

# 4<sup>th</sup> World Congress on Health Economics, Health Policy and Healthcare Management

September 13-14, 2018 | Zurich, Switzerland

## Energy Economics, Finance, and CO2 Emissions

Ali Matar

Ilam University, Iran

The relationship between energy consumption and economy, as well as economic growth and environmental pollution, has been the subject of several studies especially in the past four decades started with the study of Kraft and Kraft (1978). The economic and financial development of the world contributes in air pollutants growing rapidly, especially in recent decades. Rapid global economic growth resulted in a 1.4% increase in overall emissions over 2011, reaching a total of 34.5 billion tons in 2012. The CO<sub>2</sub> emissions trend reflects energy-related human activities which were determined by economic growth, particularly in emerging countries. In 2012, a decoupling of the increase in CO<sub>2</sub> emissions from global economic growth (in gross domestic product) took place, which points to a shift toward less fossil fuel-intensive activities. Furthermore, it reflects enhanced use of renewable energy and increased energy saving. Actually, 90% of the CO<sub>2</sub> emissions originate from fossil-fuel combustion and therefore are determined by the energy demand or the level of energy-intensive activity. High energy demand predicts high levels of use in power generation, industries, and road transport. However, changes in energy efficiency and shifts in the fuel mix, especially from carbon-intensive coal to low-carbon gas or from fossil fuels to nuclear or renewable energy, can cut the overall global emissions level (Trends in Global CO<sub>2</sub> Emissions: 2013 Report). The empirical results proved the existence of a long-term equilibrium relationship among CO<sub>2</sub> and real GDP per capita, energy consumption, and financial development in all GCC countries except UAE. From the short-run disequilibrium among the variables is corrected in each period to return to the long-run equilibrium level. Furthermore, they reveal that the rate of adjustment in returning to equilibrium for UAE is much faster than for the other GCC countries in absolute value. While in the long run 1% significance level in Saudi Arabia, Oman, Kuwait, and Qatar have been found, but there is no long-run relationship among these variables in the case of UAE and the result is inconclusive for Bahrain. Furthermore, the Granger causality test suggests unidirectional causality running from CO<sub>2</sub> to energy consumption in Saudi Arabia, UAE, and Qatar this means that in these countries the energy conservation policies will not affect environment. While Oman and Kuwait display bidirectional causality between these variables this displays feedback implication.