The Bottom Line: The Economic Benefits of Digital Ethics

Frank Wisselink & Dominik Schneider

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We are currently at the onset of the fourth industrial revolution.

The industrial revolutions and changes of society:

1st Industrial Revolution: 1770 - 1830
- From Agrarian to Industrial society

2nd Industrial Revolution: 1870 - 1914
- Mass consumerism

3rd Industrial Revolution: 1970 -
- Information Age

4th Industrial Revolution: 2015 -
- Fusion of Humans with AI Technology
The good news is that the industrial revolutions made societies wealthier

Yet distribution of this wealth got ever more unevenly distributed

Decoupling of Productivity & Compensation

1995=100

150
140
130
120
110
100
90
95
2000
2005
2010
2015

Productivity
Real Average Compensation
Real Median Compensation

Gap
Wage Inequality

Divergence of Top 1% Earners

1995=100

150
140
130
120
110
100
90
95
2000
2005
2010
2015

Top 1 % Earners
Average Earners
Median Earners

Source: Cyrilie Schwellnus, Andreas Kappeler and Pierre-Alain Pionnier OECD2017“The decoupling of wages from productivity: Macro level facts economics department working papers No. 1373
The population in Europe notices these discrepancies too

Note: Three-year averages starting and ending in indicated years. 1995-2013 for France, Portugal; 1997-2014 for United Kingdom; 1998-2014 for Ireland. Source: OECD National Accounts Database.

Source: Cyrille Schwellnus, Andreas Kappeler and Pierre-Alain Pionnier OECD2017 "The decoupling of wages from productivity: Macro level facts economics department working papers No. 1373
The 4th industrial Revolution probably results in jump of productivity

In the 4th revolution the internet of things, artificial intelligence and flexible automation will be combined, resulting in:

- Agility and Responsiveness
- Resource productivity and efficiency
- Improved time to market
- Customization to customers needs

Yet a lack of knowledgeable resources, high investment and no clear short term benefits currently prevents adaptation…

…hence industry requests society to invest in education
Industry expects to get 3,7 trillion $ out of it, yet how does society ensure its fair share?

Source: The next economic growth engine; World Economic Forum 2018
Ethics, associated values and policies will play a key role in the current economic development

The cooperation between humans and AI needs to be accompanied with clear Ethics, Values and Policies framework.
Indications are that the “Me, Myself and I” model will not pay out in the medium- and long term

Not playing by the rules of society won’t pay out in the medium- and long term
Industry must realize again that there exist a non-zero sum game with society where both can win more and not only a few

"Paying good wages is not a charity at all – it is the best kind of business."

Henry Ford 18.01.1919

Source: Benson Ford Research Center
The education of society is the cornerstone, increasing labour share again and promoting growth at the same time.
The education of society should focus on how human and artificial intelligence can join forces to create a win-win situation

Cognitive strengths of humans
- Perceive unexpected stimuli
- Develop new solutions for problems
- Deal with abstract problems
- Be able to change
- Generalize observations
- Take difficult decisions on incomplete data
- Learn from experiences

Cognitive strengths of artificial intelligence
- Perform repeatable tasks accurately
- Store huge amounts of data
- Retrieve stored data reliably
- Perform several tasks in parallel
- Perform simple calculations quickly
- Make routine decisions quickly

Gaining an understanding of the value creation of the cooperation between humans and AI is essential.

Better Information \(\times\) Decision agility = Value

The “platform3L” is an example to create value by diffusion of knowledge

For every Industry:

AUTOMOTIVE

ENERGY

RETAIL

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BETTER INFORMATION

Algorithm based trend selection, tailored to the needs of the company

DECISION AGILITY

Swarm Intelligence: Use of collective knowledge to set the course for the future

VALUE CREATION

Ideas and Innovations made where they are needed most: in the company itself

With thanks to Platform3L

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TREND

Information input from Microtrends

EVALUATION

How relevant is the trend from the employee’s point of view?

VALUE CREATION

Feedback and ideas from employees for the practical implementation in the personal work environment
Therefore, research to discover the details of the interaction between humans and AI is essential.
A first start has been made by investigating the interaction of the commercial processes supported by IoT and AI.
First results show that IoT & AI impact commercial processes considerably.

<table>
<thead>
<tr>
<th>Time saving</th>
<th>Ease of use</th>
<th>Service improvements</th>
<th>Need based customer support</th>
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<td><img src="image" alt="Target" /></td>
<td><img src="image" alt="Information" /></td>
<td><img src="image" alt="Magnifying Glass" /></td>
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<thead>
<tr>
<th>Additional satisfaction of needs</th>
<th>Higher discretion &amp; security</th>
<th>Higher customer confidence</th>
<th>Loyal customer relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Magic Wand" /></td>
<td><img src="image" alt="Lock" /></td>
<td><img src="image" alt="Handshake" /></td>
<td><img src="image" alt="Heart" /></td>
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AI technologies enable for instance frictionless shopping where you simply enter, chose and leave all time.

Source: DeepMagic 2018
Yet these models function only, when there is a fundamental level of trust created by adhering strong ethical principles.

**Customer Value:**
Value creation for a customer by Data driven Business models

**Perceived Cost:**
The perceived cost for a customer allowing to use its data

**Use of data allowed**

**Risk:**
Churn and image loss due to wrong handling of customer insights

**Valuable insights monetization possible**

**Value creation:**
Added value based on trustworthy handling of customer insights

1. Data Provision pulled attractive services
2. Sustainable Monetization of insights

- Data
- Insights
- Monetization
Ethical principles are essential for successful value creation in society and in companies

- Ethics concerns everyone since it is the key for our economic development.
- Ethical principles are essential for companies to survive in the long term.
- Ethical principles are important to uphold customer trust.
- Only if customer trust is maintained, business models can be conducted sustainably.

Without ethical principles the successful creation of value is endangered in society and in companies!
Further Reading

- *Pushing the Right Buttons: How the Internet of Things Simplifies the Customer Journey*
- *Low Power Wide Area Networks: The Game Changer for the Internet of Things*
- *Big Data in Customer Relationship Management – Trustworthy While Creating Added Value for Customers*
- *Intelligent business by Big Data*
Thank you!
ONE STEP AHEAD: TAKE ACTION

IDENTIFY IDEAS
Collect relevant ideas via an internal dashboard and transfer them into projects

MATCHMAKING
Find suitable resources, based on a skill system and collected with help of artificial intelligence to bring your project to life.

Internal: Cross-functional collaboration
External: Partnerships with Corporates, Startups and Freelancers

EXECUTION
The ideas will be transformed into a challenge and tested with the newly assembled team in a sprint. The result will be a sustainable solution with a lasting impact.

Optional: Each shareholder (company, employee, partners) profits via a fair split through blockchain tokens.