

MOBILE PHONES: THE FASTEST GROWING DIGITAL DEVICES IN EMERGING MARKETS

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Abstract

Smartphones have been an essential device of everyone, specifically in India, as every company in the consumer electronics company looks at India as a huge potential market. 2015 has been a good year for Mobile phone industry. It's the year of innovation, an addition of many attractive features and competitive prices with increased performance started off from 2015. This paper focuses on growth of mobile phones in EME;s, Indian mobile handset sectors, the technological shifts that are happening , revenue & investment trends, its contribution to jobs & economic growth and competitive landscape.

Keywords:

Mobile Phone,

Trends,

Emerging **M**arkets (EMEs),

Technology,

Smartphone's

Introduction

Smartphones have become increasingly popular in emerging market economies (EMEs), fuelled by falling prices and surging demand for Internet access. In some EMEs, household Possession of smartphones already surpasses personal computers. Meanwhile, tablets expand slower on account of both low-income levels in some EMEs and competition from smartphones. Overall, technological leapfrogging has boosted Internet usage in EMEs and will benefit segments, such as mobile Internet advertising and digital commerce.

Key points

- Smart phones posted impressive growth in EMEs during the 2010-2015 period, driven by high
- Demand for Internet access, rising incomes and falling prices. In 2015, fourteen out of the key 25 EMEs had a household smart phone possession rate of above 50.0%, up from below 20.0% in 2010. In some markets such as in China, the penetration rate of smart phones (53.2% in 2015) already surpassed that of personal computers (PC) (48.1% in 2015)
- Meanwhile, tablets are also becoming more popular, although the pace of

growth is slower and varies largely among EMEs. In Malaysia, possession of tablets increased from 3.2% of households in 2010 to 23.7% in 2015, while in India it rose only slightly from 0.1% to 1.8% during the same period. This is partly because consumers in many EMEs still have limited incomes and opt for smart phones as they can afford only one device;

- The phenomenal growth of smart phones, and to a certain extent tablets, reveals the technological leapfrogging in EMEs as consumers skip PCs and move directly to smart phones to gain access to the web. This will have significant implications for manufacturers, service providers and segments such as ecommerce and mobile Internet advertising. The growing popularity of wireless Internet devices will also boost consumer expenditure on communications in EMEs, which grew by 4.3% year on year (in constant, fixed US\$ terms) in 2015;
- The rising trend of smart phones and tablets in EMEs is forecast to remain strong in the coming years, with mobile Internet subscriptions growing fast accordingly. The share of mobile

Internet subscriptions to mobile phone subscriptions in all EMEs is projected to average 71.4% by 2030, up from 41.0% in 2015. Manufacturers of low-cost smart phones and tablets, which target the huge group of price sensitive consumers in EME's, will continue to find good opportunities

Smart phone penetration shows phenomenal growth in EMEs

Compared to other digital devices (mobile phones, PC, laptop and tablets), smartphones posted the most robust growth in most emerging markets during the 2010-2015 period. Rising incomes have fueled this, declining prices of smartphones and the soaring demand for mobile Internet:

- In 2010, most EMEs except United Arab Emirates (UAE) and Saudi Arabia had a household smart phone possession rate of below 20.0%. In 2015, however, fourteen out of the 25 key emerging countries have surpassed the 50.0% smart phone penetration rate. These include China, Malaysia, Thailand, Hungary, Russia, Ukraine, Argentina, Brazil, Chile, Colombia, Saudi Arabia, South Africa, the UAE and Turkey;
- In Turkey, the smart phone possession rate among households increased from 18.8% in 2010 to 68.6% in 2015, the fastest increase among all EMEs. The UAE and Saudi Arabia posted the second and third fastest expansion in household smart phone possession during the period;
- With 71.0% of households owing a smart phone in 2015, the UAE had the highest smart phone penetration rate among all EMEs, and the seventh highest rate worldwide. Meanwhile, the smart phone penetration rate in Egypt was the lowest among all EMEs in 2015, at 27.1% of households, followed by India with 34.2% of households;
- Thanks to strong growth, household possession of smart phones now even surpasses that of PCs and laptops in some emerging countries. In China, for example, 53.2% of households possessed a smart phone in 2015 (up from 13.2% in 2010), while the possession rate of PCs and laptops was 48.1% and 39.0% in the same year respectively. The same trend can also be observed in other emerging Asian countries such as India, Indonesia, Vietnam, Thailand and the Philippines where PC penetration rates were

relatively low during the 2010-2015 periods.

While tablet penetration varies largely

While smartphones posted strong growth in all EMEs, tablets also become more popular in emerging markets, although the pace of growth remained far lower than smartphones. Also, the rate of tablet penetration differs remarkably among EMEs:

- The UAE and Malaysia lead all EMEs in terms of both tablet penetration rate and growth.
- Possession of tablets reached 32.3% and 23.7% of households in the UAE and Malaysia in 2015 respectively, robustly up from 5.9% and 2.3% in 2010. Relatively high income levels have enabled many households in both countries to afford tablets as an extra portable device;
- Growth in tablet possession was also significant in China, Poland, Argentina, Colombia and Saudi Arabia during the 2010-2015 period. In Argentina, for example, household possession of tablets increased from 1.1% in 2010 to 17.3% in 2015;
- On the other hand, penetration of tablets remained muted in many emerging markets such as India,

Indonesia, Vietnam, Ukraine and Peru, on account of both relatively low income levels and strong competition from “phablets” (smart phones with large screens). In India, the rate of household possession of tablets stood at merely 1.8% of all households in 2015, up from 0.1% in 2010.

Implications

- The soaring demand for portable devices and mobile Internet in EMEs will continue to boost
- Consumer expenditure on communications in the coming years, providing great opportunities for businesses in the sector. The aggregate consumer expenditure on communications in all EMEs grew by 4.3% in constant, fixed US\$ terms year-on-year in 2015, slightly higher than 3.7% growth in total consumer expenditure. In some emerging markets such as Vietnam and Indonesia, communications were among the fastest growing spending categories during the 2010-2015 period;
- The strong growth of smart phones, and to some extent tablets, in EMEs reflects the fact that

- Consumers in emerging market economies leapfrog their developed country counterparts by moving directly to wireless digital devices rather than purchasing PCs. In South Africa, for example, PC penetration remained rather low at 19.6% of households in 2015, while 60.8% of households already owned a smart phone. Such a leapfrogging trend will have important implications for Internet services providers and segments such as mobile advertising, ecommerce and the app market in EMEs;
- A fast rise in the usage of wireless digital devices has remarkably helped to improve Internet
- Access in EMEs. Due to a lack of fixed line Internet infrastructure, many consumers in EMEs gained access to the web for the first time from their smart phone. In 2015, there were already 1.7 billion Internet users in all EMEs, increasing by 82.3% since 2010. Growing access to the Internet is an indicator of improving living standards in EMEs as it facilitates education, information, services as well as business activities;
- The online retail markets in EMEs are set to benefit significantly from the

growing popularity of the Internet via wireless digital devices. China already has become the largest Internet retailing market leaving the US well behind in 2015. It was also the second largest online ad spend market worldwide in the same year. In India, the value of Internet retailing increased by more than eleven times in real terms between 2010 and 2015.

Prospects

- The growth trend of wireless digital devices is forecast to remain robust in EMEs in the coming years, fueled by rising incomes, rapid urbanization and the youthful, technology savvy population in most emerging countries. In China, possession of smart phones among households is expected to get closer to that of feature mobile phones, reaching 84.7% of households by 2030. In the UAE, 65.4% of households will possess a tablet by 2030;
- Mobile Internet subscriptions will also rise accordingly in EMEs. The share of mobile Internet subscriptions to mobile phone subscriptions in all EMEs is projected to average 71.4% by 2030, up from 41.0% in 2015;

- Nevertheless, a lack of infrastructure and low income, especially in rural areas, coupled with high tariffs remain factors constraining the expansion of digital devices and mobile Internet services in EMEs. In Vietnam and India, 43.0% and 42.3% of the population still earned less than US\$2,500 per year (in constant terms) in 2015 respectively. Manufacturers of budget smart phones and tablets will therefore continue to find good opportunities in EMEs' huge low-income consumer segment.

INDIAN MOBILE HANDSET SECTOR

The competitiveness of Indian mobile handset sector is a comprehensive multi-dimensional concept that holds numerous aspects such as quality, price, technology, efficiency and macroeconomic environment.

In this section, various studies on the Indian mobile handset sector are reviewed, under different heads pertaining to competitiveness, namely, global comparisons, ongoing technology, Revenue and investment trends, Mobile contributing to jobs and economic growth, Employment and public funding, Contribution to public financing and

Outlook and trends for 2016–2020 of Indian Mobile handset sector.

Global Comparisons

According to GSMA's "The Mobile Economy Report" (2017), Two-thirds of the world's population already had a mobile subscription by the end of 2016, a total of 4.8 billion unique subscribers. There is an apparent geographic shift underway, with Asia-Pacific region set to account for two-thirds of the 860 million fresh subscribers expected globally by the end of the decade. By 2020, almost three-quarters of the world's populace – or 5.7 billion people – will subscribe to mobile services. Regional penetration rates are estimated to range from 50% in Sub-Saharan Africa to 87% in Europe. Ten countries will account for 72% of growth in new mobile subscribers worldwide. There is a definite geographic shift underway, with Asia set to account for two-thirds of the incremental subscriber growth over the forecast period. India, already the world's 2nd largest mobile market, will be the key driver of this growth, with 310 million new exclusive subscribers expected in the period to 2020, helped by improving technology, affordability, lower device prices and better network coverage. This is followed by China and fast-growth Asian markets

including Indonesia, Pakistan & Bangladesh.

GSMA (2017) analysis says that there were 3.8 billion mobile phone connections at the end of 2016, accounting for half of the total connections worldwide (excluding M2M). Adoption rates have peaked 65% of the connected base in developed markets. As with subscriber growth, expanding markets & particularly Asia are driving the current phase of mobile phone growth. In emerging markets, mobile phone connections reached 47% of the total base at the end of 2016 & are forecasted to reach 62% by 2020. Overall, Asia-Pacific region will account for half of the 1.9 billion new mobile phone connections predict globally by 2020. India overtook the US to become the 2nd largest mobile phone market in 2016, with 347 million mobile phone connections. India will account for just under one-fifth of new mobile phone connections globally in the four years to 2020; its mobile phone base will double to 686 million over the period. Affordability is becoming less of a barrier to mobile phone adoption as incomes rise and there is continued growth in sub-\$100 devices, led by Chinese manufacturers such as Oppo, Huawei, OnePlus & Xiaomi. While China, Japan and South

Korea have been the traditional mobile phone manufacturing hubs in Asia Pacific region, local manufacturers are also gaining prominence in India, Indonesia & the Philippines.

Ongoing Technology shift

The generational (2G, 3G, 4G & 5G) move will versant broadband frameworks through that world continues picking dependent upon catalyst, driven Toward an improved extent for higher pace systems, every last one of All the more alluringly esteemed majority of the data levies What's more noticeable approachability What's more sensibility for cell phones. In the wind from claiming 2012, versatile broadband associations (3G Also 4G technology) accounted for a quarter of downright associations (excluding M2M). This enhanced on 55% eventually Tom's perusing the limit for 2016, with 4 billion mobile broadband associations.

An extra to existing 2.3 billion portable broadband associations is gage the middle of 2016 Furthermore 2020, with that rate of the aggravator rising with 73%. The quick development with 4G stayed a magic part of 2016, for 4G associations stretching 55% in the quite a while should 1. 7 billion. To sure, those degrees of 4G associations around the world may guess

will immensely twofold the middle of 2016 Also 2020 from 23% to 41%. Accordingly, by 2020, 2G will continue during no run through later on making those improvements in regards to acquaintanceships.

Operators need contributing profoundly in LTE system rollouts, which bring been instrumental moulding for driving those push previously, 4G Choice. Beginning during 2016, 580 LTE frameworks required been presented in 188 countries. The making scene spoke to 3 fourth of the new framework dispatches done 2016 and presently identifies with permanently under those parcel from claiming aggravator LTE systems, up starting with one-quarter over 2012. 4G frameworks went with indeed about 60% of the aggregate people over 2016, up from a significant portion previously, 2015 Furthermore 11% over 2012. In the making scene, A substantial portion of the people will be secured by 4G; this will be depended upon on augment will precise almost 70% by 2020. Conversely, 4G scope levels in the made world, toward 93% of the populace, are recently foreseen that might upgrade toward two rate concentrates to 95% toward 2020.

Revenue and investment trends

Income development in created businesses need to stay plane In the most recent

couple years, Likewise decreasing incomes Previously, Europe was offset Eventually Tom's perusing improvements On other guideline made markets, for example, those US, Japan and South Korea. In 2016 critical European businesses for example, such that Germany, Spain Furthermore Italy come back to development. That prime driver from claiming this turnaround may be duty readjustments, which mainly offer more excellent information remittances toward higher cosset & have been executed done an amount for European business sectors. Close-by Extending premium to information, and the positive impact of the former union, these worth adjustments will drive higher pay advancement previously, 2017. By complexity, those us showcase need to turn into dependably in the span of The majority late few from claiming quite some time yet may be presently entering An additional stale improvement stage, Similarly as robust contention weighs on incomes. From 5% improvement seen in 2014. (YoY), those us showcase produced by 1. 7% to 2015, Furthermore, Eventually Tom's perusing An unimportant 0. 1% done 2016. T-Mobile USA Also Sprint continue acting Concerning illustration contenders in the market, for that past mainly demonstrating compelling Previously, drawing customers starting with AT&T What's more Verizon.

Bringing then afterwards two quite some time from claiming low development, which indicated a Uni for made markets, the making scene bounced back to 2016, for growing incomes 5. 3% year-on-year. Macroeconomic headwinds facilitated, with China Furthermore India those critical drivers for development; increasing enthusiasm for the majority of the data and supporter doorway accelerated advancement rates clinched alongside both countries. Wage improvement secured alongside doing businesses is figure should direct All around those accompanying four a considerable length of time Likewise raised contention to enter business sectors (India What's more Malaysia) Furthermore managerial slices should compact conclusion rates in Brazil weigh concerning the improvement.

Mobile Phone Industry contributing to jobs and economic growth

This esteem included impression changes crosswise over areas. High-salary nations have progressed in computerised economies, skilled work and capital so tend to practice more on esteem creation in zones, for example, content and administrations. Medium pay markets have upper hands in assembling gadgets (work costs specifically). Low-wage nations have on a regular a less talented workforce, so their biological community design

ordinarily depends more on the parts of the esteem chain that are more work dangerous, especially appropriation and retail.

Not withstanding their direct financial commitment, firms in the portable environment buy contributions from their merchants in the production network. For instance, handset producers obtain grants from microchip suppliers, and mobile substance suppliers require administrations from the larger IT segment. Besides, a portion of the benefits and income produced by the environment are spent on different merchandise and administrations, animating monetary action in those divisions. In 2016, this extra financial movement collected a further \$430 billion in esteem include (or 0.6% of GDP). The utilisation of portable innovation additionally drives changes in proficiency and profitability for specialists and firms. The effect of this profitability created around \$1.85 trillion in 2016 (or 2.5% of GDP). By and large, considering the immediate, circuitous and efficiency impacts, in 2016 the portable business made an aggregate commitment of roughly \$3.3 trillion in esteem included terms, proportional to 4.4% of worldwide GDP.

Employment and public funding

In 2016 mobile operators and the ecosystem provided direct employment to

more than 11 million people globally. Financial movement in the biological system additionally produces occupations in different parts. Organisations that give merchandise and administrations as generation contributions for the portable biological system (for instance, microchips) will utilise more people thus of the request brought about by the versatile part. What's more, the wages, open subsidising commitments and benefits paid by the business are spent in different areas, which give other employment. In 2016, around 17 million additional job was in a roundabout way upheld along these lines, bringing the aggregate effect (both immediate and circuitous) of the versatile business to more than 28 million occupations. The portable biological system likewise makes an exceptional commitment to the financing of the general population part using general tax assessment. In many nations, this incorporates esteem included duty, partnership charge, wage imposes and government-managed savings from the commitments of firms and workers. The biological system made an assessment commitment to people in general funds of legislatures of around \$450 billion in 2016.

Contribution to public funding

Besides the public funding contributions through general taxation, mobile operators

made further contributions via two additional channels. In 2016, range barterers created incomes of nearly \$19 billion – half of which was from the sale in India. In a few nations, versatile administrators are likewise subject to particular part expenses, for example, income share charges, social commitment support commitments, SIM and broadcast appointment voucher assessments or yearly range charges.

Outlook and trends for 2016–2020

We anticipate the worldwide financial commitment of the versatile business with keep on expansion On both relative and supreme terms. Previously, worth-included terms, we gauge that those biological communities will produce more than \$4.2 trillion by 2020 (4.9% about GDP) up starting with \$3.3 trillion (4.4% of GDP) in 2016. The vast majority of this expand will be expected will benefit additions. In the created world, the selection from claiming M2M results will drive expanded benefit development. Over creating countries, profit Growth will be determined mostaccioli by those selections for mobile web benefits.

COMPETITIVE LANDSCAPE

- Samsung India Electronics Pvt Ltd maintained its leadership position in

feature phones with a 28% volume share in 2016. The company's share improved from 23% in 2015. With manufacturers sinking production due to falling demand, Samsung was able to see growth in its sales due to enhanced customer service and higher brand value.

- Samsung India Electronics Pvt Ltd also led sales of mobile phones in India with a volume share of almost 25% in 2016. Apple India Pte Ltd saw a 40% jump in sales in 2016 to reach 2.8 million units. The company launched the iPhone 6 and iPhone 6s, which were well received by consumers. With these new launches there was also a drop in the price of the Apple iPhone 5, adding to the demand.
- Sales of mobile phones in India are equally dominated by national and international brands. Among the international players, Samsung India Electronics Pvt Ltd, Lenovo India Pvt Ltd and Xiaomi Technology India Pvt Ltd led the market. Domestic players such as "Micromax Informatics Ltd", Intex Technologies (India) Ltd and Lava International Ltd saw good growth in their sales.
- Reliance Industries and Idea Cellular have become the second and third

players, respectively, to launch 4G services in India after Bharti Airtel Limited. With this the prices of 4G services are expected to come down, increasing demand for 4G mobile phones in the country.

PROSPECTS

- Declining unit prices for larger-screen mobiles are expected to drive demand for mobile phones in India over the forecast period. With more larger-screen mobile phones available at economical prices and better specification, consumers will slowly start replacing their tablets with mobile phones, pouring demand for mobile phones in the country
- Volume sales of mobile phones in India are expected to post a CAGR of 18% over the forecast period to reach 231.5 million units by 2021.
- On the other hand, demand for feature phones is expected to decline, with a negative CAGR of 14% over the forecast period, taking sales to 45.9 million units by 2021. With mobile phone prices falling, consumers are replacing their feature phones with mobile phones. Having said that, there are many uneducated people in India who do not know how to use mobile phones and will continue to use

feature phones and this will drive demand for feature phones over the forecast period.

- The penetration rate for feature phones is expected to decrease from 117% in 2016 to 90% in 2017. The limited demand for feature phones is expected to be driven by people in rural India and also people who are economically disadvantaged.
- In contrast to feature phones, the penetration rate for mobile phones is expected to increase from 85% in 2016 to 107% in 2017, which will be driven by decreasing unit prices for mobile phones.
- The replacement cycle for mobile phones is expected to remain at 22 months during the forecast period. People spend a large sum of money on a mobile phone and expect to use the product until damaged or new technology is available at an affordable price.
- Rural India's share of retail volume sales of mobile phones is expected to increase from 40% in 2016 to 46% in 2021. Increasing availability of mobile phones in rural India is likely to drive demand for mobile phones in these areas.

- Mobile phones are having a negative impact on sales of tablets. With more larger-screen mobile phones introduced onto the market and at cheaper prices, demand for tablets is expected to decline over the forecast period.
- Android will continue to dominate mobile phone volume sales in terms of operating system during the forecast period.

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