High Technologies and Media Business Models:
Current discussion on implications of high technologies on business models.
Investments of media corporations in high technology start-ups.

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Is it possible to identify and classify structures in the adoption of primarily high technologies for media business models and to evaluate them with regard to theories of technology diffusion?

(1) Which technologies are currently being discussed in scientific as well as in business practice?

(2) Which technologies are media companies currently investing in (understood as investments or acquisitions in start-ups)?
Mixed Method Approach (mix of qualitative and quantitative research)

What is being discussed? Content Analysis:
(a) relevant scientific journals,
(b) studies carried out and/or commissioned by companies,
(c) conference speeches by relevant professionals

A total of 199 documents (journal articles, studies, lectures) were recorded and analysed.

How is action taken in practice? Evaluation of the investments of the largest German media companies and their investment organizations/units with regard to target technologies and target industries

A total of 226 Investments were identified and analysed.

Selection and systematization of technologies is based on the Gartner Hype Cycle of Emerging Technologies (Gartner Inc. 2017).
GARTNER HYPE CYCLE OF EMERGING TECHNOLOGIES

As of July 2017

Source: Gartner Inc. 2017, gartner.com/SmarterWithGartner
Business Modell Approach

Value Proposition Model
What do we offer to the customer?

Who?
Who is our target group/or customer?

How?
How do we create and produce our service?

Profit Model
How do we achieve value?

Value Chain Model
How do we create and produce our service?

Source: vgl. Gassmann/Frankenberger/Csik 2013, 6
(1) WHAT IS BEING DISCUSSED?

FIVE MAIN TECHNOLOGIES ARE BEING DISCUSSED:

1: Artificial Intelligence 23.1%
2: Blockchain 16.1%
3: Virtual Reality 16.1%
4: Machine Learning 13.6%
5: Augmented Reality 10.1%

23.1% out of 199 sample units discuss Artificial Intelligence as a main topic. Blockchain and VR are of secondary importance.
### 1. What is being discussed?

**High Tech has the Most Impact on the Value Chain Model**

<table>
<thead>
<tr>
<th>Model</th>
<th>ARTIFICIAL INTELLIGENCE</th>
<th>BLOCKCHAIN</th>
<th>VIRTUAL REALITY</th>
<th>MACHINE LEARNING</th>
<th>AUGMENTED REALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value Proposition Model</td>
<td>66.5%</td>
<td>37.5%</td>
<td>50.0%</td>
<td>20.6%</td>
<td>40.0%</td>
</tr>
<tr>
<td>Value Chain Model</td>
<td>60.9%</td>
<td>58.3%</td>
<td>71.9%</td>
<td>40.7%</td>
<td>60.0%</td>
</tr>
<tr>
<td>Profit Model</td>
<td>26.1%</td>
<td>20.6%</td>
<td>25.6%</td>
<td>12.2%</td>
<td>13.3%</td>
</tr>
</tbody>
</table>

**Example:**
- Out of 32 sample units covering virtual reality, 34.4% discuss the impact of the technology on the profit model.
- Out of 46 sample units discussing the impact of new technologies on the profit model, 23.9% cover virtual reality.

**How often is the Value Proposition Model being discussed?**
- n=70

**How often is the Value Chain Model being discussed?**
- n=90

**How often is the Profit Model being discussed?**
- n=46
(1) WHAT IS BEING DISCUSSED?

MEDIA INDUSTRY OF MINOR RELEVANCE

ONLY 28% OF OUR SAMPLE UNITS DEAL WITH THE BUSINESS MODEL IN REFERENCE TO THE MEDIA INDUSTRY.

RELEVANCE OF HYPE CYCLE PHASES*

PHASE 1: INNOVATION TRIGGER ........................................ 44.6%
PHASE 2: PEAK OF INFLATED EXPECTATIONS 69.6%
PHASE 3: TROUGH OF DISILLUSIONMENT .............. 14.3%
PHASE 4: SLOPE OF ENLIGHTENMENT ............ 23.2%

*only sample units in reference to media; multiple entries

Most sample units that deal with a single component discuss the value chain model.

Value Proposition Model 7.1%
Value Chain Model 19.6%
Profit Model 1.8%
2+ Models

Covering all business model components at once is most popular, followed by linking the value chain and value proposition model.

VPM + PM 71%
VCM + PM 5.4%
VCM + VPM 25.5%
All 33.9%

n=56
(2) HOW IS ACTION TAKEN IN PRACTICE?

TECHNOLOGIES WERE CLUSTERED IN THREE LEVELS:

HIGH TECH
- technologies appearing on the Gartner Hype Cycle of Emerging Technologies

MID TECH
- high technologies which are no longer on the Gartner Hype Cycle

LOW TECH
- technologies such as platforms, websites and apps
(2) HOW IS ACTION TAKEN IN PRACTICE?

LOWTECH & NON MEDIA TARGET INDUSTRIES DOMINATE THE INVESTMENTS OF MEDIA COMPANIES.
(2) HOW IS ACTION TAKEN IN PRACTICE?

WHEN MEDIA COMPANIES INVEST IN HIGH TECHNOLOGY, THEY DO SO IN THE PEAK OF INFLATED EXPECTATIONS PHASE._

SOURCE: WWW.GARTNER.COM/SMARTERWITH
GARTNER/TOP-TRENDS-IN-THE
GARTNER-HYPE-CYCLE-FOR
EMERGING-TECHNOLOGIES-2017/
N = 52

TECHNOLOGIES INVESTED IN

MEDIA COMPANIES PREFER TO INVEST IN TECHNOLOGIES IN THE PEAK OF INFLATED EXPECTATIONS PHASE – ALMOST HALF OF 52 INVESTMENTS BELONG TO THIS PHASE.
(2) HOW IS ACTION TAKEN IN PRACTICE?

2 OUT OF THE TOP 3 HIGH TECH INVESTMENTS FROM MEDIA COMPANIES FOLLOW THE AI EVERYWHERE TREND:

- **Transparency/Immersive Experiences**
  - Virtual Reality (26%)
  - Connected Home (10%)
  - Augmented Reality (5%)

- **AI Everywhere**
  - Smart Robots (40%)
  - Machine Learning (35%)
  - Autonomous Vehicles (30%)
  - Artificial General Intelligence (25%)

**Technologies Invested In**

More than two thirds of 52 investments addressed machine learning, virtual reality and artificial general intelligence.
(2) HOW IS ACTION TAKEN IN PRACTICE?

EXAMPLE CASES:

- **MairDuMont**
  - $8,000,000
  - Machine Learning

- **Fineway**

- **HV Holtzbrinck Ventures**
  - $9,500,000
  - Virtual Reality

- **LoopMe**

- **Bertelsmann Digital Media Investments**
  - $6,000,000
  - Machine Learning

- **Visionary**
SUMMARY (WHAT IS BEING DISCUSSED?)

• Artificial Intelligence, Blockchain, Virtual Reality, Machine Learning and Augmented Reality are the top technologies being discussed.

• These five technologies are discussed (when related to business model innovation) with implications for the value chain model.

• If implications for business models are discussed (for Value Proposition Model, Value Chain Model or Profit Model), artificial intelligence is the most important issue.

• The reference to the media industry is rare (only in 28% of cases).

• With reference to the media industry, implications for the value chain model are addressed.
The investments of media companies mainly take place in the low tech sector (74%).

Only 50% of the Media companies' invests (in start-ups/companies) can be assigned to the TIME sector. Thus, media companies are diversifying into completely new sectors.

Media companies invest (if in high technologies at all) in technologies located at the peak of inflation expectations (46%).

Media companies invest (if in high technologies at all) mostly in artificial intelligence.
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Thank you very much!
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