

After Life Digital Assets

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In this study, we aim to assess the Canadian readiness for the digital after life. Therefore, we reviewed previous literature dealing with the issues of afterlife digital assets. We carried out a personal survey to assess the impact of awareness of digital assets and digital after life on digital after life readiness. We addressed our questionnaire to 59 students of Engineering School in university of Ottawa. Our results highlights the most important and valuable digital assets for our sample (memories and Facebook accounts). Moreover our findings outline a positive impact of “awareness of digital assets” and “awareness of digital after life” on “readiness for digital after life”.

1. Introduction

Nowadays, unremitting technological innovations and widespread access to internet and social media has lead to a digital life. Indeed, 98% of 18 to 29 years old use the internet. More than 70% of them check their e-mail, texts, facebook and Instagram daily (Varnado, 2013).

Furthermore, “Facebook has 1.5 billion users now. And according to the Digital Beyond, an online legacy planning company, millions of them are already dead” (Brown, 2016). The number of dead people on Facebook is expected to outnumber living members of the social network by 2098 (Bearne, 2016). Hopkins (2013) notes that thirty-million Facebook profiles have outlived their owners in the end of 2012 and he outlines that “These digital legacies are left behind long after people die, begging the question: What happens to my digital life when I die?”.

Indeed, digital assets have not only a sentimental importance, but also a significant monetary value. In 2011, the global average of digital assets’ perceived worth was estimated at \$37,438 per consumer. For North America, the average perceived value of digital assets was \$54,722. In spite of this value, at least 40% of people reported have not worried much about their digital assets’ protection (McAfee, 2011).

In this research, we aim to assess the awareness of digital assets and digital after life of urban Canadians as well as the impact of these two variables on the readiness for digital afterlife.

2. Literature review

Indeed, digital assets may be defined as “any asset that exists only as a numeric encoding expressed in binary form. For example, information stored on the internet, photographs, account information, videos, electronic documents, software, e-mails, and digital applications are all types of possible digital assets. Essentially, digital assets include any electronically stored information” (Hopkins, 2013). The author precises that digital assets do not include electronic or digital devices such as computers or phones.

Nathan (2010) pieced together definitions of “digital” and “asset” from Webster’s Dictionary in order to define digital asset as “any file on your computer in a storage drive or website and any online account or membership.”

Furthermore, Hester (2012) defines digital assets as “any information stored on computers, data storage, devices or on the internet, e-mail accounts, financial information and accounts, web pages and blogs, social networking accounts, domain names, videogames and virtual worlds, and intellectual property rights such as copyright, trademark, and patents”.

Connor (2010) cites different examples of digital assets, namely, documents created via a Microsoft Office Program (e.g. Word, Excel, or PowerPoint), digital photos, digital videos, music on iTunes, online accounts and memberships such as e-mail accounts, profiles on social networking sites such as Facebook and MySpace, online digital photo accounts, online banking and credit card accounts, and websites or domain names owned by a person, and any online subscription accounts, a website, a bidding agent, a video game character, or any number of other intangible, digital commodities. Thus the author considers digital assets as a virtual property and defines them as “any digital file on a person’s computer as well as online accounts and memberships”. Furthermore, Cowling (2012) distinguishes between digital “assets” and “accounts” when planning for a digital afterlife. He notes that “digital assets have been described as: digital photos, quicken spreadsheets, word and excel documents, tweets, your iTune collection etc. Digital accounts are not the files themselves but the accounts you use to access those files, such as: email accounts, social network accounts, file sharing accounts, software licenses etc”.

Hopkins (2013) adds that digital assets can be stored on various mediums, devices, and locations. He notes that digital assets should be stored in some physical location (with the owner, a third party, or on the cloud that allows the storage of digital assets on the internet). The author explains that “many of these digital assets are saved in the cloud and accessible through an account protected with a password. Each internet user has an average of twenty-six different online accounts and uses roughly ten different passwords or pin numbers in a day”.

Indeed, “different usernames and passwords can create a significant issue for those responsible for ensuring the security of someone’s estate after their death. Without the correct usernames and passwords the information stored on these web-based accounts cannot be accessed and will essentially be left floating in cyber space with the possibility of being preyed upon by identity thieves” (Connor, 2010). The author mentions also the issue of a blogger continuing to post after death.

Further, Carroll & Romano (2010) highlight the issue of digital assets’ safety. According to them, “It is easy to assume that your digital possessions will always be there, but they’re as safe as you might think. There are numerous technical and legal issues that could cause their demise. If you don’t take steps to make them available to your loved ones, your digital legacy could be lost forever”.

According to Beyer & Cahn (2012), there is a lack of laws dealing with afterlife digital assets and protecting the rights of executors, agents, guardians, and beneficiaries. They note that “Although many on-line services have their own policies for how to deal with a user’s death or incapacity, not all sites have developed policies. Moreover, a client may not be entirely satisfied with a particular site’s procedures”.

Therefore, Connor (2010) provides suggestions for dealing with digital assets in regards to estate planning such as:

1. “The proper planning”; a person can simply prepare a list of assets and then leave it in a place that is easy for his family and any designated successors to obtain.
2. “Giving the Keys to the Estate”; a person can provide to his executor an informal letter that lists important passwords, user names, security codes, and other information needed to access online accounts.
3. “More Workable Alternative” such as setting up a trust in which to list the passwords and usernames for all the different accounts

McCallig (2013) provide other suggestions. In his words, “Options could include the ability to make an account available a fixed number of years after death or, in particular for social media sites, accounts could be made available to access after the death of all a decedent’s network friends. Other granular choices such as the type of institution or research could also be offered to users”.

For Cowling (2012), the best way to protect digital assets and accounts is to conduct digital audits and leave a detailed list of accounts and passwords and clear instructions of wishes for digital life after death. They suggest that internet users should leave a sealed envelope with his lawyer or executor or keep track of passwords electronically on his computer or blackberry or on an online password manager such as Last Pass or Pass Pack.

In this research we try to evaluate to which extent Canadian are ready to digital after life. We will assess their awareness of digital assets and digital after life as well as the impact of this awareness on digital after life readiness. Our research model may be presented as follows;

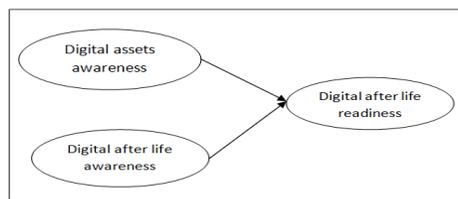


Figure 1 *Research Model*

3. Methodology

We generated primary data by conducting a personal survey. We addressed our questionnaire to 59 students of engineering school in university of Ottawa. We relied on SPSS and PLS to analyze the collected data. We represent some descriptive statistics of our sample in the following tables.

Table 1 *Life in Urban Area of Canada*

	Frequency	Percent	Valid percent	Cumulative percent
Valid Yes	53	89,8	89,8	89,8
No	6	10,2	10,2	100,0
Total	59	100,0	100,0	

Table 2 *Salary Range*

	frequency	percent	valid percent	cumulative percent
Valid \$42,705 or less	50	84,7	84,7	84,7
\$42,706 to \$85,405	6	10,2	10,2	94,9
\$85,406 to \$103,915	1	1,7	1,7	96,6
\$103,916 or more	2	3,4	3,4	100,0
Total	59	100,0	100,0	

Table 3 *Industry Section*

	frequency	percent	valid percent	cumulative percent
Valid Accountancy, banking and finance	2	3,4	3,4	3,4
Business, sales, consulting, management	1	1,7	1,7	5,1
Creative arts and design	1	1,7	1,7	6,8
Engineering, IT and manufacturing	36	61,0	61,0	67,8
Environment and agriculture	1	1,7	1,7	69,5
Healthcare and education	4	6,8	6,8	76,3
Other	14	23,7	23,7	100,0
Total	59	100,0	100,0	

Table 4 *Gender*

	frequency	percent	valid percent	cumulative percent
Valid Man	37	62,7	62,7	62,7
Woman	22	37,3	37,3	100,0
Total	59	100,0	100,0	

We collected data about the Value and the types of digital assets as well as the afterlife Facebook account. We performed descriptive statistics to analyze these primary data.

Then, we devoted an important part of our questionnaire to assess the impact of awareness of digital assets and digital after life on digital after life readiness. To analyze these relationships, we referred to SPSS 20 and Smart PLS3.

We examined the validity of our variables according to Fornell and Larcker (1981) and we measured their reliability using the Chronbach's alpha coefficient following Evrard and al. (2009). We relied on the path coefficients provided by Smart PLS to test our hypothesis. We performed Structural equation models and we determined the correlation indexes.

4. Results and Discussion

Our empirical findings indicate that, for our sample, personal memories are the most valuable digital assets. However, entertainment files do not represent a valuable asset for our respondents (see table 5).

Indeed, some students consider their digital assets as priceless. They attribute imaginary values to their records, files, career information, hobbies and projects. In order to remove outliers from our dataset, we considered values exceeding 20.000 \$ as missing values.

Table 5 Value of Digital Assets

		value of digital assets	value personal records and communication	Value entertainment files	value hobbies and projects	value career information
N	Valid	53	53	56	56	56
	missing values	6	6	3	3	3
	Mean	5048,4906	3724,9057	2058,6607	2628,0357	2863,0357
	Min	,00	,00	,00	,00	,00
	Max	20000,00	15000,00	20000,00	10000,00	20000,00

Further, our respondents answer differently the question «What do Digital assets include». Indeed, the results outline that social network accounts, photos, music and entertainment files are the digital assets the most listed by our respondents (see the following tables).

Table 6 Identifying Digital Assets

	n	%
Social network accounts	51	86.4
Online business	24	47.7
Website content	28	47.5
Online account information	32	54.2
Videos	27	45.8
Photos	45	76.3
Digital cameras	26	44.1
Music, movies and TV-shows	44	74.6
e-mail and web mail	50	84.7
Empty external hard drive	40	67.8
Cryptocurrency such as Bitcoin	21	35.6
Financial documents	38	64.4
Personal documents	36	61
Loyalty programs	20	33.9

N: Respondents considering the item as a Digital Asset

Then, the majority of our respondents outlined that they prefer that their Facebook account would be memorialized after their death. This result reflects the respondents' awareness of digital assets and digital after life (see the following table).

Table 7 After Life Facebook Account

		frequency	percent	valid percent	cumulative percent
Valid	Memorialized	37	62,7	62,7	62,7
	Removed	20	33,9	33,9	96,6
	I don't know	2	3,4	3,4	100,0
	Total	59	100,0	100,0	

Then, we dealt with the relationships between digital assets awareness, digital after life awareness and digital afterlife readiness. We assessed validity and reliability using Spss 20 and PLS3.

According to Evrard and al. (2009), our empirical results outlines a satisfactory levels of validity (Extracted Average Value (AVE) are greater than 0.5). The results also highlight an acceptable level of reliability according to Fornell and Larcker (1981) (Cronbach alpha coefficients exceed 0.70.) (See table 2).

Average Variance Extracted (AVE)

	Original Sampl...	Sample Mean (...)	Standard Devia...	T Statistics (O...	P Values
Digital after life awareness	1.000	1.000	0.000		
Digital after life readiness	0.542	0.543	0.064	8.495	0.000
Digital assets awareness	0.500	0.502	0.056	9.009	0.000

Figure 2 Average Value Extracted

Cronbach's Alpha

	Original Sampl...	Sample Mean (...)	Standard Devia...	T Statistics (O...	P Values
Digital after life awareness	1.000	1.000			
Digital after life readiness	0.785	0.777	0.061	12.800	0.000
Digital assets awareness	0.868	0.867	0.031	4.136	0.000

Figure 3 Cronobach's Alpha

In order to test our hypothesis, we relied on the Path coefficients provided by PLS software. Indeed, our empirical findings indicate a p value that is inferior to 0.05 (0.00) and high T-values (greater than 1.96) (see table. 3). Our results reveal a positive impact of digital assets awareness and digital after life awareness on readiness for digital after life. This result supports our hypothesis.

Path Coefficients

	Original Sample (O)	Sample Mean (...)	Standard Devia...	T Statistics (O...	P Values
Digital after life awareness -> Digital after life readiness	0.389	0.395	0.100	3.901	0.000
Digital assets awareness -> Digital after life readiness	0.474	0.483	0.099	4.795	0.000

Figure 4 Path Coefficient

Furthermore, we calculated the correlation index of awareness of digital assets-readiness for digital after life link and awareness of digital after life-readiness for digital after life link.

According to Fox (2002), these structural equations represent causal relationships between the variables in the model□

The structural equation models reveal positive correlation coefficients that range from 0 to 1 (see the following figures). Our findings outline a positive correlation indexes for the two links (0.471; 0.389).

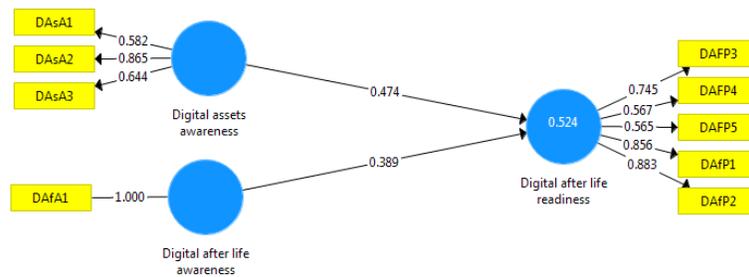


Figure 5 Variables' Correlation

These findings indicate that digital assets awareness and digital after life awareness positively influence the digital after life readiness. Thus, in order to enhance digital after life readiness, consumers should be better aware of digital assets and digital after life.

5. Conclusion

The objective of this study was to assess the awareness of digital assets and digital after life and its impact on digital after life readiness. Therefore, we opted for a survey. We addressed our questionnaire to 59 students of engineering school in university of Ottawa.

We collected data about the Value and the types of digital assets as well as the afterlife Facebook account and we performed descriptive statistics to analyze it.

Also, we assessed the impact of awareness of digital assets and digital after life on digital after life readiness. We analyze these relationships using SPSS 20 and Smart PLS3.

Our findings indicate that our respondents range the digital assets according their value as follows; personal memories, personal records and communication, career information, hobbies and projects and entertainment files.

Moreover, social network accounts, photos, music and entertainment files are the digital assets the most listed by our respondents seem to be the most common digital assets for our respondents.

Another result of this study reveals that our respondents prefer that their Facebook account would be memorialized after their death.

Finally, our empirical findings highlight the positive impact of a positive impact of awareness of digital assets and digital after life on readiness for digital after life.

We approve that our research has some limits such as the size of the sample (59 respondents) and the restricted cultural context (only, Canada). Thus, future researches should consider larger samples and more cultural contexts.

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