
Mobile Telecommunications, the Internet and Social and Economic Development in Myanmar

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Abstract: Myanmar has changed from being a closed society under the military dictatorship that ran the country for decades to becoming an open or at least semi-open country with a democratic system. One impact of this has been in the field of mobile telecommunications; ten years ago, almost no one had a mobile telephone but now almost everyone does and, with it, very commonly access to the internet. This paper draws upon empirical research into these issues and this has informed the current discussion, which focuses on the social and economic development of the country under the current conditions.

Keywords: economic development, internet, mobile telecommunications, Myanmar, social development

1. Introduction

It has become quite well-known that there is a positive correlation between the growth of telecommunications in a country and that nation's economic development (Röller & Waverman, 1996). This is because of the direct effect of investment and its effect on employment and the indirect effects of providing an enabling technology that people can use in a wide range of innovative and positive (and some neither innovative nor positive) ways. Although not always identified as such, it is clear that it is this infrastructure that has enabled those deep shifts in social and economic behaviour (e.g. driverless cars, wearable technology, smart cities etc.) that are considered to be the foundations of the fourth industrial revolution (Schwab, 2017:121-72). In basic terms, this is because telecommunications generally, like the telephone before them and, before that, the telegram, helped to improve the efficiency of business operations by promoting rapid communications across extensive space. The telegraph contributed to the ability of firms to undergo vertical integration and to compete in non-local markets, while also being the location of one of the world's first contested monopolies. However, it also had the effect of changing the nature and understanding of language and its use and was, therefore, a watershed in the history of communication (Carey, 2009).

The telephone, the mobile telephone and the internet have all represented new forms of that technology which has contributed to the annihilation of space by time. They have given rise to a wide range of powerful economic and social activities, ranging from the possibility of global media events (in 2018, the World Cup and the Kim-Trump summit) to transnational flows of capital in support of international financial markets to the gig economy. The possibilities of instant communication have not only transformed the lives of consumers and providers, it has also revolutionised the ways in which language is used and the signal transferred between various sender-receivers. Much of this is effectively invisible and broadly positive (e.g. electronic data interchange and the internet of things) but much else is visible and of different levels of value, such as the use of Twitter and Facebook to frame national political discourse. These changes have a range of different effects and may demonstrate mixed results which vary further over time. The presence of telecommunications infrastructure means that countries at different stages of economic development can now experience phenomena at the same time, irrespective of their ability to deal with unexpected consequences of those phenomena. Although it is possible to argue that while technology defines what is possible, it is, ultimately, government agencies that decide what is to be permitted (Chang & Grabel, 2014:27-30), this is much less likely to occur in a state where these government agencies lack resources and technical capacity and face significant constraints with respect to implementing policies that would have an impact on international relations. This is the case with Myanmar, which has in recent years emerged from decades of isolation under a repressive military dictatorship to a form of civilian constitutional democracy. As part of this transition, legislation is being introduced in a wide range of areas which were either irrelevant in the past or else could be

dealt with by administrative fiat. The provision and regulation of telecommunication and telecommunications infrastructure falls into this category. The purpose of this paper is to investigate the spread of telecommunications in Myanmar and attempt to assess the different ways, both positive and negative in nature, that these tools are having and will be likely to have in the future on the economy and society of the future. The paper now goes on to describe the environment of Myanmar as a country and then the effects upon it of the spread of telecommunications. Finally, some policy recommendations are derived from the analysis.

2. The Myanmar Environment

Myanmar today is a product of the British Empire. It is composed of the lands of the Burman majority to the south and centre and the uplands areas of ethnic minority people such as the Shan, Chin and Kachin to the north. It is possible to write a history of the country, previously known as Burma, as one of the attempted domination of the northern uplands by the Burman majority (Callahan, 2009). The principal city, Yangon (formerly Rangoon) and its former capital was a colonial city, designed primarily for the extraction of resources and their transportation by sea to British interests elsewhere (Kotkin, 2006:127-32). The new capital, Naypyidaw, was selected under the military government at least in part because it had historical Burman resonances that were quite distinct from the colonial era (Preecharushh, 2009).

The country is still primarily reliant on agriculture, with a monsoon-based rice paddy system that enables a second crop for many farmers. There is a limited but growing amount of industry and manufacturing, much of which is being funnelled into various industrial estates (IEs) and there are plans for more extensive industrialisation based in the special economic zones (SEZs) that are being built. Legislation has been introduced to try to facilitate this process. Many of the country's ethnic minority groups have launched campaigns for autonomy from the central government that have led to warfare in a number of cases. To support their campaigns, minority groups have encouraged farmers in upland areas to revert to opium growing for their second crops and this has fuelled the drugs trade throughout mainland Southeast Asia and beyond. The Panglong Treaty (Transnational Institute, 2017) brought a ceasefire to most parts of the country, although there has been renewed fighting in Kachin State in particular (Hogan, 2018). In addition to the casualties of violence, the fighting has also led to the creation of hundreds of thousands of internally displaced persons (IDPs), living in camps in border regions. In particular, persecution of the Rohingya people has resulted in actions that have been described as tantamount to genocide (), with more than one million people being housed in temporary camps in neighbouring Bangladesh.

Nation-building had been one of the cornerstones of the military government's policy and its trappings are still to be found in Myanmar society. As a concept, nation-building involves the use of state and civil institutions to develop an inclusive 'imagined community' (Anderson, 1983) which will inspire feelings of loyalty, belonging and patriotism. History textbooks have been used in the country to try to introduce this concept (Salem-Gervias & Metro, 2012) and this has been reinforced in popular culture. The impact of this approach will be seen in the analysis of usage of telecommunications by Myanmar people.

The economy of Myanmar remains hindered by the very poor transportation infrastructure outside of the principal urban areas. This situation reduces import-export trade possibilities and, in particular, restricts the ability of farmers to transport cash crops to local or regional markets. Research (Walsh, forthcoming) shows that just over half (52.6%) of a sample of 411 farmers used mobile telecommunications to contact regional markets for sale of produce but less than one percent (0.7%) used them for international markets. There are good prospects for the export of processed agricultural goods from Myanmar and in some cases (e.g. coffee, tea and salted snacks) this has already started to take place. Opportunities to do so will improve to a considerable extent when the Asian Development Bank (ADB)-supported Asian Highway Network (AHN) completes superior highways linking the principal cities of Yangon, Mandalay and Naypyidaw with border crossings with Thailand, China and India. A new dry dock at

Mandalay will also enhance import-export efficiency. There is scope for improving the efficiency of cross-border bureaucratic agencies in this regard.

Myanmar is a member of important regional associations such as the Association of Southeast Asian Nations (ASEAN), the Ayeyawaddy-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS) and the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC). As a result, the country has become incorporated into networks of cooperation and trade promotion, since all such associations enhance the economic sphere rather than the social one. However, perhaps the most important international relationship that Myanmar has is with its northern neighbour of China. China's principal policy objectives have historically been to maintain peace and order and it has used its veto power as permanent member of the United Nations Security Council to protect the military government from effective external scrutiny or intervention. Under conditions of democracy, China has been more pro-active in ensuring security in the border region through direct intervention, which is also aimed at securing the oil and gas pipeline from Myanmar's coast at Kyaukphyu to the Chinese provincial capital of Kunming. Chinese investment in Myanmar, particularly in Mandalay and the north of the country, is extensive and takes place on both a formal and an informal basis. Increasing Chinese influence throughout Southeast Asia and the physical manifestations of the One Belt and Road (OBR) policy have led to some fears about the scale of the Chinese presence in Myanmar and some resentment of it.

3. Telecommunications in Myanmar

Under the military government, the use of mobile telecommunications was extremely expensive and difficult to obtain. Very few people were able to take advantage of the opportunities available. This situation has changed in recent years. The democratic government adopted an open-market approach to competition in the sector and, as a result, numerous outlets have appeared for each of the principal competitors. The three main players are the state-owned enterprise (SOE) Myanma Posts and Telecommunications (MPT), Norway's Telenor Myanmar and the Qatari enterprise Ooredoo. There are some smaller domestic players as well. A fourth and final license has been awarded to Myanmar National Tele and Communications Co. Ltd., which is a joint venture between Vietnam's SOE Viettel and local partners Myanmar National Telecom Holding Public and Star High Public Company (Reuters Staff, 2917). Sim cards are available for only a few dollars each so that many customers will buy more than one to take advantage of varying levels of coverage and short-term price promotions. The handsets themselves are likely to be generic Chinese items, which are widely available in a variety of retail outlets (Cunningham, 2016). Mobile telecommunications operators also market their own branded models and more well-known products could also be used (e.g. Huawei). Recent research (Walsh, 2018) has indicated that the availability and use of mobile telephones in Myanmar now exceeds 98% in both urban and rural areas.

Myanmar adopted a semi-open competitive stance that permitted competitive forces to shape growth in the sector overall which was consistent with the national goal of progressively increasing the penetration of mobile telephones in the market. For example, when MPT found itself losing ground on its competitors it was permitted to recapitalize and reorganize with Japanese corporations KDDI and Sumitomo to regain its share (Kirchenbauer, 2015). This cooperation was specifically provided for in the 2013 Telecommunications Law (The Pyidaungsu Hluttaw Law No.31, 2013), in section 11.

This was an effective approach since Cambodia now has the infrastructure and services it needs but it was not efficient because a number of competitors had to withdraw from the market with significant losses, including job losses. This also negatively affected many customers. However, now that penetration appears to be complete, it is likely that operators will now intensify competition on the basis of features, services and marketing tactics and this might still lead to losses.

In addition, in its 2011-15 ICT plan, the Myanmar government acknowledged a number of constraints to growth, including weak and outdated infrastructure, low average revenue per user, strict regulations and low levels of skills and competencies (Nam, Chan & Halili, 2015). In addition, the ADB also identified specific problems with respect to the absence of a separate and independent regulator, inadequate legal framework and implementation guidelines, limited foreign investment, inadequate physical infrastructure and skills gaps and mismatches (*ibid.*:22-3). These difficulties represent constraints on economic growth efficiencies which exist in the following areas:

- ✓ Reduce information costs and hence information asymmetries that are harmful to small-scale operators seeking to deal with larger market-based agencies;
- ✓ Reduced communication costs encourage vertical integration of firms because coordination costs are less significant than market-based mechanisms, particularly with respect high asset-specific products;
- ✓ Enable synergistic production by incorporating inputs from around the world and enabling attendant interaction at very low cost (Yates, 1986; Aker & Mbiti, 2010).
- ✓ There are other ways in which ICT can improve productivity from a practical perspective:
- ✓ Application that enable video conversations at low or zero cost make it much more possible for women to work and still manage their role in a household with children and other dependants (Win & Walsh, 2017);
- ✓ Rapid, widespread and low-cost sharing of online information would help to decrease the digital divide that currently disadvantages poor, rural young people. Access to information has at least the potential to reduce inequality (Wilkinson & Pickett, 2010:264-7);
- ✓ Communication promotes entrepreneurial thinking among many people, we have used the new forms of connectivity as means of establishing new business opportunities (e.g. Mokhtar, 2017).
- ✓ These economic changes have also been accompanied by various social changes, which will be the subject of the next section.

4. Social Changes

In addition to provoking and responding to economic change, telecommunications tools have also led to social change in Myanmar. This is part of a broader set of changes in the country with respect to participation in public discourse and interactions with the popular media. In the latter years of the military government, the degree of control of the media was relaxed to a certain extent to permit private sector enterprises to become active both in print media and also in broadcast media (Aye, 2012). Although this process has mostly continued since democratization, there still remain a number of issues relating to freedom of speech in the country. Reporters without Borders, for example, ranked Myanmar as 137th out of 180 countries for press freedom (Reporters without Borders, 2018a) and noted that some 20 journalists were prosecuted in 2017 under article 66(d) of the Telecommunications Act, which relates to the criminalisation of online defamation (Reporters without Borders, 2018b). Notably, two journalists, Wa Lone and Kyaw Soe Oo, were arrested at the end of 2017 under the Official Secrets Act, which is a remnant of the colonial era, for reporting on the crisis in Rakhine State (Reuters Staff, 2018). This case is a reminder of the power still held by the military despite the apparent transition to democracy in the country. Denials by the military that any outrages against the Rohingya people have taken place are reiterated by the government (Ratcliffe, 2017) and the false assertion that the people affected should be referred to as newly-arrived Bengali migrants has entered official discourse (Myint, 2014).

The right to freedom of expression, in other words, remains contested. An important new voice in this context has been that of trade unionism, since unions were legalized a year after the new labour law of 2011 and has flourished after years of violent persecution (Zajak, 2017). The areas within which trades unions are able to act within Myanmar are of course circumscribed by the law but, nevertheless, represent a new space in which civic groups can express their opinion and organize them. In doing so, they can use mobile telephones and internet applications. Research () has shown that, in both urban and rural areas, online sources are more important when it comes to searching for health related information have become more important than television, radio or newspapers. This is despite the fact that comparatively few websites are published in Myanmar language and even fewer in the languages of the country's numerous ethnic minority groups. A Myanmar language web search service listed some 2,000 Myanmar language using websites in 47 categories (Htun, 2009). The language uses an alphabet for which computer fonts are not always easily available. A more recent listing of the most popular websites in the country showed only three out of 50 as being based in Myanmar, which number was exceeded by transnational sites, Russian sites and sites specialising in pornography (Top Sites in Myanmar, 2018).

Websites for some ethnic groups, for example the Kachin, have the advantage that the language can be expressed through a standard alphabet and font. Nevertheless, access to information that is timely and credible can still be problematic.

4.1. The Impact of Facebook

For many people who have become part of Myanmar's online world, the horizons are set by Facebook. This is because many online packages, for mobile telephone consumers include access to Facebook for free, while access to other internet services requires an additional fee. In part, this was managed through the now withdrawn Free Basics program (Moon, 2018). Since many other friends and family members are also present online via Facebook, users can benefit from network externalities (Katz & Shapiro, 1986) by following suit. Unfortunately, lack of experience with different types of online information has contributed to the problem of fake news on the site and the propagation of hate speech as a result. A prominent example of this is the Buddhist monk Wirathu, who has been preaching fear and loathing of Muslim people for a number of years. His use of the standard mode of discourse of monks (that is, the calm and rhythmic recitation that would appear to a non-speaker of the language to be authentic spiritual advice) has encouraged many thousands of people to support his worldview despite the absence of evidence (Hodal, 2013). Violence perpetrated by his supporters, among others, prompted calls to prosecute him for hate speech and the Myanmar Sangha, the ruling body of Buddhist monks, banned him from preaching for one year (Htun, 2017). Facebook itself suspended the account because it "... consistently shares content promoting hate (Barron, 2018)."

The problem with Facebook, in addition to the fact that it provides a platform for these sentiments, is that the site's automated algorithms promote that content which is most often liked and discussed. It is not clear to people outside the company how often, if at all, human monitors look at the content being thus promoted and judging whether it should be given such prominence. Embroiled in a range of scandalous news stories relating to content on the website, Facebook announced that it would hire thousands of extra monitors to assess content for suitability (Dwyer, 2017). However, it was not clear how many of those monitors would be qualified to work in the Myanmar language, not to mention the languages of ethnic minority people.

An additional problem is the power that a single digital platform has to mould (deliberately or not) the opinions and features of an entire society. This amount of power would be dangerous and possibly destabilising whoever might be wielding it, including state broadcasters if acting without accountability. It is the more dangerous if the platform concerned shows a lack of interest in or understanding of the issues which its followers are discussing. There is also the

issue of the narrowing of perspectives of users who may be enticed into believing that Facebook is the internet and, therefore, lose interest in the many other opportunities for personal development and enrichment that are available.

4.2. Digital Technology, Governance and Democracy

A society which derives its information from decentralised and often unofficial sources behaves differently in some ways from a society which derives its information from centralized, official sources. Myanmar has switched between these two positions on a rapid basis. Information, accurate or not, has flooded in through cracks in society that had previously been dammed by the heavy hand of the state. People are being expected to demonstrate the ability to judge the value of apparently unbiased news items in a way that has proved quite beyond people from societies that have been open for many years and so they might be expected to be able to demonstrate a more mature degree of sophistication in doing so. However, as the Trump election and Brexit referendum event demonstrate, substantial numbers of people are willing to interpret what they observe in a way that agrees with their existing opinions, i.e., confirmation bias (Nickerson, 1998). The threats posed to good governance by these forces are significant and may prove to be overwhelming. One response by authoritarian states such as China is to impose strict limitations on what may be accessed and how it may be accessed. Indeed, there have been attempts made to build a Chinese internet with wholly curated content, in the country which has the world's most intense internet censorship. Other countries would be happy to follow suit, if they could (Feng, 2017).

However, in democracies, no matter how flawed, people become accustomed to access to information sources and reluctant to abandon them. This becomes a structural issue when internet access becomes a routine requirement for school and college work and a means of communicating with family members in support of a more independent form of lifestyle.

The ideal way of dealing with this would be for some form of enlightened use by citizens who could demonstrate the tenets of critical thinking in approaching the news items made available to them. These tenets are suppressed by the standard method of education in the country, which only rarely promotes the benefits of independent thought (e.g. Maber, 2014). Few states have been able to promote critical thinking skills on a large scale in a short period of time, although some successes have been possible (e.g. Chan, 2013). To some extent, it is the process of globalisation – the spread of capitalist consumerism – that brings about some changes in agency among people by challenging them to compare themselves to models and to compete with each other:

“[This occurs as] ... an erosion of the traditional bases for group identities and their replacement with the mass media as a primary source of identity. The end of this process would result in a society that is increasingly homogenised along market lines ... Advertising, with its omnipresent interpretation of social change, encouragement of self-doubt, and use of English helped to ameliorate possible ambivalence towards such change (Hart, 2003:156).”

What previously took place in Korea might now be happening, at least potentially, in Myanmar. New forms of dress and appearance and new modes of discourse might in some cases inspire people to penetrate the cognitive dissonance they suffered in the past when they were told things were happening in one way when the evidence of their senses told them they were actually happening in another way.

5. Conclusion

This paper has considered the role of mobile telecommunications and the internet in provoking social and economic change in Myanmar. Just a few years ago, mobile telephone usage was extremely limited because of the considerable cost of imported handsets and sim cards in a country with a government intent on restricting access to various types of information and interaction. Now this situation has been revolutionised with cheap equipment and access packages meaning that very nearly everyone in the country who wishes to have a mobile telephone and internet access is able to do so. However, while the access has become very convenient, that does not mean that people are able and willing to use the new resources to the utmost value. Limited awareness of the difficulties involved in separating truth from fiction in an online milieu in which people are intent on pushing the fake as being real and vice versa. This has led to a number of social changes that are considered in the paper.

The research reported on here is limited by the inevitable constraints of time and space. Previous research has demonstrated significant differences in results depending on the specific location of a town or village. To some extent, this can be associated with the presence of a different ethnic minority group to the majority Burmans. However, this research was conducted in national language and it was not possible to use different languages to check for different possible answers as a result.

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