
Effect of Digitalization on Business in a Small Developing Economy: The Case of Fiji Islands

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Abstract

Digital technologies open up dynamic platforms for business operations. The system designs make applications more beneficial in a widely open spectrum of business, irrespective of the environment of operation such as the size of the business, market and business culture. An attempt was made to investigate characteristics of e-business and e-service operations in Fiji Islands to identify driving forces and challenges related to digitization of business and to show that e-business models have succeeded in a Small Developing Nation. A secondary set of information were gathered and analyzed. It was revealed that market challenges and the need for operational efficiencies have driven the business to adopt e-service, while security issues and disposable income of consumers are seen as challenges. Further, e-business models such as market creator, content provider and community provider models have played a more dominating role, threatening traditional business models, due to affordability, proven operational efficiency, and market visibility. The case of “content provider model” may carry threats in competitive advantage from features of the traditional business model.

1. Introduction

The introduction of new information systems has led to traditional business models becoming obsolete. Camera films once used to develop photographs have been digitalized. The video cassette was replaced by the DVD, and the latter is now being replaced by Netflix, music can be purchased online, television series can be purchased online and big sporting events can be streamed live. Some of these radical changes have resulted in the closure of businesses like camera film makers and tape and video cassette producers. As technology continues to evolve traditional businesses will continue to become obsolete. No one ever thought that the world’s largest taxi operator could have the biggest consumer market share without even owning a single taxi. Thanks to the invention of online application called Uber. A consumer can today make deposits or check their bank balances while sitting at their desk during their morning

tea break or while commuting to work. They do not have to wait for the bank to open to access these services as per the traditional norm in the past. It is available 24 hours a day, seven days a week. A consumer can connect to their bank account from anywhere in the world to see their transactions.

As emerging technologies continue to develop, the way businesses operate will continue to change. There may even come a day when universities will hold classes without students physically going to classes, instead connecting to a virtual space where they are sitting with other students and listening to the lecturer. It seems that the possibilities could be endless.

This vast spectrum of digitization and its effects have made us enthusiastic about analyzing different types of e-business models used in small developing economies, despite their limitations in terms of size of the market, capabilities related to know-how, investment capacity on ICT and harsh competition in the market due to influence of globalization.

The present paper looks at different e-services and different e- business models available in a few selected businesses in Fiji. Three different types of business models are taken as case studies for descriptive purposes and attempted to identify factors that contribute to operations of e-business models and e-services.

2. Methodology

The researchers used secondary information(specify) to gather relevant information from web sites and organizations engaged in e-services and e-business in Fiji. The contextual issues related to the researchable area are captured from academic material available in text books, internet, and journal articles. Different types of e-services were identified and they were used to describe successfully implemented services in a Small Developing Nation (SDN). Three case studies were used to describe features of e-businesses in a SDN.

2.1. Facts about ICT strength in Fiji

Total Population	885,000
Land Area	18333 km ²
GDP per Capita	7903.9
Currency	FD (1 FD equivalent to 0.48 USD)
Fixed telephone subscriptions	8.4 per 100 inhabitants

Mobile-cellular telephone subscriptions	114.2 per 100 inhabitants
Percentage using internet	48%
Fixed-broadband subscriptions	1.34 per 100 inhabitants

Sources: Fiji Bureau of Statistics & ITU

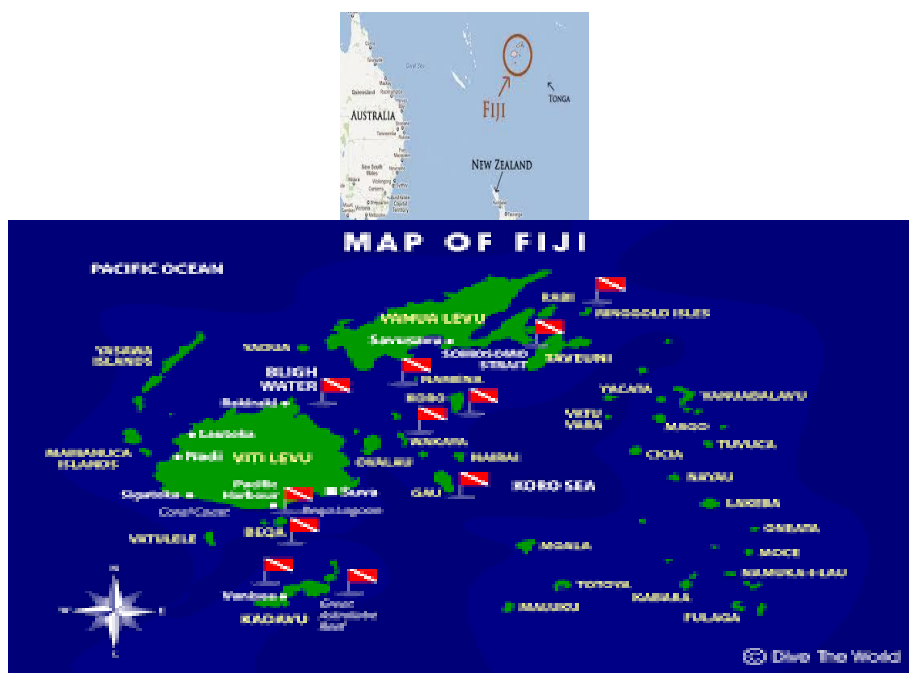


Figure 1: Map of Fiji (Source: Google Maps)

2.2. Practical Examples of E-services in the Developing World

E-service (short for electronic service) is one of the applications utilizing information and communication technologies (ICTs) in different areas. Internet is used for e-service, and some of the other channels are telephone, mobile phones, and television. Some means of e-services are e-tailing, customer support and service delivery. Rowley (2006) emphasized that inherent characteristics of e-service delivery and the factors that differentiate one service experience from another are more important than service quality in e-services.

Information technology is a powerful tool for accelerating economic development. Developing countries have focused on the development of ICT during the last two decades and as a result, it has been recognized that ICT is critical to economy, and it is a catalyst of economic

development. So, in recent years there seems to have been efforts for providing various e-services in many developing countries since ICT is believed to offer considerable potential for the sustainable development of e-Government and as a result, e-Services.

Many government agencies in developed countries have taken progressive steps toward the web and ICT use, adding coherence to all local activities on the Internet, widening local access and skills, opening up interactive services for local debates, and increasing the participation of citizens on promotion and management of the territory (Graham and Aurigi, 1997). Yet, the potential for e-government in developing countries remains largely unexploited. ICT is believed to offer considerable potential for the sustainable development of e-government. Different human, organizational and technological factors, issues and problems pertaining in these countries, require focused studies and appropriate approaches. ICT, in general, is referred to as an “enabler”, but on the other hand, it should also be regarded as a challenge and a peril in itself. The organizations, public or private, which ignore the potential value and use of ICT may suffer pivotal competitive disadvantages. Nevertheless, some e-government initiatives have flourished in developing countries too; e.g. Brazil, India, Chile, etc. What the experience in these countries shows, is that governments in the developing world can effectively exploit and appropriate the benefits of ICT, but e-government success entails the accommodation of certain unique conditions, needs and obstacles. The adaptive challenges of e-government go far beyond technology, they call for organizational structures and skills, new forms of leadership, transformation of public-private partnerships (Allen et al., 2001).

2.3. Major factors in the e-government e-services

As a service provider, any government has an obligation to provide free e-services to its countrymen. Acceptance which can be defined as the users’ willingness to use the e-service or the willingness to decide when and how to use the e-service Morris (1996) is one of the keywords in e-services. Other factors such as accessibility, simplicity in terms of administration literacy and skill requirement make the e- service more usable and appropriate. Further, standardization in line with international usage, minimization of digital divide, e-readiness of users (participation by citizens) and security features contribute to the efficiency and usability of e-services.

Table 1: Details of e-services provided in Fiji

	Free e-service	Service provider	Business function	Type of e-business	Revenue model
1	e-transport	Vodafone Fiji	Bus fare payment	Transaction broker	Commission
2	e-advertising	Go Advertising		Market	Advertising

			On-line, social media and billboard advertising	creator	
3	Fiji government on-line portal	Fiji Government	On-line information, application forms and general civil service	Portal	Free-for-service
4	e-communication	Digicel Fiji	Communications network provider	Content provider	Subscription
5	e-business	Datec Fiji Limited	Cloud computing	Service provider	Licensing
6	Student Academic service support	University of Fiji	Educational Institute	Service provider	Free-for-service
7	e-billing 'Noqu-portal'	Energy Fiji Limited	Industrial and domestic electricity provider	Community provider	Free-for-service
8	e-information	Fiji National Provident Fund	Superannuation service provider	Community provider	Interest
9	e-banking	Bank of the South Pacific	Banking services	Transaction broker	Free-for-service
10	Social media	Facebook - Buy & Sell in Fiji	Social media platform	Community provider & E-Tailer	Advertising

3. Findings

Some of the e-services in Fiji are government service lines, Fiji government websites, privatized enforcement organizations (e.g. Land Transport Authority), education services, electricity, water, FNPF and other services like online banking, buy and sell websites, and other private and public companies.

While conducting an investigation on how consumers access free e-services, it was found that the e-services mainly used by people in Fiji are for transportation, information, advertising and local small scale retailing where generally cash is involved through social media, phone

and television. Table 1 shows some of the common free e-services used in Fiji, and the e-business models and revenue models for each of the identified services.

E-service has become one of the major means of advertising and information transfer between customers and firms. As per the investigation it was found that less than half of the consumers are in their late 40's and above, and are new to these services and have limited information about these services. For example, people believe in physically seeing the product before paying for it. Young and middle age group people are using e-services for almost everything in terms of finding out what is available in the market, and what the latest overseas trends are. Basically most of the people are using e-services for information. In addition, the other observation was that people's income plays a very big role in the use of e-services. Most of the people or consumers in Fiji cannot afford or own a credit cards or a debit card which is used in many of the e-service transactions.

In addition to payments for transactions, the other observation was the security for the transaction from untrustworthy sites; for example, 'Pink Window Creations'. A lot of government services are now available online which has made the access for most of the services easy and less time consuming. For example, LTA has put some of its major services online which reduces the time for people standing in line and unnecessary hassles.

Lastly, e-service is very important for any organization to grow and be successful in today's competitive market. Through e-service a business can access a greater customer base, a broadcasting market research, alternative communication channels to customers, increasing services to customers, competitive advantages, and potentials for increasing customer knowledge.

However, while there are many benefits of accessing free e-services there are also new threats to organizations. These threats come with the development of new technologies. If we look at the example of the banking services, the threats in today's digital world are the ability of scammers or hackers to wipe bank accounts by breaching cyber security for online banking systems. Banks are now fortifying their online security systems, and are creating layers of security to ensure such attacks are not made aiming their online systems. ANZ Fiji has recently introduced new layers of security that asks consumers different types of questions as part of its enhanced online banking security feature.

3.1. E- Business models

Laudon (2016) has described seven e-business models namely; e-tailer, transaction broker, market creator, content provider, community provider, portal and service provider. Free e-

services are discussed above. In this investigation, we have identified three internet business models in Fiji that have grown significantly with the rapid development of information systems. One of the internet business models is based on social media, while the second one will look at an online media company that has been created to challenge the traditional media platforms. The third case is used to strengthen the success of Market Creator business model.

3.2. Cars for Sale (Fiji) as a Community Provider

Facebook (FB) is a social media networking site that has grown gigantically since its launch in 2004. Averagely, there are 2.2 billion active FB users (Statista, 2018). In Fiji's context FB is the most popular social media networking site. It has also been noticed the emergence of different groups and pages created for people wanting to buy and sell through FB.

One of the most popular FB pages is the 'Cars for Sale (Fiji)' which is a closed group with 85,570 members who actively participate in buying and selling of used vehicles.

Cars for Sale (Fiji) has averagely more than 10 posts daily with sellers posting the vehicle that they want to sell with its images, features and the price. Other FB users who are interested in purchasing the vehicle either comment on the page requesting for additional details or privately message the seller to negotiate for prices. Once the seller and buyer have agreed on the price, then the person who has posted on the FB page will inform the rest of the group that the vehicle has been sold. Traditionally, the buying and selling of vehicles was only done through retail car outlets where customers have to visit the car retail outlet and then physically view the car. This is now changing due to the availability of information systems that are now changing the way we do business.

This internet business model is a community provider where a market has been created for people to communicate with one another by sharing common interests in cars, uploading videos and pictures, and buying and selling cars. This is also an example for a market creator model where a new platform has been established for buying and selling cars in Fiji as buyers and sellers can meet through FB pages. It is a Consumer to Consumer (C2C) type of E-Commerce that is available on the FB page for free. It is a free platform where the sellers are able to connect with other FB users to sell their used vehicles. While FB allows this free service the seller can also pay for a premium FB service by creating advertisements for the vehicle that he wants to sell and this advert will be visible to other FB users on their newsfeeds.

The buying and selling of cars through this FB page has allowed consumers the luxury of viewing different vehicles that are on sale from the comfort of their computers and mobile

devices. They are able to negotiate a price and are able to buy the car by simply contacting the seller, unlike traditionally where the customer would travel to the second hand car dealer outlets to view the car, which is time consuming. With the advent of social media, consumers do not have to waste their time by travelling to retail outlets; but the biggest benefit of this platform is that buyers are able to purchase second hand vehicles at a much cheaper price than what is available in second hand vehicle outlets. Figure 1 below shows an example of a post on the Cars for Sale (Fiji) FB page.

3.3. Fiji Live as a content provider

The second internet business model is on FijiLive, an online media company that was established in 1999. It is the first online media company that was started in Fiji to challenge the traditional media platforms – print, radio and television. FijiLive does media reports on news and sports events which are made available for free on their website. They have journalists, sales executives, and traditional media outlets; however their whole business is entirely based on E-business.

The type of E-Commerce is business to consumer (B2C) and business model is based on being a content provider where news articles are available for anyone who logs on to their website: www.fijilive.com. Online users do not have to pay or subscribe to read news articles; however revenue for the website is generated through sales that they receive from businesses that place advertisements on the FijiLive website. An additional revenue source for the website is the mobile ringtones which their team produces and consumers are able to download off the website.

A benefit of the online media company is that news articles are available on the website; whereas traditionally, news was only available in newspapers, radio and television. Traditional media companies are also going online; for example, Fiji Times carry snippets of their news for readers on their website. There is an increasing number of online readers, and the growth of online media companies is a huge challenge for traditional media outlets that are on the verge of closing down due to declining sales. More and more people are connected to the internet and are able to read news through online mediums. The figure below (Fig 2) shows the FijiLive website.



Kumar Asish
April 19 at 8:26pm

Toyota corolla

FREE

📍 Lautoka, Fiji

Toyota corolla 2004 \$15,000
88k mileage
Lady driver
Neat condition and neat interior
Automatic / unleaded ... See More



Figure 1: Cars for Sale (Fiji) FB page



Figure 2: FijiLive website

The sustainability of the competitive advantages of this business is considered out of control of digital technologies, but may fall within parameters of traditional business models such as speed, quality and customer responsiveness.

3.4. Quick sales as a market creator

The third case, 'Quick sales' is an internet e-commerce Market Creator – Affiliate Marketing Business Model that is operated in Fiji. 'Quick sales' has been operating in Fiji and Australia from the year 2003 and is a growing e-commerce business. The Fijian counterpart is 100% Fijian owned(Quicksales.com.fj, 2018).

The Market Creator - Affiliate Marketing website, 'Quick sales', renders the following features:

1. Ubiquity – easily accessible over the internet with 24-hour communication service with the site administrator.
2. Multitude of products – multiple vendors are able to sell products of all legal trade categories on the website.
3. Products are categorized – customers can select the type of product they are seeking and search for the specific category; thereby, save time as the customers do not have to scroll through items they are not interested in.

4. Easy delivery – The customer does not have to physically visit the store to pick-up the purchased item. ‘Quick sales’ connects the customer with the retailer, who then delivers the purchased item to the buyer via a courier service.
5. Retailers can also be sorted according to their location – this assists the buyer by obtaining products with minimal courier charges.
6. ‘Quick sales’ also provides space for free advertising by the retailers.
7. ‘Quick sales’ markets / advertises on multiple social and business sites, thus creating greater awareness and more sales opportunities for the retailers.
8. Provides ‘Safety Tips on Shopping’ –
 - a) Cash On Delivery (COD)
 - b) Bank Cheque
 - c) Exchange funds at a bank
 - d) Exchange legal documentation for each transaction
9. Provides a ‘General Safety Guideline’ – gives reminders to both the buyers and sellers to legitimise the sale through appropriate documentation and to transfer funds via a secured medium, e.g. Bank deposits.

The type of e-commerce business used by ‘Quick sales’ through Affiliate marketing is Business to Consumer (B2C) and Business to Business (B2B) model (Smallbusiness.chron.com, 2018).

Quick sales provides a website where multiple retailers are able to register and sell their products to customers.

‘Quick sales’ only provides a platform for displaying the products and then connects the interested potential buyers with relevant retailers. The risk that the retailer may exclude ‘Quick sales’ from the supply chain by providing to the customer his personal bank details is avoided via ‘Quick sales’ registration requirements. A refundable amount, which will constitute towards an agreed commission for ‘Quick sales’ on completion of a sales transaction, is paid to ‘Quick sales’ by the retailer in advance.

On successfully securing a sale, customer deposits the priced amount into the ‘Quick sales’ account. ‘Quick sales’, will inform the retailer of the payment receipt upon which the item will be dispatched by the retailer via a courier company for direct delivery to the customer; this is known as drop shipping (Smallbusiness.chron.com, 2018). On confirmation of being dispatched, ‘Quick sales’ receipts its commission, and then deposits the remaining amount into the retailer’s account.

Revenue is derived by 'Quick sales' through the 'Affiliate Revenue Model'(Zuora, 2018). For providing a storefront and a secure website to do business, 'Quick sales' executes a commission from the retailers for each completed transaction. Therefore, through greater outreach and extensive marketing, more sales that 'Quick sales' is able to facilitate will contribute towards higher commission.

Affiliate Marketing is an emerging e-commerce business in Fiji and provides a lucrative potential for interested entrepreneurs and businesses to capitalize on easy revenue sources.

In comparison to traditional business model, Market Creator - Affiliate Marketing has the following benefits:

1. Low cost business set-up—the Market creator does not need a physical store.
2. Ease of access – products can be searched from almost any place, 24 hours and in all seven days of the week.
3. Low search costs –buyers do not need to travel from store to store searching for products.
4. Enormous returns on investment – the Market Creator has very low investments, however, makes large revenues depending on the number of sales transactions.
5. Diverse products on offer—a very diverse range of products from hardware, departmental stores, shoes, clothes, dive/fish &tackle and many more categories of items are found in a single website.
6. Dynamic price structures –due to multiple retailers of same/similar products, prices can be further negotiated by buyers for greater discounts.
7. Low risk of business transaction – the customer complaints or delivery issues are handled by the registered retailer, and the website does not hold liability.
8. Lesser tension -
9. Brand development and increased visibility—successful sales transactions automatically assist the website in developing its brand power, thus providing greater sales transactions and more revenue.
10. Easy to analyse market demands and predict customer buying trends

4. Discussion

In a non-competitive environment, the free-service providers see security for the information available in their sources as the key challenge. On the other hand, traditional business models are under threat by the emerging internet business models (Feedough, 2018) that are taking the world by storm. In the three examples given above the rapid growth of these three internet business models; community provider, content provider and market creator have

meant that the traditional businesses like second hand vehicle retail outlets and media companies are under threat by the entry of competition through the internet platform which enhances operational efficiency and customer equity. The emergence of these internet business models in Fiji shows that with new technologies now readily available traditional businesses like second hand retail car outlets and traditional media companies could be closed someday. On the other hand, traditional business models can incorporate Internet Business Models focusing on issues such as inherent characteristics of e-service delivery and the factors that differentiate one service experience from another (Rowley, 2006). The case of “Fiji Live” is an example for the threat from traditional newspaper companies who incorporate internet business model with the traditional model. The above Internet based business models do not require large capital investments. It is cheaper to operate, convenient for consumers and is readily available 24 hours a day, 7 days a week. Therefore, the competitive advantage between two competitors, once both starts to use e-business models, will depend on the attributes they were using during traditional business environment. For example, the market creator ‘Quick sales’ faces significant challenges if it does not respond to customer requirements and changes.

5. Conclusion

The above study reveals that businesses in small developing nations can succeed by using selected (not all) internet business models, and therefore focuses on shifting platform of operation through investment in ICT technology which will enhance operational efficiency and market visibility. However, parameters of traditional business models may still play a key role for success and sustainability of business. Naturally, customers in small developing nations have limited disposable income and therefore, any move towards cost leadership while satisfying their requirements will generate sustainable competitive advantages.

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