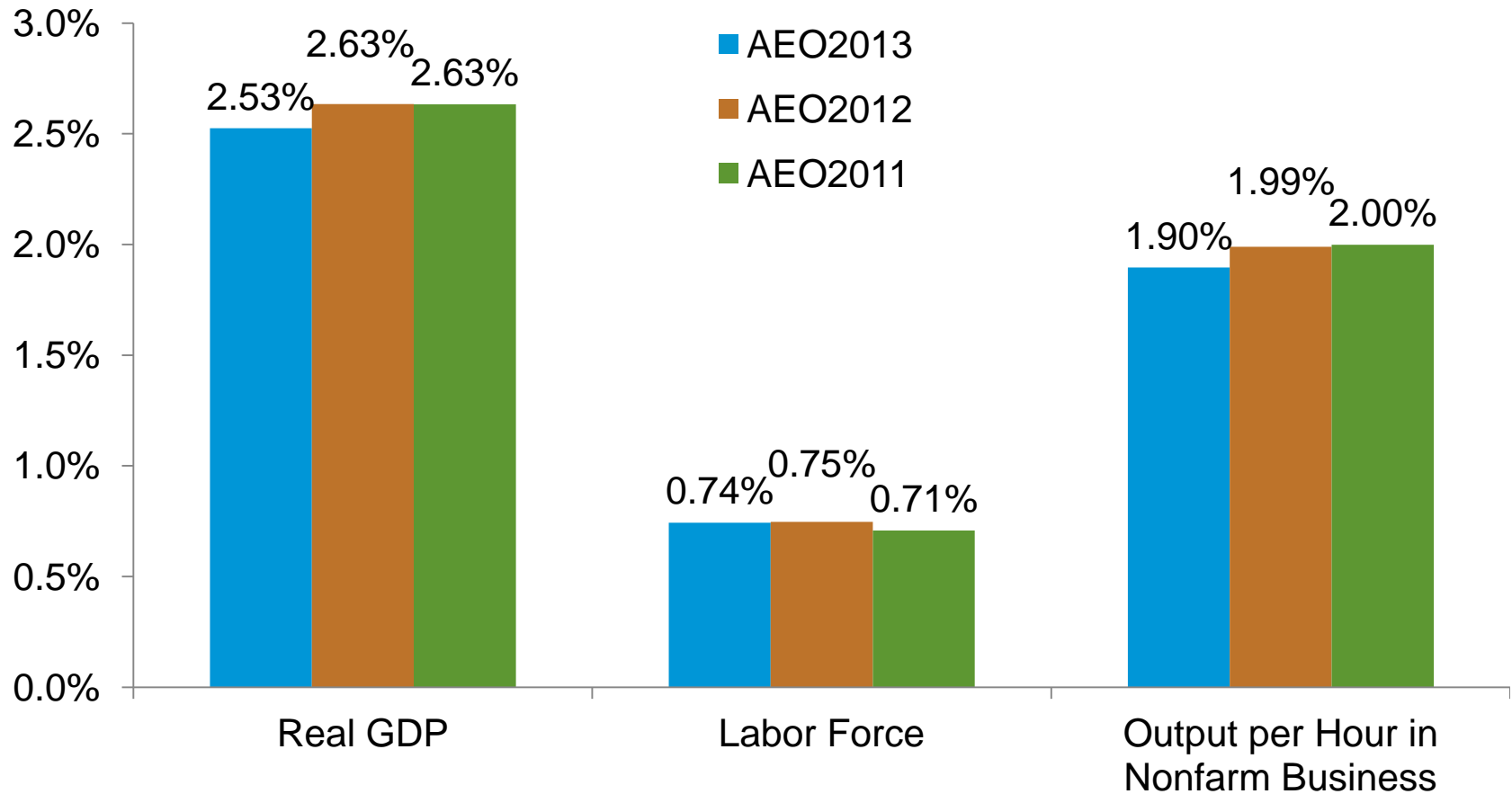
Annual % change



Sources: ref2012/d020112c, ref2013/d090612a, CBO, IHS-GI, Blue Chip, OASDI, OMB, INFORUM

# Macroeconomic indicators

Annual growth rate (per cent)

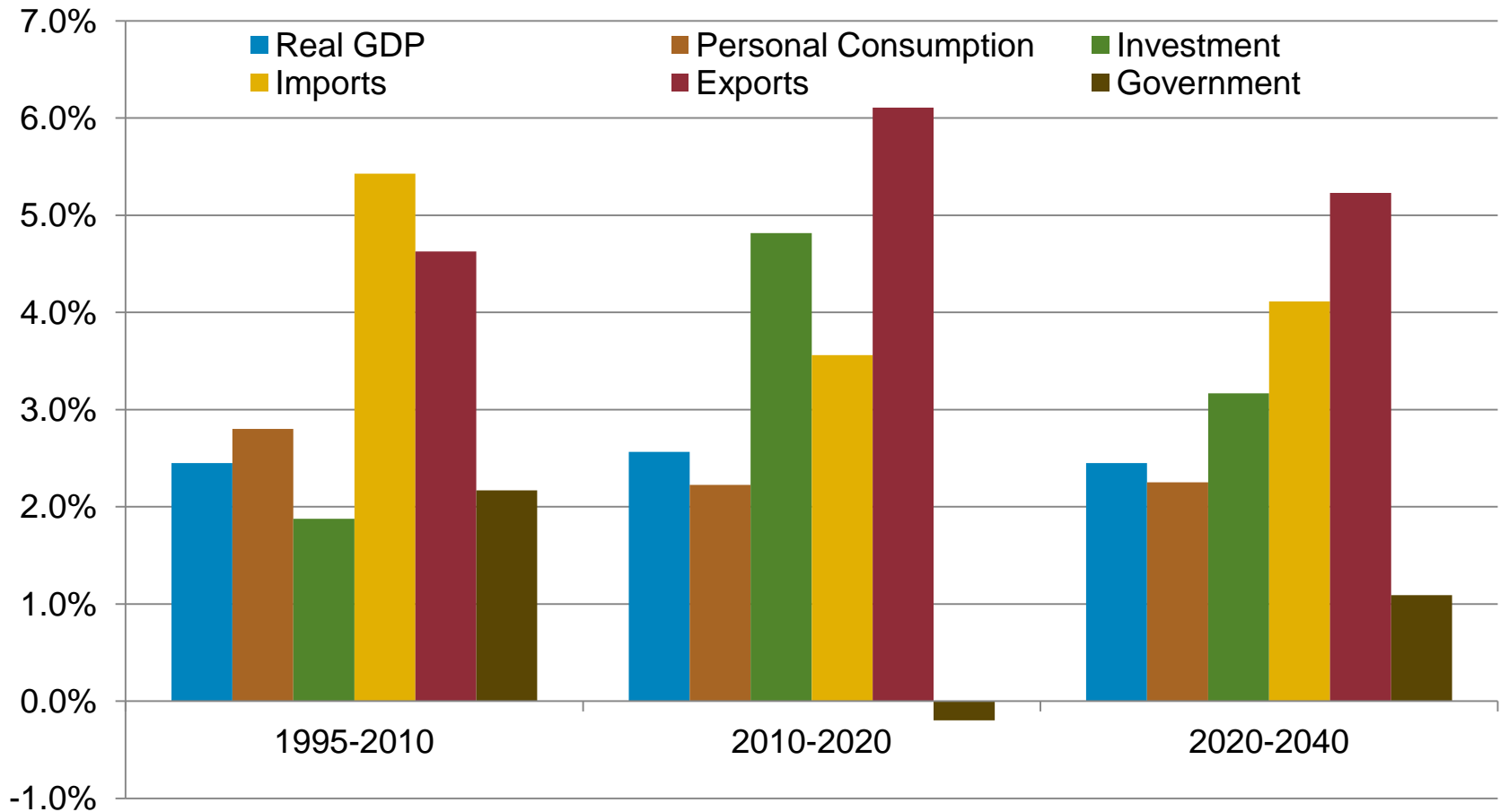


Source: ref2013/d090612a



# Components of GDP

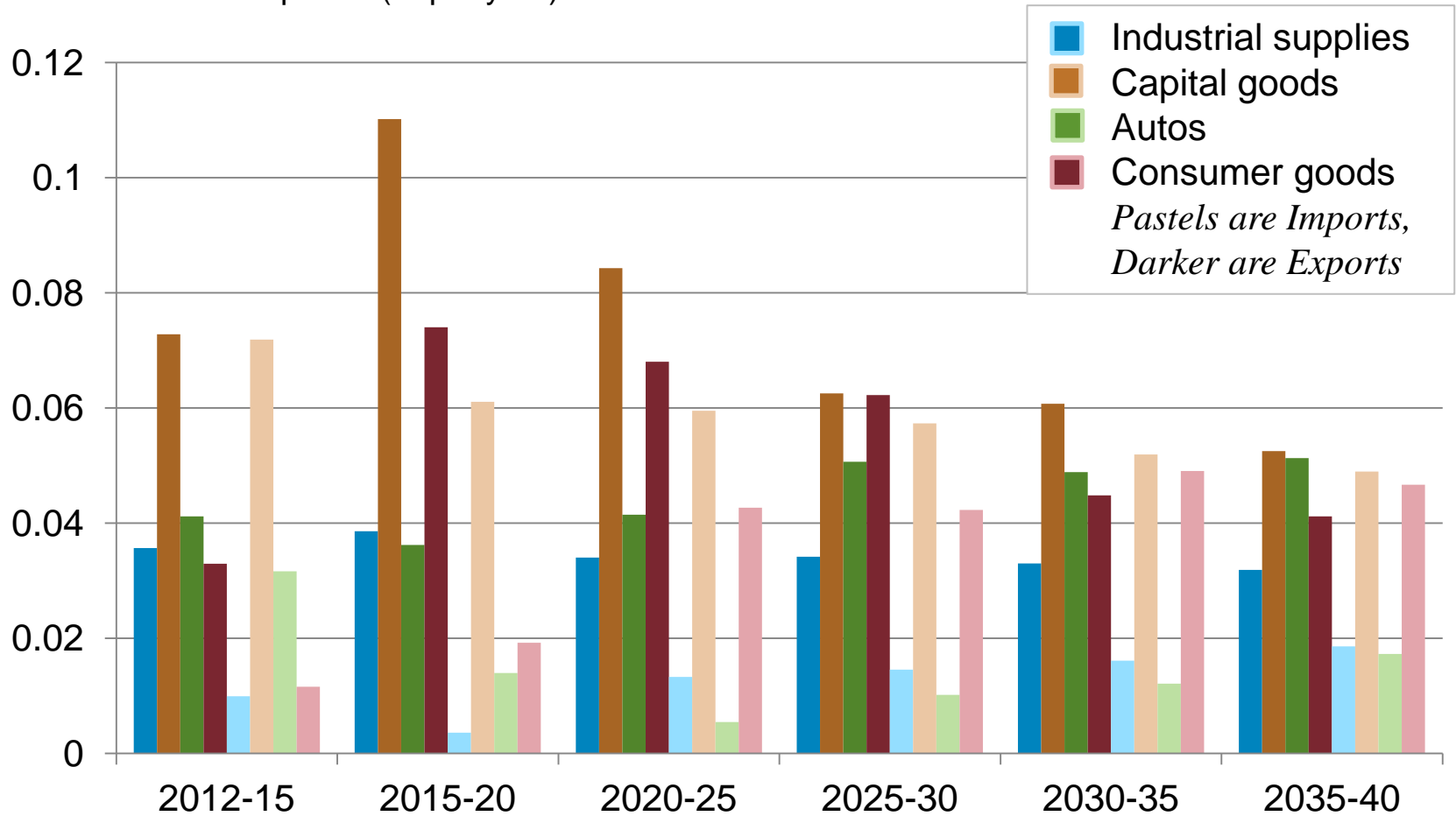
Growth rate within period (% per year)



Source: ref2013/d090612a

# Trade by category

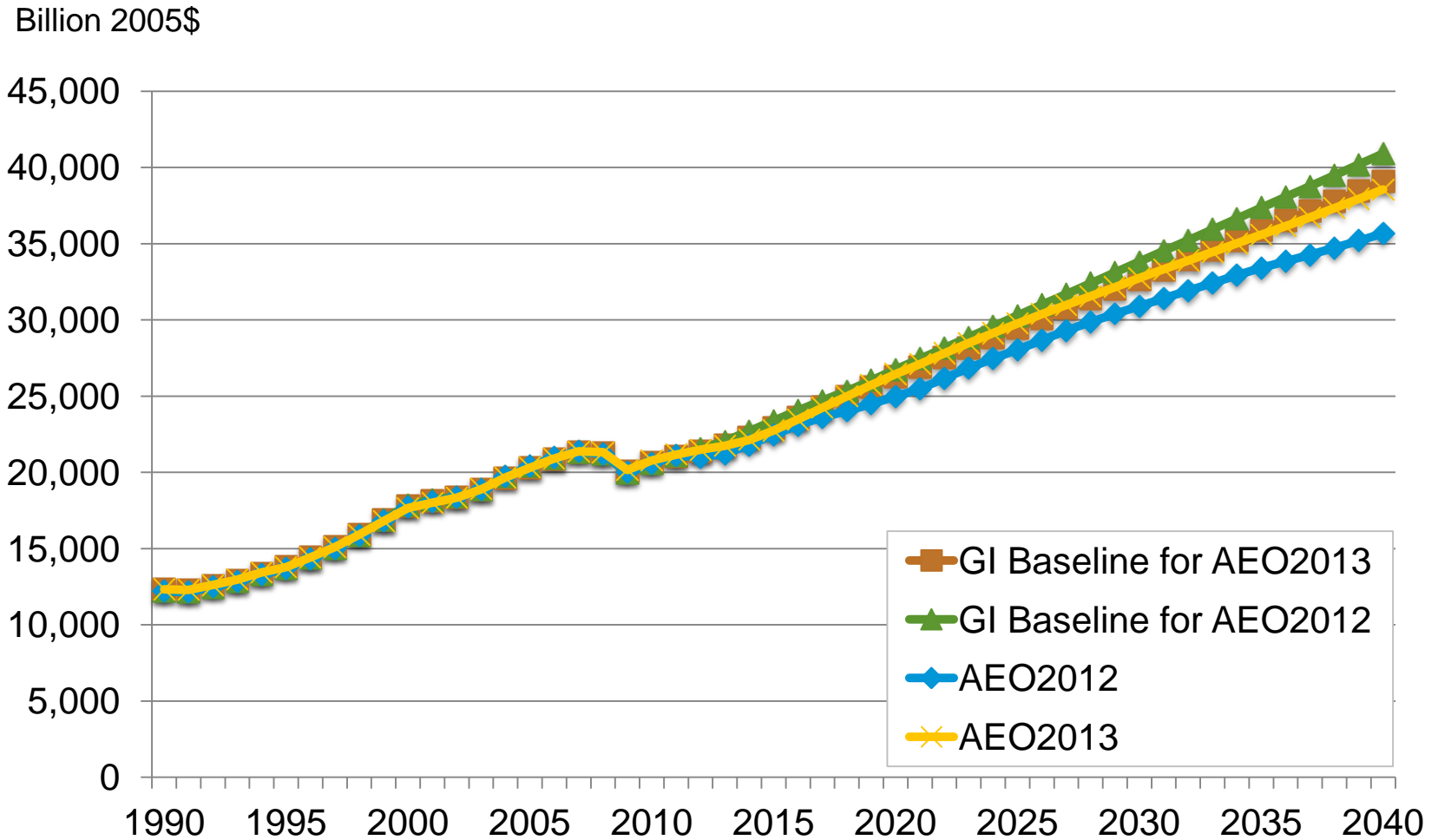
Growth rate within period (% per year)



Source: ref2013/d090612a

# Industrial detail

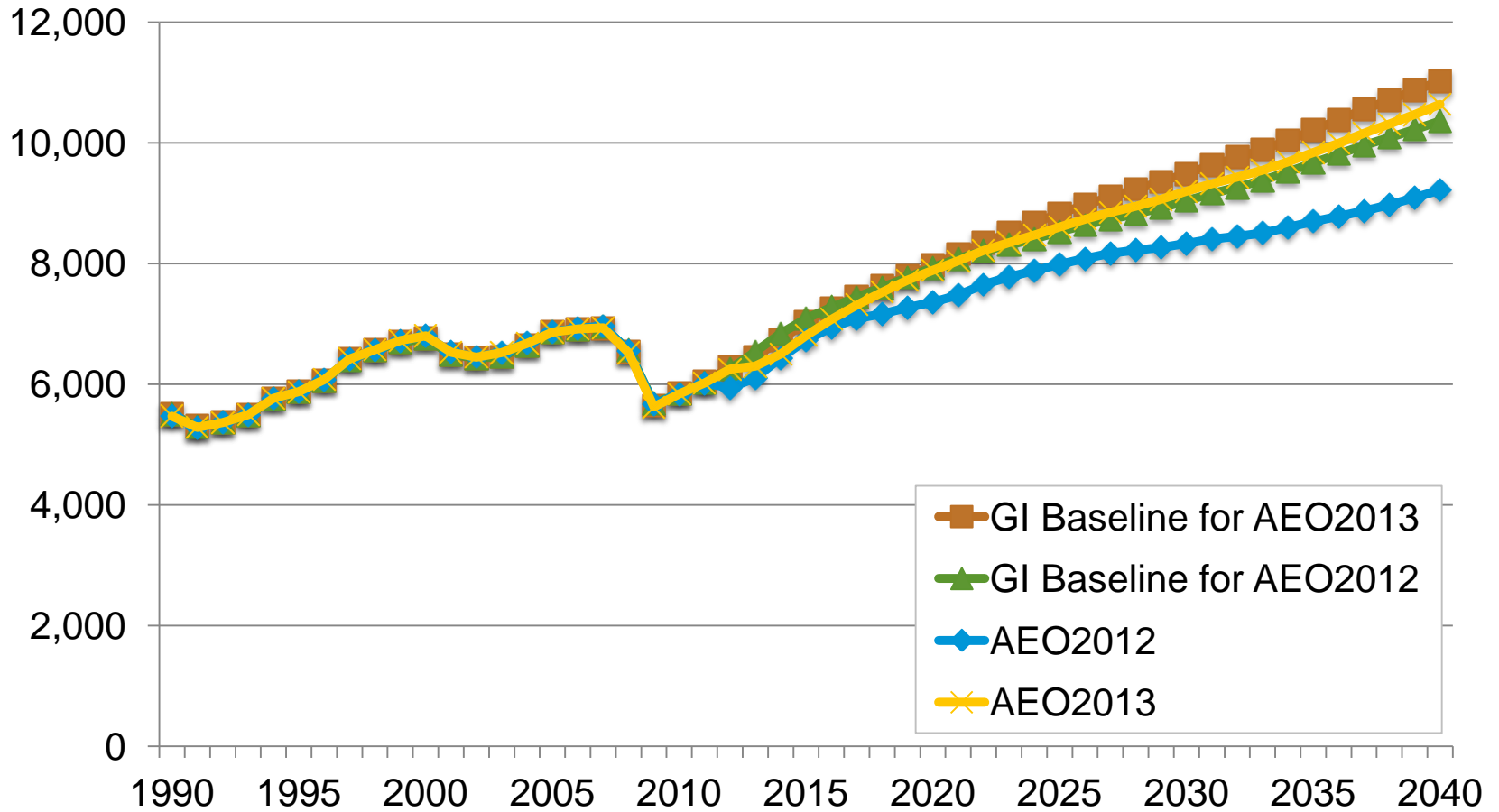
# Services



Source: IHS-GI, ref2012/d020112c, and ref2013/d090612a

# Industrial sector (non-service)

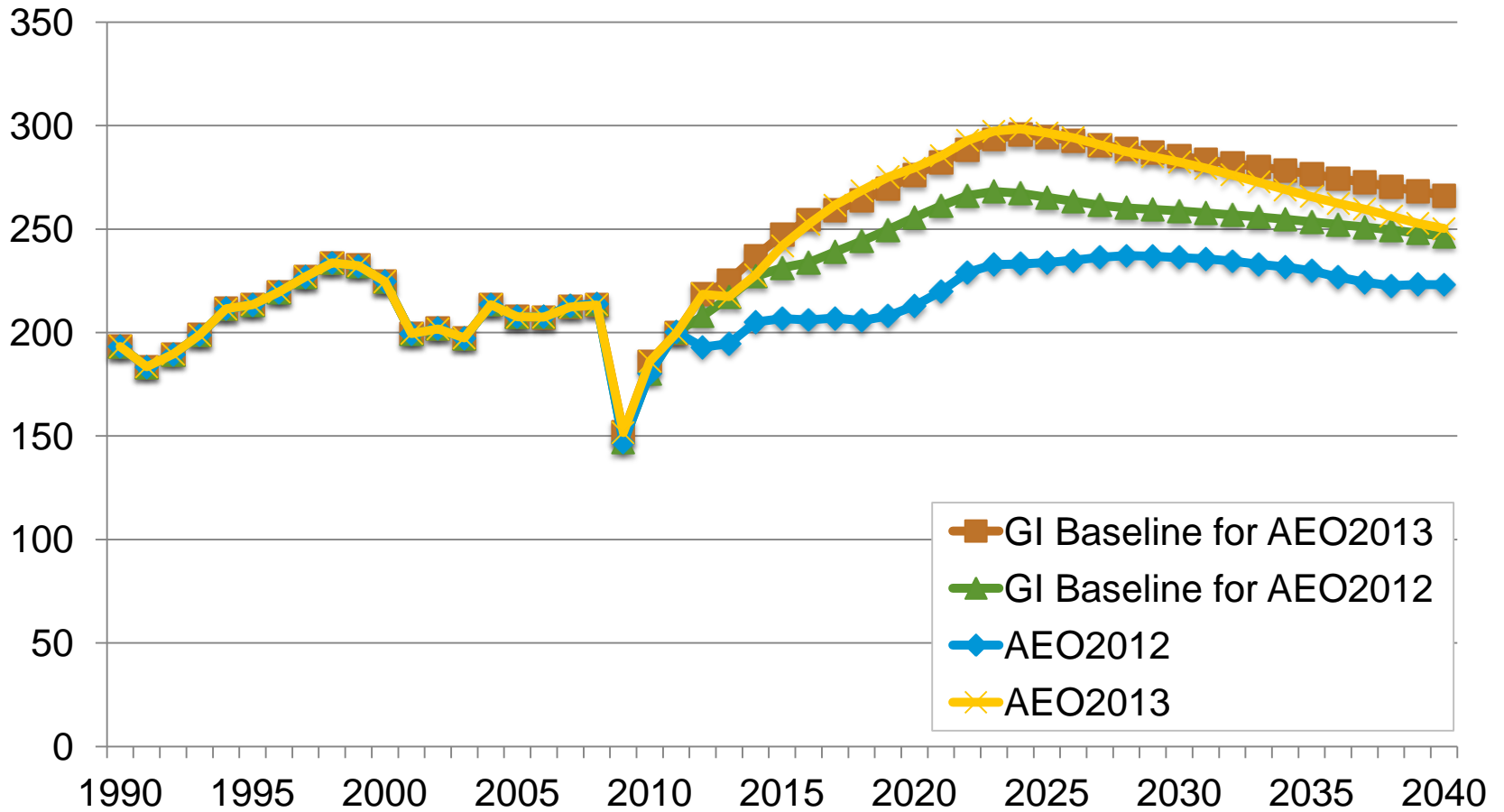
Billion 2005\$



Source: IHS-GI, ref2012/d020112c, and ref2013/d090612a

# Primary metals

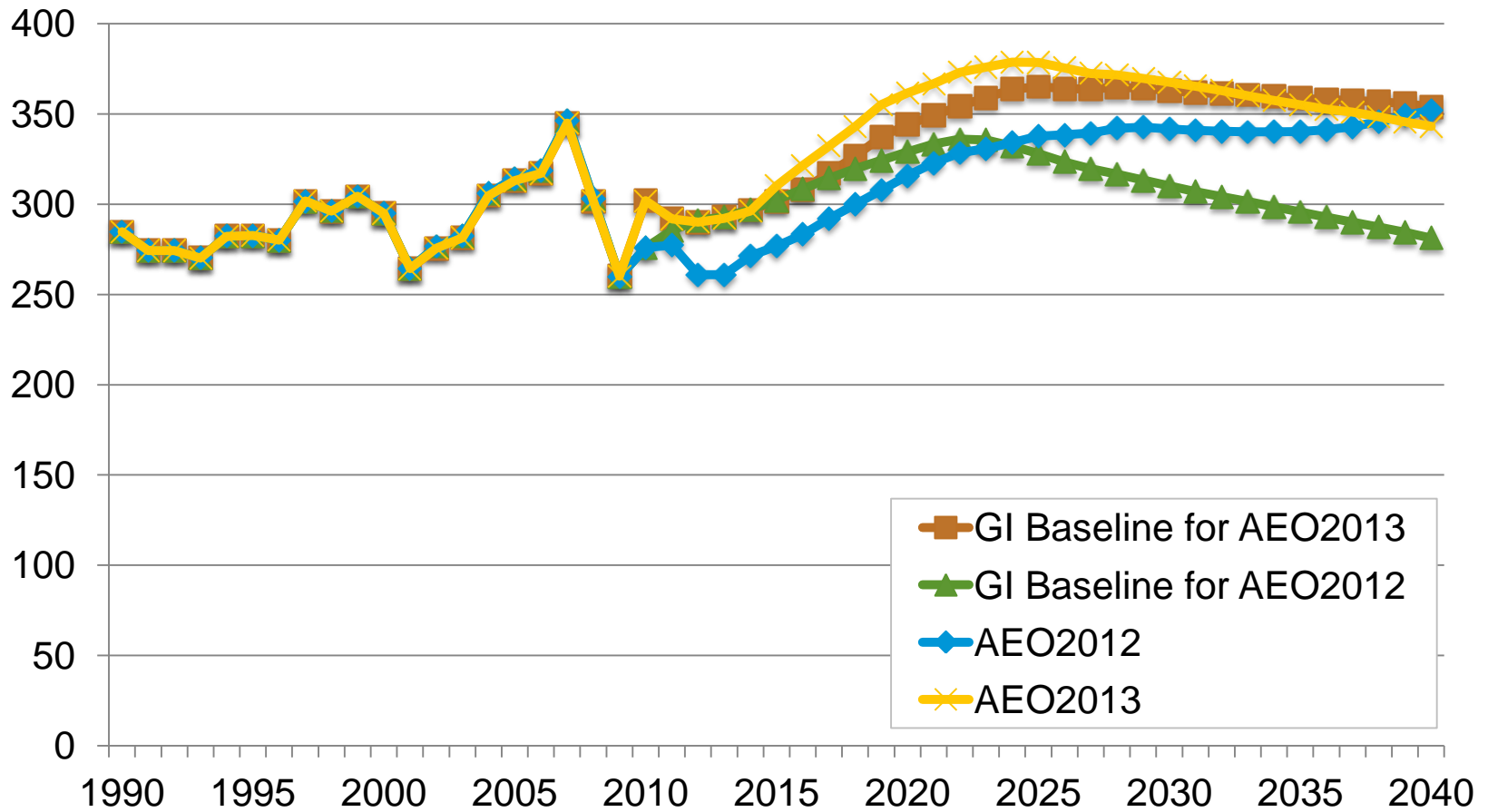
Billion 2005\$



Source: IHS-GI, ref2012/d020112c, and ref2013/d090612a

# Bulk chemicals

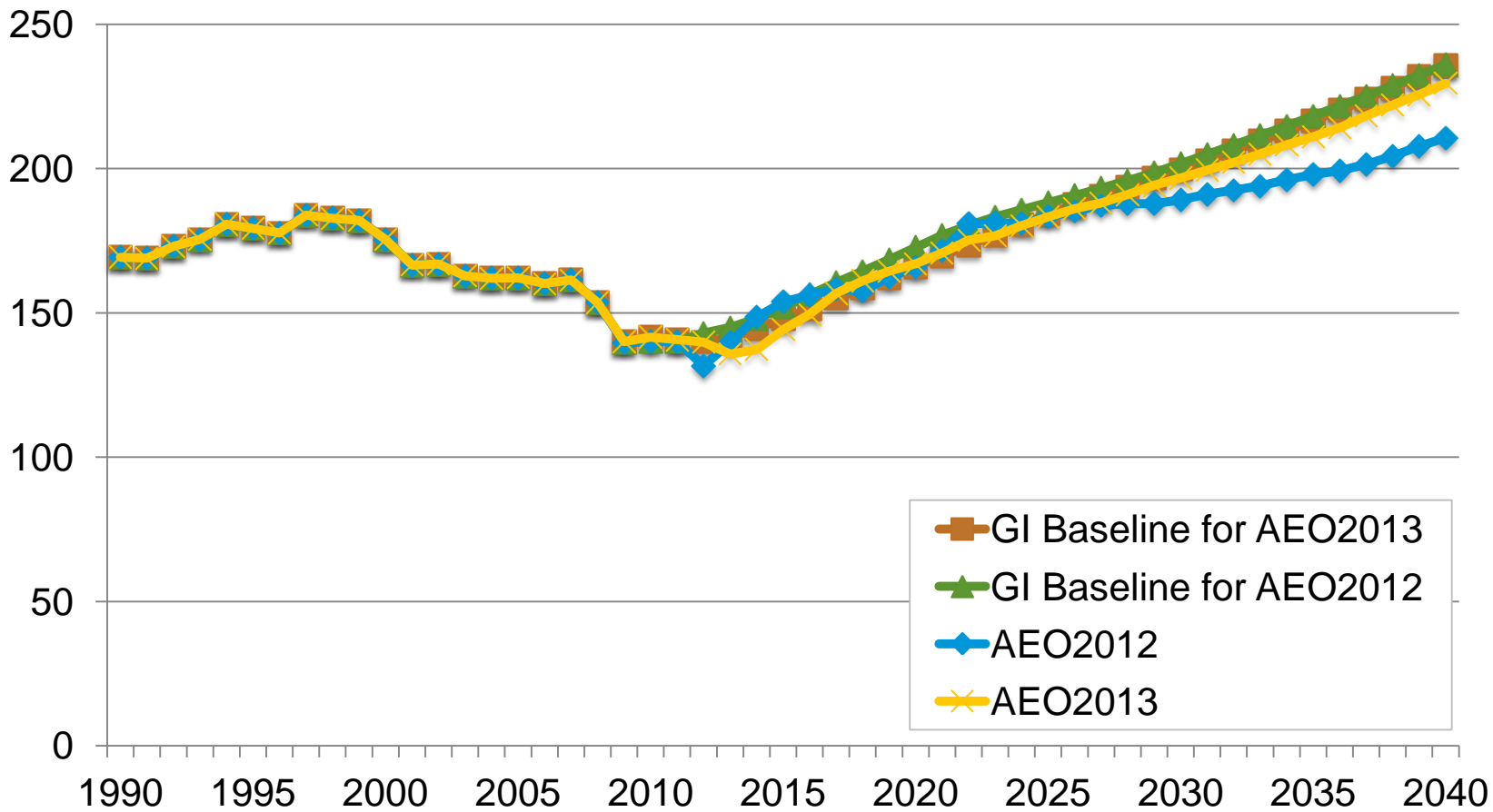
Billion 2005\$



Source: IHS-GI, ref2012/d020112c, and ref2013/d090612a

# Paper

Billion 2005\$

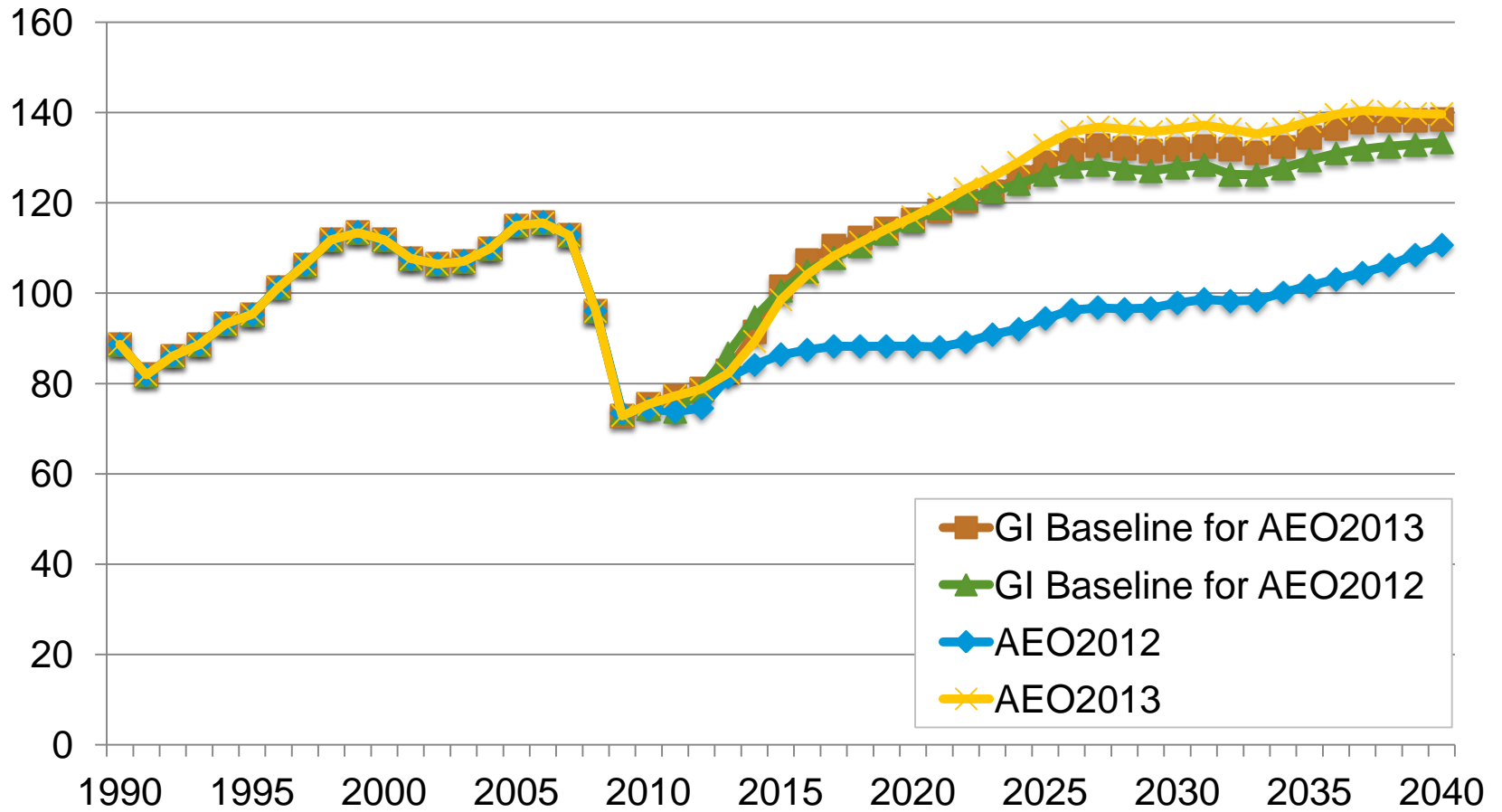


Source: IHS-GI, ref2012/d020112c, and ref2013/d090612a



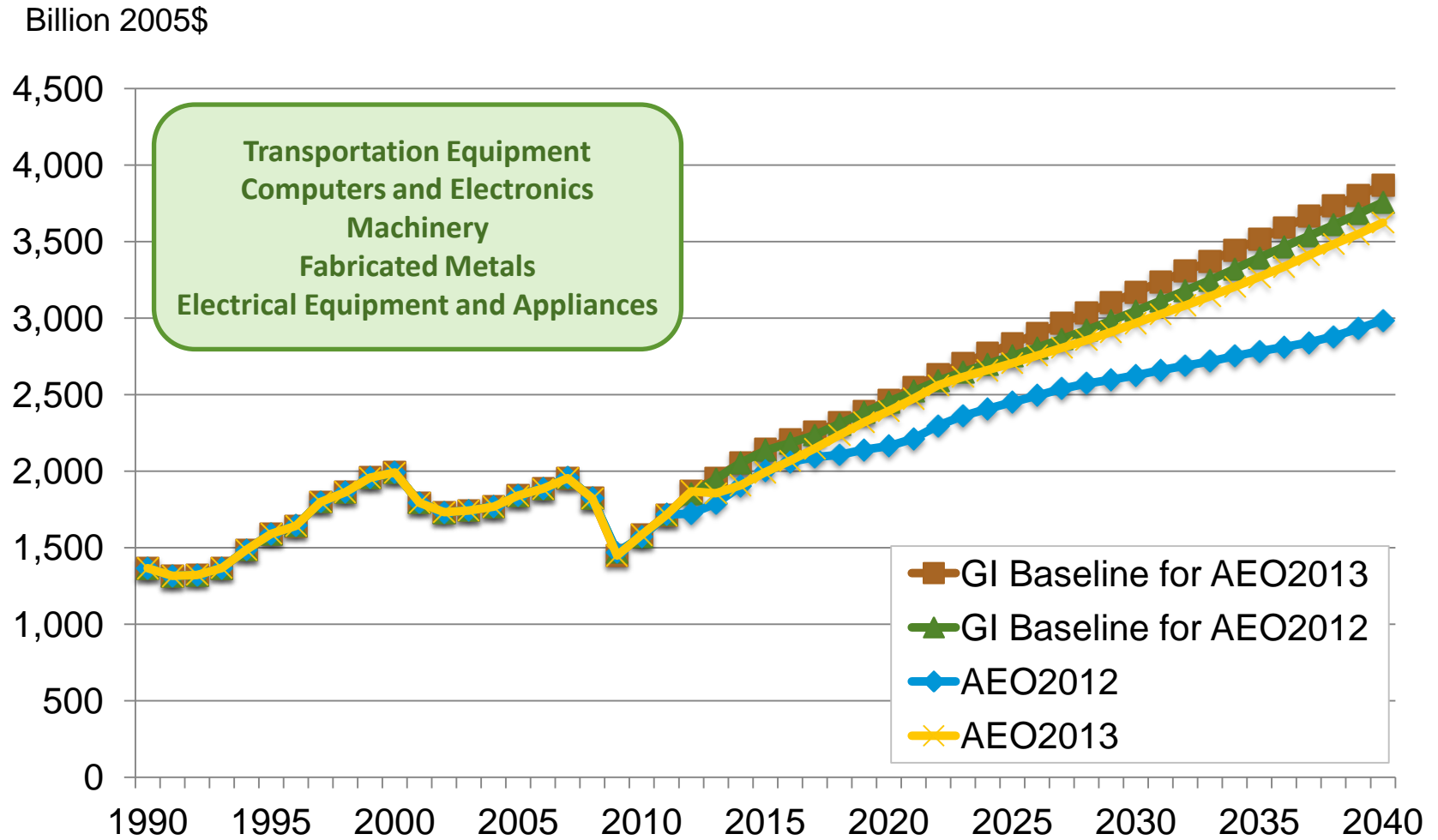
# Non-metallic minerals\*

Billion 2005\$



Source: IHS-GI, ref2012/d020112c, and ref2013/d090612a; \* also known as stone, clay, and glass

# Metal-based durables

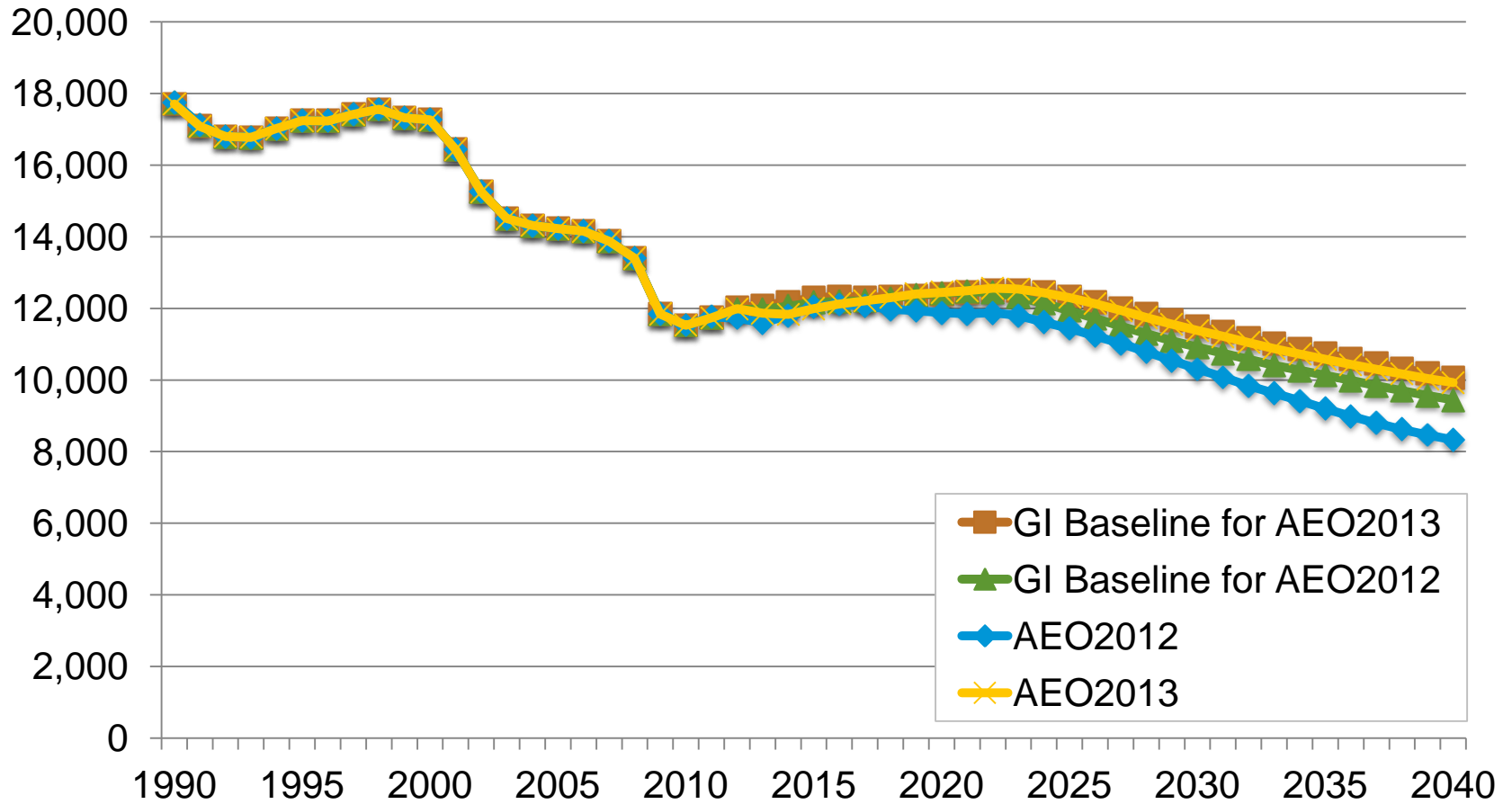


Source: IHS-GI, ref2012/d020112c, and ref2013/d090612a

# Employment and commercial floor space

# Manufacturing employment

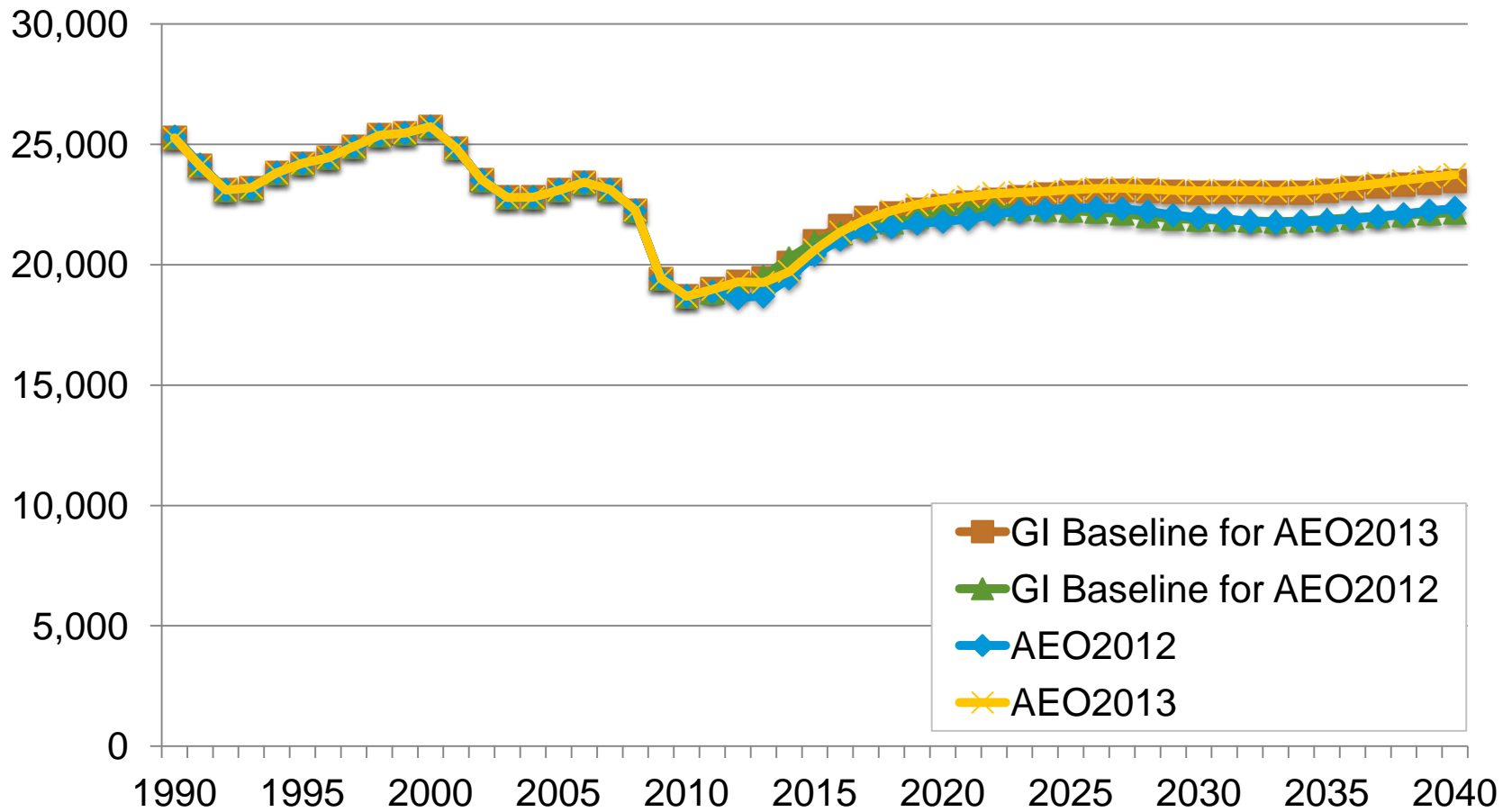
Millions of persons



Source: IHS-GI, ref2012/d020112c, and ref2013/d090612a

# Total employment

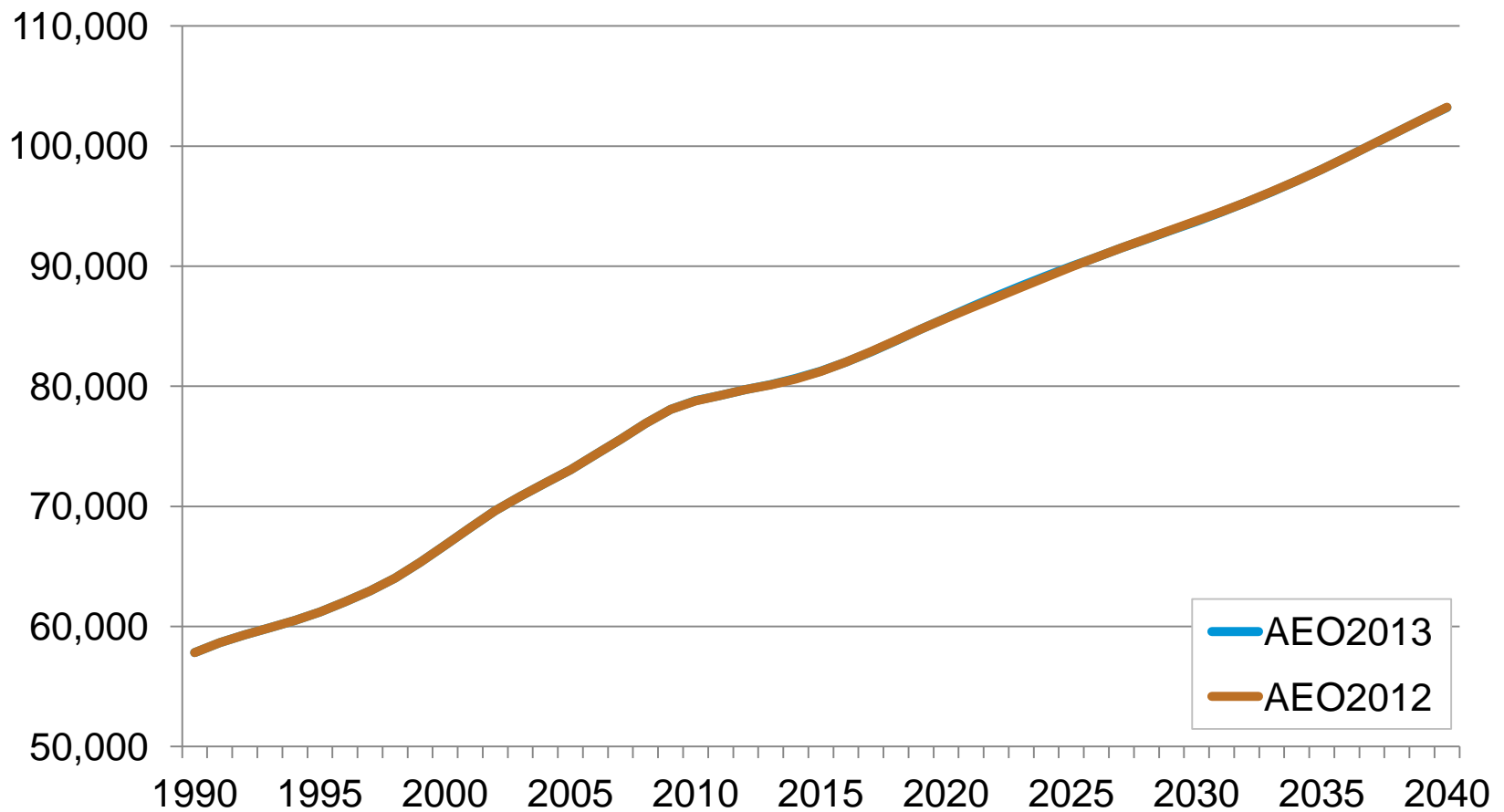
Millions of persons



Source: IHS-GI, ref2012/d020112c, and ref2013/d090612a

# Commercial floor space

Billion square feet



Source: ref2012/d020112c and ref2013/d090612a

# For more information

U.S. Energy Information Administration home page | [www.eia.gov](http://www.eia.gov)

Annual Energy Outlook | [www.eia.gov/aeo](http://www.eia.gov/aeo)

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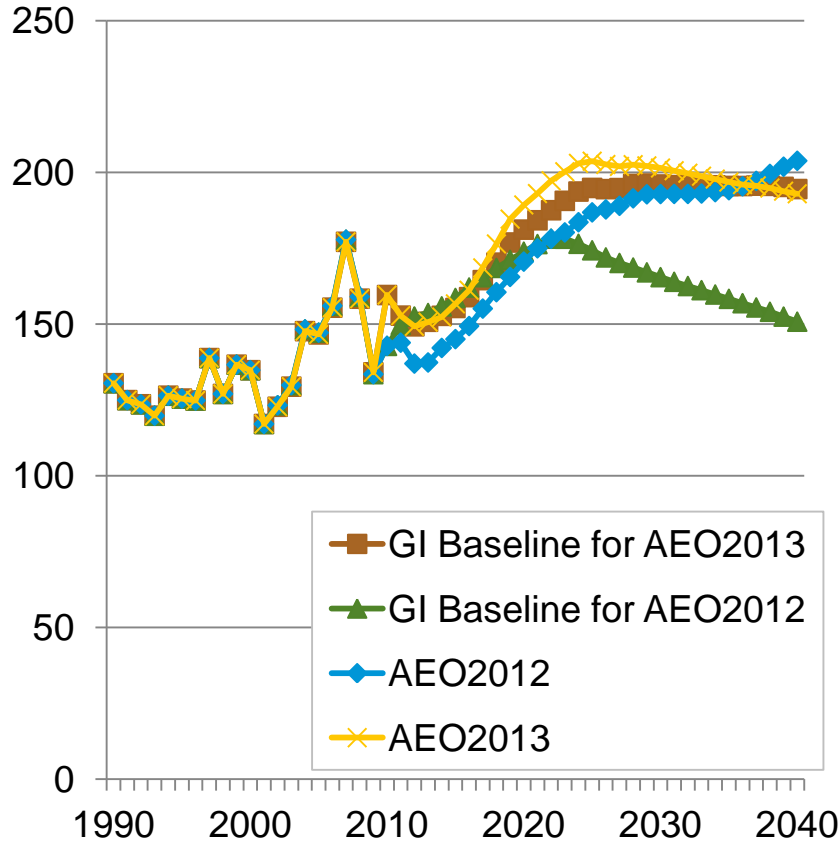
(202) 586-7145

# Backup slides

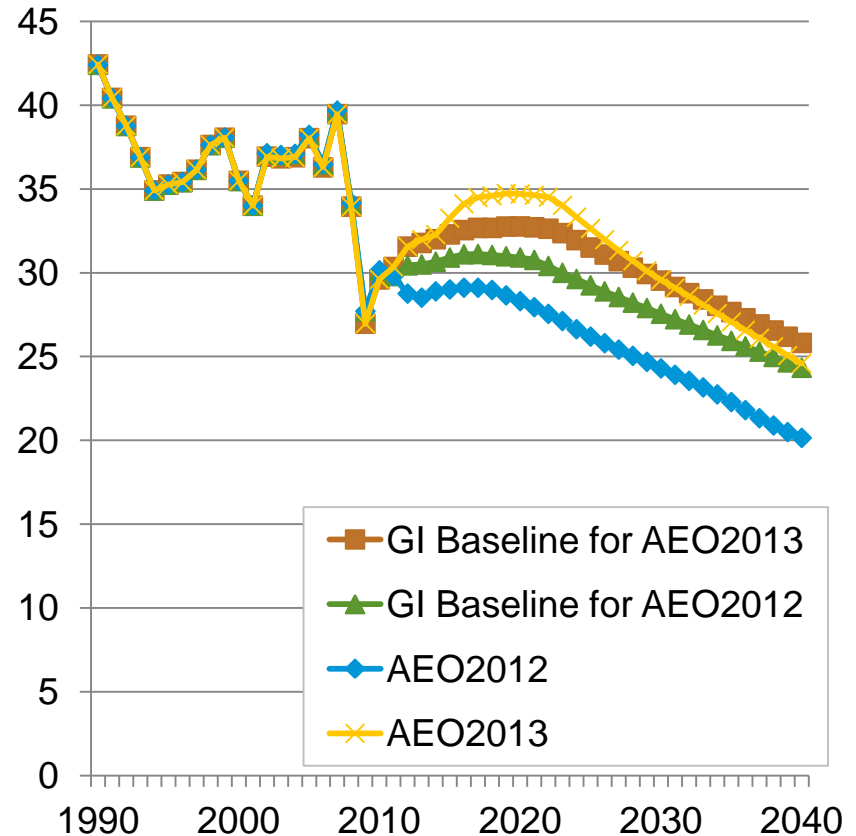


# Bulk chemicals details

## Organic



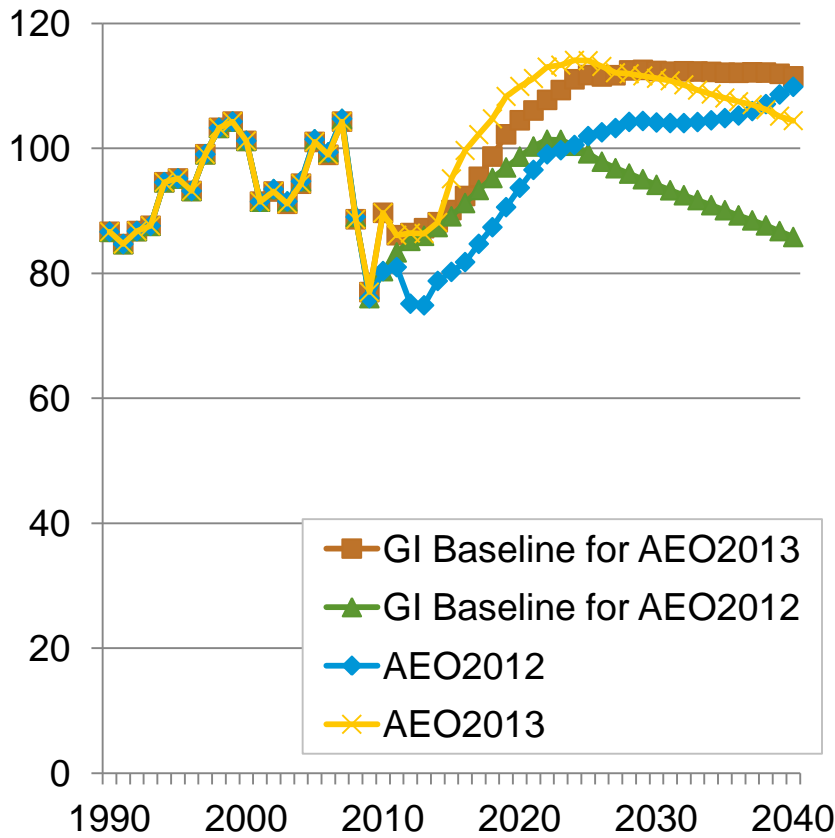
## Inorganic



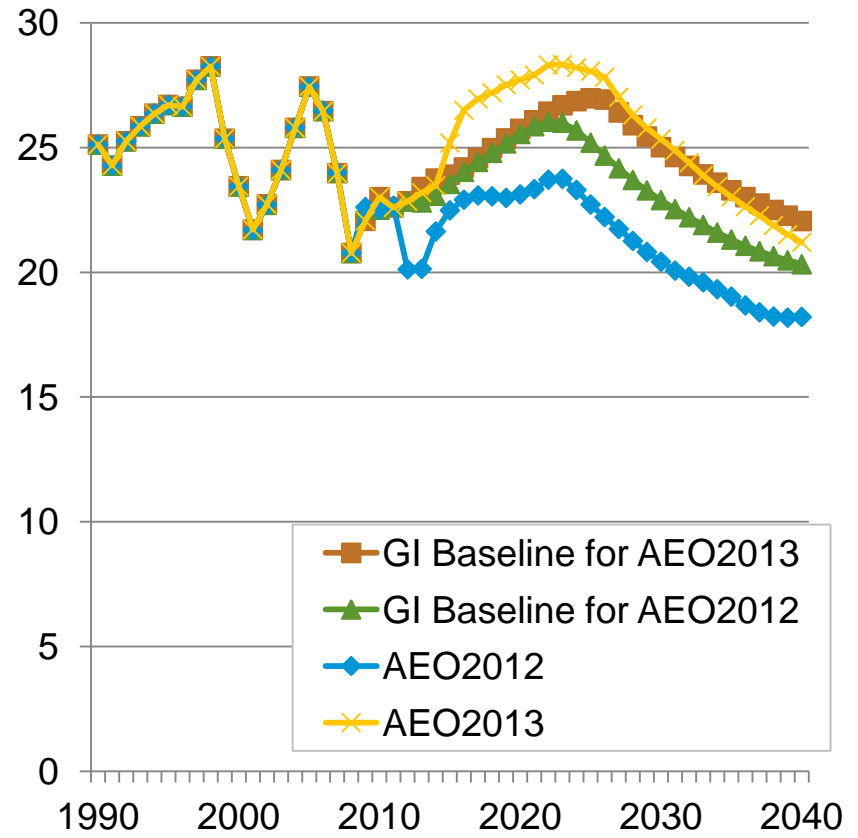
Source: IHS-GI, ref2012/d020112c, and ref2013/d090612a

# Bulk chemicals details (cont.)

## Resins and Synthetic Fibers



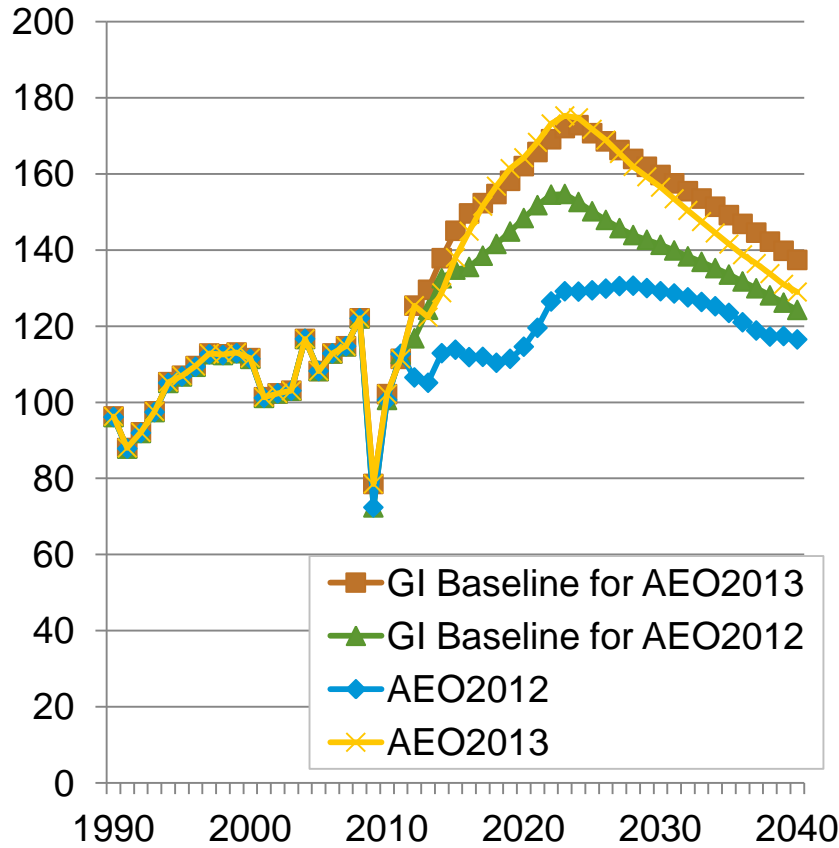
## Agricultural Chemicals



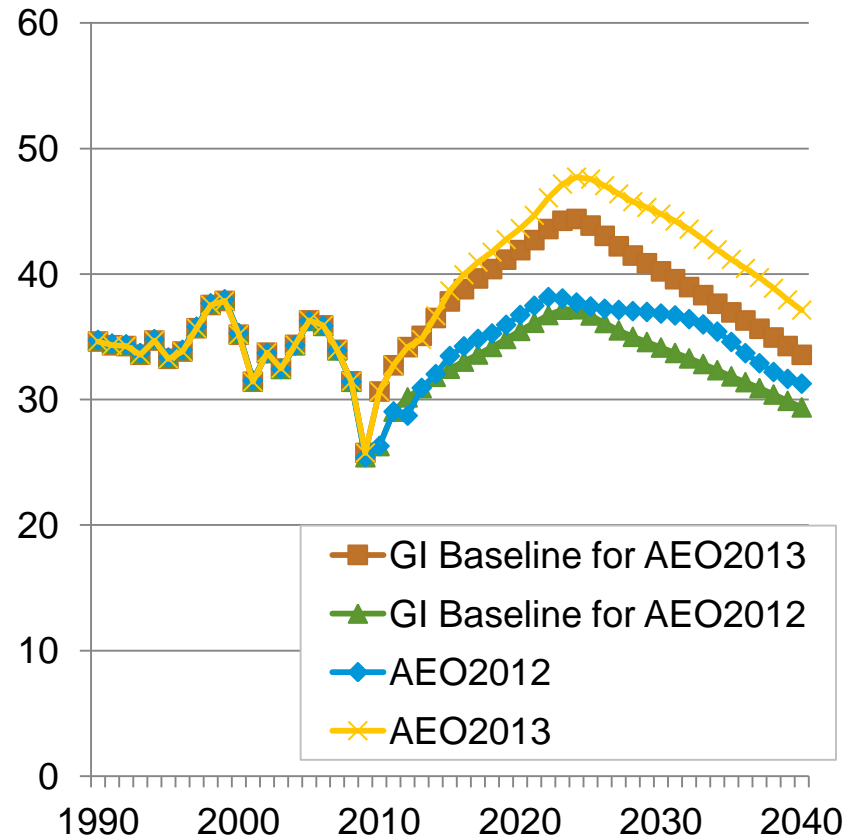
Source: IHS-GI, ref2012/d020112c, and ref2013/d090612a

# Primary metals details

## Iron and Steel



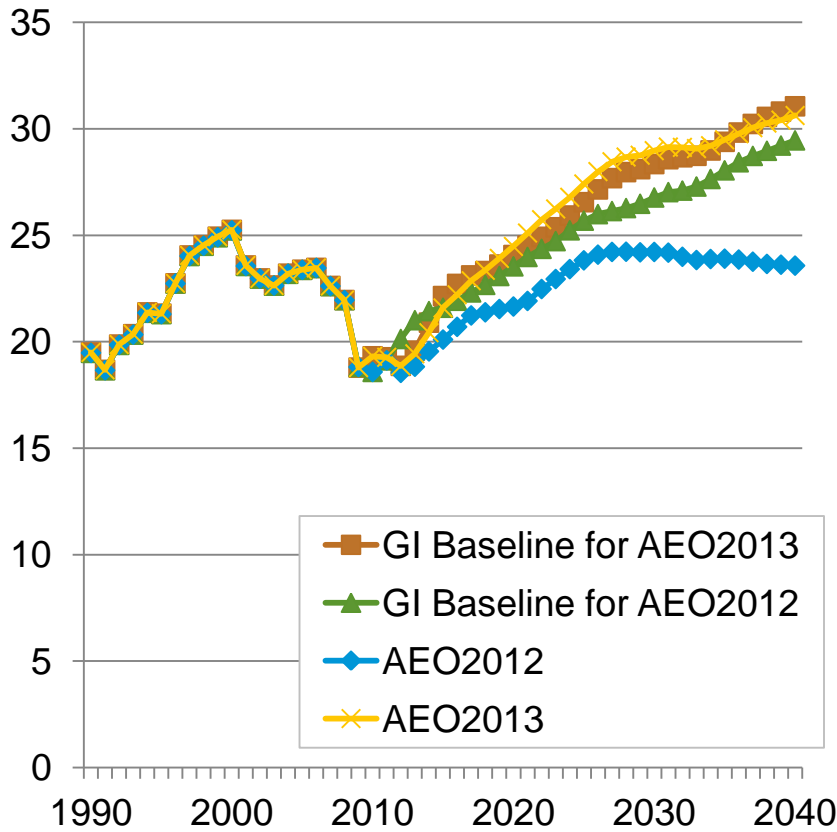
## Aluminum



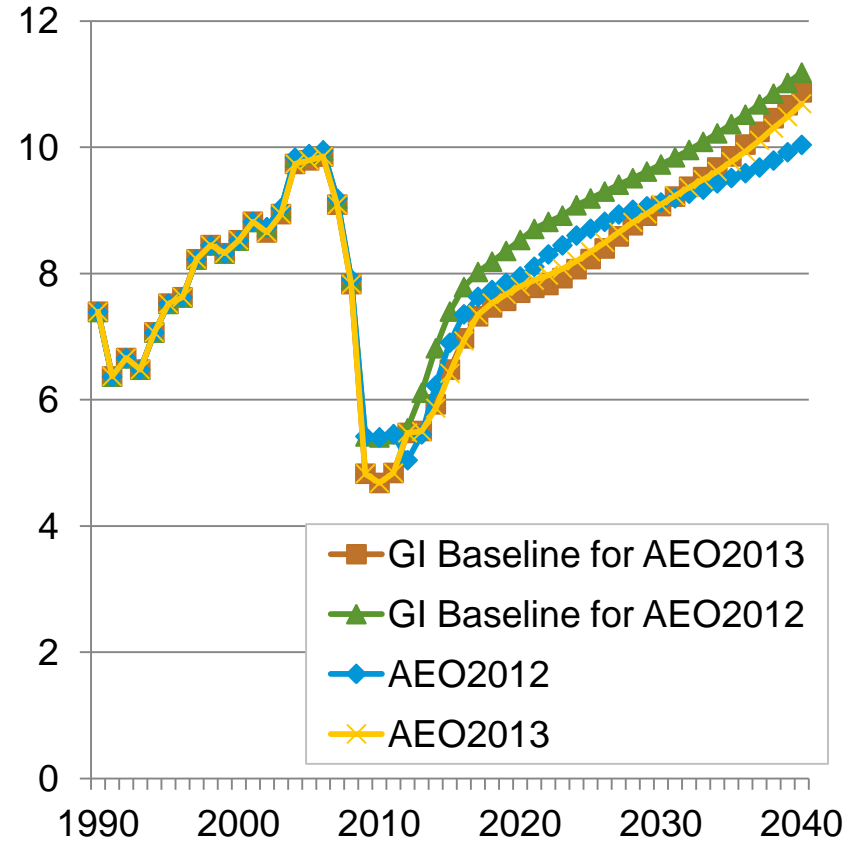
Source: IHS-GI, ref2012/d020112c, and ref2013/d090612a

# Non-metallic minerals details

## Glass



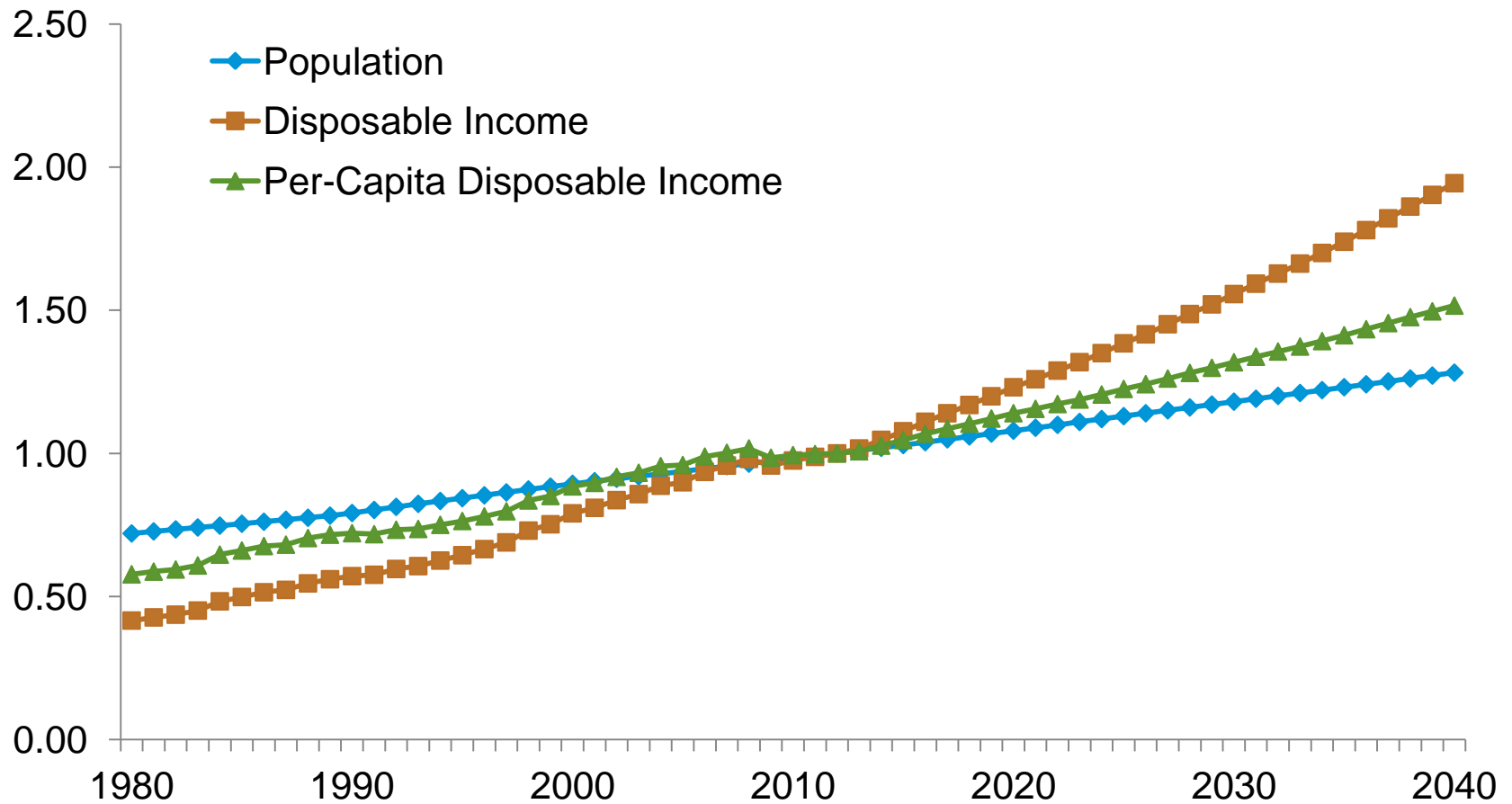
## Cement



Source: IHS-GI, ref2012/d020112c, and ref2013/d090612a

# Population and disposable income

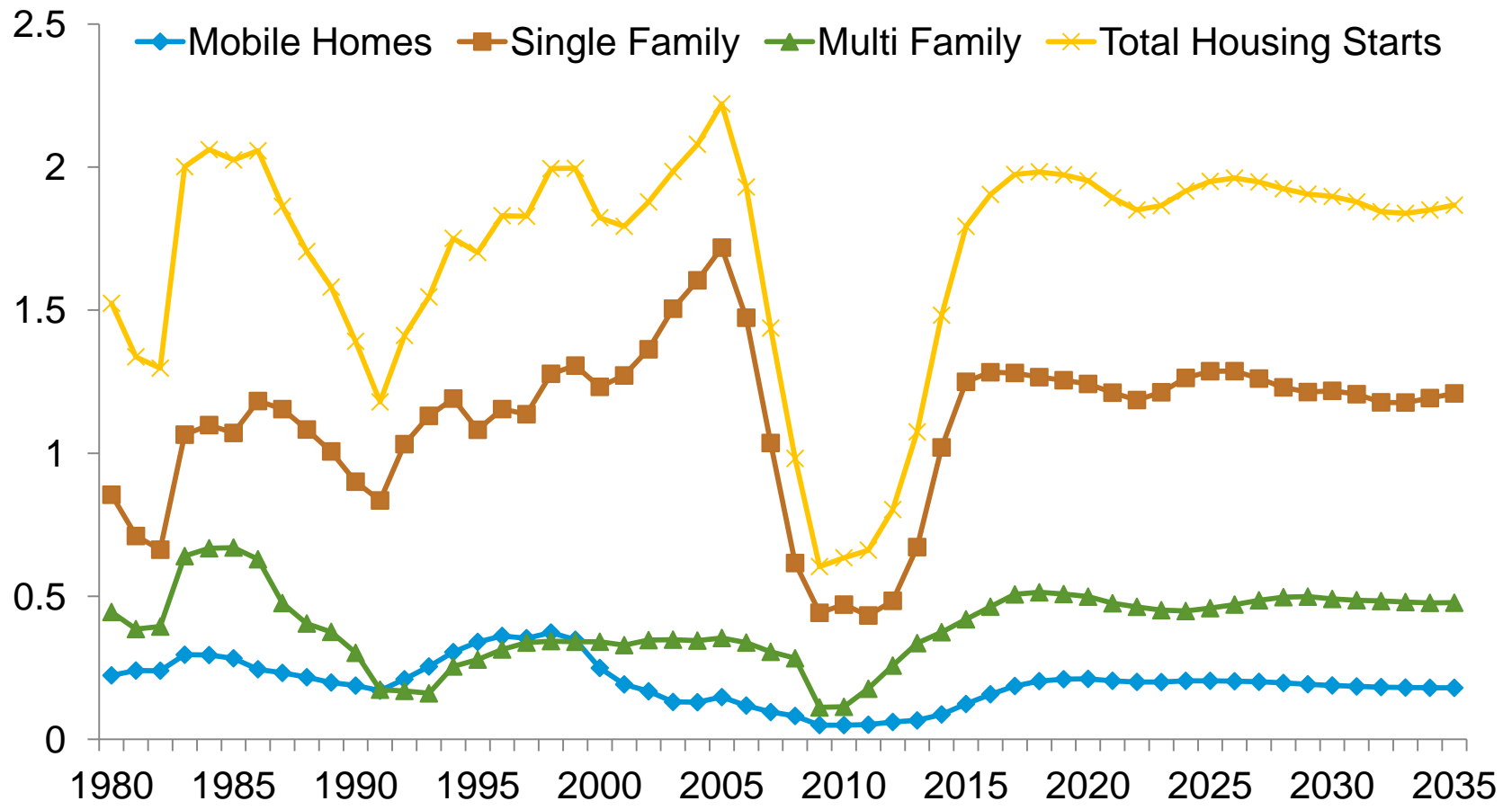
Index (2012=1)



Source: ref2013/d090612a

# Housing starts

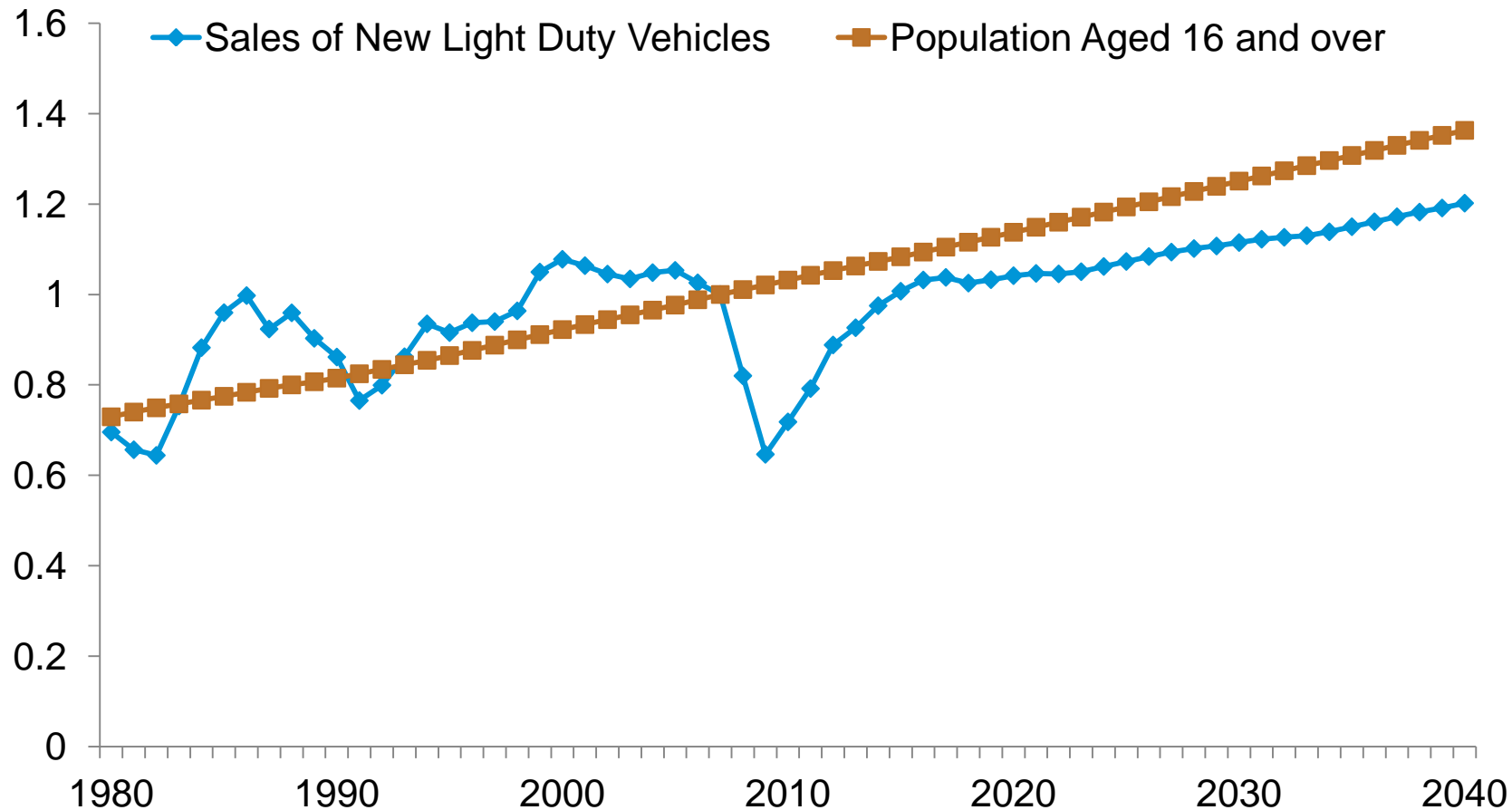
Millions of units



Source: ref2013/d090612a

# Vehicle sales

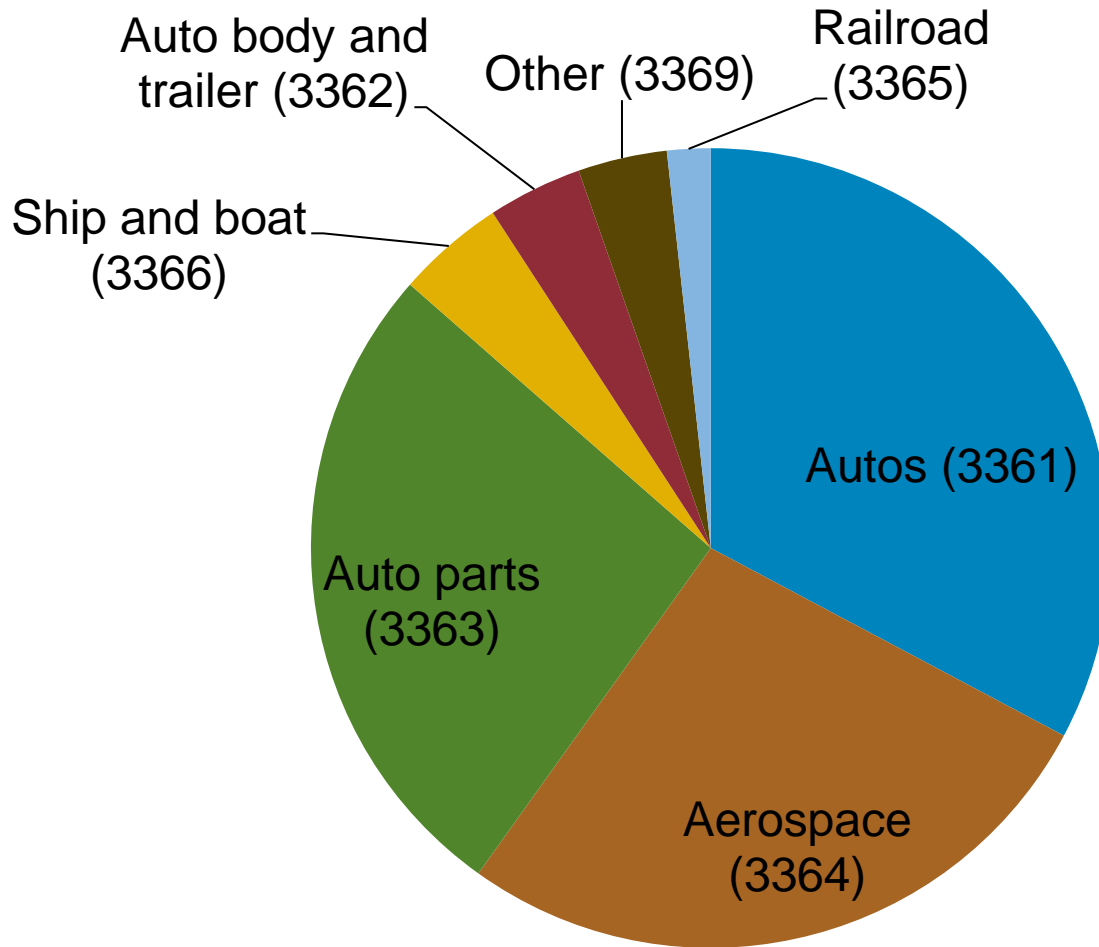
Index (2007=1)



Source: ref2013/d090612a

# Transportation equipment sub-industries

Shipments (Billion \$)



Source: Annual Survey of Manufacturing 2010, U.S. Census Bureau