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4th BUSINESS MANAGEMENT CONFERENCE
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Theme: Innovative and Creative Solutions for Economic Growth Strategies and Sustainable Futures
Dates: 24 to 26 August 2016
Venue: The Riverside Hotel, Durban, South Africa



Innovation and Sustainability

From Disruption out of Emerging Markets to the Base of the Pyramid Innovation and Beyond.

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Durban, South Africa

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5 Trends regarding Innovation Research and Sustainability

1. There is a growing awareness of the specifics of innovation in/from **Low End & New Market** Contexts
2. There is a growing awareness of the specifics of innovation in/from **Emerging Markets**
3. There is a growing awareness of the specifics of (social) **Sustainability** in the context of innovation
4. There is a growing number of **new innovation concepts** that try to address this recent growing awareness
5. There is a growing **terminological confusion** that blurs the underlying concepts, since many of them are used synonymously and use the similar empirical examples

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Sustainability & Sustainable Development: Background and Normative Orientation

- „Sustainable development is development that meets the needs of the present without compromising the ability of **future** generations to meet their own needs.
- It contains two key concepts:
  - the concept of "**needs**", in particular the essential needs of the **world's poor**, to which overriding priority should be given; and
  - the idea of **limitations** imposed by **the state of technology** and **social organization** on the **environment's ability** to meet present and future needs.“

    1987 World Commission on Environment and Development (Brundtland Report.) „*Our Common Future*“

→ **Triple-Bottom-Line:** Economic growth, environmental protection, and social equality

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5 Trends regarding Innovation Research and Sustainability

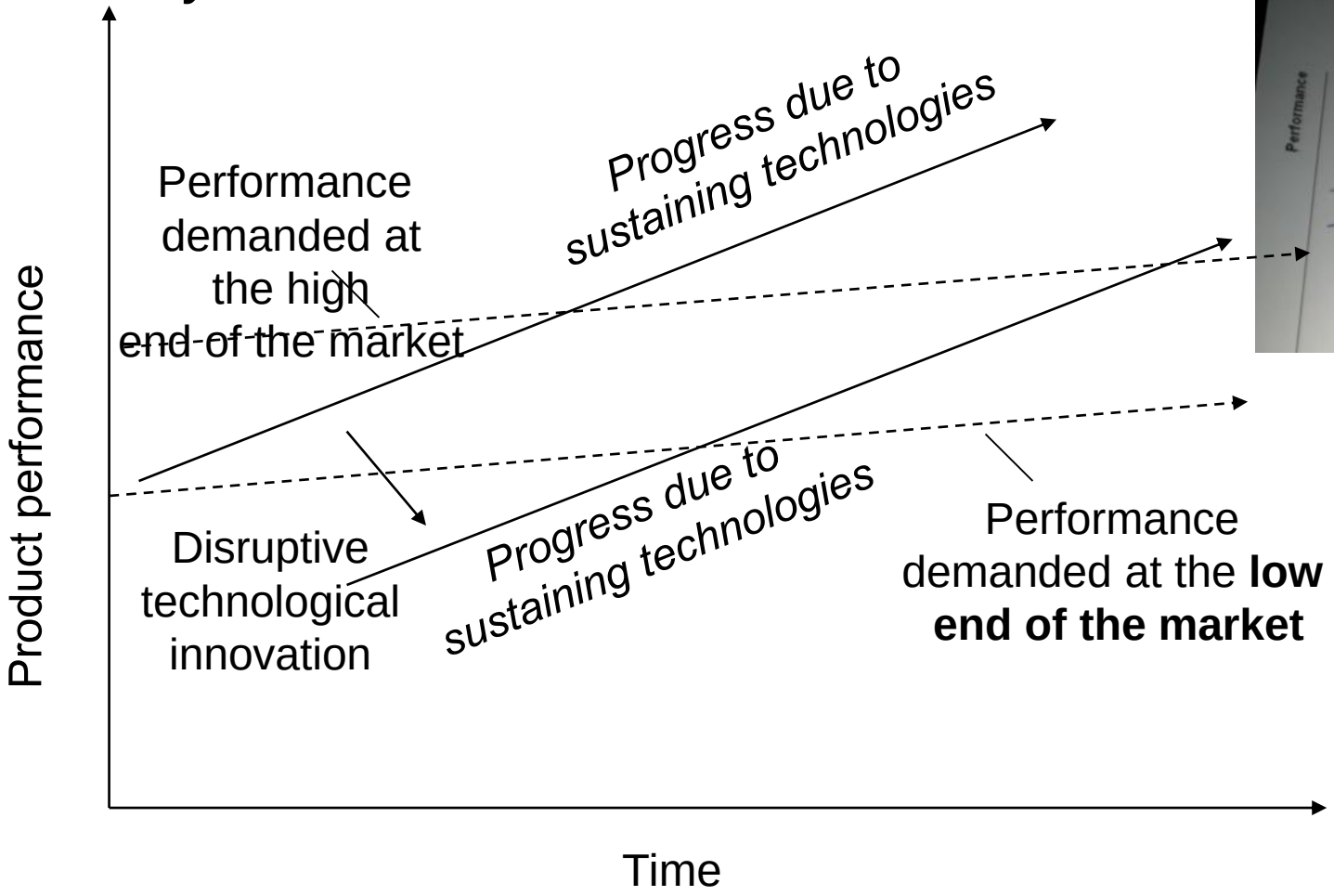
1. There is a growing awareness of the specifics of innovation in/from **Low End & New Market** Contexts

Disruptive Technologies

Growing awareness of the specifics of innovation in/from Low End & New Market Contexts

- Clayton M. Christensen/HBS 1997





5 Trends regarding Innovation Research and Sustainability

2. There is a growing awareness of the specifics of innovation in/from **Emerging Markets**

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Growing Awareness of the Specifics of Innovation in Emerging Markets (I)

R&D MANAGEMENT

'Low cost–high tech' innovations for China: why setting up a separate R&D unit is not always the best approach

Christian Schanz[1], Stefan Hüsig[1], Michael Dowling[1] and Alexander Gerybadze[2]

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Emerging Markets Usually Encompass Different Market Segments with Different Consumer Needs

Criteria \ Market segment	Premium Market	Middle Market („Good-enough-market“)	Commodity Market (“Lower-end Market”)
Product functionality	High-end (many state-of-the-art features)	Key/decisive user features only	Low-end (basic standard user features to meet basic needs; undifferentiated products)
Product price	High (according to status as international brand)	Significantly (ca. 25–40%) below premium segment	Low (typically 40–90% of premium price)
Customers	High purchasing power	Value-seeking with mid-level incomes	Low income
Players/Competitors	Multinationals	Local companies with global ambition and multinationals	Local companies
Market share (% revenues)	Ca. 10–15%	Ca. 60–65%	Ca. 25%
Importance MNCs / MNCs competitive position	Very high / traditionally strong position	Very high / rather weak position	Low / (very) weak position

Source: Adapted and extended from Gadiesh et al. (2007).
Note: MNC = Multinational Corporation. The segmentation was first developed for consumer markets but it can also be applied to B2B markets.

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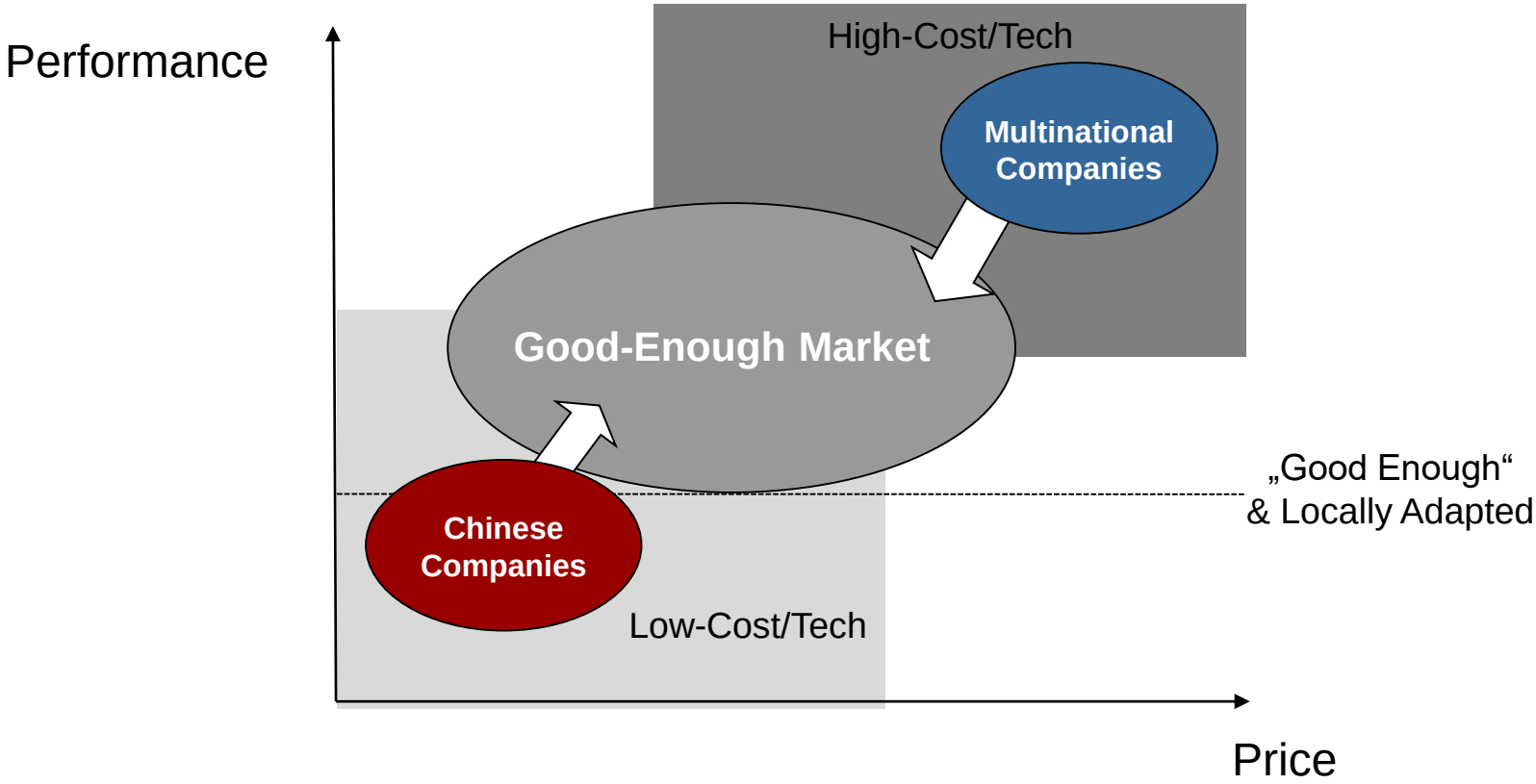
The “Good-Enough Market” is Served by Chinese as well as MNCs



Schanz/Hüsig 2009

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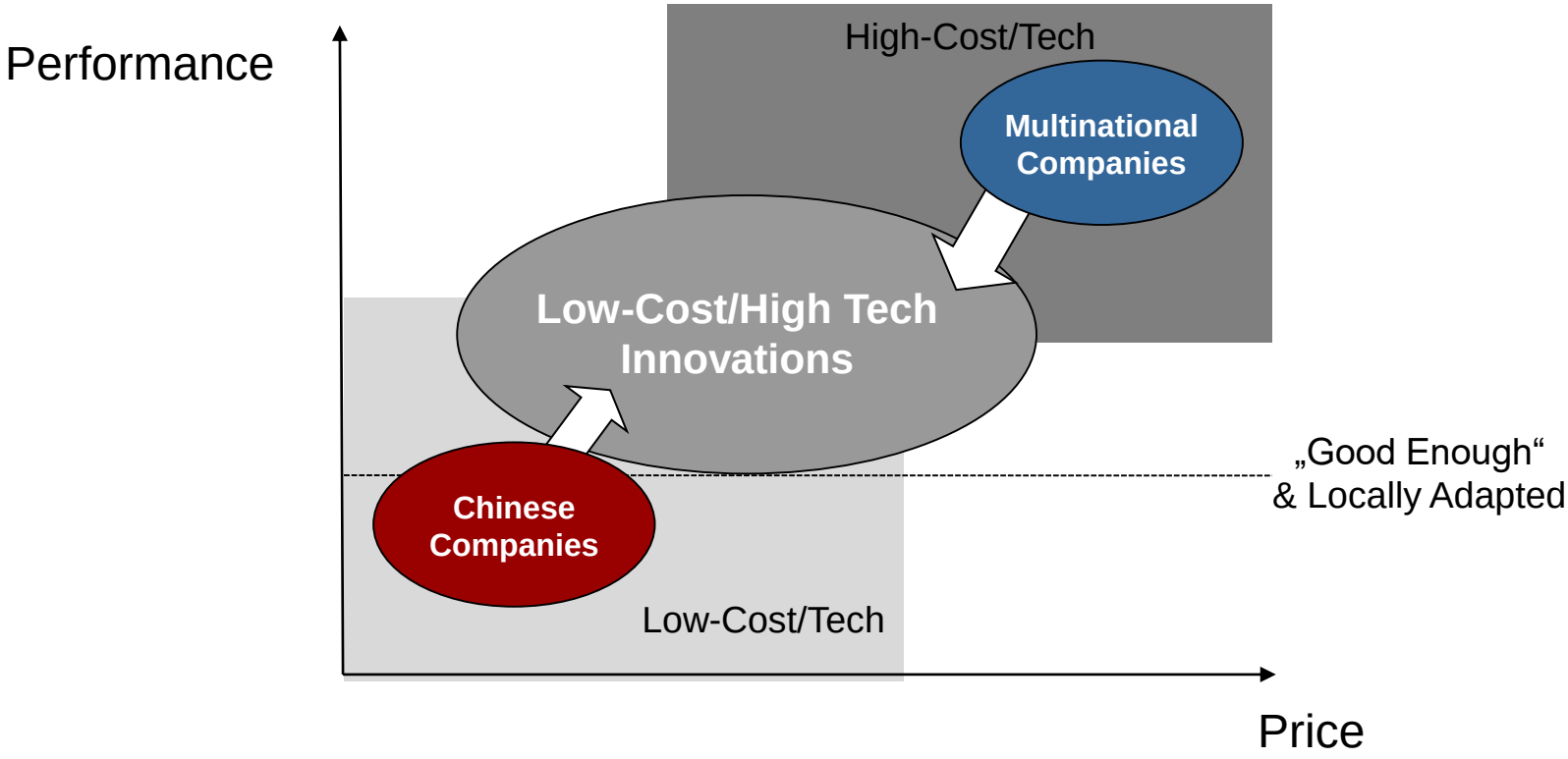
The Good-Enough Market is Served by Chinese as well as MNCs via Low-Cost/High Tech Innovations

Product Characteristics of Low-Cost/High Tech and High-End Innovations in an Emerging Market Context Differ Significantly

	Low-Cost/High Tech Innovations	High-Cost/High Tech Innovations
• **Customers (B-to-B)**	• Local companies in developing countries	• Companies with home-base in industrialized countries • Governmental companies or organizations in developing countries
• **Product Characteristics**	• Economically priced • Robust and easily maintainable • Limited and specialized functionality • Standard and "state-of-the-art" technologies	• Expensive • Flexible and customizable • Latest functionality • Latest technologies
• **Market Growth**	• High growth rates	• Average growth rates

The Good-Enough Market is Served by Chinese as well as MNCs via Low-Cost/High Tech Innovations



Schanz/Hüsig 2009

Example: CT Scanner by Siemens Medical Solution

Med Somatom Spirit

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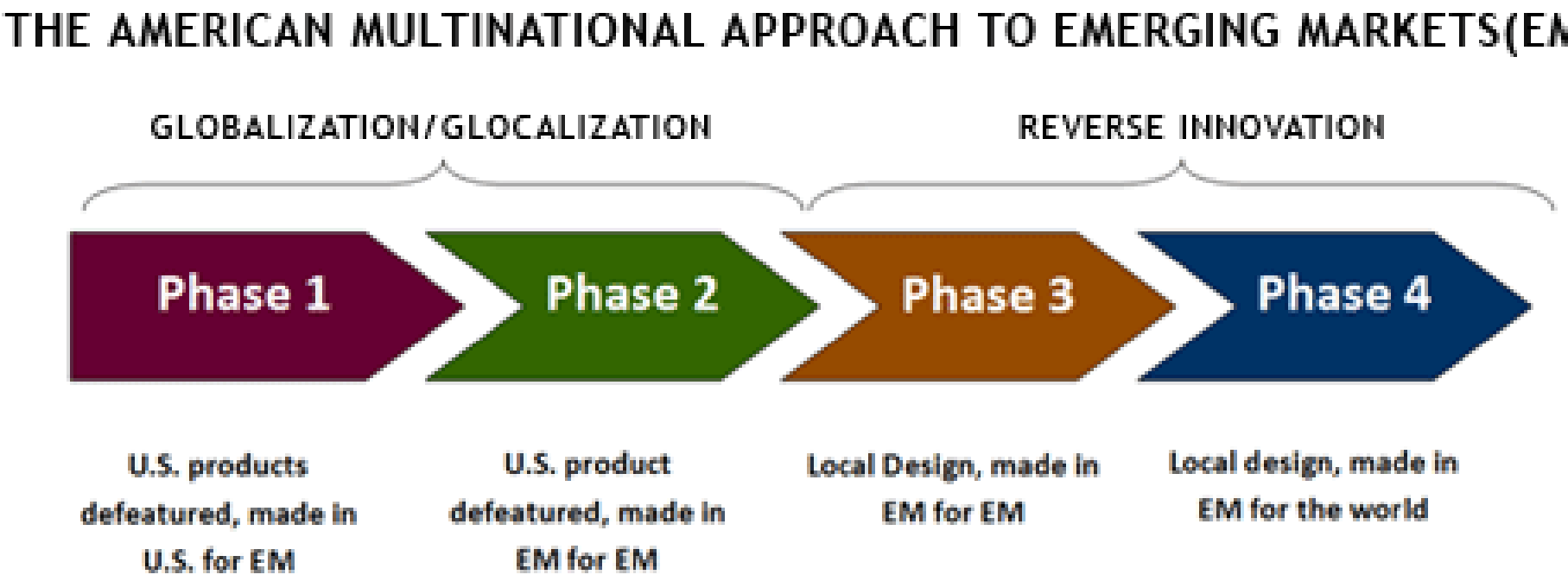
Growing Awareness of the Specifics of Innovation from Emerging Markets (II)



Path to Reverse Innovation



- Example RI: GE is now selling an ultra-portable electrocardiograph machine in the U.S. at an 80% markdown for similar products. The machine was originally built by GE Healthcare for doctors in India and China.

5 Trends regarding Innovation Research and Sustainability

3. There is a growing awareness of the specifics of (social) **Sustainability** in the context of innovation

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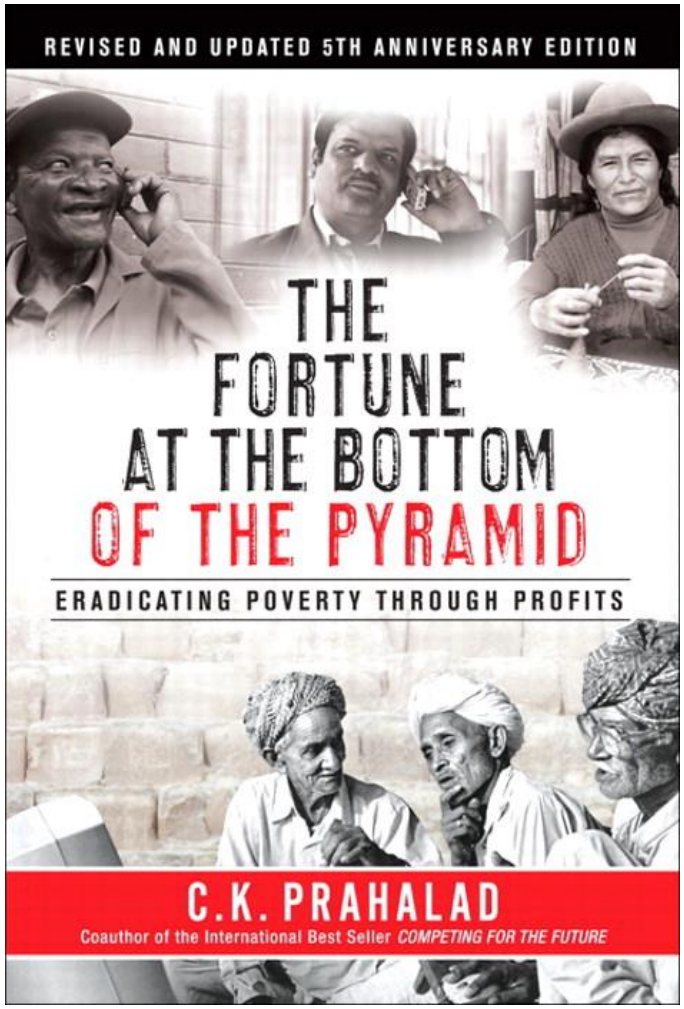
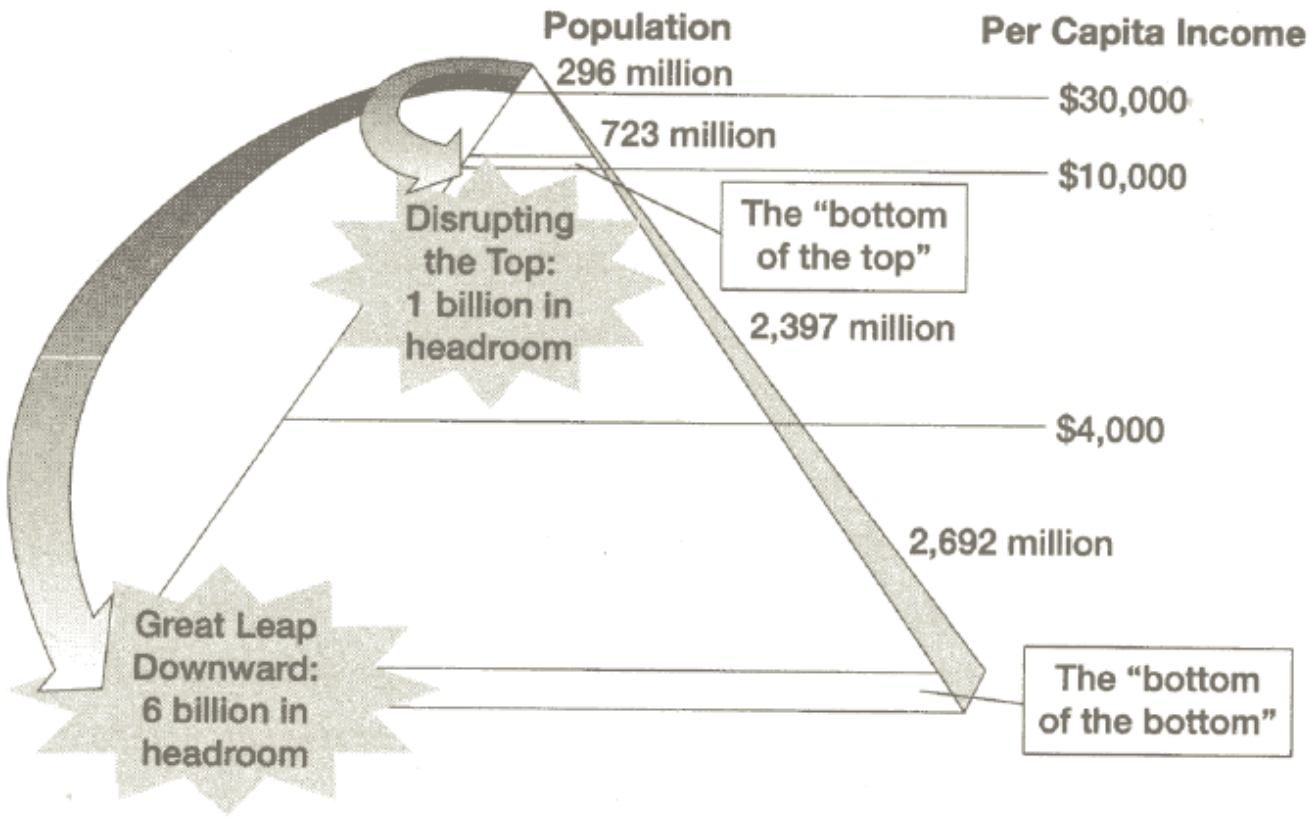
BOP-Innovation:
Growing awareness of the specifics of (social) Sustainability in the context of innovation





What does Low End/New Market mean?
Future Growth Opportunities are at the Bottom of the Pyramid (BOP) as Objective of Innovation



Source: Author analysis, World Bank; per capita income based on purchasing power parities.

Christensen et al. (2004)

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Critical Areas for Innovation at the Bottom of the Pyramid (BOP)

Price Performance	Views of Quality
• Product development • Manufacturing • Distribution	• New delivery formats • Creation of robust products for harsh conditions (heat, dust, etc.)
Sustainability	**Profitability**
• Reduction in resource intensity • Recyclability • Renewable energy	• Investment intensity • Margins • Volume

BOP Innovation Examples

- Microcredits (40-70% p.a.), e.g. Grameen Bank (Bangladesh) vs. loan sharks (up to 2000% p.a.)
- Grameen Telecom‘s Village phone vs. expensive individual phone
- P2P mobile Money transfer, e.g. M-Pesa von Safaricom (Kenia)





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5 Trends regarding Innovation Research and Sustainability

4. There is a growing number of **new innovation concepts** that try to address this recent growing awareness
5. There is a growing **terminological confusion** that blurs the underlying concepts, since many of them are used synonymously and use the similar empirical examples

Conceptual Classification of Innovation for and from Emerging Markets

Martin Albert & Stefan Hüsig

Chair of Innovation Research and Technology Management

Faculty of Economics and Business Administration, TU Chemnitz

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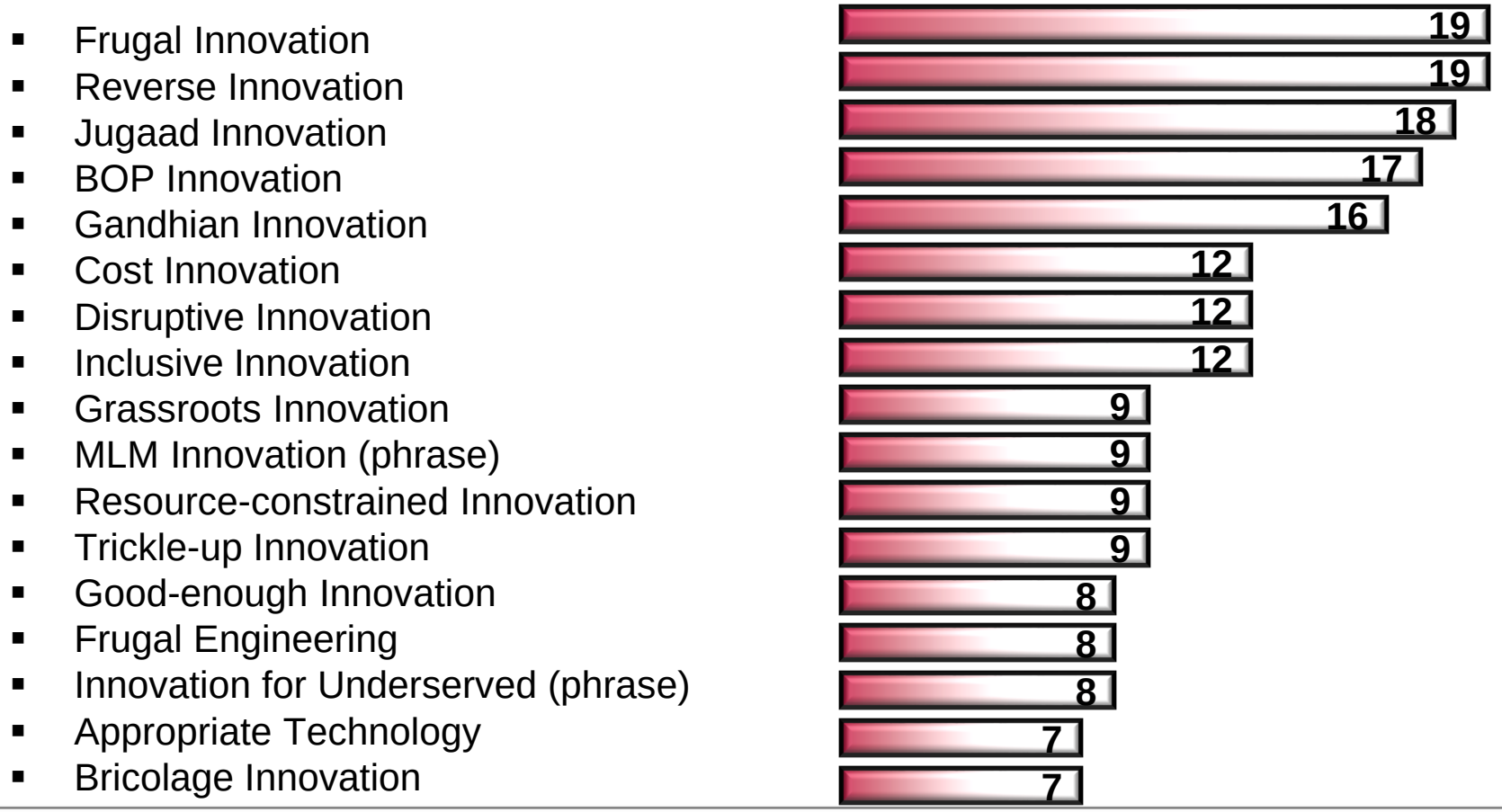
Methods and Materials

- Relevant **keywords** were identified: ‘reverse’, ‘frugal’, ‘jugaad’, and ‘bottom of the pyramid / bottom of pyramid / bop’.
- Keywords in various combinations were used for searching the database of **Google Scholar** (at 30.03.2016), total number of search results: **1222**
- For a further inductive and deductive **content analysis** only texts were considered with **at least eight various terms** in order to cover the **greatest possible term diversity**
- Identified **19 key texts** (10 journal articles, 3 conference papers, 1 literature review, 1 doctoral thesis, 2 master theses, 2 working papers)

Growing Terminological Confusion that Blurs the Underlying Concepts (I)

Results: Overview of 33 Terms 1/2

(listed by total mentions in 19 texts)

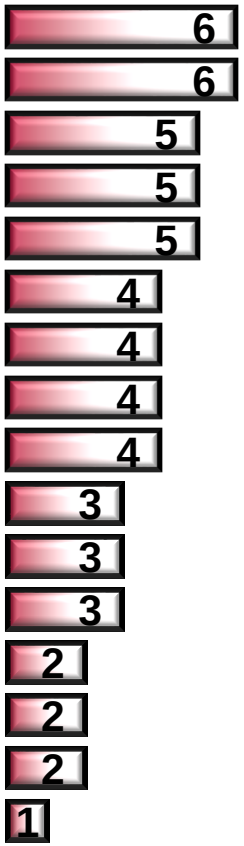


Growing Terminological Confusion that Blurs the Underlying Concepts (II)

Results: Overview of 33 Terms 2/2

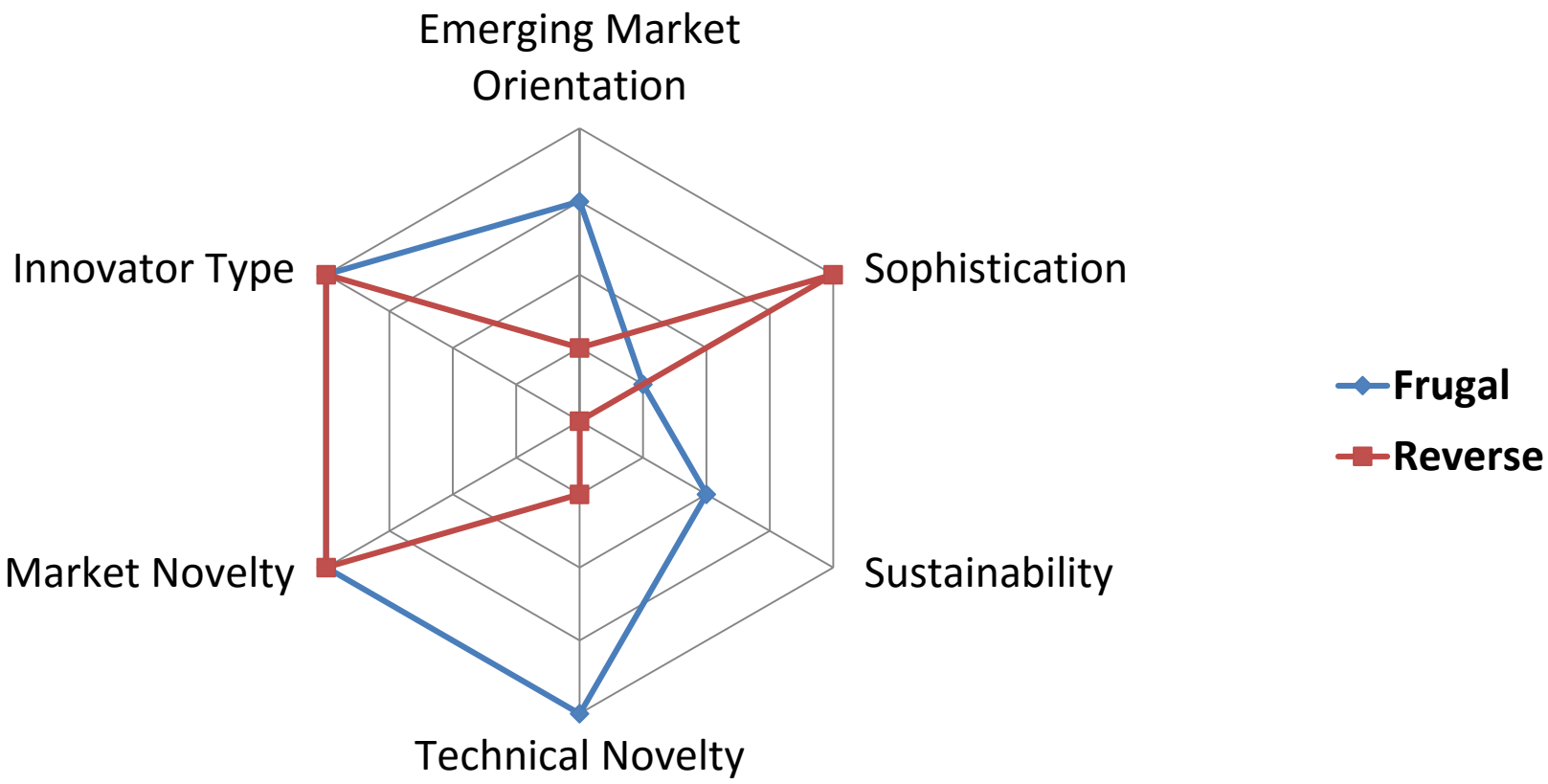
(listed by total mentions in 19 texts)

- Blowback Innovation
- Indigenous Innovation
- Below the Radar Innovation
- Global Innovation
- Reverse Engineering
- Catalytic Innovation
- Improvisation
- Indovation (phrase)
- Lean Engineering
- Design Thinking
- Empathetic Innovation
- Pro-Poor Innovation
- Effectuation
- Extreme Affordability
- Long Tail Innovation
- Value Innovation
- Vernacular equivalents in other languages

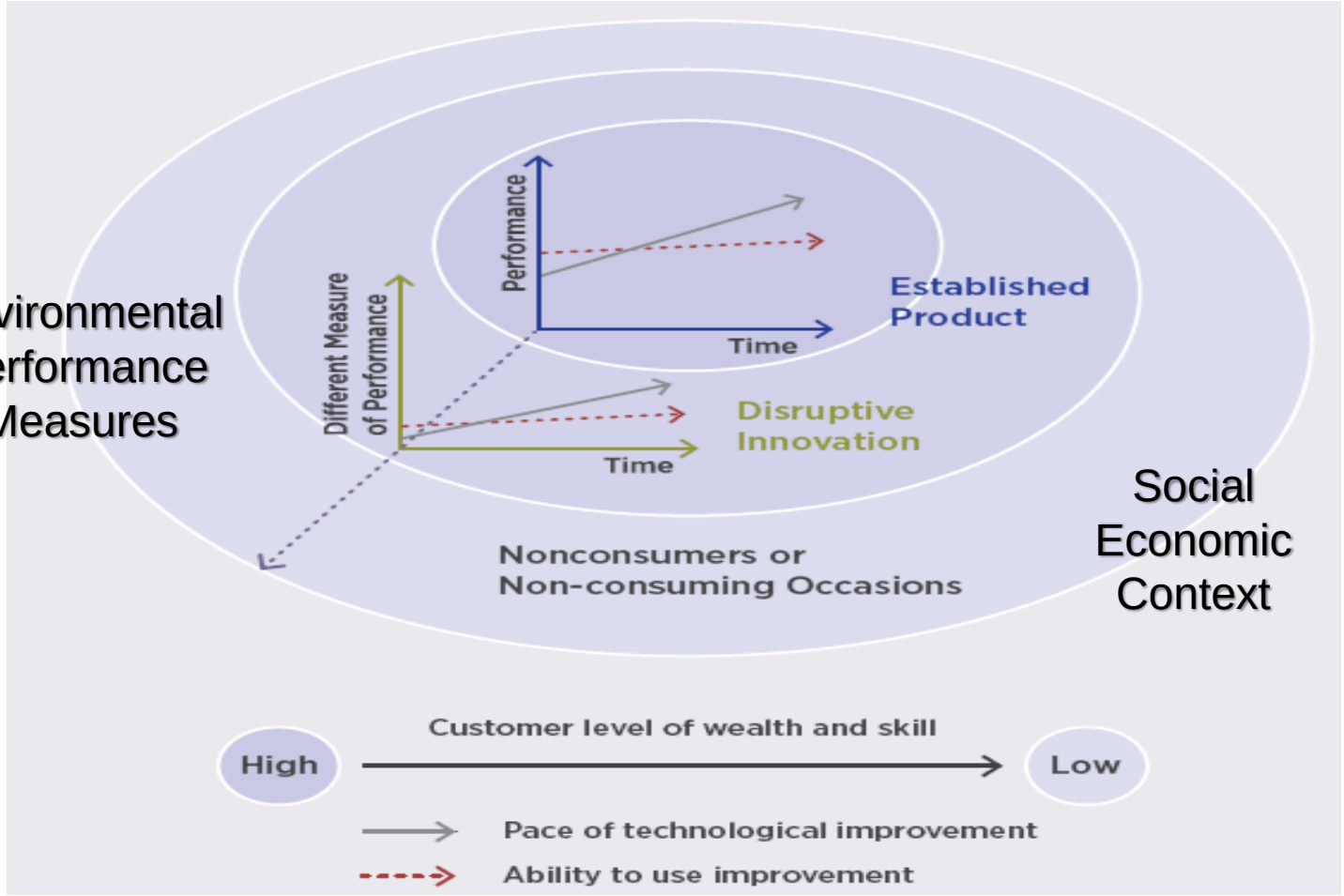


Developing an Approach Based on Classification Criteria to Analyze Concepts

Example: Visualization Differences between Innovation Concepts with Classification Criteria



Re-Integration of Sustainable Development in the Mainstream Innovation Theory?



(Modified from Christensen et al. 2013)

Further Research is Needed – Work in Progress!

Thank you for your attention!

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