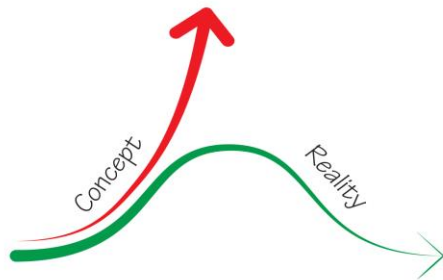


THE THIRD CURVE

The End of Growth
as we know it



Mansoor Khan

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As we know it

A New Lens to Understand our New Economic Reality

Financial markets are under threat.

Growth rates are dropping.

The age-old remedies prescribed to boost economic growth are proving ineffective, if not outright dangerous.

Five years after the 2008 global financial crash, nothing seems to work as per projections.

But what if the rules of the game have inverted?

What if economic growth is eluding us for a reason that we have discounted all this while?

What if there are indeed limits to growth?

Yes maybe the Modern Industrial World stands at a crucial and unavoidable turning point. The sacrosanct paradigm of modern economics, namely perpetual growth, is in the process of ending.

Our economic growth model makes 2 simple yet amazingly unreasonable assumptions:

- 1. That money is the currency that runs the world. In fact it is energy.*
- 2. That we have limitless energy & other resources on a finite planet.*

These assumptions appeared to hold true for the last 150 years – the first half of oil reserves. But now we are about to begin the second half of the story of oil. This half-way point of oil is an unprecedented point in history and is called Peak Oil. Peak Oil is not an ideology but an aspect of geology – the point of maximum oil extraction from the earth.

This geological limit is what defines what will be economically possible in the future starting right now. The global economic collapse of 2008 was the advent of this turning point because past the peak we get only less oil. Therefore less industrial and economic growth. This spells doom to the religion of perpetual economic growth.

My lecture is NOT directly about morality, justice, equity, environmental consciousness and other noble human values. It is about the head-on collision between:

- * Our total **acceptance** of an infinite economic growth model which is not possible.*

AND

- * Our total **denial** of the finiteness of the earth which is evident.*

We need a new lens to understand this inversion of economic reality. The Third Curve provides us that lens.

It identifies the root cause of the malady by reminding us of the forgotten relationships between money and energy, capital and resources, concept and reality.

Only through recognising the pitfalls of perpetual growth can we truly map a secure future for our business enterprises, ourselves, our children and the planet at large.

Blurbs from prominent persons who have read this book.

"Khan lucidly presents the counterpoint to the ideas of perpetual growth: a keen penetrative look at the state of our natural resources and the laws of energy that govern our hopes and plans for the future. The Third Curve offers an original argument, intricately researched and vividly presented. While not everyone will agree with his conclusions, Khan offers a valuable blueprint of insights for policy-makers and decision-makers who might want to consider his view of the pitfalls and consequences of exponential growth. Densely argued but engaging, The Third Curve marks an intriguing debut."

Shashi Tharoor – Author, Ex Under-Secretary General, U.N. and Minister of State for HRD

"Yet another masterpiece from Mansoor Khan. A clear, sharp articulation of the insanity and absurdity of the economic assumption that we can have perpetual, limitless growth on a planet with ecological limits. Peak oil, climate chaos, the food crisis, the financial crisis are different aspects of interconnected crises triggered by an obsolete paradigm of growth. We need a new paradigm based on the ecological reality of the planet. And Mansoor Khan's new book is vital reading for anyone wanting to participate in evolving a new paradigm."

Vandana Shiva – Author & Environmentalist Activist

"Future economic collapses may well be possible if we move on growth paths that do not recognize the finiteness of resources and the fragility of ecosystems. The Third Curve points to the need for business and finance to get real."

**Dr. Maria Ligia Noronha - Executive Director (Research Coordination),
The Energy and Resources Institute (TERI), New Delhi.**

“Mansoor has tackled some very complex concepts without compromising on their importance. While this is a book that certainly will generate debate on both sides, I am certain that those who read it will thoroughly enjoy it. I wish him all success and hope that he continues his study into this field, which is greatly in need of more scholarly work such as this.”

**Jairam Ramesh – Economist and current Minister of Rural Development,
Government of India.**

Why this book is needed.

Global peak of oil production happened in 2005. Oil prices shot to \$146 in 2007. The world economic collapse resulted in 2008 and 4 years later the world is lurching towards a second recession if not a *proper* depression and the Euro zone is about to disintegrate. High energy prices sent food prices skywards. Social unrest due to joblessness and hunger spread. Despite all this economic mayhem, *crude* oil prices hold at \$100 plus.

All these are aspects of Peak Oil and were discussed and predicted by the Peak Oil community as early as 2000. But *the* mainstream was kept unaware by the media, oil companies and world leaders.

Even now most *expert* discussions on the economic collapse are misleading the public to believe that the collapse was due to wrong policies or faulty financial planning. Economists and world leaders still hold onto the archaic notion that we can ‘grow’ ourselves out of this mess. The Euro zone disaster is proving them wrong every day.

If we delude ourselves further then there is a colossally large financial correction around the corner that will make the 2008 collapse look like a junior league event.

We need a reality check. Growth is over. Controlled shrinkage is the sensible way out - both financially and ecologically.

Only through understanding Peak Oil can we hope to start a realistic dialogue.

We need nothing *less* than an inversion of our economic and industrial paradigm in order to deal with the new reality of declining oil. Ignoring this will lead to unimaginable collapse.

The structure of the book.

The book is divided into 5 chapters.

Chapter 1 examines the glaring mismatch between our Concept of exponential money growth and the Reality of finite energy. It explains how we defined money and the subsequent rules that money MUST follow. This eventually leads to the infinite concept of perpetual exponential growth. And all this to be fulfilled by the reality of finite resources. And as we force growth, the Concept and Reality move increasingly apart causing first the ecological crisis and then the financial crisis as we hit Peak Oil. This was inevitable.

Chapter 2 explains the core principles of Peak Oil and through the bell curve of resource availability. We trace the history of Peak Oil from theory to becoming validated as a geological law. We interestingly note that despite this validation there is immense denial in our system to accept Peak Oil. The reasons for the denial become evident when we delve into the intricacies of Peak Oil.

Chapter 3 explore Alternative Energies and why they will fail to meet the requirements of our Industrial paradigm. It explains basic energy concepts that help us evaluate why all alternative energies will fail to perpetuate the growth paradigm.

Chapter 4 addresses the only realistic option available to us – a zero-growth economic paradigm. This is what I call the Third Curve that represent our realistic energy budget. It is nothing but the inevitable state that we will reach - a non-growth, non-depletion based future. We will reach that state whether we like it or not. The only difference is going to be how we end up reaching there. Through denial we will crash to the Third Curve. Through acceptance we can make a gentle landing to the Third curve. The choice is ours.

Chapter 5 addresses how to make the Transition from our current state of high energy consumption to the eventual and inevitable lower energy state of The Third Curve. The core thinking of this Transition approach is based on the principles and actions of the global Transition Movement pioneered by Rob Hopkins of Totnes, U.K. This transition requires a qualitative and holistic approach and not a mere quantitative approach as is being advocated by most well-intentioned groups and organisations including a large segment of the environmental movement. Today the Transition Movement has made effective change in over 400 communities in dozens of countries across the globe.

How I tested my ideas before writing this book.

Over the last 2 decades, India has celebrated her new-found prosperity through liberalization. We are giddy over our near double digit growth record. But we are also a country of 1.2 billion people with no oil reserves to talk about. We certainly needed to do a reality check.

I studied Peak Oil issues since 2001 but found very little acceptance. Our country was just not in the mood to see the other side of oil and resource depletion.

Post 2010 when the world-wide recession refused to go away and India started feeling the financial impacts, it became clear to me that the time was right for me to take my ideas out. Maybe this is why I was allowed to speak at prestigious and relevant places like Indian School of Business Hyderabad, IIM Bangalore, The Energy Resources Institute (TERI), New Delhi along with corporates like Yahoo and Manhattan Associates in Bangalore. I also spoke at 3 separate TEDx events in Chennai.

The experience from the talks encouraged me. The audience was able to relate to the content of my argument because the emerging economic reality was explained far better through the lens of Energy & Peak Oil.

Unanimously through all the lectures I got a strong feedback from the audience that I must spread this thought wider. And so using the experience and format of my lectures I started shaping this book.

My book, though written primarily to show economic limitations imposed by laws of energy, geology and thermodynamics, always keeps in mind the ecological aspect. In fact it warns that finding an economic 'fix' at any cost to maintain the status quo of our growth-based paradigm is going to wreck what remains of our ecological sanctity.

The answer has to be a paradigm shift in economics first. The paradigm of perpetual growth is over for geological and thermodynamic reasons and cannot be overcome merely with human ingenuity.

The Third Curve will be useful to start the dialogue of a more realistic approach to our financial and ecological future.

Author Bio Data

An alumnus of IIT Mumbai, Cornell University, and M.I.T, Boston, Mansoor Khan started his career as a filmmaker and went on to make four feature films that won several national awards. In 2003, he moved to Coonoor, to realize his life's vision of building an organic farm that was self-supporting and local. Spread over 22 acres, Acres Wild plays host to all those interested in a close-to-Nature experience.

The Third Curve is the outcome of Mansoor's own journey, an intricately researched piece of work that examines the co-relation between the compulsions of economic growth and the limits imposed on us by Nature. Questioning the efficacy of the modern Industrial world, the Third Curve unfolds truths that Civilization might perforce have to accept not merely as a possibility but as a way of life.

Mansoor has delivered lectures on various aspects of the Third Curve at following institutions:

like Indian School of Business, Hyderabad, Indian Institute of Management, Bangalore, The Energy & Resource Institute (TERI), New Delhi, and The Foreign Services Institute, New Delhi.

- IIM Bangalore
- Indian School of Business (ISB) Hyderabad
- The Energy & Resources Institute (New Delhi)
- Morgan Stanley (Mumbai)
- Yahoo (Bangalore)
- Symbiosis Institute of Business Management (Bangalore)
- Foreign Services Institute (New Delhi)
- Bombay Chartered Accountants Association (Mumbai)
- Think 2013
- 3 TEDx talks in Chennai and Coimbatore
- Mumbai Lit Fest 2013
- Bangalore Carnival Literature Fest 2014
- Young Presidents Organisation (YPO) and World Presidents Organisation (WPO) – Bangalore