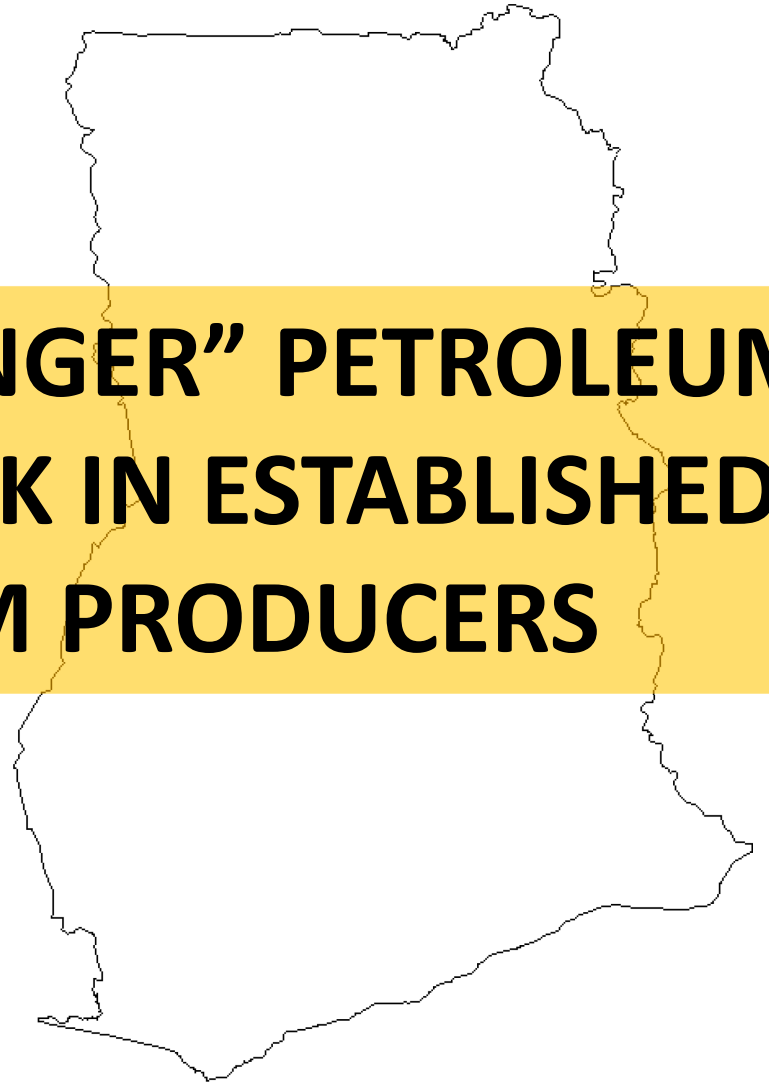




REPUBLIC OF GHANA

Ministry of Finance

# FISCAL IMPACT OF “LOWER FOR LONGER” PETROLEUM PRICES AND INVESTMENT OUTLOOK IN ESTABLISHED AND PROSPECTIVE PETROLEUM PRODUCERS



A Presentation Made at the IMF’s Fiscal Management of Mining and Petroleum in West Africa Conference on February 27, 2018

by

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# Introduction

## Crude oil:

- supplies approximately 40% of the world's energy needs;
- is one of the most geopolitically significant issues of the last 5 decades; and
- shortages or perceived shortages have caused political, economic and social panic, even for world superpowers.

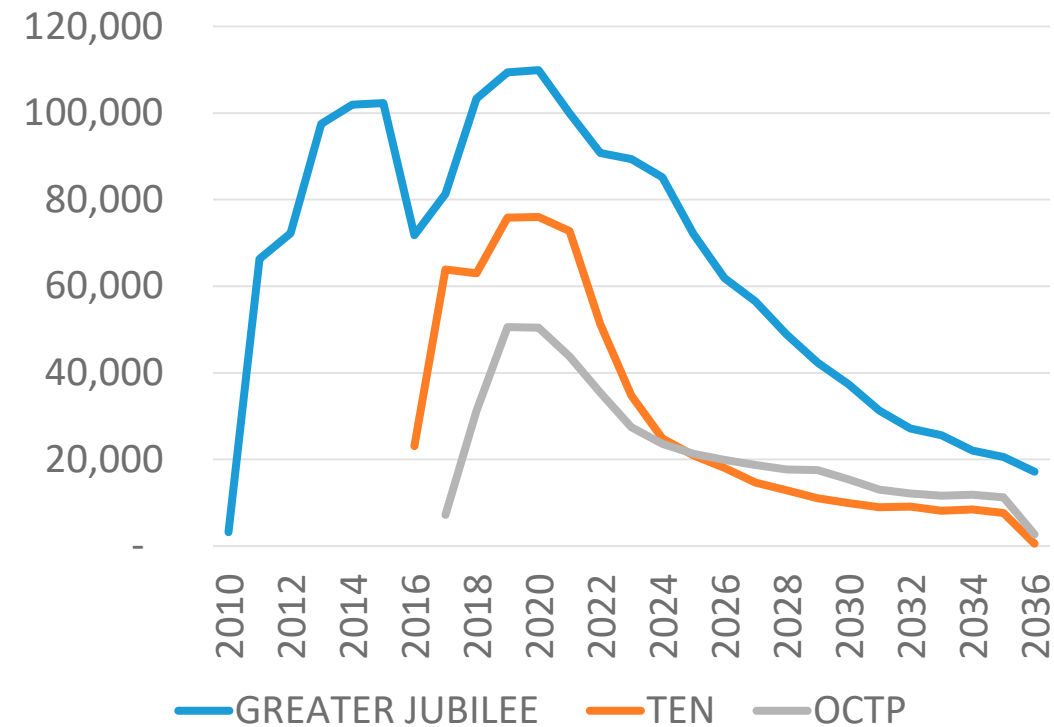


# Ghana's Story with Upstream Petroleum

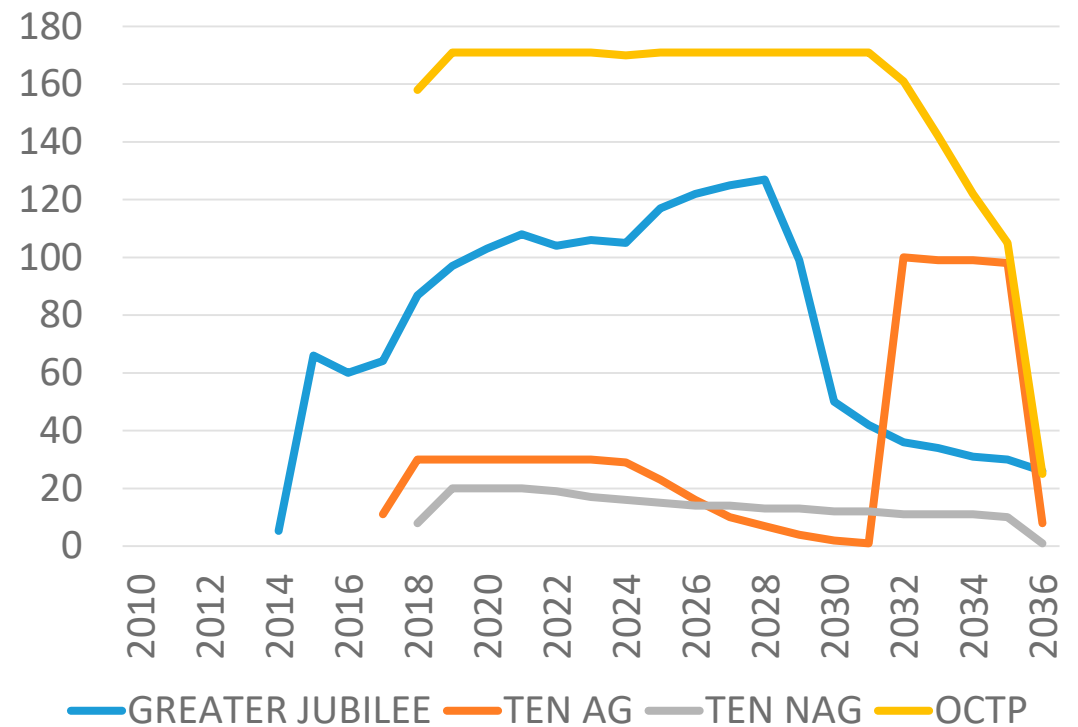
- Over 100 exploration wells were drilled in Ghana between 1898 and the late 1990s with no significant discovery
- Crude oil deposits found at the Saltpond Field in 1970
- First major discovery made in June 2007
- Others, including TEN, SGN, MTA and Hess discovered subsequently

# Production Profile

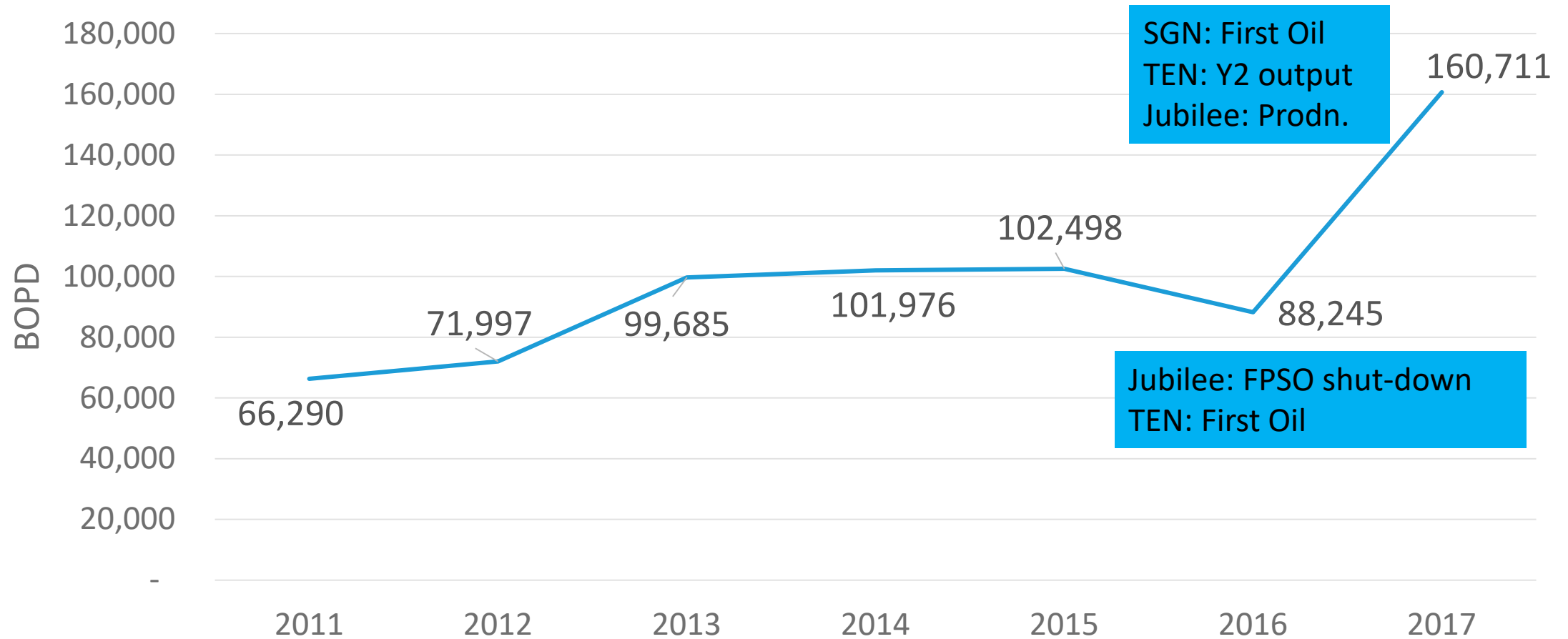
## Production Profile: Crude Oil (Bopd)



## Production Profile: Gas (MMScf)



# Output Trend: 2011-2017

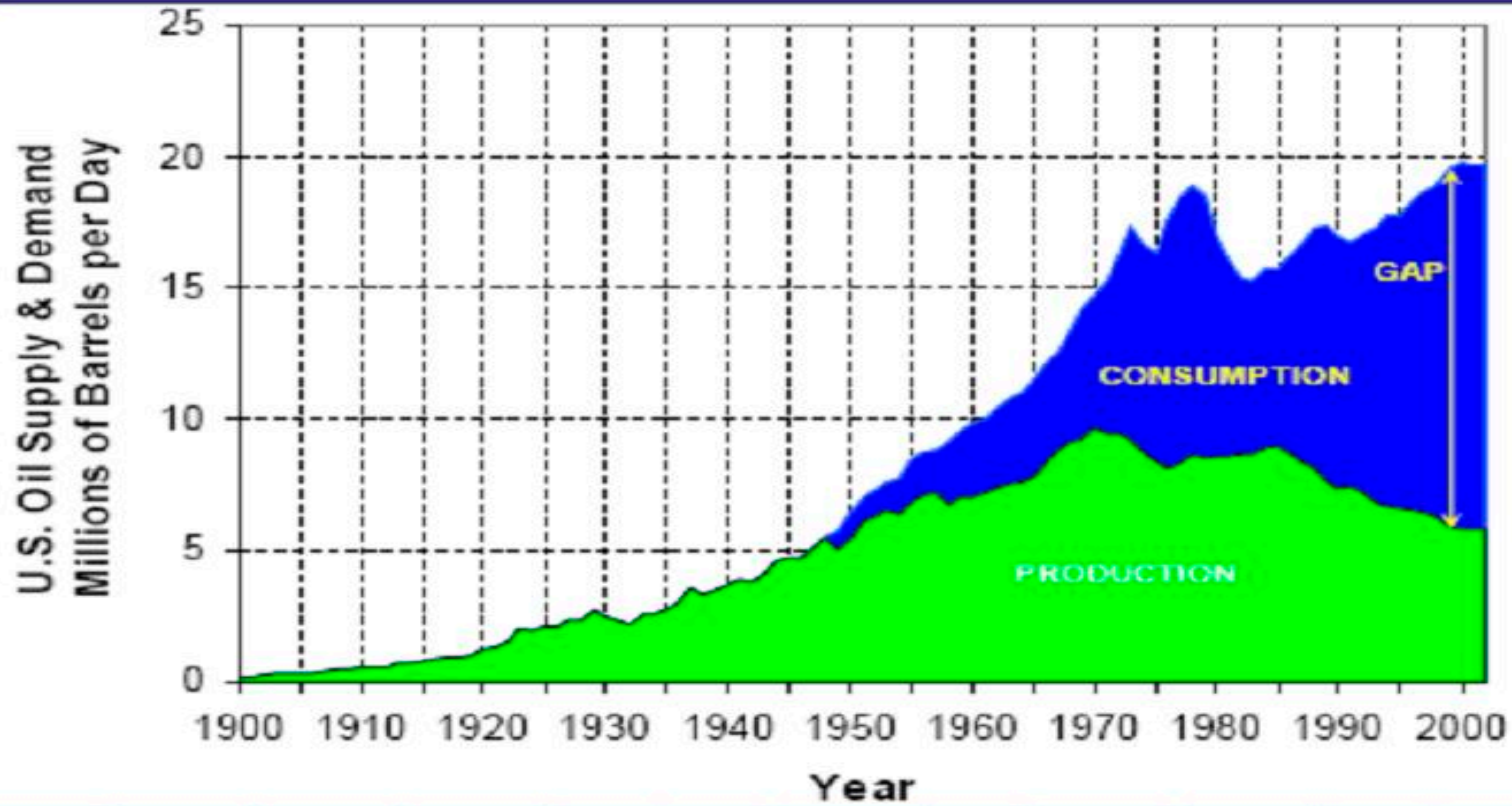




# Crude Oil Price Setting: Demand and Supply Factors



# U.S. Oil Supply & Demand



**Production Data:**  
1900-1937:  
World Energy Council  
1938-1953:  
C.J. Campbell, "The Coming Oil Crisis"  
1954-2002:  
EIA: Annual Energy Review, Table 1.2, Crude Oil Production and Oil Well Productivity

**Consumption Data:**  
1900-1949:  
Est. Production = Consumption  
1949-2002:  
EIA: Annual Energy Review Table 5.1, Petroleum Overview



# Supply Factors

- 1 • Declining reserves and production: U.S. in the 1970s
- 2 • The OPEC effect:  $\geq 25\%$  production cut
- 3 • Geopolitical tensions: Yom Kippur War and Iranian Revolution
- 4 • September 11, 2001 terrorist attack in the US
- 5 • Increased non-conventional production: 20K new shale wells in US





# Demand Factors

1

- Population growth

2

- Global financial crisis and recovery

3

- Economic activity: Euro Zone, China



# Recently...

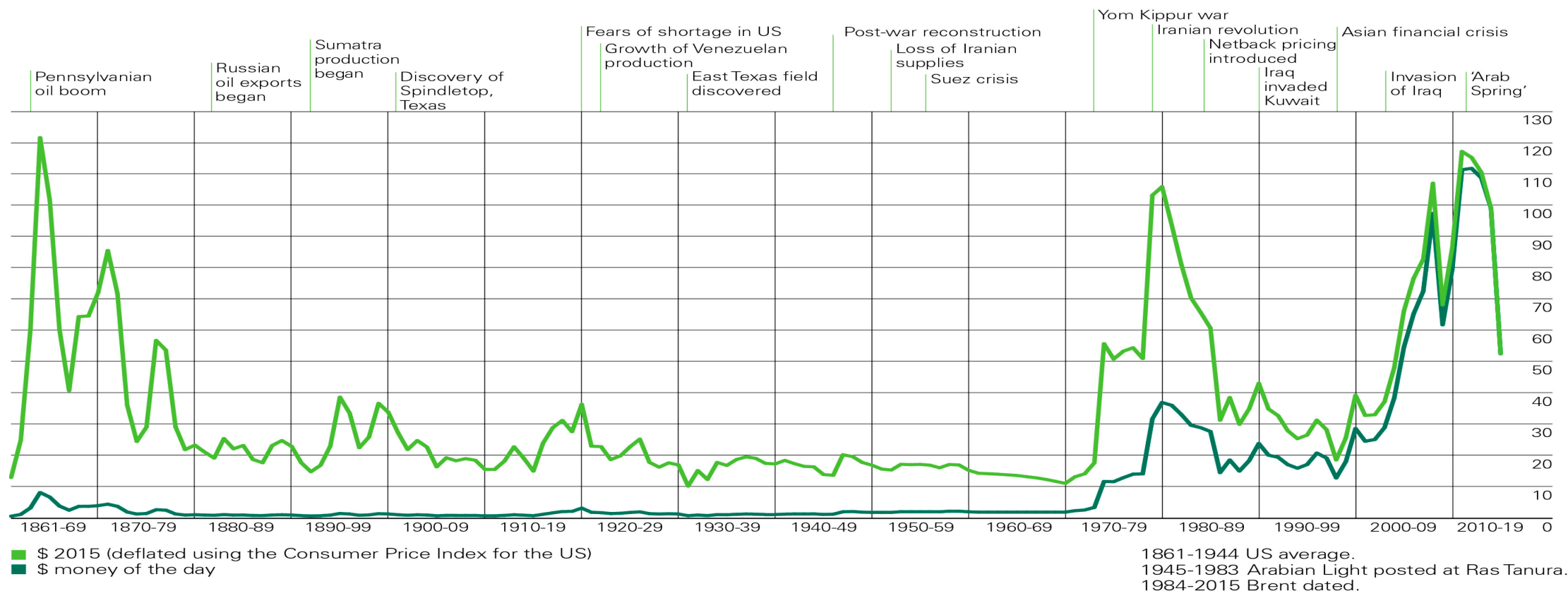
- OPEC's Market share maintenance stance
- Shale resilience: price hedge, cost-cutting and increased productivity
- The Iran factor: nuclear deal
- China and Euro Zone slow-down

## **More Recently...**

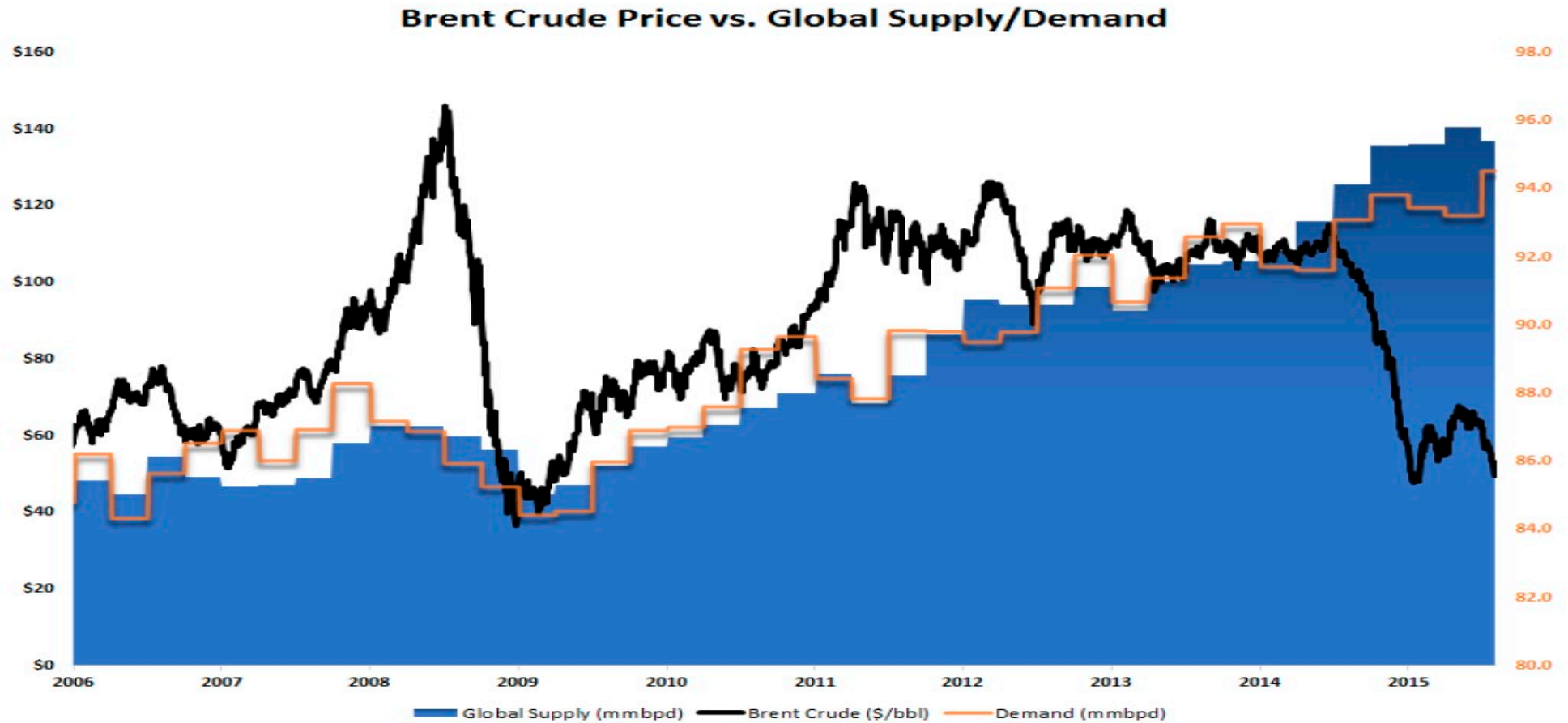
- Brexit
- OPEC and Russia commitment to production cuts
- Rallying oil prices kick-starts shale



# Crude Oil Prices: 1861-2015



Source: BP Statistical Review of World Energy, 2016



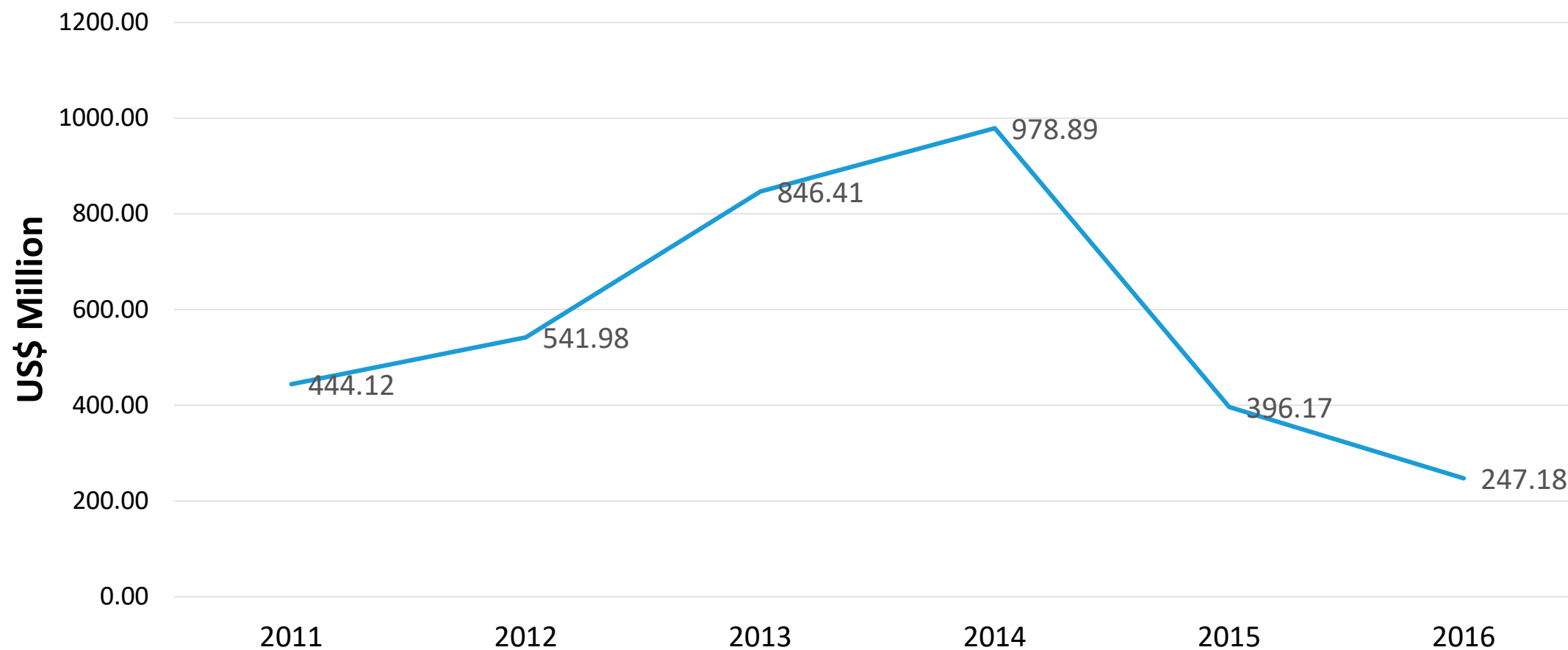
Source: International Energy Agency, Bloomberg



# Price Decline Implications for Ghana: Export Side

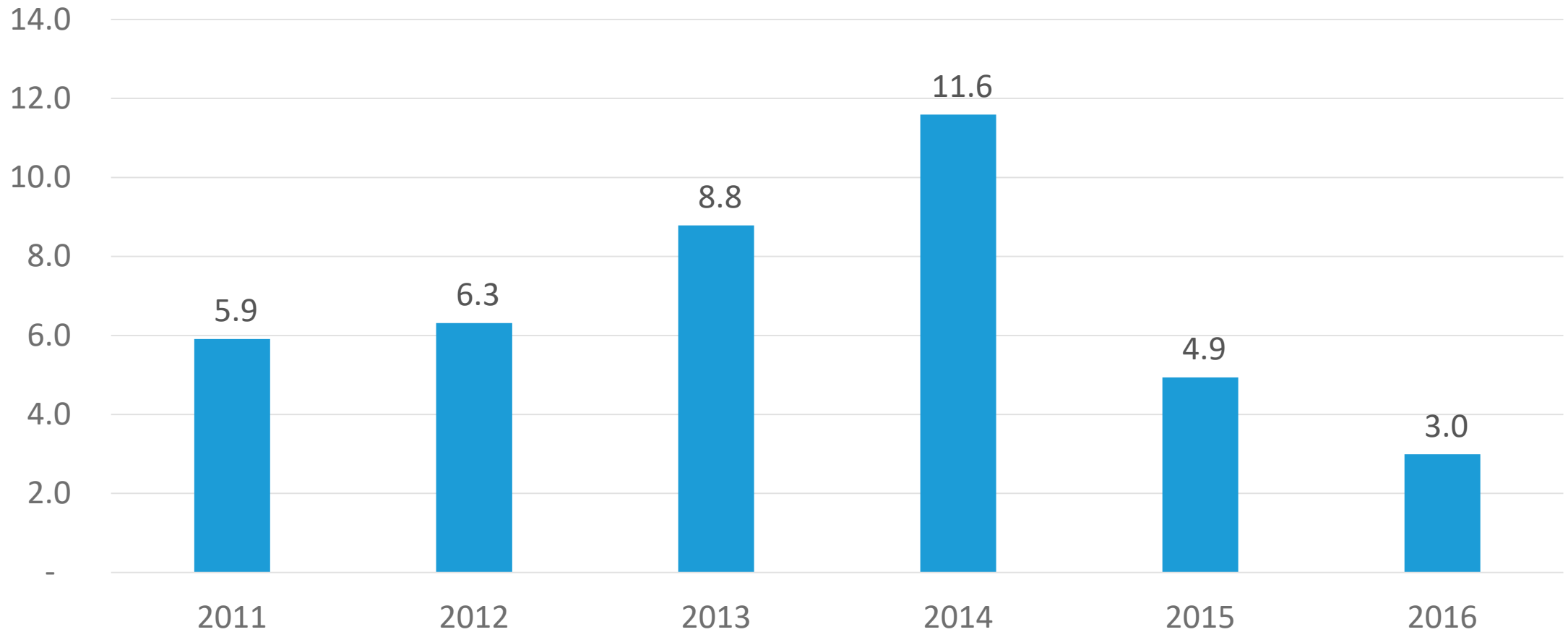


# Petroleum Revenue: 2011-2016

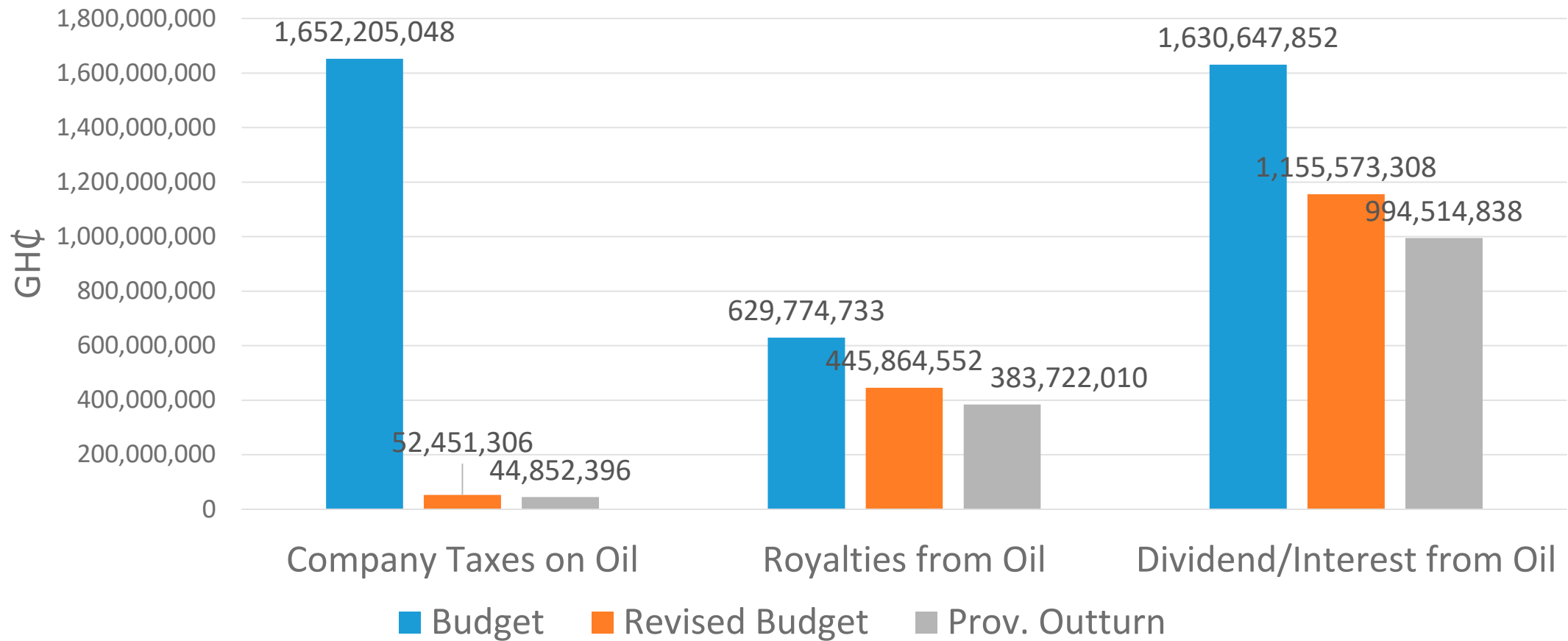




# Share of Petroleum Revenue in Domestic Revenue (%)

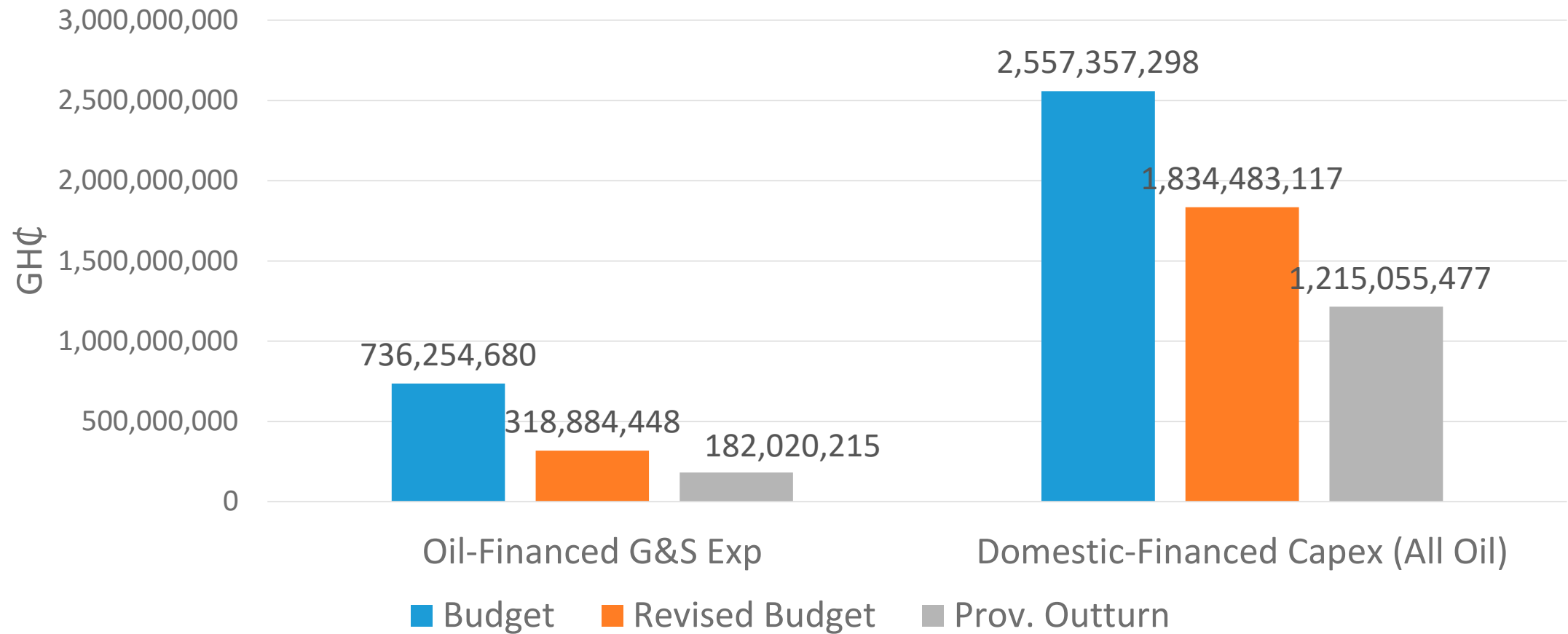


# 2015: Revenue Impact

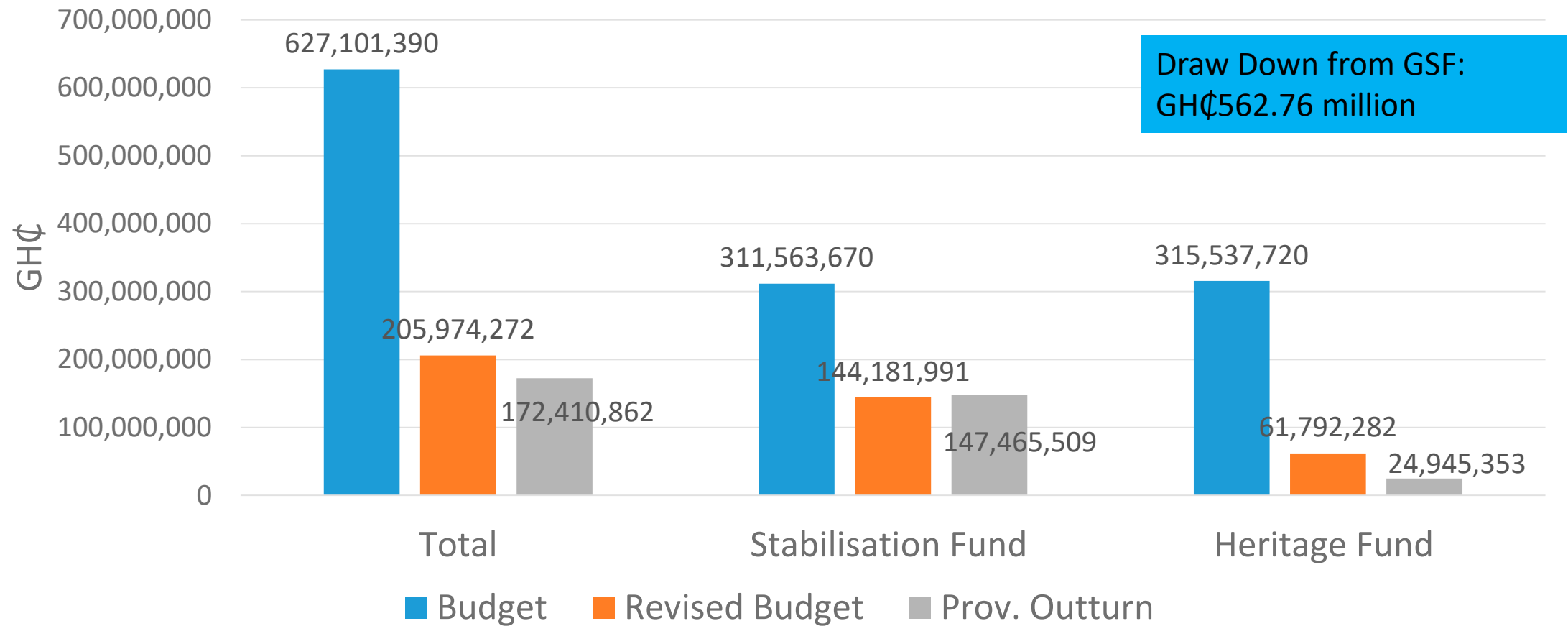




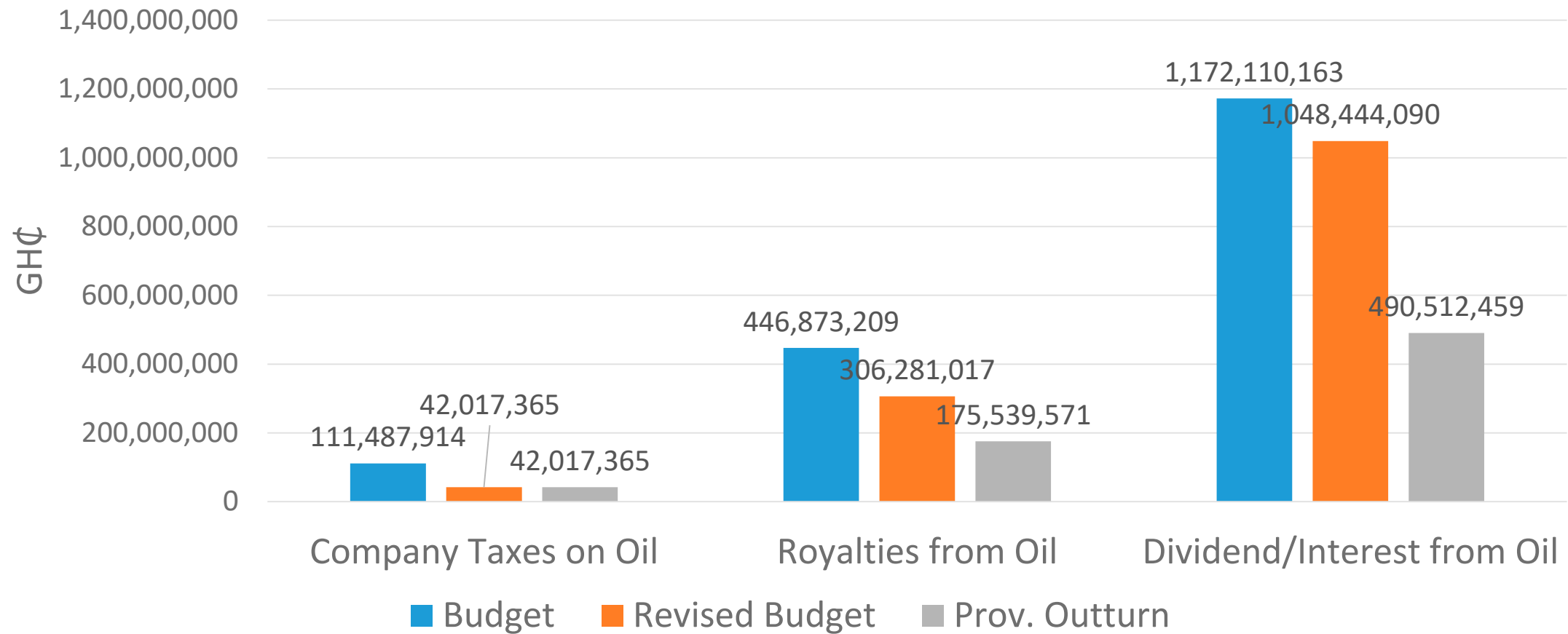
# 2015: Expenditure Impact



# 2015: Savings Impact

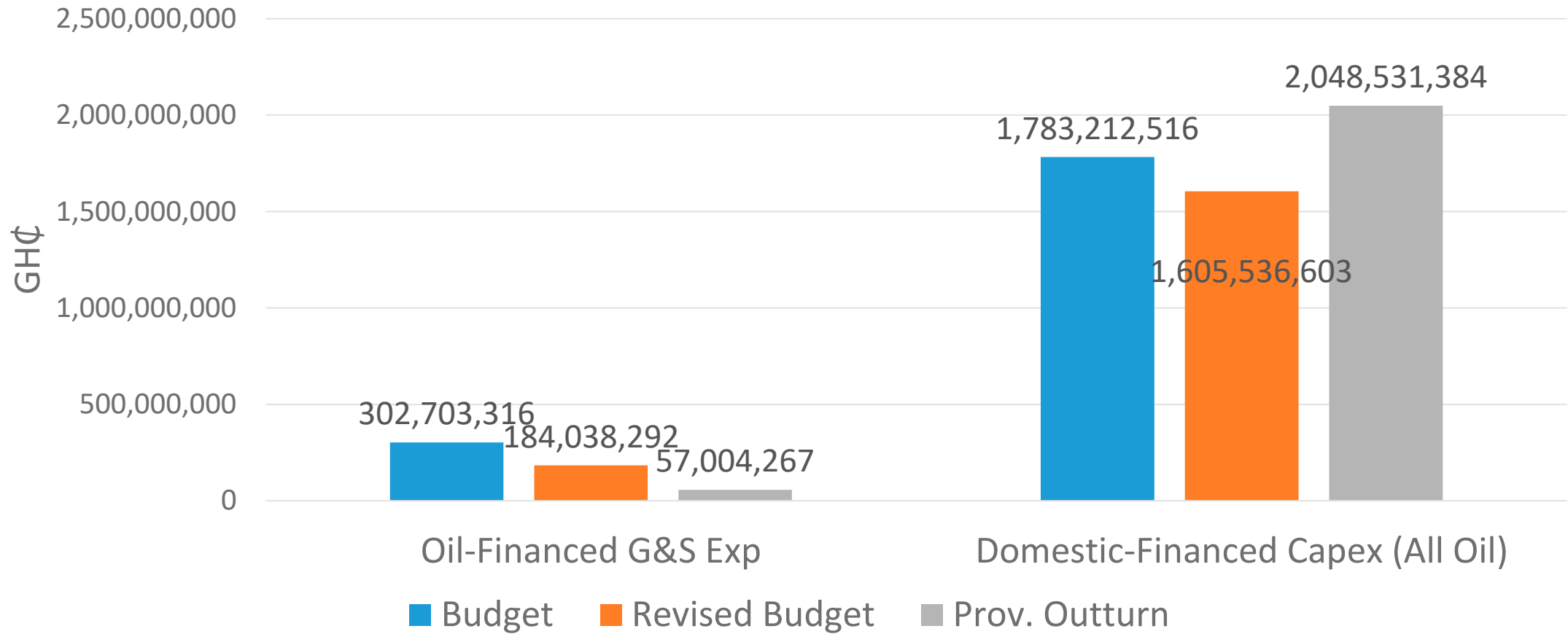


# 2016: Revenue Impact

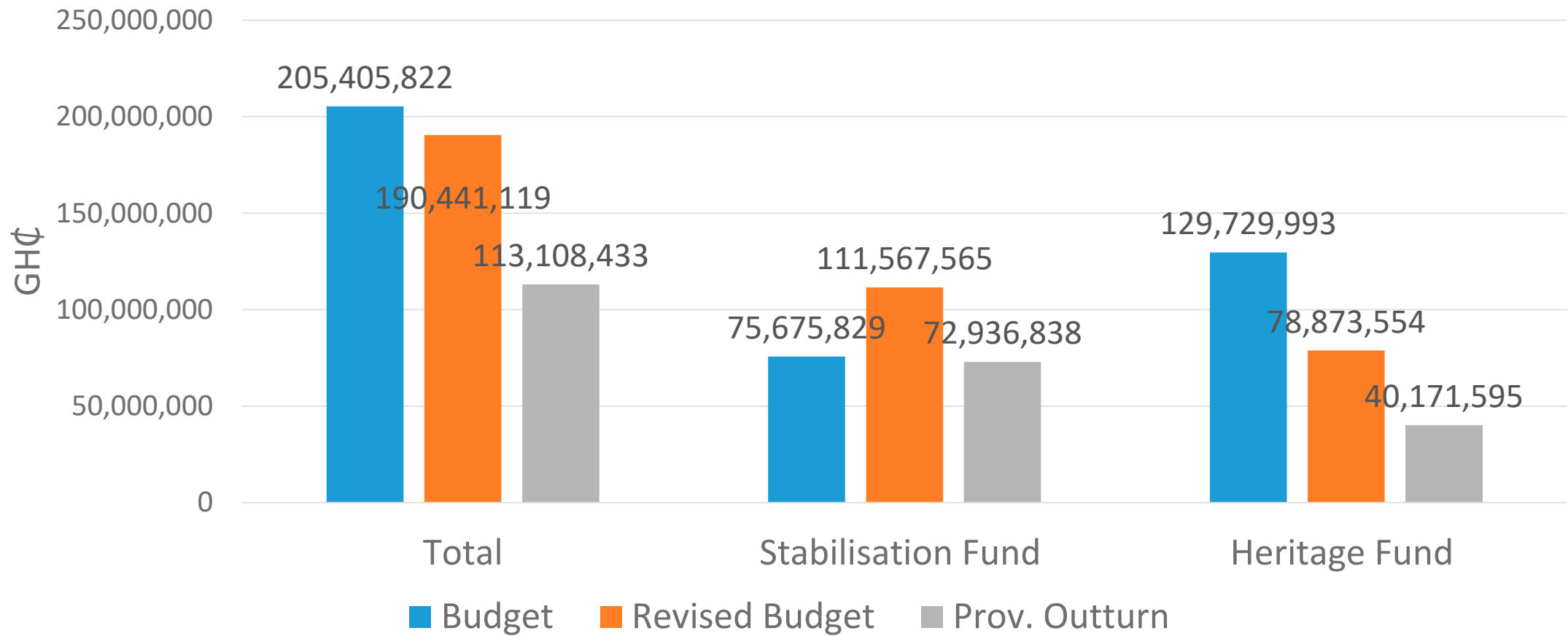




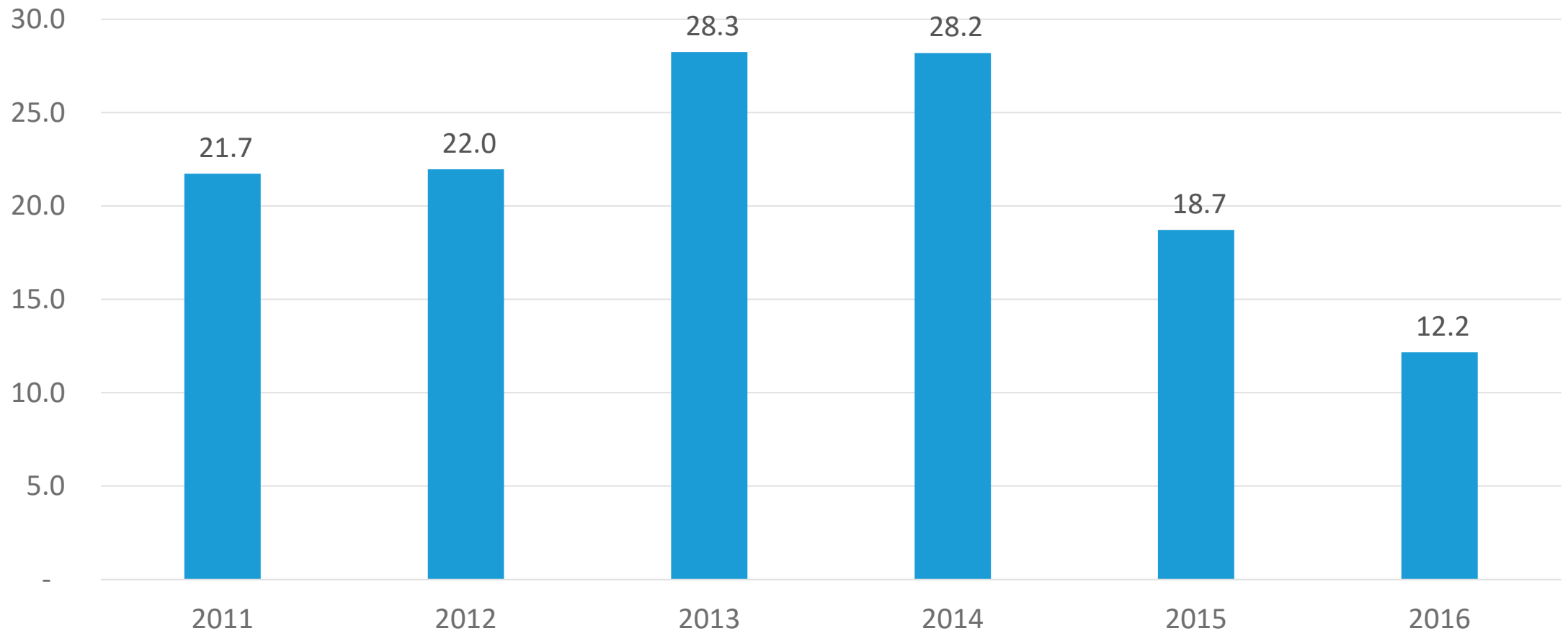
# 2016: Expenditure Impact



# 2016: Savings Impact

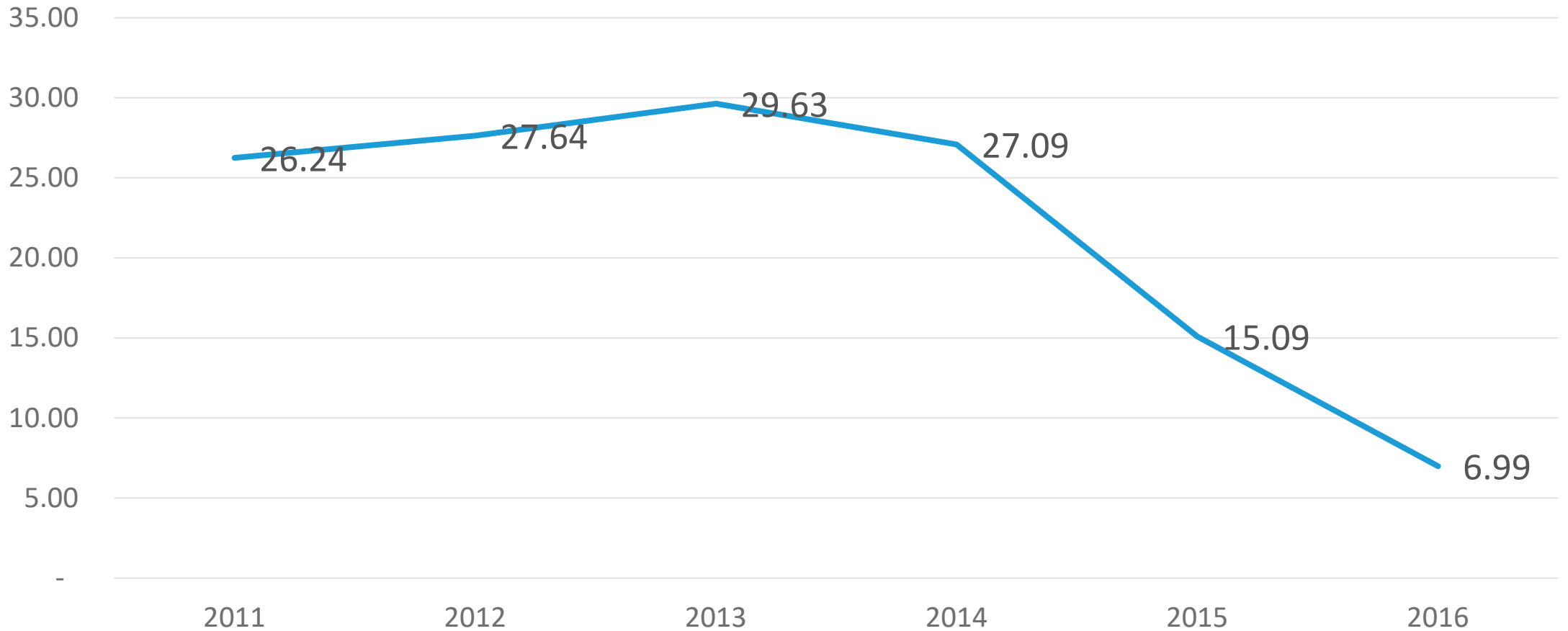


# Share of Petroleum Exports in Total Exports (%)



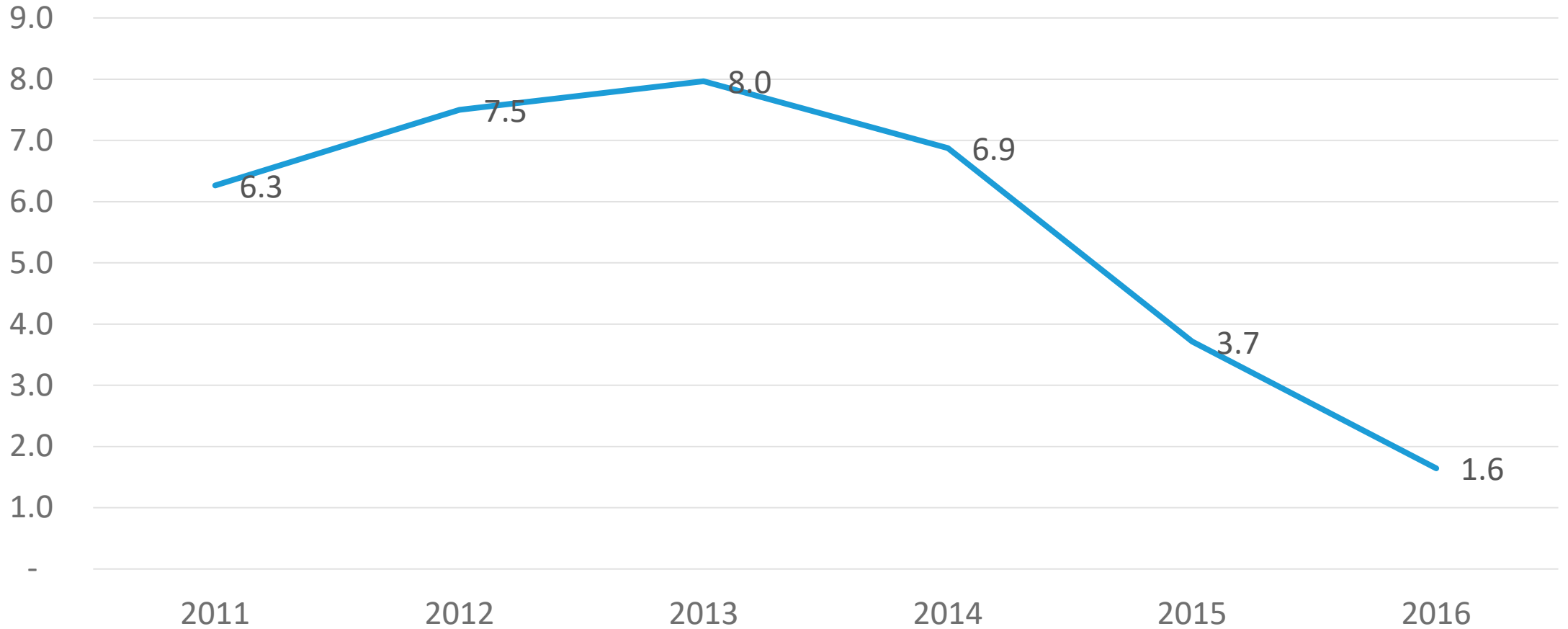


# Share of Petroleum Output in Industry (%)





# Share of Petroleum Output in GDP (%)







# Price Decline Implications for Ghana: Import Side



- 1 • Declining petroleum import bill
- 2 • Forex losses and under-recoveries
- 3 • Exchange rate impact
- 4 • Inflation impact



# How we dealt with it

- Expenditure rationalization
- Withdrawals from the GSF
- Sinking Fund



# Investment Outlook



## Impact of Price Decline on Investment

- Planned investments went ahead: TEN and SGN
- The Ghana-Cote d'Ivoire case rather slowed investment
- Decreased cost of development: SGN

## Outlook

- TEN drilling
- Hess
- Springfield



*Thank  
you*

