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Cloud Computing Adoption in Australia: The benefits, risks and implications for accounting

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Structure

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2. Why Cloud Computing
3. Cloud Computing Risks and Limitations
4. Research Questions
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CC Defined

- Cloud computing (CC) is an enabler of ITO whereby access to IT resources such as software, hardware, and platform are delivered over the Internet as a service and users are predominantly charged on a pay per-use basis (Yigitbasioglu et al., 2013).
- SAAS, PAAS, IAAS

- The International Data Corporation predicts public IT cloud services to grow 5 times that of the IT industry
  -> to $107 B in 2017

  "Cloud computing as a disruptive technology"

- New market, new business model, pricing etc.
- Email vs postal service, phone vs telegram
Applications available in the cloud

• Cloud computing has been around for a while: e.g. Hotmail, Yahoo, Instagram
• Relies on existing technology such as grid-, distributed computing, SOA
• Initial business applications mainly in the CRM area
• New domains: accounting and ERP software

“Mission critical applications”
Why Cloud Computing?

- Big and diverse data, different devices and platforms -> an increasingly more complex IT environment that needs to be managed and maintained
- Similar motivation as for ITO

Cloud computing eliminates most of the IT upfront costs (Opex vs. Capex model)

- Access to better software (democratization of IT) at 'lower cost’
Some recent news on CC adoption in Australia

“It was decided that the Qantas hotel booking system will be hosted entirely in the cloud through Amazon Web Services” (ZDNet, April, 2013)

“NSW police technology to catch and punish traffic violators is being processed at Amazon Web Services.” (CRN, September, 2013)
(data kept temporary on Amazon)

“The bank shifted nab.com.au from an internal legacy set-up into the Amazon public cloud more than a week ago, said NAB enterprise delivery general manager Thor Essman.” (The Australian, October, 2013)
(user specific information kept on premise)

Suncorp has moved its first transactional systems onto the Amazon Web Services cloud as part of an 18-month plan to move 2000 applications from its data centres to AWS. (itNews for Australian Business, November, 2013)
Cloud Computing Risks and Limitations

• Security is number one barrier to adoption

“Harris Corporation is selling its super-secure data center in Harrisonburg, Virginia and leaving the “cloud computing” business, saying that both its government and commercial customers prefer hosting “mission-critical information” on their own premises rather than in the proverbial cloud.” (Wired, 2012)

• Privacy regulations prohibit data of some types of personal data outside Australia, EU, etc.

• PRISM surveillance program
Research on Cloud Computing

- To date, most research has been normative rather than empirical.
- Technical Architecture
  (e.g. Youseff, 2008; Foster et al., 2008)
- Conceptual papers on business benefits and risks
  (e.g. Leimeister, 2010; Marston et al., 2011)
- Emerging empirical papers on perceived benefits, risks, business strategy, etc.
  (e.g. Ross and Blumenstein et al, 2012; Gupta et al., 2013;)

Theories: TCE, RBV, IDT...
Research Questions

• What drives CC adoption in Australia?

• What are the implications of CC on IT governance and forensic accounting?
Methodology

- Explorative and qualitative
- Up to 25 interviews with IT experts and forensic accountants (ongoing)
- Accounting firms and Individual Users
- Thematic analysis
Preliminary Findings: CC readiness

- Adoption of various software: Google e-mail, marine management systems, accounting software, POS systems for restaurants, hotels, temporary software requirements: event management software, data storage requirements for litigation cases etc.

“From the access point of view and from the security point of view, I think within the next two years, it’s going to be at least secure enough, and the Internet speed and connectivity will be good enough for at least SME’s to go fully with cloud based operations.” (I1)

“Eventually in 5 to 10 years' time everyone will be using it no matter whether you like it or not.” (I2)

- Organizations consider switching when its time to renew licenses, hardware etc.
Preliminary Findings: Benefits

“If you can’t move as fast as your competitors and the cloud allows you to move fast or faster than your competitors, it is not a game of following fashion, in many cases it is a game of survival.” (I3)

Forensic accountants will benefit the same way as other businesses.

- Deployment time
- Physical security and backups
- Cost benefits (predictable, easy to budget)
- Instant scalability
- Usability
Preliminary Findings: Risks

“Company X decided not to use CC at this stage mainly because we would need to store our clients information in the cloud based on the products out there….. if you think about it, we are still not sure where they are keeping their data” (I1)

• The moving cloud and unknown legislation
• Data access issues and audit trail

“Google is not going to give you the data which we have tried and they said no.” (I1)

• Risk due to common servers (virtualization)
• Vendor lock in