Over recent years there have been many discussions surrounding the idea of lowering fossil fuels in energy production and transport in order to reduce environmental degradation, but at what cost? This argument can be whittled down to a single question: can the fuel source be switched without negatively impacting the economy? The answer lies in the Pollution-Income Relationship (PIR) or, more specifically, a certain scenario within the PIR framework known as the Environmental Kuznets Curve (EKC).

This theory outlines a framework in which an economy can thrive while following a green agenda. The key to understanding this concept is to examine an economy through three stages of development. In the first stage, natural resources are extracted and used in the production process which, in turn, raises pollution levels. This period of transition from the primary sector to an industrial economy is known as the scale effect and, over this time, the transport of goods and people will also increase. At some point, economic development will reach a high enough level to invest in cleaner technologies and in the implementation of service sector jobs. At this stage, the composition and technical effects will outweigh the scale effect and emissions would redirect to a downward trajectory, even though income (or a country’s affluence) and vehicle ownership remain on a growth path.

Some justifications of this relationship are as follows:

- Higher disposable incomes. Within a more affluent economy, people have more discretionary income, are more likely to own at least one vehicle per household, and are happier to pay more for better environmental standards.
- Technological development. In order to pursue long-term economic growth, technology must be developed and the level of productivity increased. In terms of the automotive industry, this has been linked to the increase in fuel efficiency.
- Government legislation. Generally speaking, economic growth increases the size of government as a share of GDP. This allows these governments to implement taxes and legislation, as well as increase subsidies to lower urban pollution, for example.

The important take-home is that pollution and economic activity might be positively correlated, but only up to a point, as this relationship is not necessarily linear, so there does not have to be a trade-off between a growing economy and lower emissions. A key proponent of this argument is that when pollution reaches a certain level, the health of the working population is impaired to the extent that productivity falls due to sickness and costs rise through higher use of medical services. In fact, a number of studies conclude that generous investment into R&D of cleaner energy technology would ensure considerably higher revenue development and job creation within this burgeoning industry than if the status quo were to be maintained. In other words, the opportunity cost of not tackling pollution would far outweigh the initial cost of ‘going green’.

As with most economic theories, this one has its critics, but it is generally accepted that markets with a reasonable level of income and focused legislation can reduce environmental degradation, while encouraging economic activity. Intuitively, these issues will be more keenly felt in densely populated countries and more affluent markets will be better placed to combat pollution. With this in mind, it comes as little surprise that Europe and China, in particular, are implementing strategies to push the uptake of low-emission mobility. The benefits to society and the environment are the most obvious consequences, but, undoubtedly, the potential of long-term economic gain will also be driving many aspects of this transition.