

Sources of Imposed Constraints

'Necessity is the mother of invention.'

English proverb

Developing countries experience on-going constraints due to a scarcity of resources of all kinds, and this can serve as a catalyst for frugal innovation¹. ['The Boy Who Harnessed the Wind'](#) is an inspiring example of this.

In developed countries constraints can be imposed by extreme events that cause disruption or scarcity of resources, for example:

- War or terrorism
- Natural disasters, e.g. earthquakes
- Extreme weather events, e.g. droughts, floods
- Equipment or infrastructure breakdown
- Industrial accidents
- Pandemics
- Political or trade disputes leading to sanctions, embargos or import tariffs
- Supply or demand volatility/ shocks

Such events can also exacerbate the situation in developing countries. In any context, a shortage of funds can also impose constraints on business. This may be due to the economic climate, competitors, and/or the stage of the business lifecycle (e.g. start-up).

Imposed constraints can, of course, be highly damaging; however there can be positive benefits from the innovations that are triggered through necessity.

¹ See Forms of innovation that can support 'doing more with less' document