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**Major Bubble Collapses and the  
Changing Roles of Markets and Governments  
(Slides)**

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**MAJOR BUBBLE COLLAPSES  
AND THE CHANGING ROLES  
OF MARKETS AND GOVERNMENTS**

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## WHAT I WILL ARGUE:

- This is not an ordinary financial crisis
- It is a once-in-a-half-century event, with a role in the pendular dynamics of capitalism
- It is endogenously generated by the way technological revolutions are assimilated
- It has a major impact on the real economy
- It marks the end of a job done by finance and signals the need for a structural shift with the return of an active State

## WHAT I WILL SHARE WITH YOU:

- Some reflections on the possibility of a sustainable global golden age ahead
- And on the challenges that building such a future involves

## SCHUMPETER'S BASIC QUESTIONS:

WHAT DRIVES  
GROWTH?

Entrepreneurship  
Technical change  
Innovation

WHY IS GROWTH  
CYCLICAL?

Because technical change  
comes in clusters and revolutions  
producing waves of creative destruction  
through market equilibrium processes

What happens if we turn the second question around?

WHY AND HOW DOES TECHNICAL CHANGE OCCUR BY REVOLUTIONS?

HOW ARE REVOLUTIONS ASSIMILATED?

## THE HISTORICAL ANALYSIS OF HOW TECHNOLOGICAL REVOLUTIONS DIFFUSE REVEALS POWERFUL REGULARITIES AND IDENTIFIABLE SPECIFICITIES

### HISTORICAL REGULARITIES

- A technological revolution comes together every 40 or 60 years (at maturity of the previous)
- Each drives *a great surge of development* broken in two different periods one led by finance, the other by production
- A major financial collapse marks the beginning of the switch

### EPOCHAL SPECIFICITIES

- Each revolution brings a techno-economic paradigm shift in the direction of innovation and the criteria for competitiveness
- The potential for growth is different each time depending on the characteristics of the new technologies
- Social forces and institutions define what part of the new potential will be deployed and how

Each great surge is unique due to historical, political and other contingent factors  
But the recurring patterns have fundamental causal explanations

# THE CAUSES OF THE PENDULAR DYNAMICS OF CAPITALISM

When a revolution becomes exhausted  
(as mass production did in the 1970s)  
SHIFT TO FINANCE

Production capital has become  
conservative

The economy needs  
mobility of investment  
to experiment  
with radical new technologies

Finance takes over  
to invest in the new and  
modernise the old and  
the State must be out of the way

INSTALLATION

From irruption of the revolution  
to boom and major bubble collapse

When the major bubble collapses at mid-life  
(as in 1929 or now)  
SHIFT TO PRODUCTION

Financial capital has  
become reckless and decoupled

The economy needs  
stable expansion and innovation  
to take advantage  
of the installed potential  
and spread the benefits of growth

The State  
comes back actively  
and helps production capital  
regain control of investment

DEPLOYMENT

(After recomposition post-bubble collapse)  
From Golden Age to maturity

# The historical record: bubble prosperities, recessions and golden ages

	INSTALLATION PERIOD	Collapse and TURNING POINT	DEPLOYMENT PERIOD
	Major bubble		Golden Age
1	1771 The 'Industrial Revolution' (machines, water power and canals)	Canal mania 1793-97	Great British leap
2	1829 Age of Steam, Coal, Iron and Railways	Railway mania 1848-50	The Victorian Boom
3	1875 Age of Steel and Heavy Engineering (electrical, chemical, civil, naval)	Global infrastructure boom (Argentina, Australia, US, etc) funded from London 1890-95	Belle Époque (Europe) "Progressive Era" (USA)
4	1908 Age of Oil, the Automobile, Petrochemicals and Mass Production	The roaring twenties: radio, cars, aviation, real estate, electricity Europe 1929-33 USA 1929-43	Post-war Golden age
5	1971 Age of Information Technology and Telecom (ICT)	Internet mania, NASDAQ emerging markets and financial mania 2000-3 2008-??	Sustainable global "golden age"???

Each Golden Age has been facilitated by enabling regulation and policies for shaping and widening markets

THIS TIME THE MID-SURGE BUBBLE  
HAPPENED IN TWO STAGES

FIRST

Technological innovation in ICT

The INTERNET MANIA  
in the 1990s

NASDAQ collapse  
in 2000

SECOND

Financial innovation with ICT

The EASY LIQUIDITY BOOM  
in the 2000s

FINANCIAL MELTDOWN  
in 2007-08

SO WE ARE NOT ONLY FACING A FINANCIAL CRISIS  
BUT ALSO THE NEED FOR A STRUCTURAL SHIFT IN THE ECONOMY

Understanding this is crucial  
for finding effective solutions to the current crisis

## WE ARE AT THE TURNING POINT

There are three tasks for governments after the mid-surge crash:

**1** intensive therapy  
for finance

DONE... even overdone

**2** redesign of financial  
regulation and architecture

This time global finance needs both  
national redesign and  
a global regulatory "floor"

STILL ON THE DRAWING BOARD

**3** enable structural shift  
in the real economy

RARELY BEING CONSIDERED AS SUCH  
But recovery will be very difficult without it

The process can be short or long depending on the social and political forces  
The last time around it took over a decade and a major war

The structural shift involves  
**A CHANGE IN THE DRIVERS OF INNOVATION**  
from **SUPPLY-PUSH** to **DEMAND-PULL**

INSTALLATION = Supply push

DEPLOYMENT = demand-pull

THE STATE  
in a  
facilitating  
service  
role

FINANCE  
and  
THE NEW  
ENTREPRENEURS  
as drivers  
and innovators

FINANCE  
in a  
facilitating  
service  
role

PRODUCTION  
and  
THE STATE  
as drivers  
and innovators

Experimenting in the new industries  
and spreading of the new paradigm

Using the new paradigm  
for innovation across all sectors

During deployment, the conditions for innovation in production  
depend on the effectiveness  
**OF INSTITUTIONAL AND POLICY INNOVATION**

FOR DEMAND-PULLED ECONOMIC GROWTH IN TODAY'S GLOBAL CONDITIONS  
NATIONAL AGGREGATE DEMAND POLICIES ARE NOT ENOUGH

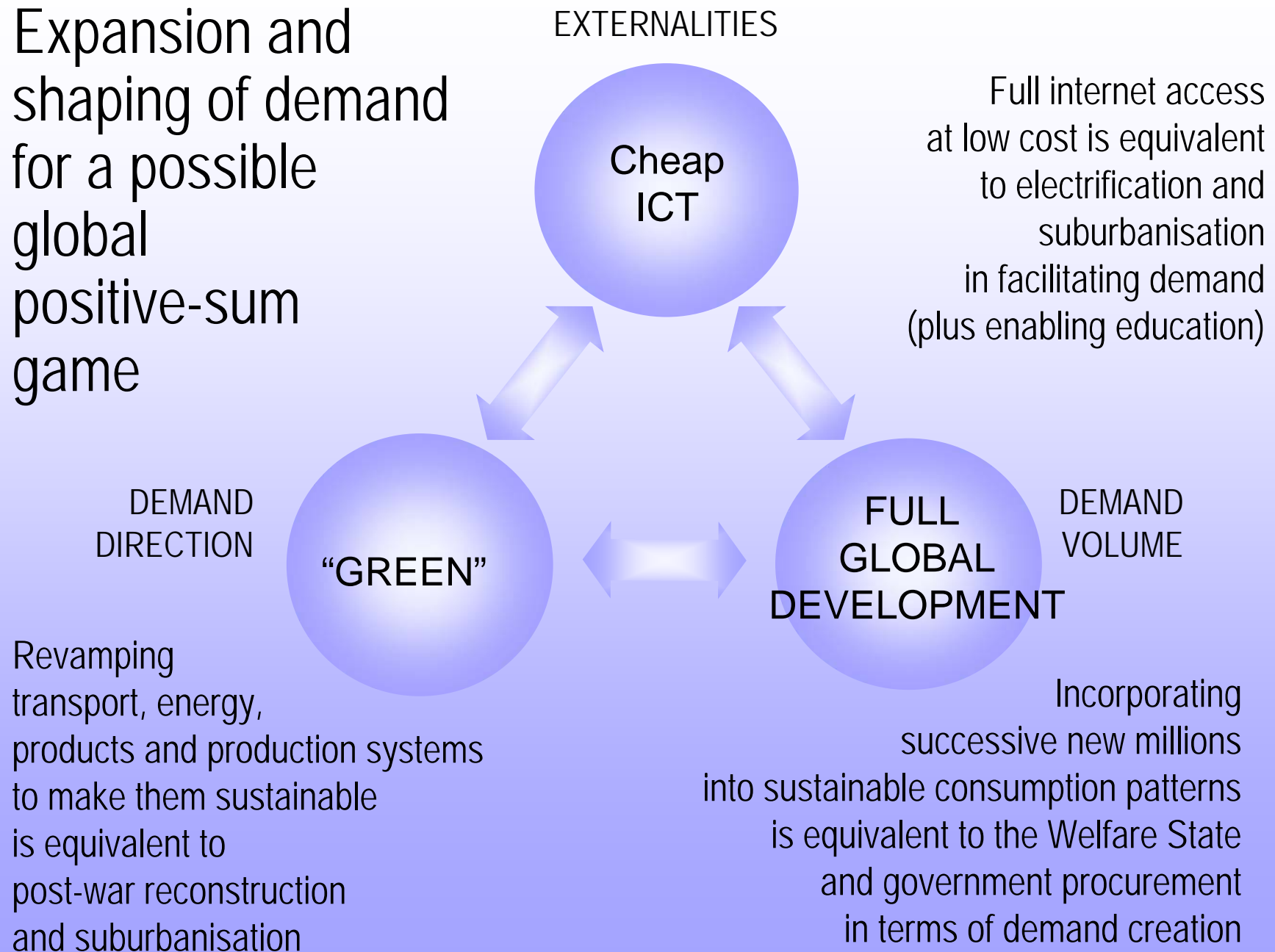
- The installed potential for innovation and expansion is sufficient for growth in all countries
- Hyper-segmentation of markets can allow mutual benefit production and trade patterns through adequate specialisation and respecialisation
- ICT has led to globalised finance but there are no executive global institutions

**KEYNES NEEDS**  
a neo-Schumpeterian  
enrichment  
incorporating  
**TECHNOLOGY AND  
GLOBALISATION**

**SCHUMPETER NEEDS**  
a Keynesian enrichment  
incorporating  
**INSTITUTIONAL  
INNOVATION**

The demand policies to unleash a global golden age  
require a combined theoretical approach  
involving consensus on technological directionality in a globalised context

Expansion and shaping of demand for a possible global positive-sum game



## A SHIFT IN POLITICAL GOALS

Each technological revolution provides the space of the possible in wealth creation

THE SOCIO-POLITICAL FORCES SHAPE THE DIRECTION

**Mass  
production**

**Flexible  
production  
(ICT)**

**EQUALITY = HOMOGENEITY**

Welfare State = workers as "middle income"

"One best way" = The American Way of Life

International core and periphery

**NATIONAL GOLDEN AGES IN THE "WEST"**

**"EQUIVALENT SATISFACTION"?**

Global rise in the quality of life?

Different sustainable "glocal" lifestyles?

Development across all countries?

**A GLOBAL GOLDEN AGE?**

# A SHIFT IN ECONOMIC THOUGHT

What Pigou (Marshall's successor in Cambridge) wrote in 1949:

Deployment  
3rd Surge

"In the years preceding the First World War there were in common use among economists a number of metaphors ...  
'Money is a wrapper in which goods come'; ...  
'money is a veil behind which the action of real economic forces is concealed' ...

Installation and  
turning point  
4th Surge

"During the 1920s and 1930s  
... money, the passive veil, took on the appearance of an evil genius;  
... the wrapper a thing liable to explode.  
Money, in short, after being little or nothing, was now everything ...

Deployment  
4th Surge

"Then with the Second World War, the tune changed again. Manpower, equipment and organisation once more came into their own. The role of money dwindled to insignificance..."

Pigou (1949) *The Veil of Money*, Macmillan pp.18-19

But the shift to production capital  
is not automatic and conditions are different each time

## THE DRIVING FORCES FOR GOVERNMENT ACTION POST-COLLAPSE

- Indignation with finance (fraud, scandals, innocent victims, etc.)
- Weakening of finance (losses, bankruptcies, etc.)
- Pressure from production capital due to contraction of markets and absence of credit for the expansion potential
- Social unrest, anger of the unemployed
- Recession, depression
- Growing disappointment with free markets

ONLY SOME OF THOSE FORCES ARE CURRENTLY ACTIVE

AND THE RECIPES BEING APPLIED ARE THE SAME  
THAT MOUNTED THE CASINO IN THE 2000s

## THREE MAJOR CHALLENGES

- A political challenge
- A policy challenge
- A research challenge

The political challenge

A TRIPLE ALLIANCE  
TO BUILD A PROGRAMME  
FOR A SUSTAINABLE GLOBAL GOLDEN AGE

**Social democracy**  
**greens**  
**and development advocates**

AIMING TO ENGAGE THE BUSINESS WORLD  
IN A POSITIVE-SUM GAME

## The policy challenge

THE INSTITUTIONAL INNOVATIONS REQUIRED BY SUCH A PROGRAMME  
WILL PITCH IMAGINATION AGAINST  
IDEOLOGICAL AND BUREAUCRATIC INERTIA

- How to regulate the financial world (nationally and globally) so its profits come from promoting growth and innovation
- How to establish consensus building mechanisms
- How to revive employment and maintain quality of life in the advanced countries
- How to effectively help promote and fund development in the marginalised countries
- How to identify the right mix of pro-environmental policies (regulation, incentives, taxes, risk reduction, guaranteed markets, subsidies, education, legislation etc. etc.)

AN INTELLIGENT AND INFORMED TILTING OF THE PLAYING FIELD  
GLOBALLY, NATIONALLY AND LOCALLY

# THE RESEARCH CHALLENGES FOR THE NEO-SCHUMPETERIANS

- **DEVELOP MACRO-ECONOMIC THEORY**  
enrich Keynes by including technology  
and updating it to the current circumstances  
of a diversified global economy
- **FOCUS ON INSTITUTIONAL INNOVATION**  
to do for government policy makers what the analysis  
of the university-industry link did for companies
- **STUDY THE FINANCE-TECHNOLOGY LINK**  
in the micro, meso and macro levels