

UNIVERSITY OF SWAZILAND
DEPARTMENT OF BUSINESS ADMINISTRATION
MAIN EXAMINATION PAPER
DECEMBER, 2019

TITLE OF PAPER : MANAGEMENT INFORMATION SYSTEMS
COURSE CODE : BUS 615
TIME ALLOWED : THREE (3) HOURS
INSTRUCTIONS: 1. THE NUMBER OF QUESTIONS IN THIS PAPER=5 FIVE
2. SECTION A IS COMPULSORY.
3. ANSWER ANY THREE (3) QUESTIONS IN SECTION B
4. THE MARKS TO BE AWARDED FOR EACH QUESTION
ARE INDICATED ALONGSIDE THE QUESTION.

NOTE: MARKS WILL BE AWARDED FOR GOOD COMMUNICATION IN ENGLISH, AS WELL AS FOR ORDERLY AND NEAT PRESENTATION OF WORK. FURTHER MARKS WILL BE AWARDED FOR USE OF RELEVANT EXAMPLES.

SPECIAL REQUIREMENTS: NONE

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR.

Facebook: It's About the Money

Over the course of less than a decade, Facebook has morphed from a small, niche networking site for mostly Ivy League college students into a publicly traded company estimated to be worth at least \$50 billion. Facebook boasts that it is free to join and always will be, so where's the money coming from to service 1 billion subscribers? Just like its fellow tech titan and rival Google, Facebook's revenue comes almost entirely from advertising. Facebook does not have a diverse array of hot new gadgets, a countrywide network of brick-and-mortar retail outlets, or a full inventory of software for sale; instead, it has your personal information, and the information of hundreds of millions of others with Facebook accounts.

Advertisers have long understood the value of Facebook's unprecedented trove of personal information. They can serve ads using highly specific details, like relationship status, location, employment status, favorite books, movies, or TV shows, and a host of other categories. For example, an Atlanta woman who posts that she has become engaged might be offered an ad for a wedding photographer on her Facebook page. When advertisements are served to finely targeted subsets of users, the response is much more successful than traditional types of advertising. A growing number of companies both big and small have taken notice: in 2011, Facebook made \$3.2 billion in advertising revenue, which constituted 85 percent of its total revenue. The rest comes from the sale of virtual goods and services, principally Zynga games.

That was good news for Facebook, which launched its IPO (initial public stock offering) in May 2012 and is expected to continue to increase its revenue in coming years. But is it good news for you, the Facebook user? More than ever, companies like Facebook and Google, which made approximately \$36.5 billion in advertising revenue in 2011, are using your online activity to develop a frighteningly accurate picture of your life. Facebook's goal is to serve advertisements that are more relevant to you than anywhere else on the Web, but the personal information they gather about you both with and without your consent can also be used against you in other ways.

Facebook has a diverse array of compelling and useful features. Facebook's partnership with the Department of Labor helps to connect job seekers and employers; Facebook has helped families find lost pets after natural disasters, such as when tornadoes hit the Midwest in 2012; Facebook allows active duty soldiers to stay in touch with their families; it gives smaller companies a chance to further their e-commerce efforts and larger companies a chance to solidify their brands; and, perhaps most obviously, Facebook allows you to more easily keep in touch with your friends. These are the reasons why so many people are on Facebook.

However, Facebook's goal is to get its users to share as much data as possible, because the more Facebook knows about you, the more accurately it can serve relevant advertisements to

you. Facebook CEO Mark Zuckerberg often says that people want the world to be more open and connected. It's unclear whether that is truly the case, but it is certainly true that Facebook wants the world to be more open and connected, because it stands to make more money in that world. Critics of Facebook are concerned that the existence of a repository of personal data of the size that Facebook has amassed requires protections and privacy controls that extend far beyond those that Facebook currently offers.

Facebook wanting to make more money is not a bad thing, but the company has a checkered past of privacy violations and missteps that raise doubts about whether it should be responsible for the personal data of hundreds of millions of people. There are no laws in the United States that give consumers the right to know what data companies like Facebook have compiled. You can challenge information in credit reports, but you can't even see what data Facebook has gathered about you, let alone try to change it. It's different in Europe: you can request Facebook to turn over a report of all the information it has about you. More than ever, your every move, every click, on social networks is being used by outside entities to assess your interests, and behavior, and then pitch you an ad based on this knowledge. Law enforcement agencies use social networks to gather evidence on tax evaders, and other criminals; employers use social networks to make decisions about prospective candidates for jobs; and data aggregators are gathering as much information about you as they can sell to the highest bidder.

In a recent study, Consumer Reports found that of 150 million Americans on Facebook, at least 4.8 million are willingly sharing information that could be used against them in some way. That includes plans to travel on a particular day, which burglars could use to time robberies, or Liking a page about a particular health condition or treatment, which insurers could use to deny coverage. 13 million users have never adjusted Facebook's privacy controls, which allow friends using Facebook applications to unwittingly transfer your data to a third party without your knowledge. Credit card companies and other similar organizations have begun engaging in "weblining", taken from the phrase redlining, by altering their treatment of you based on the actions of other people with profiles similar to yours.

Ninety-three percent of people polled believe that Internet companies should be forced to ask for permission before using your personal information, and 72 percent want the ability to opt out of online tracking. Why, then, do so many people share sensitive details of their life on Facebook? Often it's because users do not realize that their data are being collected and transmitted in this way. A Facebook user's friends are not notified if information about them is collected by that user's applications. Many of Facebook's features and services are enabled by default when they are launched without notifying users. And a study by Siegel+Gale found that Facebook's privacy policy is more difficult to comprehend than government notices or typical bank credit card agreements, which are notoriously dense. Next time you visit Facebook, click on Privacy Settings, and see if you can understand your options.

Facebook's value and growth potential is determined by how effectively it can leverage the personal data is aggregated about its users to attract advertisers. Facebook also stands to gain from managing and avoiding the privacy concerns raised by its users and government regulators. For Facebook users that value the privacy of their personal data, this situation appears grim. But there are some signs that Facebook might become more responsible with its data collection processes, whether by its own volition or because it is forced to do so. As a publicly traded company, Facebook now invites more scrutiny from investors and regulators because, unlike in the past, their balance sheets, assets, and financial reporting documents are readily available.

In August 2012, Facebook settled a lawsuit with the FTC in which they were barred from misrepresenting the privacy or security of users' personal information. Facebook was charged with deceiving its users by telling them they could keep their information on Facebook private, but then repeatedly allowing it to be shared and made public. Facebook agreed to obtain user consent before making any change to that user's privacy preferences, and to submit to bi-annual privacy audits by an independent firm for the next 20 years. Privacy advocate groups like the Electronic Privacy Information Center (EPIC) want Facebook to restore its more robust privacy settings from 2009, as well as to offer complete access to all data it keeps about its users. Facebook has also come under fire from EPIC for collecting information about users who are not even logged into Facebook or may not even have accounts on Facebook. Facebook keeps track of activity on other sites that have Like buttons or "recommendations" widgets, and records the time of your visit and your IP address when you visit a site with those features, regardless of whether or not you click on them.

While U.S. Facebook users have little recourse to access data that Facebook has collected on them, users from other countries have made inroads in this regard. An Austrian law student was able to get a full copy of his personal information from Facebook's Dublin office, due to the more stringent consumer privacy protections in Ireland. The full document was 1,222 pages long and covered three years of activity on the site, including deleted Wall posts and messages with sensitive personal information and deleted e-mail addresses.

It isn't just text-based data that Facebook is stockpiling, either. Facebook is also compiling a biometric database of unprecedented size. The company stores more than 60 billion photos on its servers and that number grows by 250 million each day. A recent feature launched by Facebook called Tag Suggest scans photographs using facial recognition technology. When Tag Suggest was launched, it was enabled for many users without opting in. This database has value to law enforcement and other organizations looking to compile profiles of users for use in advertising. EPIC also has demanded that Facebook stop creating facial recognition profiles without user consent.

In 2012, as part of the settlement of another class-action lawsuit, Facebook agreed to allow users to opt in to its Sponsored Stories service, which serves advertisements that highlight products and businesses that your Facebook friends are using. Now, users can control and see which of their actions on Facebook generate advertisements that their friends will see. Sponsored Stories are one of the most effective forms of advertising on Facebook because they don't seem like advertisements at all to most users. Facebook had previously argued that users were giving "implied consent" every time they clicked a Like button on a page. Users are now confronted with an opt-in notice that analysts speculate may cost Facebook up to \$103 million in advertising revenue.

Additionally, in response to the increased scrutiny brought about by its IPO, Facebook has improved its archive feature to include more categories of information that the company makes available to users that request copies of their personal data. In Europe, 40,000 Facebook users have already requested their data, and European law requires that Facebook respond to these requests within 40 days. Still, even after Facebook's improvements, they will offer users access to 39 data categories, while the company supposedly maintains at least 84 categories about each user. And, despite the increased emphasis on privacy and data disclosure, European lawmakers are unlikely to hamper Facebook's ability to offer highly customized advertisements, which is the backbone of Facebook's business model.

Perhaps sensing that privacy concerns represent a long-term threat to its profitability, Facebook is working to develop revenue streams beyond display advertising. Facebook is now a strong second to Google in the United States in display advertising, with 28 percent of all display ads served on Facebook, but the company hopes to become more of an online marketplace, facilitating the selling of goods and services, potentially challenging Amazon and eBay. Still, it's likely that the personal data of hundreds of millions of users will always be Facebook's most valuable asset. How responsibly it manages that asset will guide its path into the future.

CASE STUDY QUESTIONS

1. Perform an ethical analysis of Facebook. What is the ethical dilemma presented by this case? [20 marks]
2. Describe the weaknesses of Facebook's privacy policies and features. What management, organization, and technology factors have contributed to those weaknesses? [20 marks]

SECTION B

Question 1

How does Porter's competitive forces model help companies develop competitive strategies using information systems? 20 marks

Question 2

Suppose your business had an e-commerce Web site where it sold goods and accepted credit card payments. Discuss the major security threats to this Web site and their potential impact. What can be done to minimize these threats? 20 marks

Question 3

Supply chain management is less about managing the physical movement of goods and more about managing information. Discuss the implications of this statement. 20 marks

Question 4

Canadian Tire is one of Canada's largest companies, with 57,000 employees and 1,200 stores and gas bars (gas stations) across Canada selling sports, leisure, home products, apparel; and financial services as well as automotive and petroleum products. The retail outlets are independently owned and operated. Canadian Tire was using daily mailings and thick product catalogs to inform its dealers about new products, merchandise setups, best practices, product ordering, and problem resolution and it is looking for a better way to provide employees with human resources and administrative documents.

What are the problems created by this way of doing business? And hence explain how knowledge management system might help. 20 marks

Question 5

Toronto-based Mercedes-Benz Canada, with a network of 55 dealers, did not know enough about its customers. Dealers provided customer data to the company on an ad hoc basis. Mercedes did not force dealers to report this information. There was no real incentive for dealers to share information with the company. How could Customer Relationship Management (CRM) and Partner Relationship Management (PRM) systems help solve this problem?

20 marks