THE EFFECT OF IT USE ON WORK PERFORMANCE

TOWARDS AN IT CONSUMERIZATION THEORY
MOTIVATION
CONSUMERIZATION

MOTIVATION

'Office 0.0'

'Office 1.0'

'Office 2.0'
Workers report that they use at least one self-purchased device for work. 95%

72% of IT Leaders say that consumerization is inevitable.

35% of all employees agree value their own productivity higher than IT policies.

CONSUMERIZATION DEVELOPMENTS

45% would accept a lower-paying job with more flexibility with device choice, social media, and mobility than a higher-paying job with less flexibility.

55% would rather lose their wallet before losing their smartphone or mobile device.

SOURCE: CISCO (2011) EMPLOYEE EXPECTATIONS, DEMANDS, AND BEHAVIOR OF THE NEXT GENERATION’S WORKFORCE—IS YOUR COMPANY READY?
**CONSUMERIZATION**

**DEFINITION**

<table>
<thead>
<tr>
<th>Ownership</th>
<th>Purpose</th>
<th>Consumerization</th>
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</thead>
<tbody>
<tr>
<td>Private</td>
<td>Use of private IT for private purposes (e.g. accessing social networks with private laptop)</td>
<td>(e.g. use of private smartphones to access corporate eMail)</td>
</tr>
<tr>
<td>Business</td>
<td>Use of enterprise IT for private purposes (e.g. accessing social networks at enterprise workstation)</td>
<td>Traditional use of enterprise IT for work (e.g. use of terminal with access to ERP systems, corporate eMail,…)</td>
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</tbody>
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RESEARCH OBJECTIVE

"Please identify the key factors driving your firm to deploy BYOD program(s)." (Select all that apply)

- Increase worker productivity: 70%
- Provide easy access to corporate information for employees who are away from the office: 63%
- Enable employees to use their personal smartphones for work activities: 52%
- Enable employees to use their personal tablets for work activities: 52%
- Provide easy access to corporate information for employees who work from home or telecommute: 48%
- Reduce corporate liable device costs: 40%

IT Consumerization → Performance
METHODOLOGY

- Three-step approach:

1. Structured Literature Analysis
2. Model Development
3. Single-Case Study

- Derivation of constructs
- Reasoned connection of constructs using psychological theories
- Initial check of constructs
LITERATURE ANALYSIS
LITERATURE REVIEW
IDENTIFICATION OF CONSTRUCTS

- Mostly practitioner studies on the topic
- 22 studies identified, 13 considered relevant after initial screening

Iterative open coding: 115 codes; 3 categories emerged

<table>
<thead>
<tr>
<th>Study</th>
<th>Concept 1: Workload</th>
<th>Concept 2: Autonomy</th>
<th>Concept 3: Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aerospace Industry Association [21]</td>
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<td>Avenade [26]</td>
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<td>Cisco [27]</td>
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<td>Dell and Intel [24]</td>
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<td>Gens et al. [9]</td>
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<td>Harris et al. [1]</td>
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<td>Harris, Junglas, and Long [31]</td>
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<td>Moschella et al. [29]</td>
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<td>Murdoch et al. [23]</td>
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<td>Prete et al. [30]</td>
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<td>Price Waterhouse Coopers [25]</td>
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<td>Vile [8]</td>
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<td>Sum</td>
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</table>
DERIVED CONSTRUCTS

- Perceived Workload
  - Ubiquitous reachability leads to more work-related calls/mails during off-time
  - Faster communication leads to expectations regarding response speed

- Perceived Autonomy
  - Consumerization is often associated with ‘greater freedom’ or ‘new freedoms’ for employees
  - This leads to an increased perception of autonomy, as IT decisions are on their own or provide technical support for themselves
DERIVED CONSTRUCTS

- Perceived Competence
  - End users perceive consumer applications and devices as easier to use and more intuitive
  - Employees use their IT not only in a business setting, but also privately and are more familiar with it
  - In contrast, existing corporate IT infrastructures create innovation barriers and lead to frustration among employees
MODEL DEVELOPMENT
** MODEL DEVELOPMENT **

** COGNITIVE MODEL OF STRESS **

- **P_1:** Employees who use private IT for business purposes experience higher workload.
- **P_2:** Workload has a positive influence on work performance.
- **P_3:** If workload becomes overload, it raises the stress level at work.

- Construct found in the practitioner literature
- Construct grounded in theory
**MODEL DEVELOPMENT**

**COGNITIVE MODEL OF STRESS**

\[ P_4: \text{Employees, who are given the choice of using private IT for work purposes, perceive a greater autonomy at their workplace.} \]

\[ P_5: \text{Autonomy lowers the stress level at work.} \]
**MODEL DEVELOPMENT**

**SELF DETERMINATION THEORY**

![Diagram of model development with constructs and relationships]

**Construct found in the practitioner literature**

**Construct grounded in theory**

\[ P_6: \text{High stress levels have a negative influence on work performance.} \]

\[ P_7: \text{Perceived autonomy exerts a direct positive effect on work performance.} \]

\[ P_8: \text{Perceived autonomy raises intrinsic task motivation.} \]

\[ P_9: \text{Higher intrinsic motivation positively influences work performance.} \]
P_{10}: The use of private IT for business purposes exerts a positive effect on perceived competence.

P_{11}: Perceived competence exerts a direct positive effect on work performance.

P_{12}: Increased perceived competence raises intrinsic motivation.
The Effect of Private IT Use on Work Performance

Björn Niehaves, Sebastian Köffer, Kevin Ortbach

CASE STUDY
CASE STUDY

„COUPLING CO“

- 13 semi-structured interviews
- 60,000 words of transcript
- Interviewpartners: CEO, CFO, CIO, sub-unit executives, etc.

CouplingCo

- Medium-sized manufacturer of coupling technology
- Over 2000 employees
- Turnover of $400 million in 2011


“Inevitable, I spend a lot of time at ‘dead places’ where I am not able to do anything except working with my smartphone. By using it, I can start working on open tasks.”

“It leads to a state where free time is not really free anymore, and you always feel connected to work, think about work issues and even work on some stuff during your off-times.”
CASE STUDY

EXEMPLARY RESULTS

- “If employees can decide themselves which tools to use, they will commit to tasks that, I guess, we wouldn’t even have time for otherwise.”

- “The possibility of using private IT will certainly have a **positive effect on motivation**. Whether this effect is high or low will depend on the people. Some would cut corners, if they were told that they could do everything they wanted with their android device.”

- “Concerning performance, usability, and speed, I could **work better with my private device** because I am used to it and can carry out standards”
CONCLUSION
CONCLUSION

What did we do?

- Extraction of potential (direct) effects of IT consumerization
  - increased workload
  - perceived autonomy
  - perceived competence
- Application of psychological theories (self-determination theory, cognitive model of stress) to derive relationships to performance
- Small initial validity check of theory constructs and their relationships using qualitative study

Results from Case:

- Evidence to support most of our theoretical constructs and relationships
- No differentiation between the different effects possible from the qualitative study ($P_6$, $P_7$, $P_9$ and $P_{11}$)
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