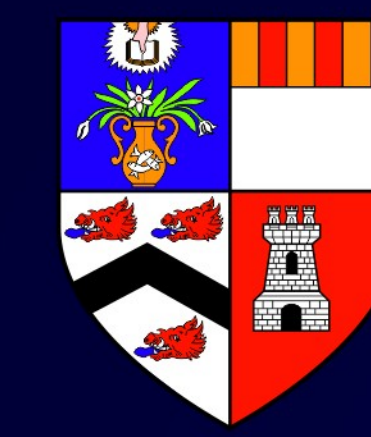


EFFECT OF OIL PRICE INNOVATIONS ON INFLATION IN NAMIBIA

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BACKGROUND/MOTIVATION OF THE TOPIC

- Voluminous studies done on the topic due to effects of repercussions associated with oil price innovations on macroeconomic variables of which inflation is central
- Most studies are concentrated on the U.S., U.K. and other European major economies
- The study is similar to other studies but differs in geographical area covered.
- In addition, the study is necessitated by the Namibian economy's vulnerability to external shocks (IMF Country Reports, World Bank reports,
- To recommend possible policy interventions

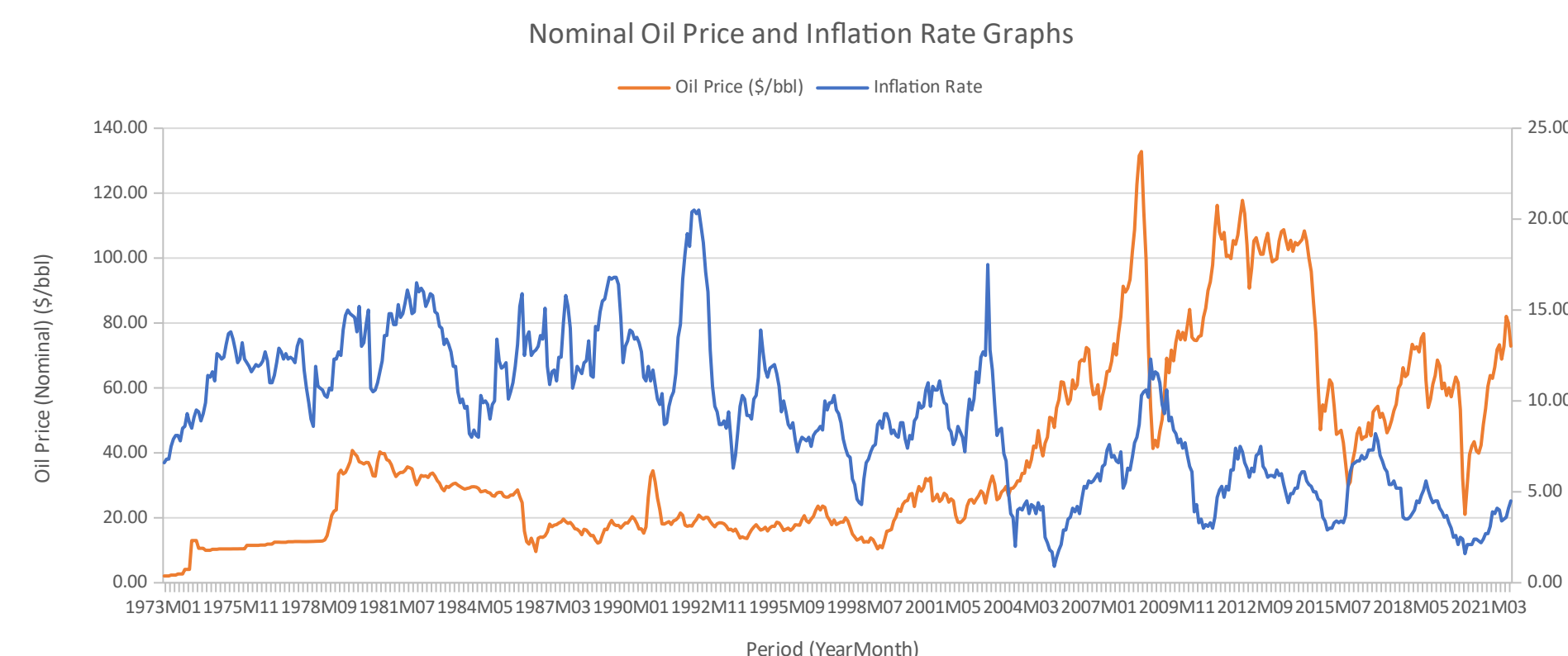


Fig. 1: Graph of oil price and Inflation Rate for Namibia

Research Objectives

- Investigate the long run impact of oil price innovations on inflation rate in Namibia
- Investigate whether the impact of oil price innovations on inflation in Namibia has declined over the past decades as observed in many countries.

METHODOLOGY

The study is based on time series data covering the period 1973M01 to 2021M12 sourced from the World Bank and Namibia Statistics Agency. The study employed a bivariate Structural Vector Autoregression (SVAR) to investigate the oil price innovations pass-through onto inflation in Namibia.

Steps:

- Data transformed into logs, 1st differencing applied, variable became stationary
- Lag length selected, unrestricted VAR estimated
- Model stability and cointegration tests done
- SVAR estimated, impulse response functions (IRFs) and forecast error variance decompositions (FEVDs), Cholesky decomposition with Monte Carlo simulation (10,000 trials used)
- Sample divided into two subsamples to determine if impact changed over time (subsamples: 1973M01 – 2001M12 and 2002M01 – 2021M12)

FINDINGS

The findings are deduced from IRFs and FEVDs

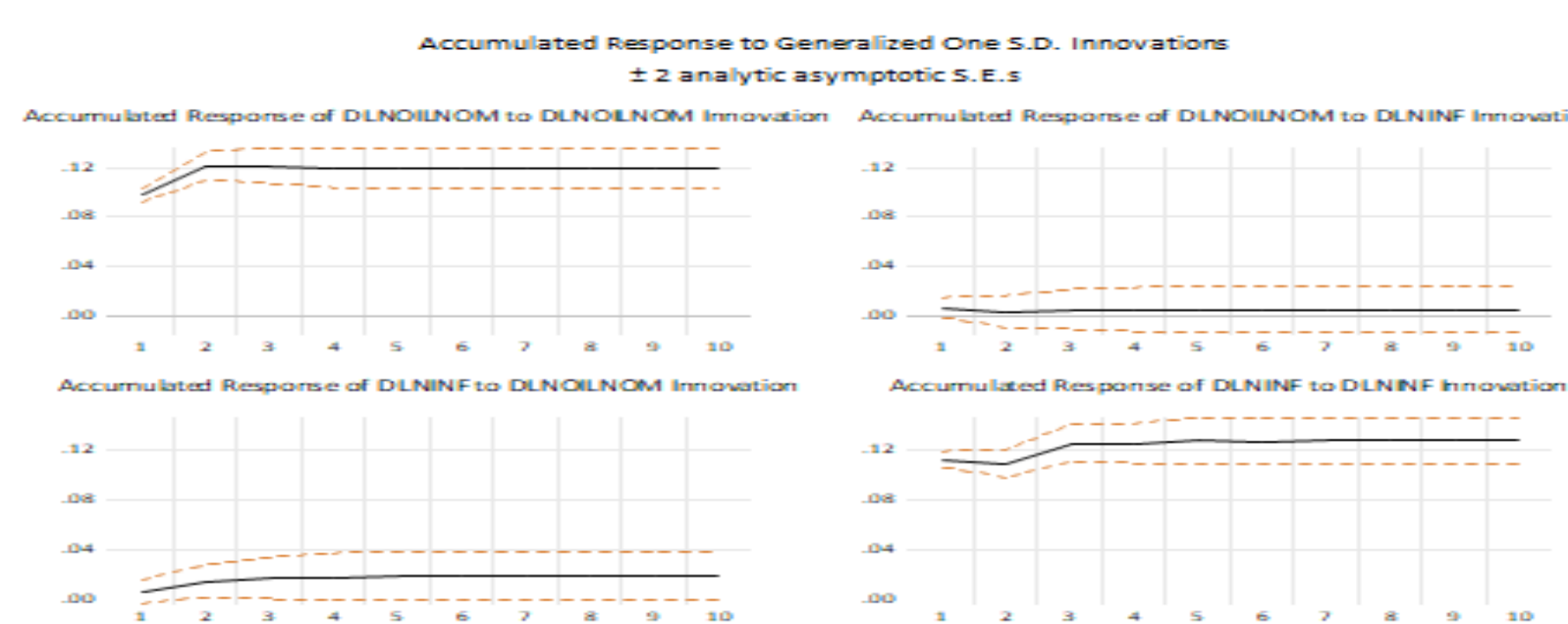


Fig. 2: Impulse Response Functions (1973M01 – 2021M01)

Empirical analysis of the 1973M01 – 2021M12 sample reveals statistical evidence suggesting oil price innovations has a positive impact of about 0.02 percentage points

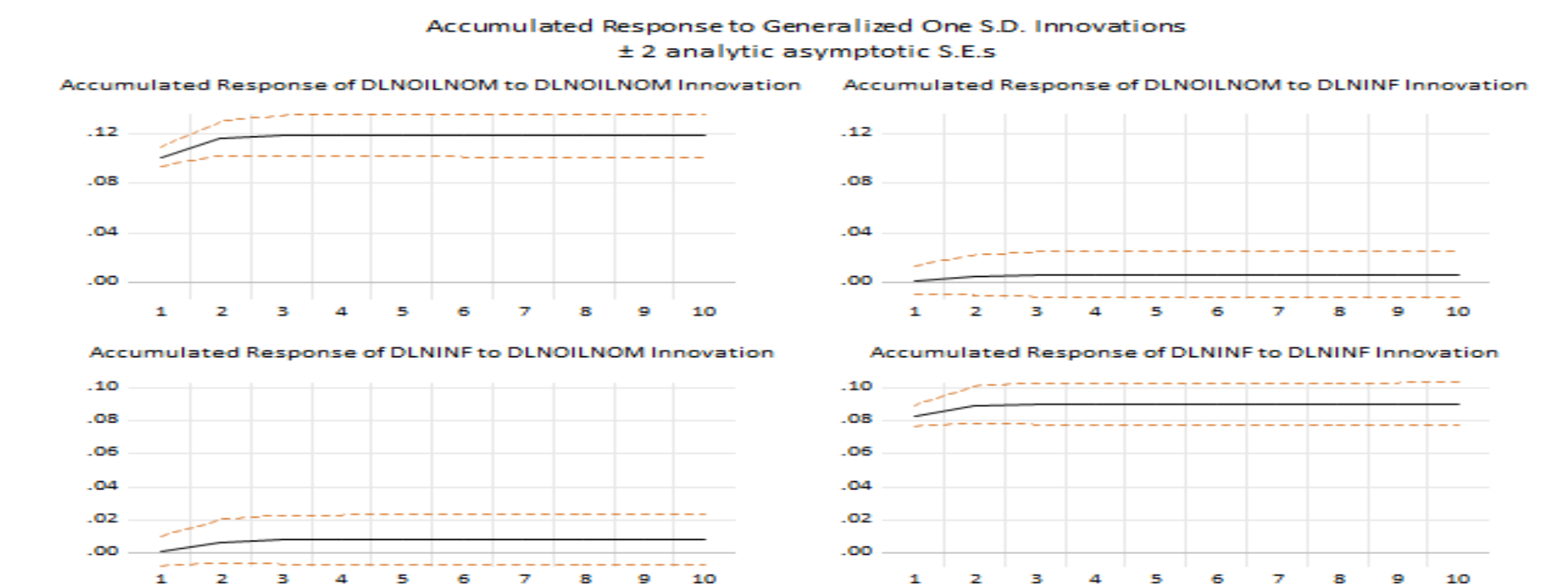


Fig. 3: Impulse Response Functions (1973M01 – 2001M12)

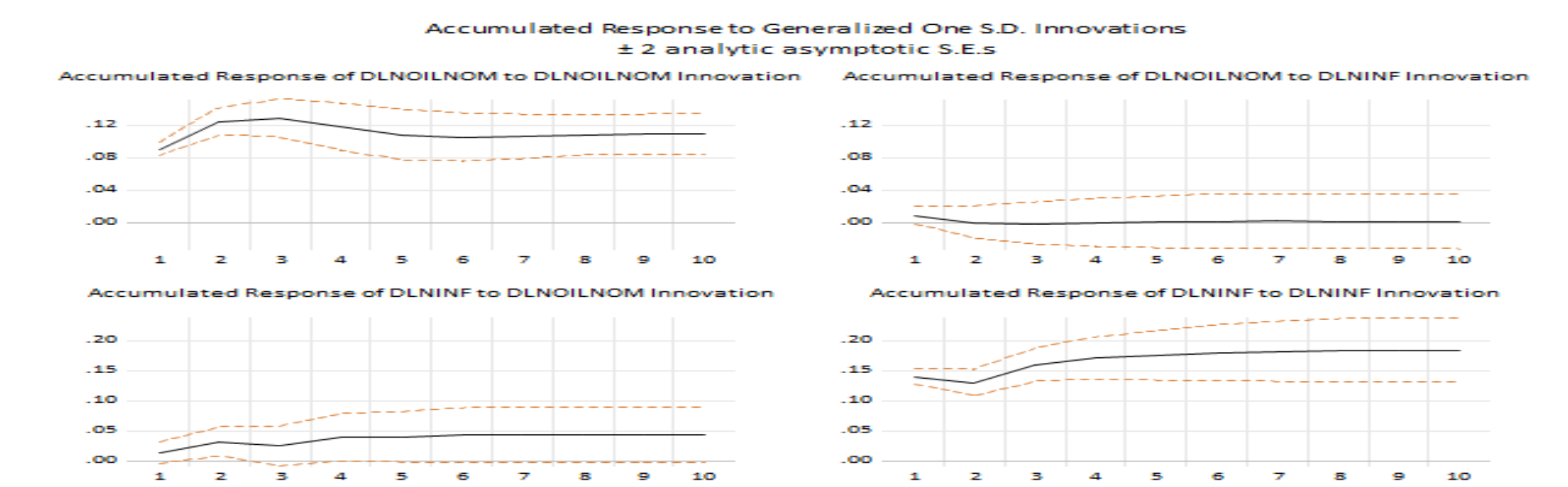


Fig. 3: Impulse Response Functions (2002M01 – 2021M12)

Comparison of the two subsamples results show that the impact of oil price innovation on inflation over the first and second subsample periods is positive and about 0.01 and 0.03 percentage points respectively. One can conclude that the impact is increasing, ceteris paribus.

POLICY IMPLICATIONS/RECOMMENTATIONS

Namibian policymakers should do more research on the determinants of domestic inflation with an objective to further interrogate the transmission mechanism for the oil shock innovations passthrough onto inflation and effect structural changes to the economy to counter this pattern.