

# Chapter 16

## Monetization of Personal Digital Identity Information: Technological and Regulatory Framework

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### ABSTRACT

*Monetization of personal identity information has become a major component of modern business models, contributing to dramatic innovations in the collection, aggregation, and use of personal information. This phenomenon is commonplace given that parties to business transactions and social interactions usually rely on the issue of claims and disclosure of unique attributes and credentials for proof and verification of identity. However, the heightened societal information privacy concerns and the diminishing level of trust between transacting parties make such attempts to monetize personal information a very risky endeavor. This chapter examines the major technological and regulatory imperatives in the monetization of personal identity information. The resulting monetization model provides an important source of reference for effective monetization of personal information.*

### INTRODUCTION

The exponential growth and ease of accessibility of personal data on Internet mediated applications and platforms creates significant economic and social value, which are in many instances, similar to those of tradable commodities. For instance, a recent World Economic Forum survey revealed that on a daily basis, over 12 trillion devices connect to the Internet worldwide, over ten billion exchanges of text messages in addition to about a billion daily blog posts (World Economic Forum, 2012a). Such a phenomenal technological advancement has paved the way for fast, easy and relatively cheap collection, aggregation and analysis of large volumes of data by organizations, with little or sometimes, no human involvement (Bélanger & Crossler, 2011). For instance, many users now enjoy on-demand self-service and location-independent resource pooling mediated by the Internet and various mobile technologies. It has therefore become imperative that actors in contemporary social interactions and commercial transactions ensure that data flows in a measured way by insisting on solutions that are based on accepted rules and frameworks.

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Commoditization and monetization of personal identity information has thus become a major component of modern business models, driving innovation and economic growth, and greatly improving social security (World Economic Forum, 2012b). Ironically, the heightened societal concerns about information privacy, and the diminishing level of trust among transacting parties, makes it very risky to attempt to monetize personal information. Yet parties in business transactions and social interactions usually rely on the issue of claims, and disclosure of unique attributes and credentials for proofs of identity. Governments in many countries have responded to the challenge and the uncertainties by implementing various forms of electronic identity management systems as a critical enabler of such government to citizens' interactions, access to social services and facilitating business transactions. Implementation of such digital identification systems and adoption by citizens usually present complex issues, for the key stakeholders, given that identity policies usually transcend technological and regulatory barriers since it revolves around information privacy and issues of trust (Adjei & Olesen, 2012).

The complexity is often compounded by the rate at which standards and technological solutions become obsolete; and the increased link-ability of information to data subjects, and its tendency to raise privacy concerns (M. Culnan, 1993). Governments therefore find it difficult to justify such investments, (Seltsikas & O'Keefe, 2010; Whitley & Hosein, 2010). Ability to leverage investments in identification systems for other legitimate purposes has become imperative (World Economic Forum, 2012b).

This chapter provides a means of communicating the concepts and issues of information monetization to policy-makers, and identity assurance providers. The aim of the chapter is to identify the technological and regulatory issues that promotes legitimate monetization of personal identity information from a developing economy context. Hence the following research question will be addressed in this chapter: *what technological and regulatory framework promotes successful monetization of personal identity information?* The chapter contributes to literature on data monetization, secondary uses of personal identity information and digital identity management research literature by enriching our understanding of the innovative uses of personal identity information for secondary purposes.

The chapter is structured as follows: this section provides an introduction to the chapter and the background to the concepts discussed. Subsequently a comprehensive review of related literature on monetization of personal identity information, and the benefits and challenges of data monetization are presented. The conclusions show a summary of our proposal of the fundamental requirements for monetization of personal identity information, and outlines the future of data monetization.

## **Managing Personal Information in Developing Countries: The Case of Ghana**

The 2012 global information technology report (Dutta & Bilbao-Osorio, 2012) rated Ghana and many African countries at the lowest in all the indices. For instance Ghana was ranked 97th out of the 142 countries covered whilst the top 20 positions were all occupied by either European or OECD countries. Credential Issuers in Ghana and many developing economies (acting as identity providers) implement Identity Management Systems (IDMS) primarily to facilitate the discharge of their primary functions – e.g. voters' identity cards are used for electoral purposes. Besides these primary functions, personal identity information collected and stored by such government agencies are usually made redundant. For instance, banks and even hospitals are currently unable to verify in real time, the identity credentials presented by customers and patients. In spite of the data redundancy, personal information can play a pivotal role in facilitating business transactions and social interactions, if the factors that account for its

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