

Connect with Consumers

Value Added Services: The Next Wave



Executive Summary

Traditionally, speed has been considered as limiting factor in growth of value added services. The ongoing roll-out of 3G and BWA services could potentially address this gap.

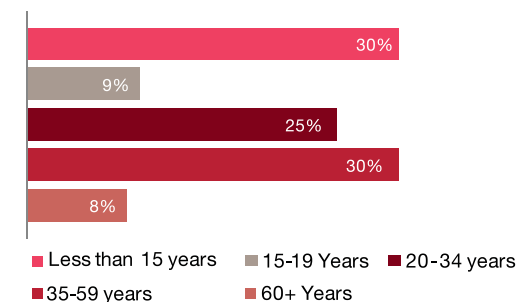
India is a young nation with over 64% of its citizens below the age of 34 years and with literacy rate of around 80% amongst the age group of 15-24 years. The nation's growth and employment opportunities have made the younger generation mobile with the rising income. Though current VAS adoption is limited to select set of services, this combination of age, income and people's mobility promises a great future.

We, in this report, through a primary market survey, attempt to highlight the issues that are holding back the growth of Mobile VAS in India and map future consumer preferences. Our market research covers consumers across SEC A, SEC B and SEC C.

This report also assesses the current state of VAS ecosystem and how it will evolve. The report evaluates the challenges faced by different stakeholders in VAS ecosystem and how each of them should react to be able to succeed in this new environment.

VAS adoption in India will spur due to positive demography, growing middle class and increasing spending power of people at the bottom of the pyramid.

Population Pyramid - India 2010



Source: US Census Bureau

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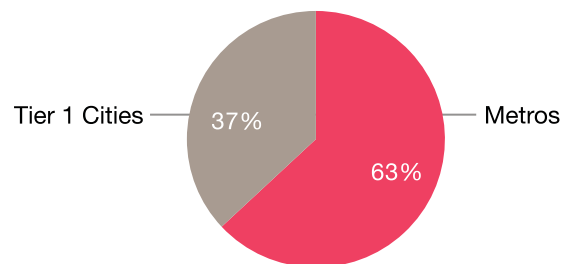




Primary Research Methodology

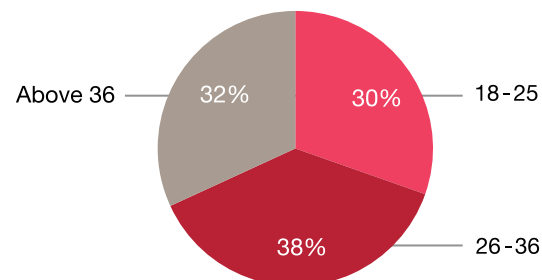
PwC undertook a detailed and wide scale market research with the objective of understanding the behavior of Indian mobile subscribers towards VAS and off take of services in future. Our research focuses on urban India, it covers 1050 respondents across 10 cities of Delhi, Mumbai, Hyderabad, Bangalore, Chennai, Bhubaneswar, Kochi, Ahmedabad, Pune and Kolkata.

Respondents By Location



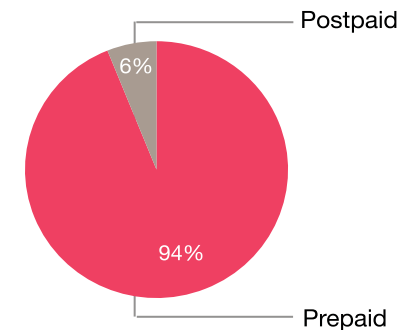
The study and the subsequent analysis of primary and secondary information also brings out an understanding of the services of the future, and the price people are willing to pay. Another key output of the analysis, apart from segmentation of the services, has been segmentation of the users according to their behavior, tastes and preferences.

Respondents by Age

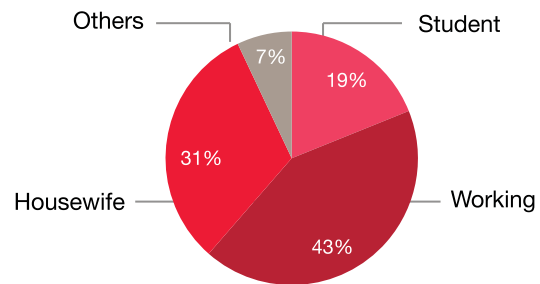


The respondents were spread across different Socio Economic Classes (SEC), age groups, education backgrounds and working status. Thus giving deep insights into various sections of the urban mobile users. This report details the results of a sub-set of the larger study. The charts below provide an overview of the sample set analysed for the purpose of this report.

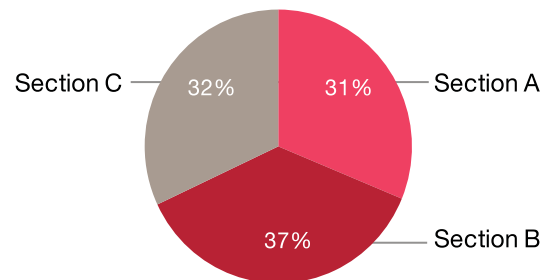
Respondents by Type of Connection



Respondents By Working Status



Respondents by SEC



The survey focuses on 30 VAS services across Entertainment, Information, Communication and m-Commerce

Summary of Key Messages

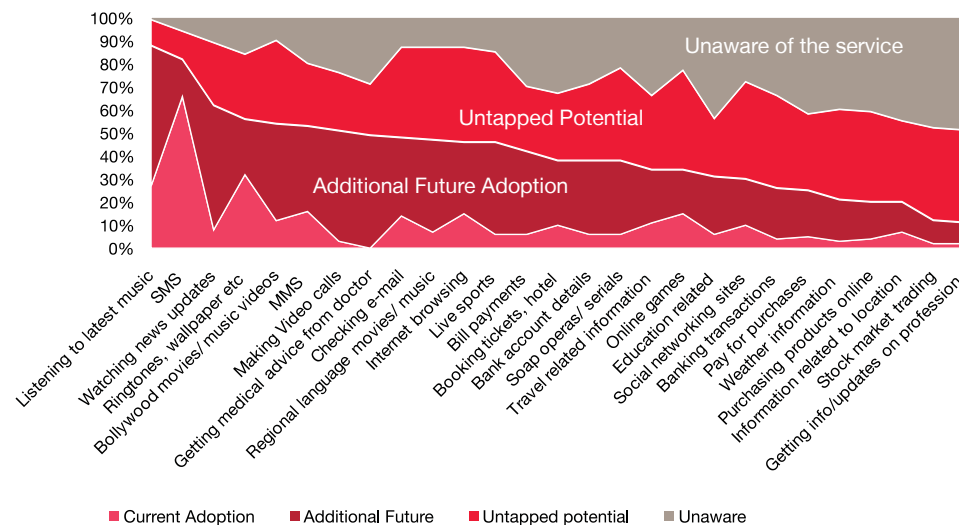
- Multilingual content, application support around languages, killer applications and readiness of handsets could drive over INR 55,000 crores of VAS revenue by 2015.
- With the launch of 3G services and expected launch of high bandwidth BWA services, VAS currently has reached its inflexion point. The constituents of VAS ecosystem such as mobile operators, content creator, handset manufacturer will need to show greater collaboration to achieve full potential of VAS.
- The future growth in VAS is expected to be broad based in contrast to the past where fewer services dominated the VAS scene.
 - There is strong demand and increasing propensity to pay for Regional and multi-lingual content.
 - Medical Advice VAS has the capability to allow the deprived sections of society to access quality medical advice at an affordable price.
 - Surprisingly, Indian users are keen to explore video calling
 - Transactional VAS(m-commerce) would need special attention to address the issues of ease of use and data privacy.
 - Demand for news updates through VAS is high and operator and VAS value chain players would need to address the challenges in delivering news updates in multimedia at a reasonable cost.

Demand: Serviced vs. Future Adoption vs. Untapped Potential

The bird's eye view of 30 services covered by the study shows that future adoption of communication and entertainment VAS is higher than that of information and transaction VAS



Introduction



Source: PwC Analysis

Future adoption relates closely to the current awareness levels of consumers. Trends depict a growing demand for entertainment services like listening to music and watching movies over mobile. These are followed by high potential information based VAS such as news updates and medical services over mobile.

Regional entertainment

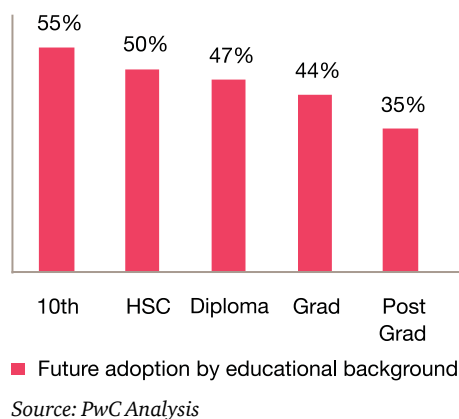
Regional entertainment growth story on other mediums seems to be replicated in VAS with nearly every second person willing to use it in future.

Regional diversity leads to strong demand for regional entertainment

The linguistic diversity of India is vast. 81% of the movies released in India are non-Hindi. The trend of increased adoption of regional entertainment is likely to continue as the effects of economic growth percolate down to the interiors of country.

India has seen an 18% growth in a year on regional TV channels during 2008-2009 and it currently attracts 35% of total viewership¹.

Future adoption of regional entertainment VAS by educational background



Regional entertainment is more popular among people who have received less formal education

Our study revealed that 87% of the people are aware of VAS based on regional entertainment, in the form of regional music videos and movies clips and 47% are ready to adopt these services in future. The consumers are also willing to spend Rs 50 per month on regional entertainment.

This could potentially translate to revenue in excess of Rs 2,500 Crores by 2015 for the VAS value chain. However, the challenge for the operators of the value chain would be to cannibalize the user from other channels such as cassettes, walkman, mp3 players, etc and offer reliable content delivery at a reasonable cost.

Healthcare Services - demand across sections of society

Strong demand for healthcare VAS is expressed by people

For every 1700 Indians there is barely 1 doctor and 80% of these doctors are situated in urban areas of India². Thus access to doctor's advice is severely restricted in India. This is specially true for semi-urban and rural regions of country.

Additionally, healthcare is beginning to receive increased attention from Indian households. It is expected that the share of wallet of healthcare for an average Indian household would grow at an CAGR of nearly 9 % (from 2005 to 2025³. Surprisingly, VAS of medical advice from doctor has good awareness level of 71% and even more interesting is that survey shows that 49% of the users willing to adopt the service in future at a price of Rs 73 per month.

However, only 14% of the people rated the service amongst the top 3 desired services.

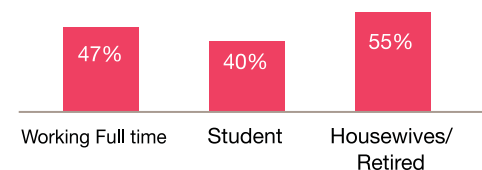
The service has the potential to contribute nearly Rs. 2000 Crores as revenue by 2015, provided the operators and the healthcare providers are able to address the customer segment and meet the challenges of usability of service.

Medical Advice on Phone - Comparison of Awareness and Future Adoption



Source: PwC Analysis

Medical Advice on Phone – future adoption by occupation



Source: PwC Analysis

Interest in the service mainly comes from housewives and retired people, which can be attributed to issues around mobility of the segment.

Informational VAS – news updates on the move

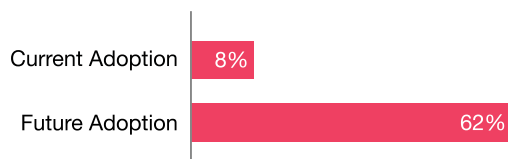
Users are willing to spend on news updates contrary to the perception of it being a freely available service

Indians are thirsty for news, the largest English language newspaper (by circulation) is published in India and yet, it ranks 11th in India by circulation⁴. India also has 250+ news channels which represent nearly 51% of total licensed channels¹.

With current awareness levels of 89% and future adoption levels of 62% news updates is among the top VAS services of the future. Even though it is perceived that people would not pay for news, our survey reveals users are willing to spend an average of Rs 51 per month for the service. The challenge for VAS value chain is to ensure that news service is tailored to specific needs of target segment which mainly consists of people working full time.

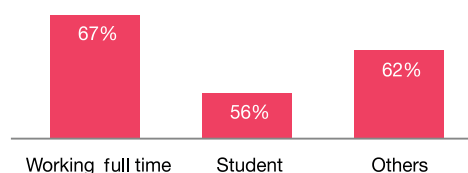
The news updates VAS has the potential to bring in nearly Rs 3,300 Crores of revenue by 2015.

News updates - present and future adoption



Source: PwC Analysis

News updates – future adoption by occupation



Source: PwC Analysis

People working full time are expected to be the biggest consumers of news updates due to paucity of time and need for information on the move

Transactional VAS - route to financial inclusion

Potential for transactional VAS to serve different needs of the affluent and the deprived classes of society

It is estimated that 41% of the urban population in India do not have access to bank accounts⁵. This figure is 60% for rural India⁵.

Thus, there is need for methods to reach people who are not serviced by conventional methods.

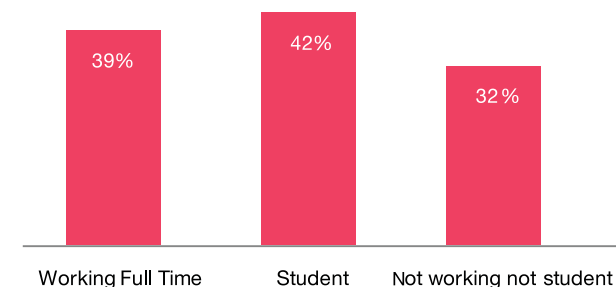
The mobile based transactional VAS is an opportunity to bring the deprived people in the fold and increase financial inclusion.

The survey highlights that the people who already have access to bank accounts are also keen on using transactional VAS to save time and for convenience. This is evident from the future adoption levels of transactional VAS

Average awareness of transaction services is 69% with future adoption levels of 39%. Also, people are willing to spend an average of Rs. 54 for these services.

Transactional VAS services have potential to contribute nearly Rs 1,600 Crores as revenue by 2015 provided operators and banks successfully respond to challenges of concerns of users around data privacy, usability and language independence of the applications

Future adoption of booking tickets (a type of transactional VAS) on mobile by occupation



Source: PwC Analysis

Future adoption levels for transaction services like booking tickets on mobile is highest for students. Hence, the future holds looks promising for transactional VAS services

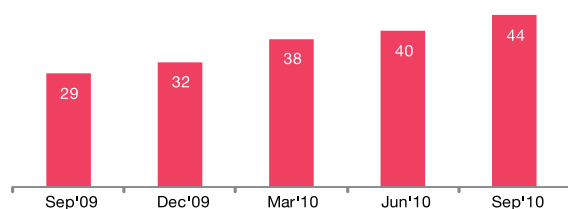
SMS – Continues to rule but hold weakens

SMS as a % of mobile VAS revenue is expected to decline to around 25% by 2015 from current levels of around 60%

SMS has been the mainstay of VAS in India. This is evident from the highest awareness level (94%) and current adoption levels (66%).

In India, only 19% of the population has knowledge of English⁶. The primary language for SMS had been English thus limiting the size of the market. With the introduction of India specific editions of phones, the users can now SMS in Hindi and other major regional languages.

Outgoing SMS per subscriber per month (Number)



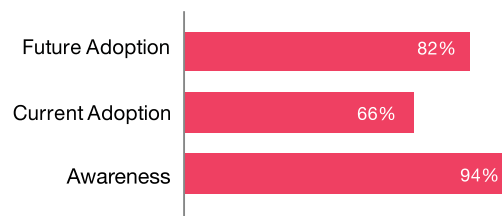
Source: TRAI

While the Minutes of Usage are falling, the number of SMS per subscriber has increased 51% just a year

The simplicity and effectiveness of SMS as medium of communication will allow it to dominate VAS in terms of usage.

4 out of 5 people are willing to use SMS in future and spend monthly average of Rs 42. In terms of revenues, SMS can contribute nearly Rs. 14,000 Crores of revenue by 2015 for the mobile VAS value chain players. The operators, however, would need to focus on the multilingual SMSs and handset manufacturers would need to design keyboards (or applications) which are designed for ease of typing in Indian languages.

SMS - Comparison of Awareness and Adoption (Current and Future)



Source: PwC Analysis

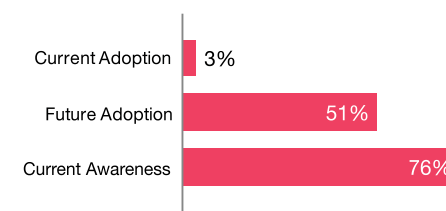
Video Calling – Language ceases to be a barrier

Surprisingly, Video calling has appeal across age groups and students are likely to be heavy users

Surprising interest in Video calling

Connecting people with voice plus video interests many and has a 76% Awareness. The low adoption levels are attributed to limited availability of the service. Also, there are concern amongst people on the ease of use of the service.

Video Calling - Comparison of Awareness and Adoption (Current and Future)



Source: PwC Analysis

And many are willing to use it

The survey shows that nearly 51% of the people are ready to adopt the service in future.

This may be due to the language independent nature of the service. With the willingness to spend Rs 57 per month on video calling, the service has potential of generating revenue of nearly Rs 2,400 Crores for the mobile value chain players by 2015.

Video Calling – future adoption by age groups



Source: PwC Analysis

The future adoption of video calling is highest for 18-25 yrs age group which constitutes students and young professionals

The success of Video Calling would be dependent upon the ability of operators to have easy to use service and affordable pricing. Video calling must not be projected as a substitute for face-to-face conversations, rather it should be positioned as a medium to experience face-to-face kind of conversations.

However, operators need to tread cautiously since this service is a bandwidth guzzler.

VAS Ecosystem: From Compete to Collaborate

Collaboration with handset manufactures, applications stores and application creators would allow the Mobile Operators to retain their importance in the VAS ecosystem

Mobile Operator	Content Creators
The Mobile operator has been the owner of the end consumer in the VAS ecosystem. The content creator had to route everything through Operator, thus the bargaining power of Mobile Operators was high. This was reflected in the operators' share of VAS revenues.	Lack of branded content lowers the importance of the Content Creators in the ecosystem. The players are fragmented and due to their small size have limited ability to invest in research and development activities
VAS at inflection point in India	Compete to Collaborate
<p>The VAS industry is at inflection point today due to changes in the environment such as</p> <ul style="list-style-type: none"> • With introduction of 3G and 4G, networks can support high rate of data transfer, thus making possible many new VAS applications • Handset manufacturers have entered the VAS ecosystem with powerful operating systems and associated Application Stores • The Mobile Operators are reaching saturation levels of teledensity in urban areas and now need to look at non-voice revenues to increase revenues. 	<p>The importance of handset manufacturers has increased and they can enable content and application creators to directly reach consumer through application stores. However, for basic VAS, mobile operator still remains the only route.</p> <p>Thus, to increase the overall size of the industry, it is inevitable that all stakeholders will have to collaborate to reach out to consumer with most relevant content.</p>

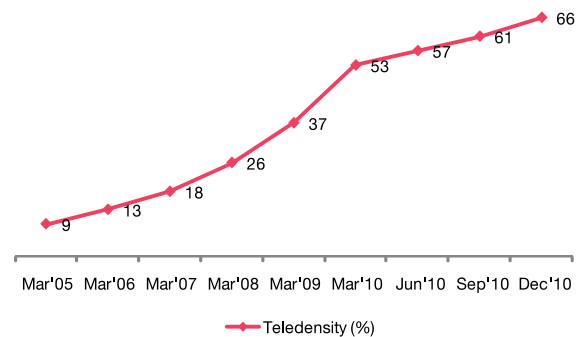


VAS in India - Current Context

Addition of low value subscriber

Incremental growth in mobile service revenues does not reflect growth in subscriber base

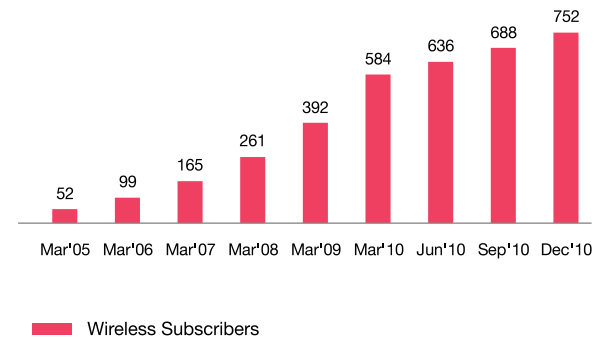
Overall Teledensity (%)



Source: TRAI

Overall tele-density touches 66%. Margin challenge for operator will continue as teledensity will increase

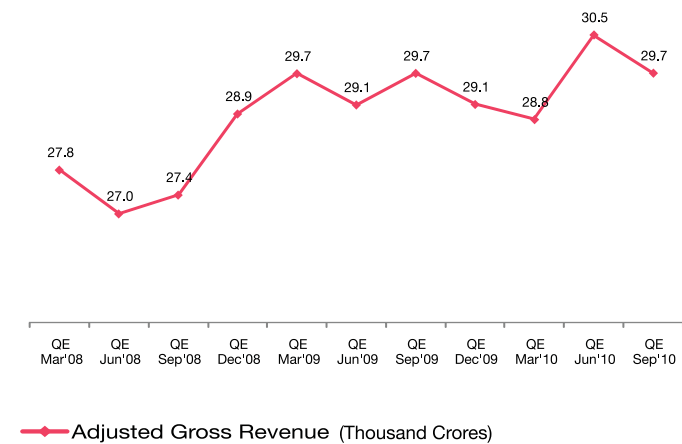
Subscriber in Millions



Source: TRAI

Mobile subscriber base has surpassed 752 million subscribers by Dec'10, growing at CAGR of 47% from March 2008 to December 2010

Adjusted Gross Revenue (Thousand Crores)



QE: Quater Ending
Source: TRAI

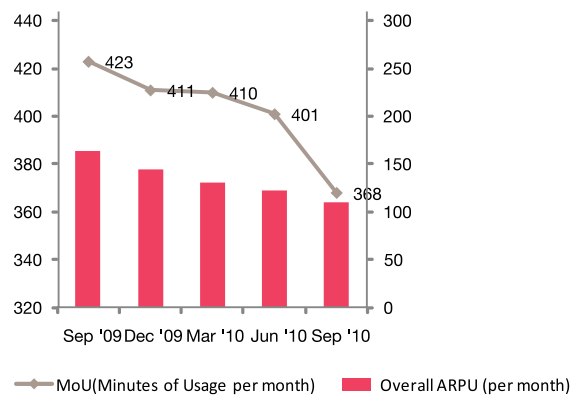
In contrast to high growth in subscribers, the telecom industry has grown in revenue at CAGR of 17% (as of Dec'10) over the last 2 years

VAS: Key to increase ARPU in a saturated market

The teledensity in urban India is near the saturation levels. By increasing VAS adoption of the subscribers, operators can move them up the value chain and increase the ARPU

As the customer acquisitions from rural India is increasing, the minutes of usage per subscribers (MoU) and ARPU are falling (Q-o-Q) due to lower paying capacity and usage patterns.

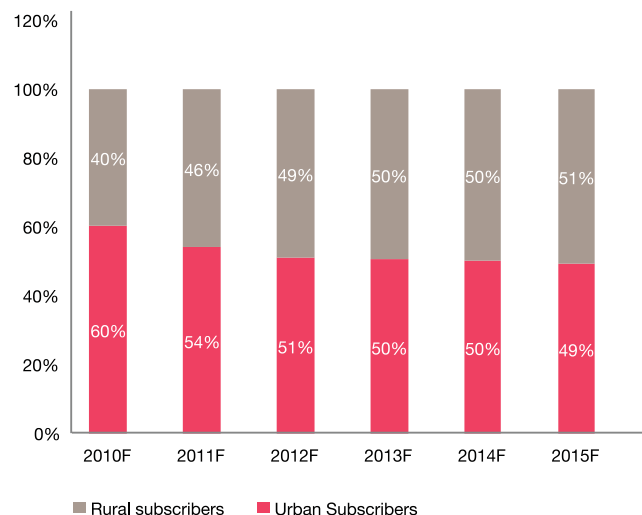
MoU and ARPU Trends



The wireless teledensity in urban India at the end of December 2010 was 140%. This points towards limited potential to add new Urban subscriber connections.

The mobile tariffs in India are one of the lowest in the world and due to hyper-competition in telecom it is not expected to rise in near future.

Mobile subscriber Composition



Source: PwC Mobile Broadband Outlook 2015

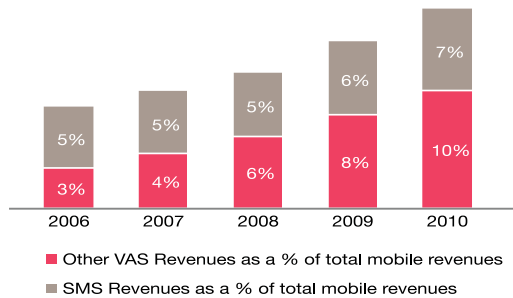
VAS remains only effective tool to increase the ARPU/share of wallet of subscribers.

In a saturated urban market with limited volume growth potential, telcos need to focus on value growth.

Also differentiated VAS are effective tool in containing the churn of subscribers more so in context of MNP.

Right time for VAS – An idea whose time has come

Roll out of 3G and BWA networks along with increasing penetration of advanced devices, VAS is an idea whose time has come



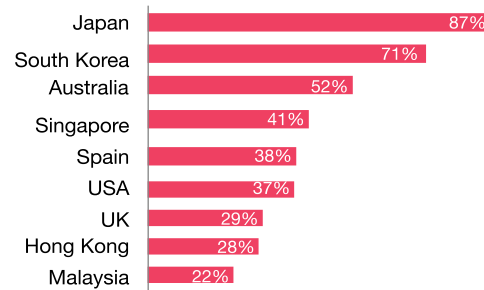
Source: TRAI

Availability of device : With increasing penetration of smartphones, advanced feature phones, iPad and tablets, consumption of VAS will evolve from traditional VAS (SMS etc.,) to advanced VAS. The price point of these devices have increased the penetration

Device readiness: Handsets have also matured in terms of giving a comparable experience as a full screen device

Diverse applications: Alongwith growing number of app stores and available apps, the quality of apps are also improving

3G Penetration (Q2 2009)



Source: Morgan Stanley - The Mobile Internet Report

Smart pipe: Another major roadblock has been inability to deliver high bandwidth consuming VAS.

India is right timed in adoption of 3G/4G technology. 3G/4G is the platform on which, due to support for higher data rates, advanced VAS can be reliably delivered .

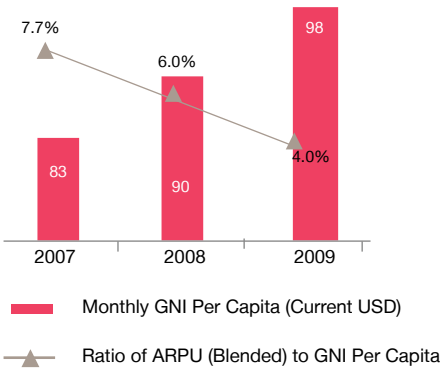
With operators rolling out their 3G as well as BWA networks, the constraint would be removed and operators can offer high quality VAS to their subscribers





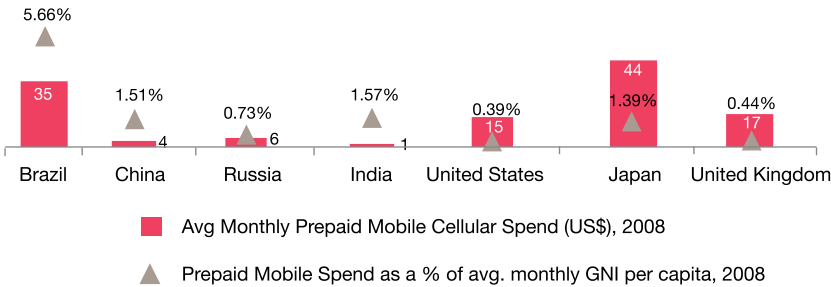
VAS will help in increasing Share of Wallet

The future spend on mobile services is expected to rise in India on account of increasing incomes



Source: TRAI and World Bank

The GNI per capita for India has been witnessing a healthy growth. However, the ratio of ARPU (Blended) to average monthly GNI per capita is falling, indicating that paying capacity has increased but spending on mobile services has not increased proportionately, perhaps due to supply side constraints, which are likely to ease.



Source: ITU Data

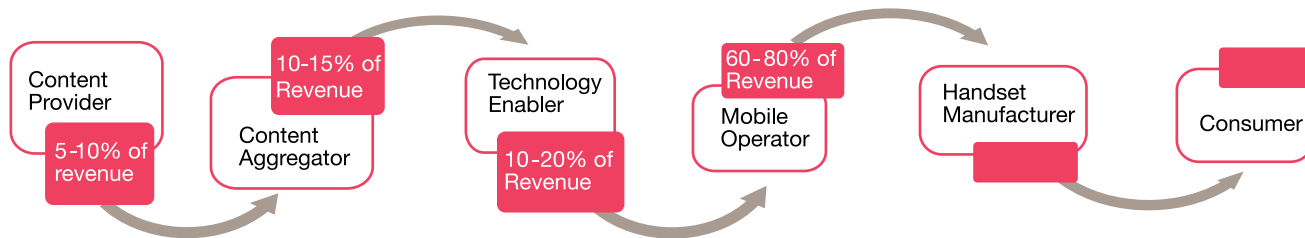
Based on an analysis of prepaid spend (the dominant payment method), the average monthly spend in India is low when compared with other developing and developed nations . Therefore, there is further scope for mobile service revenues to grow as GNI per capita grows. VAS is the key to increased share of customer wallet since voice is a commodity.



Current VAS Value chain in Indian context

Looking at present VAS value chain

The value chain player who manages the customer, appears to be the winner with lion's share of 60-80% of VAS revenues.



Source: PwC Mobile Broadband Outlook 2015

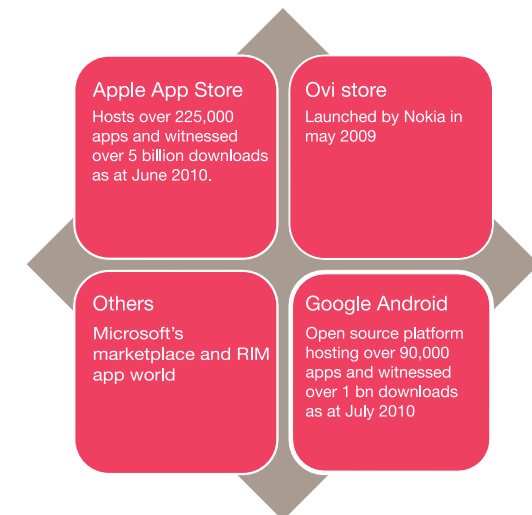
As compared to the global counterparts, Indian mobile operators are able to negotiate better terms with other players in the chain. Globally operators share nearly 25-30% of the revenue and possess lesser control over VAS players⁷.

Why operators dominate in India

- Complete control over the 'data pipe' being the major customer touch-point.
- Lack of branded content providers leading to smaller players entering the market with little negotiation power.
- No clear emergence of a 'Killer content' leading to absence of demand side pull creating space for mobile content providers

Emergence of Handset manufacturer's role in application based VAS market

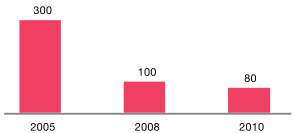
Handset linked 'App Store' serving as content aggregator and technology enabler

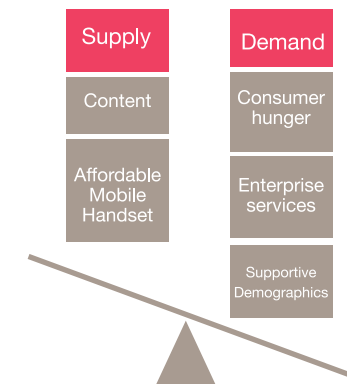


Need for development of VAS Supply Side

To fulfil the growing VAS demand, the current supply of VAS services, products and supporting infrastructure lack desired capacity

VAS Supply Drivers

Content			Mobile Handsets
Original content developers	Content as extension service	Content Aggregators	3G enabled handsets OEM
<p>Mostly small ventures run by first generation entrepreneurs.</p> <p>Low negotiating power and share 10-15 % of revenue</p> <p>Do not have the financial muscle to carry out extensive R&D needed for development of 'killer apps'</p>	<p>Mostly market leaders in their respective domains and provide content as a non core business</p> <p>Able to negotiate on content sharing agreements and get around 40% share</p> <p>Financially strong but offers limited products</p>	<p>Aggregates content from various sources and provide one stop shop for customers</p> <p>Able to market content in a user friendly way to the needy customers</p> <p>Despite getting low share(10%-15%), need to focus on their technology platform .</p>	<p>Over the years, 3G enabled handsets prices have fallen 30% (CAGR). Yet there is need for further drop to meet the untapped demand.</p> <p>Mobile handset prices (USD)</p>  <p>Source: PwC Analysis</p>



Non emergence of killer apps and unavailability of language specific products and content has left behind a huge unmet demand that needs to be serviced

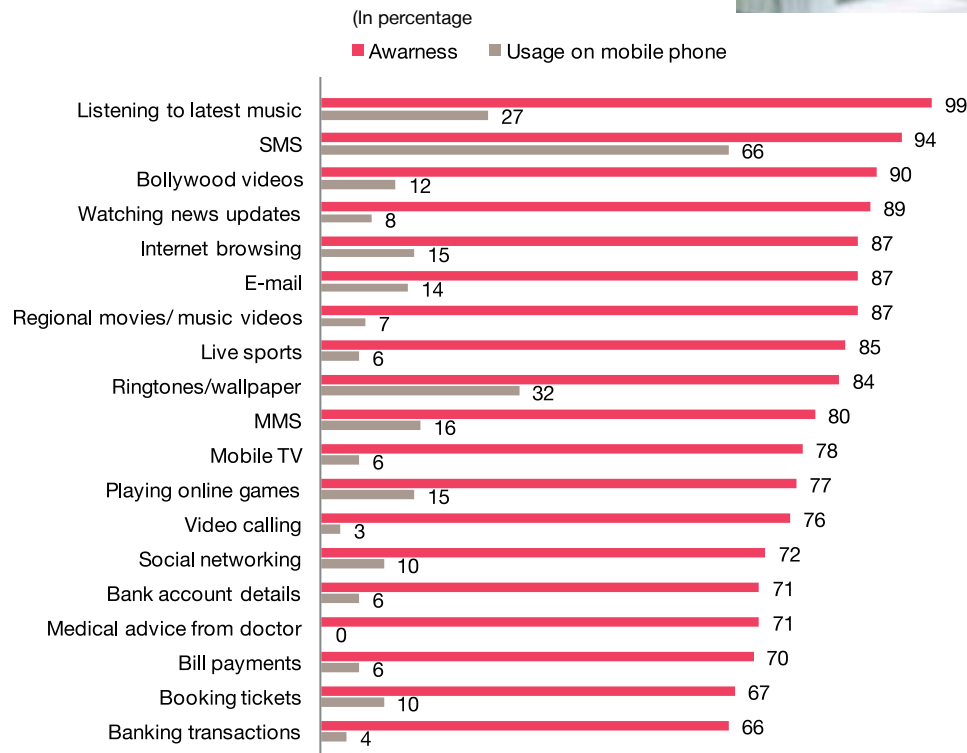


Solving the VAS puzzle

Understanding consumer behaviour and preferences

High awareness but low usage of VAS

On an average, a person is aware of 22 VAS services. However, only 3.4 services on an average are used on mobile



Awareness

- The awareness of most of the services that can be provided by mobile VAS is above 50%
- Entertainment based services like music, bollywood videos have high awareness levels of more than 90%
- Transaction services like bill payments, ticket booking, banking transactions, online purchase, stock market trading have lower awareness levels in the range of 60-70%

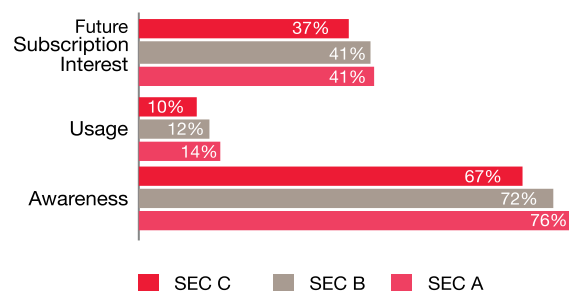
Usage

- The widespread usage of VAS service on mobile phones is limited to select few services only. Apart from SMS only ringtones/wallpapers and listening to music have been able to penetrate the user base
- Advanced services which require a user to be aware of banking fundamentals are less popular. Services like purchasing products, banking, stock market trading using mobile services have an usage rate of less than 5%

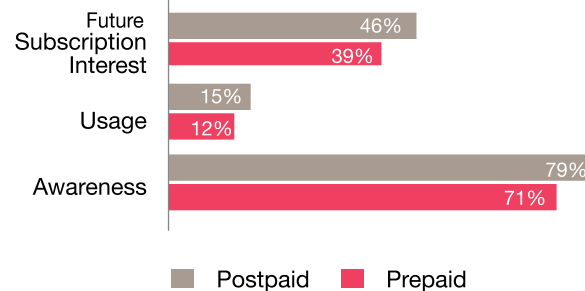
Usage and awareness across categories

Interestingly, even SEC C uses nearly as much VAS as SEC A

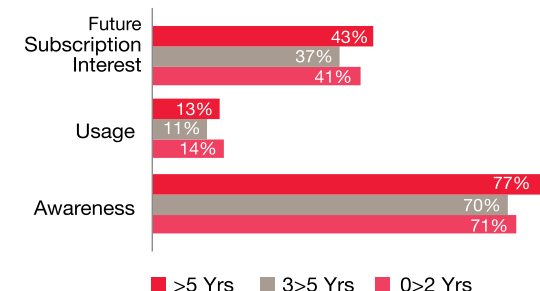
Services: Awareness and usage by SEC



Awareness and usage by type of connection



Awareness and usage by number of years of usage



Current	<ul style="list-style-type: none"> Awareness and Usage is comparable amongst SEC A ,SEC B and SEC C profiles Despite relatively larger difference in awareness between SEC B and SEC C, difference in usage is minimal 	<ul style="list-style-type: none"> Postpaid users prefer application driven content, whereas prepaid users will prefer delivery based content. Limited availability of application based content means there is uniform current adoption for both prepaid and postpaid. 	<ul style="list-style-type: none"> Awareness of VAS services is high across users and does not show large variation on the years of usage However, respondents who have been using mobile for less than 2 years have a highest consumption of VAS services.
Future	<ul style="list-style-type: none"> The future usage between SEC A & B will be consistent. 	<ul style="list-style-type: none"> With increased availability of application based content, the future adoption of VAS amongst postpaid users is expected to be higher than in prepaid users 	<ul style="list-style-type: none"> The future adoption rate for users who have been using mobile for 3-5 years will be lesser compared to the users in other segments

Source: PwC Analysis

Potential of VAS Services

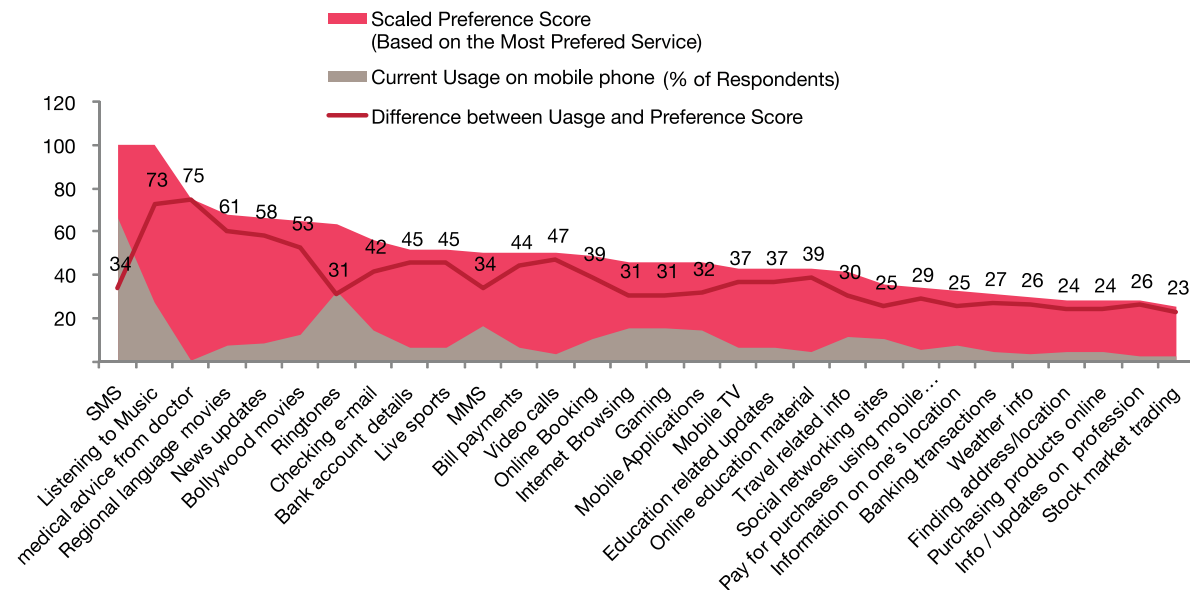
Although entertainment VAS will continue to be most popular VAS even in future, medical advice on mobile also offers a large untapped opportunity

High Potential:

- Entertainment services such as listening to music, regional language content and bollywood movies will be adopted by masses. The services can potentially grow to 60% adoption levels. The future adoption of Live Sports is in tandem with increasing viewership for all sports such as cricket, soccer, formula one and tennis
- Even though SMS will continue to be one of the most adopted VAS, the incremental adoption would be moderate due to current high adoption levels

Needs Attention:

- Services such as Mobile TV, Banking Transactions, weather, location based services need segmented approach to penetrate the Indian consumer segment



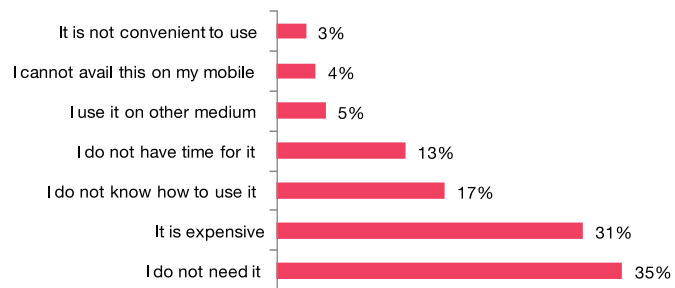
Source: PwC Analysis

Factors that can influence the adoption of VAS

*Access to required information and ease of use are two dominating motivator for adoption of VAS Services.
Lack of perceived need and cost are two major barriers for adoption*

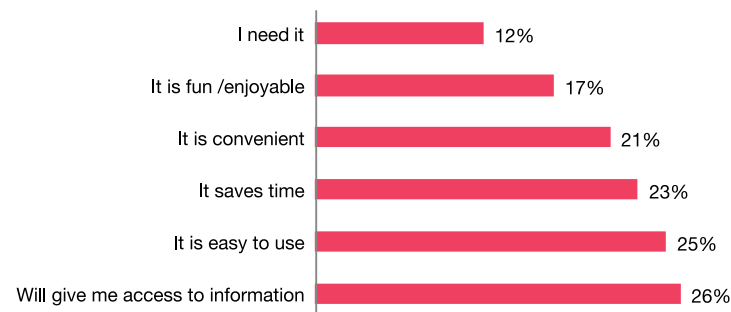
- Ease of use of VAS as well as providing multilingual content of choice is the key to increasing adoption particularly among SEC B and SEC C
- Value chain players should focus on design elements to address ease of use and multilingual content
- Promotion is the key to convert people who show willingness to buy

Reasons for not adopting a VAS (% of respondents)*



Source: PwC Analysis

Reasons for adopting a VAS (% of respondents)*



*People responded to multiple reasons for opting/not opting a given service.

Source: PwC Analysis

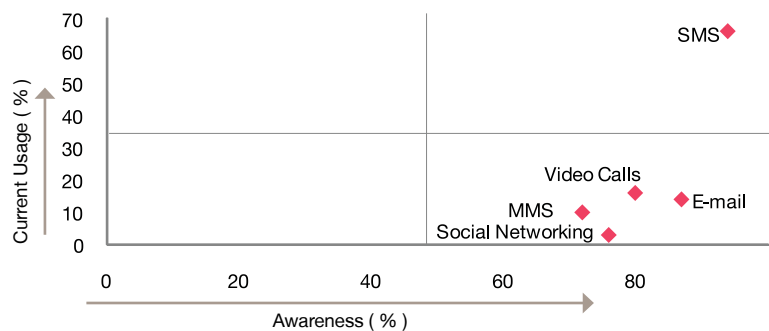


Solving the VAS puzzle

Communication VAS

Communication – Current Scenario

Video calling which is a recent introduction has higher awareness levels in comparison to social networking



Source: PwC Analysis

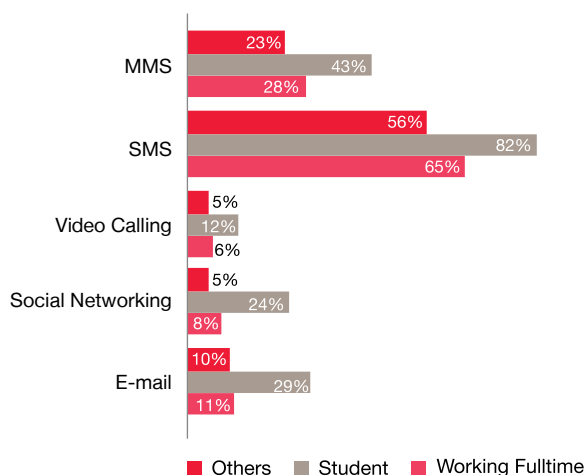
Communication

Services: SMS, checking mails on gmail or always on push mail interface, accessing mobile search engines, instant messaging on blackberry, video calling, facebook etc.,

Communication services	Current Adoption	Future Adoption	Willingness to pay (Rs. per month)	% Respondents for which it is in Top 3 VAS services
SMS	66%	82%	42	37%
Making Video calls	3%	51%	57	18%
Social networking sites	10%	30%	44	4%
MMS	16%	53%	60	11%
Checking e-mail	14%	48%	53	12%

Source: PwC Analysis

Overall adoption level across profile

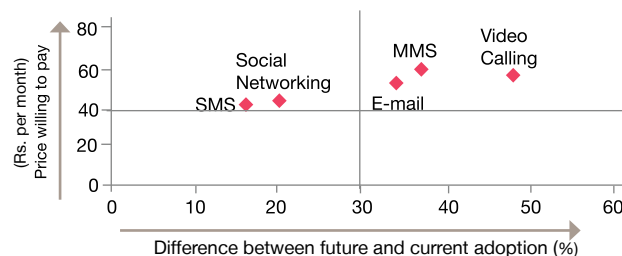


Source: PwC Analysis

- Current Usage/Adoption : % of the users that use the particular service
- Future Usage : % of users that express interest in subscribing to the service in future
- Students and 18-25 year old currently comprise the biggest consumers segment for communication services. They constitute 50% of the users of communication VAS when they accounted for 20% of the sample set for survey.
- SEC B respondents are the biggest consumers of social networking on mobile, indicating a preference for using mobiles for such services over computers. SEC B has an adoption rate of 11% in comparison to 9% for SEC A.
- Video calling is a high potential communication service which currently has lowest average adoption rate of 7%

Communication – Future Scenario

Services which are language independent like Video calling, MMS to drive communication VAS ahead



Source: PwC Analysis

- Video Calls , MMS and Email on phones would be next wave in the communication VAS services.
- SMS, even with high future adoption levels (82%) would be behind Video Calling and Email in terms of incremental growth due to limited scope for further penetration. The opportunity in SMS lies in promoting more frequent use of the service

- Students are expected to be the biggest consumers of social networking with 58% respondents inclined to subscribe to the service in future as compared to only 26% belonging to working class
- Future adoption for social networking is higher for SEC A category respondents (36%) as compared to SEC B (30%) and Section C (26%)
- Interestingly, future adoption for making video calls is higher for SEC C (54%) than SEC A (48%) and SEC B (49%)

Combined effect of higher revenue per month from Video Calling & email and the potential opportunity clearly indicate the need for operators to focus on these service.

The total revenue from communication services is expected to reach Rs. 20,021 crore by 2015 for India. SMS will contribute 72% of this revenue.



Solving the VAS puzzle

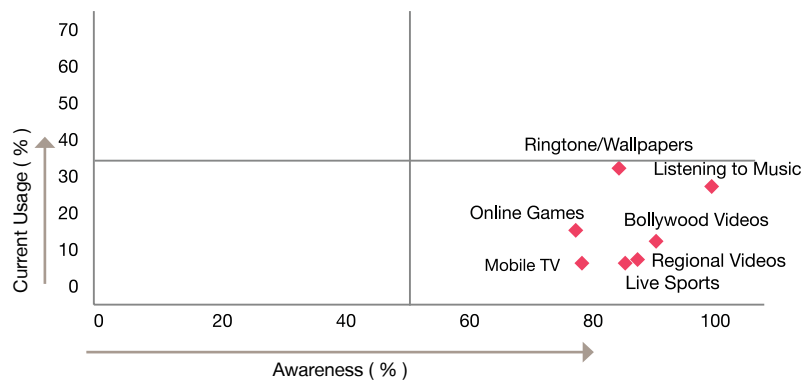
Entertainment VAS

Entertainment – Current Scenario

All entertainment services lie in the emerging category indicating their future potential

Entertainment

Services: CRBT, Wallpapers, downloading or playing online games, video streaming, conferencing, mobile TV

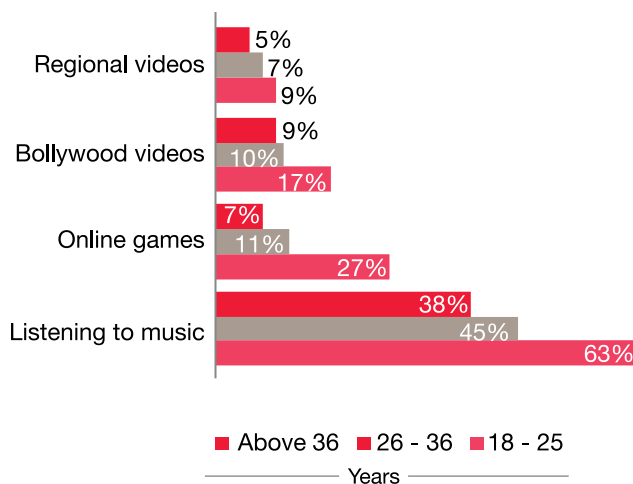


Source: PwC Analysis

Entertainment services	Current Adoption	Future Adoption	Willingness to pay (Rs. per month)	% Respondents for which it is in Top 3 VAS services
Listening to music	27%	88%	62	51%
Ringtones/ Wallpaper	32%	56%	55	12%
Bollywood movies/ videos	12%	54%	77	15%
Regional language movies/ videos	7%	47%	80	15%
Live sports	6%	46%	64	14%
Mobile TV	6%	38%	53	7%
Online games	15%	34%	55	4%

Source: PwC Analysis

Overall Adoption Levels Across Ages

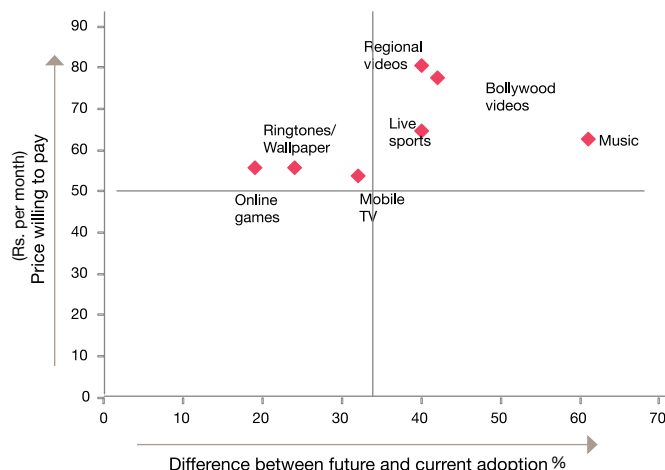


Source: PwC Analysis

- Current adoption levels for all entertainment services is maximum in age group 18-25 years
- Overall adoption rate amongst SEC A (56%) for music is higher compared to SEC B (47%) and SEC C (43%) respondents.
- Interestingly, the overall adoption rate for online gaming is identical for SEC A and SEC B at around 15%, closely followed by SEC C at 13%.

Entertainment – Future Scenario

Entertainment VAS, continuing its domination, would contribute 52% of the VAS revenues.



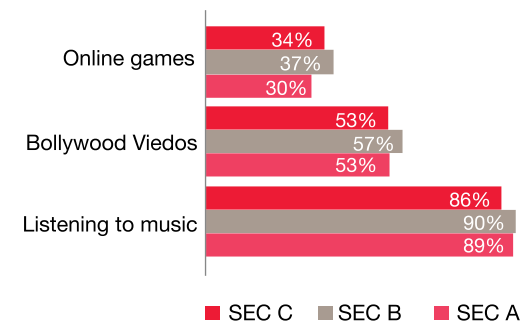
Source: PwC Analysis

India is a land of unity in diversity with 18 official regional languages.

Hence, regional videos is likely to be key revenue driver

- For entertainment services, SEC B respondents show higher subscription interest compared to Section A and C

Future subscription interest across SEC



Source: PwC Analysis

- Subscription interest for online gaming is almost double for students (57%) compared to 30% for those working full time
- Respondents in age group of 18-25 years show highest subscription interest for bollywood videos (63%) compared to 50% for age groups 26-36 years and above 36 years.

The users are willing to pay most for entertainment services as compared to all other categories of VAS. The total revenues from entertainment services is expected to reach 25,109 Crores by 2015.

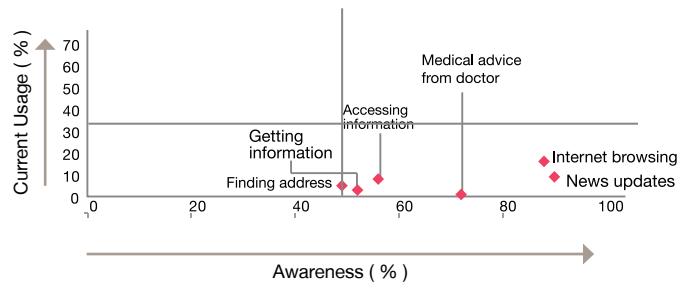


Solving the VAS puzzle

Information VAS

Information – Current Scenario

Video calling which is a recent introduction has higher awareness levels in comparison to social networking



Source: PwC Analysis

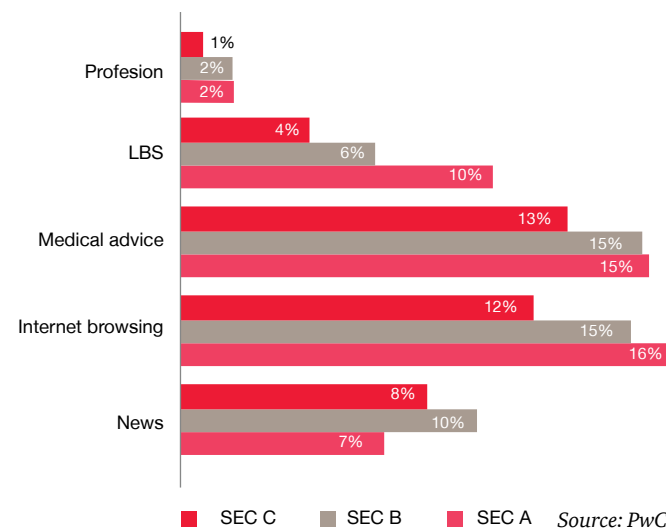
Information services	Current Adoption	Future Adoption	Price willing to pay (Rs. per month)	% Respondents for which it is in Top 3 VAS services
Watching news updates	8%	62%	51	23%
Getting medical advice from doctor	0%	49%	73	14%
Internet browsing	15%	46%	62	14%
Education related	6%	31%	55	4%
Weather information	3%	21%	49	2%
Information related to location	7%	20%	51	1%
Getting info/updates on profession	2%	11%	111	1%

Source: PwC Analysis

Information

Services : Getting weather forecast, news websites, information related to location, info updates on profession, online maps etc

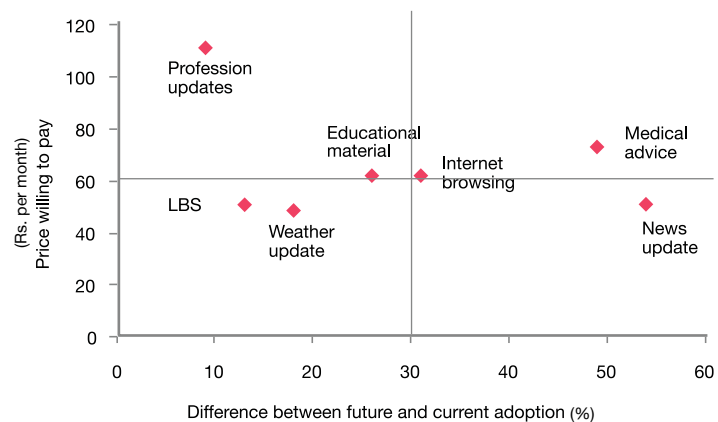
Overall adoption level across Section



- The adoption level for information services is marginally higher for SEC A followed by SEC B and C
- However, for news related updates adoption rate amongst SEC A (7%) is lower in comparison to SEC B (10%)
- Adoption of profession related services like job update is low across working/non-working/student class indicating potential among all classes

Information – Future Scenario

Subscription to service like medical advice to be key revenue driver



Source: PwC Analysis

Currently, there is only 1 doctor for almost 1700 Indians. This highlights that there is limited access to quality medical advice. Medical advice as VAS will be able to address this need.

Current unemployment rate is 9.4%. Thus people are willing to subscribe to profession related updates. This adoption is higher in students who will seek employment in coming years.

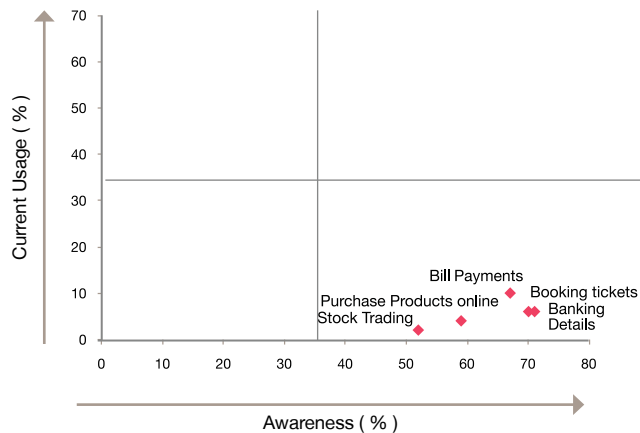
- Future adoption of news based services is highest among people working full time (67%) as compared to students (56%). This may be attributed to paucity of time as well as the need to have information on the go.
- Future adoption for Medical advice from doctors is higher for SEC B (51%) as compared to SEC A (49%) and SEC C (47%)
- Age group 36+ years have higher future adoption (52%) for medical advice from doctor in comparison to age group 18-25 years (43%) and 26-36 years (50%)

The total revenue from information services is expected to reach 7,953 Crores by 2015.

News updates and medical advice would contribute 37% and 29% of this revenue respectively

mCommerce – Current Scenario

mCommerce trails other service categories in terms of current adoption



Source: PwC Analysis

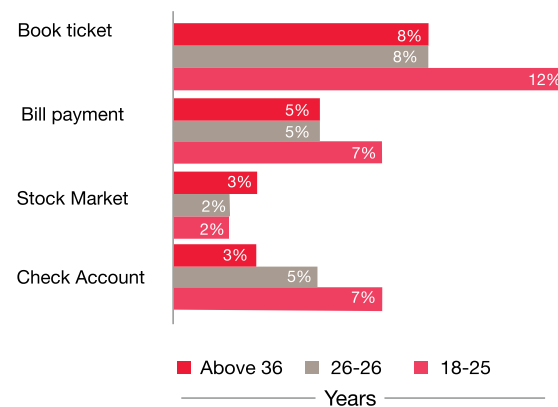
mCommerce

Services: M-Commerce, mobile banking, hotel bookings, mobile tickets, stock trading etc.

M-Commerce services	Current Adoption	Future Adoption	Price willing to pay (Rs. per month)	% Respondents for which it is in Top 3 VAS services
Bill payments	6%	42%	51	9%
Booking tickets, hotel	10%	38%	64	4%
Bank account details	6%	38%	46	5%
Travel related information	11%	34%	44	6%
Banking transactions	4%	26%	57	2%
Pay for purchases	5%	25%	80	3%
Purchasing products online	4%	20%	83	2%
Stock market trading	2%	12%	49	1%

Source: PwC Analysis

Overall adoption level across age profile



Source: PwC Analysis

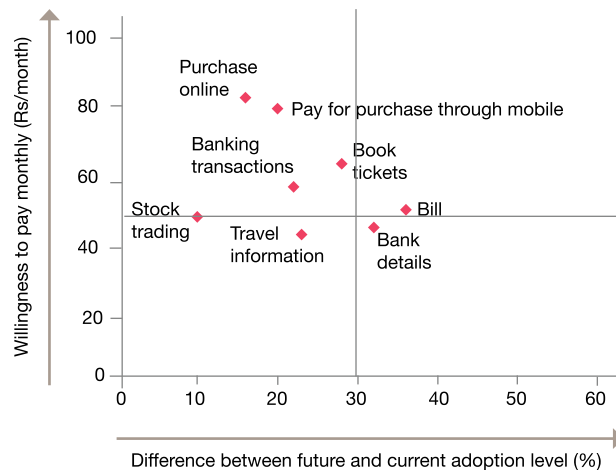
Solving the VAS puzzle

mCommerce VAS

- With exception of stock market updates, people in age group of 18-25 years are the major consumers of mCommerce services
- The mCommerce service which is most commonly used is booking tickets, hotels with average adoption rate of 9%
- Within mCommerce, stock market updates is behind other services in terms of both awareness and current usage

mCommerce – Future Scenario

mCommerce to be the key driver towards financial inclusion



Source: PwC Analysis

41% population in Urban India and 60% in rural areas do not have access to bank accounts.

Despite low current adoption levels, there is vast potential in mobile commerce services.

Even though mCommerce has awareness levels of more than 60% for most of the services, future adoption rates are lower. This points towards the special focus that is required to remove roadblocks to adoption like usability and data security concerns.

The total revenue from m-commerce services is expected to reach Rs.2,600 crores by 2015

- Future adoption for booking tickets is higher for students (43%) compared to working fulltime (39%) and others (33%)
- Students and people in 18-25 year age group show higher future adoption for Stock market updates (16%) as compared to overall future adoption of 12% in this service





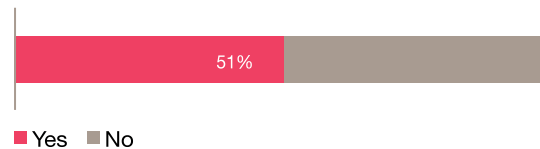
Solving the VAS puzzle

Deep dive analysis of some services

Deep Dive- Communication VAS

Distribution of respondents showing interest in subscribing to video calling

Future Adoption of video calling



Source: PwC Analysis

- About 51% of the respondents have expressed their desire to subscribe to video calling in future.
- Of the 49% of the respondents who are not willing to subscribe, around 32% are those who are aware but are not willing to subscribe to video calling in future.

Video Calling – how to increase future adoption

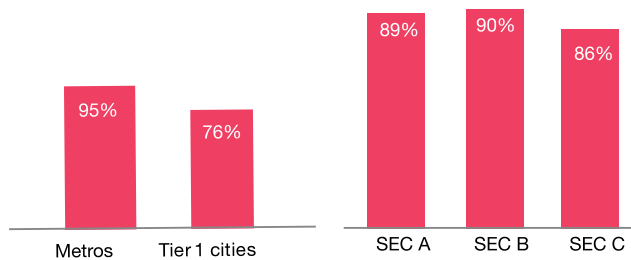
- Video calling will face stiff competition from face to face conversations. 40% of the people who don't like to subscribe say they would prefer face to face conversations
- The driver for adoption of video calling is its ability to save time. 26% of the people who are willing to subscribe say that this is a major factor impacting their choice. The promotional activity must highlight this.

- The end user needs to be educated with regards to the ease of access
- Video calling must not be projected as a substitute for face-to-face conversations, rather it should be positioned as a medium to experience face-to-face kind of conversations
- However, operators should tread cautiously on video calling services since it requires high bandwidth

Deep Dive- Entertainment VAS

Music and Videos have wider audience and uniform adoption

Future adoption rate of listening to music service (%)



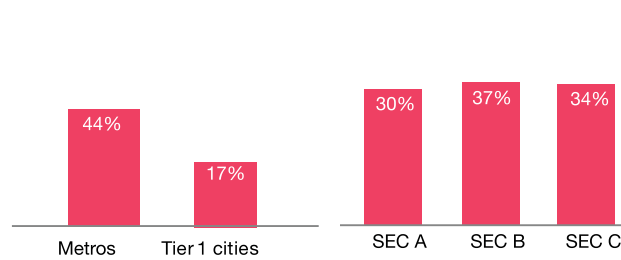
Source: PwC Analysis

- Listening to music, Bollywood movies/music videos and regional movies/music videos have appeal across SECs
- The operators, therefore would need to use mediums with mass reach for increasing awareness and increasing adoption of these services.

Deep Dive- Entertainment VAS

Mobile gaming – who are the customers?

Future adoption rate of Mobile Gaming (%)



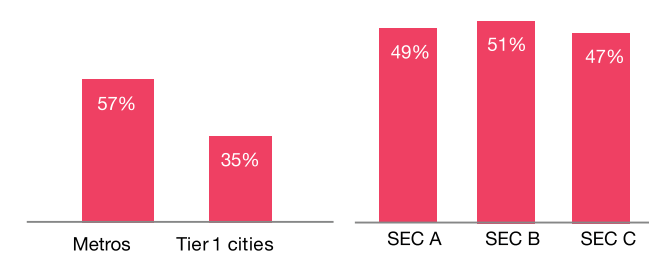
Source: PwC Analysis

- The adoption rate of mobile gaming is higher in Metros. The adoption is relatively low in smaller cities.
- Even in metros the adoption rate is higher in SEC B and SEC C as compared to in SEC A.
- The games should thus be designed keeping in mind the entertainment requirements of SEC B and SEC C users.
- The games should be less complex and should be playable on cheap handsets also. This would make possible adoption by wider audience.

Deep Dive- Information VAS

Medical Advice

Future adoption rate of Medical Advice (%)



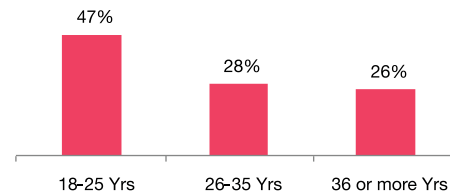
Source: PwC Analysis

- Medical advice is one of the few VAS which has high future adoption rate even in SEC C. This may be attributed to limited access to quality healthcare for SEC C.
- Although the people are willing to pay a higher than average price per month (of Rs 73) for this service, the operators must charge price which can be easily afforded by SEC C and people in smaller cities.
- This would allow the VAS to achieve its full potential and become a broad based VAS just like listening to music

Deep Dive- Information VAS

Online maps and location based services

Proportion of demand for online maps from different age groups (%)



Source: PwC Analysis

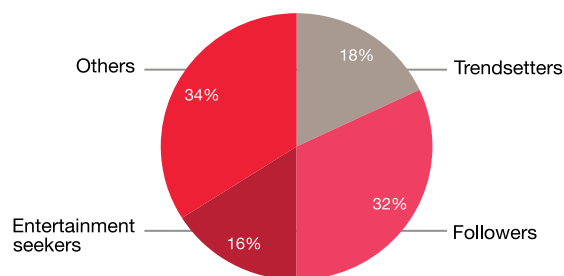
- Operators looking to tap this segment should focus more in terms of utility and perceived value of this services. Almost 47% of who are willing to subscribe are in age range of 18-25 years.
- Amongst the working class, online maps have shown highest interest in salesperson and clerical category
- The location based services and online maps should, there fore, be offered at nominal price and the revenues from advertising and paid listing should be the main source of revenues for these services.

Methodology

PwC undertook cluster analysis to segment respondents based on the preference of respondents for various VAS. The input for cluster analysis was the relative preference score (utility) for each service for each respondent. This was derived using Maximum difference analysis*.

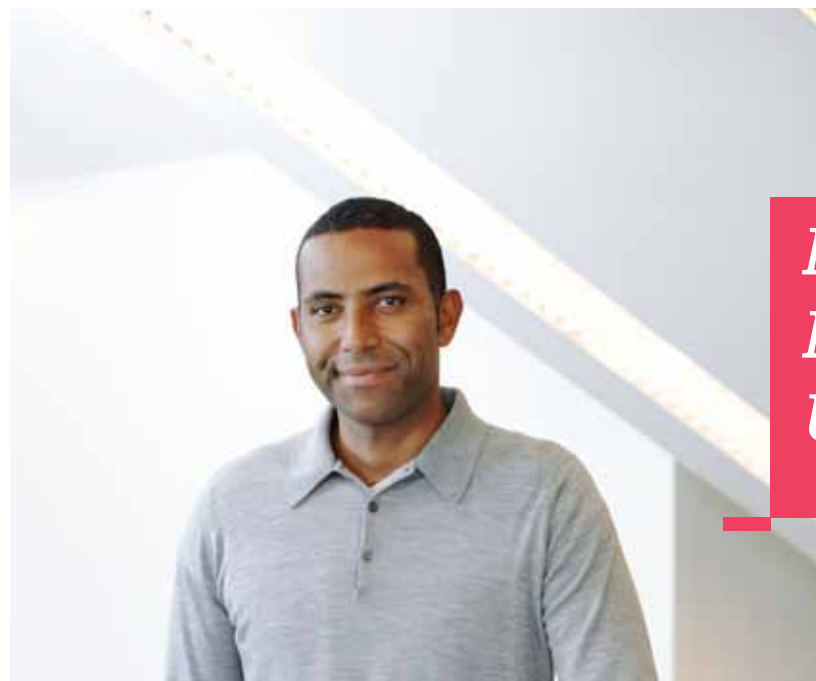
Then the K means clustering method was used to arrive at cluster solutions. The criterion for selection was based on how the clusters were differentiated in terms of needs (services that they prefer). Following are the results of the segment sizes. Then the demographic patterns and the mobile usage patterns were studied to assess the common attributes of different segments

Segment sizes



Source: PwC Analysis

*Maximum difference analysis is a technique that identifies the “best” of many alternatives (VAS services in our case). A respondent is asked to choose from a set of services which is most preferred and which is least preferred out of the four or five items at a time. The outcome is a MaxDiff score for each item that indicates both absolute and relative importance based on preference of the items



Mapping of Mobile VAS Users

Depending on usage patterns and preferences VAS customers can broadly be segmented into trendsetters, followers and entertainment seekers and others.

Trendsetters

View their mobile phones as a device for surfing the internet

<i>Young</i>	<i>Preferred Services:</i> Email, Gaming, Social Networking, Education, SMS, Basic Downloads and Entertainment (Music, Movies, Sports)
<i>Highly Educated</i>	<i>Segment Profile:</i> <i>Age:</i> Mainly 18 – 25 (Young), will also include individuals in 25-35 age bracket
<i>Students & young working</i>	<i>Gender:</i> Equal mix of men and women <i>Socio-Economic Classification:</i> Most Affluent, 42% belong to SEC A
<i>Mostly unmarried</i>	<i>Education:</i> Majority i.e. 52% either are Graduate or Post Graduate <i>Occupation:</i> Students and Working <i>Marital Status:</i> Mostly Unmarried <i>Average Voice Minutes Used Per Day:</i> 56 (Highest Usage) <i>Type of Handset Used:</i> Many have Qwerty Phone



Insights on Trendsetters

Awareness of Services

On an average trendsetters in urban India are aware of about 29 VAS services

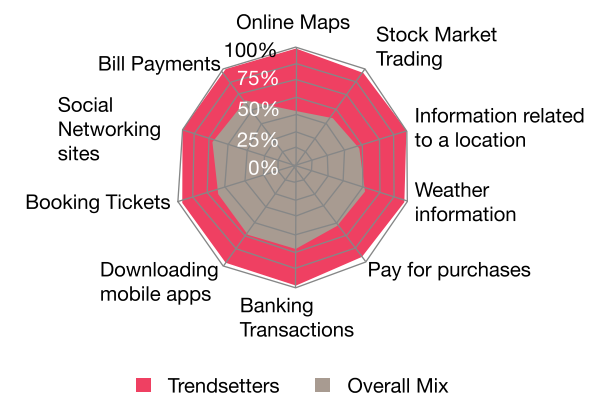
This segment is considerably more aware of services such as online maps, stock trading, location base services than the overall mix of users

Usage of Services

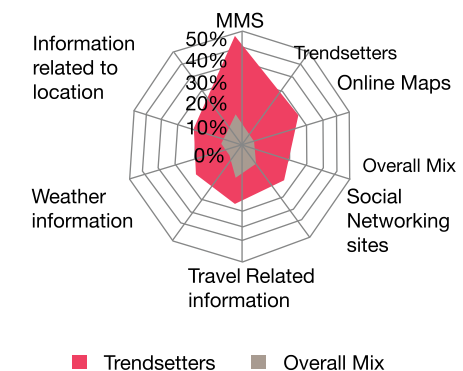
Only 5 out of 30 services on an average are used on mobile. This is much lower than the average awareness of 29 services.

Services that are more popular in this segment relative to the overall mix include MMS, Online Maps, Social Networking, Travel Related Information

Awareness of Services



Usage of Services



Source: PwC Analysis

'Followers' will adopt tomorrow the trends exhibited by 'Trendsetters' today

Followers	
View their mobile phones as a device for surfing the internet	
Young	Preferred Services: SMS, Basic Downloads ,Entertainment (Music, Movies, Sports) and Transaction Services (Includes Experimental Usage also)
Highly Educated	Segment Profile: Age: Mainly 25-36 years old
Students & young working	Gender: Equal Mix of Men and Women Socio-Economic Classification: – Mixed, 33% belong to SEC A and the Rest are in SEC B & C
Mostly unmarried	Education: SSC, HSC, Graduates, Post Graduates Occupation: Working (Including Traders & Businessmen) Marital Status: Mostly Married Average Voice Minutes Used Per Day: 40 to 45 Type of Handset Used: Conventional and Qwerty Phones

Insights on Followers

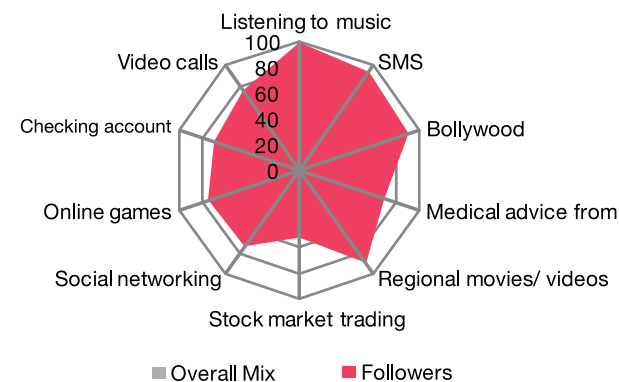
Awareness of Services

Followers exhibit similar awareness levels for most services as the overall mix

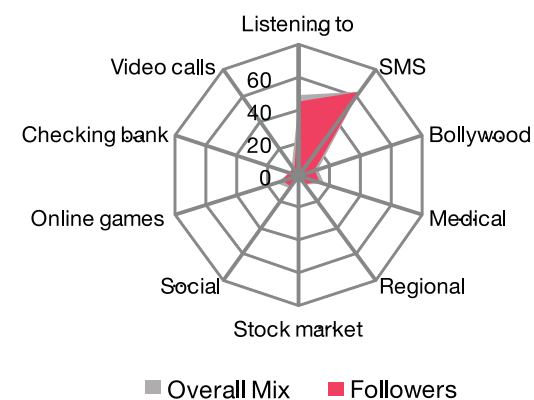
Usage of Services

Usage among followers is slightly less than the overall mix

Awareness of Services (In percentage)



Usage of Services (In percentage)



Source: PwC Analysis

Entertainment seekers would continue to bring in volumes to VAS

Entertainment Seekers

View their mobile phones as an personalized entertainment Device

<i>Middle Age</i>	<i>Preferred Services:</i> Entertainment services like bollywood and regional movies, soap operas and listening to music
<i>Less Affluent</i>	<i>Segment Profile:</i> Age: 36+ Gender : Women constitute 2/3rds of the segment
<i>Mostly Women</i>	<i>Socio-Economic Classification:</i> Least Affluent, 78% belong to SEC B & C
<i>Mostly unmarried</i>	<i>Education:</i> Least Educated, around 55% have some schooling/ SSC/HSC <i>Occupation:</i> Mix of Housewives and working population <i>Marital Status:</i> Mostly Married <i>Average Voice Minutes Used Per Day:</i> Less than 40 <i>Type of Handset Used:</i> Conventional

Insights on Entertainment seekers

Awareness of Services

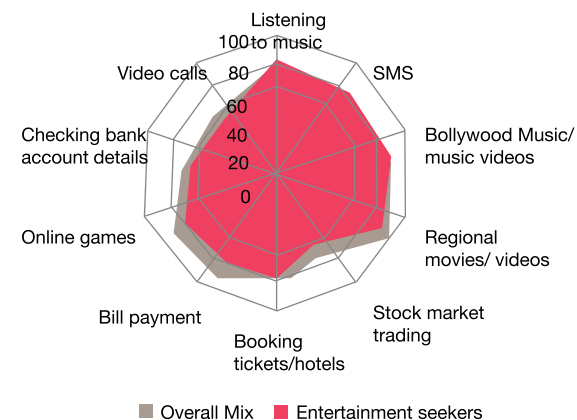
Entertainment seekers are generally less aware of services as compared to overall mix

Usage of Services

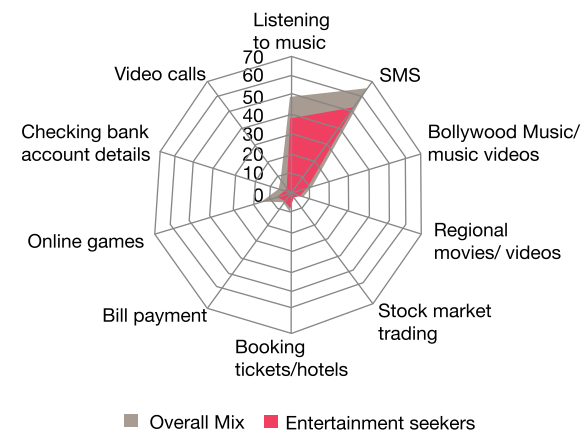
Entertainment seekers use less services on mobile than overall mix

However, their usage for Bollywood and regional videos is closer to the overall mix as compared to other services

Awareness of Services



Usage of Services



Source: PwC Analysis



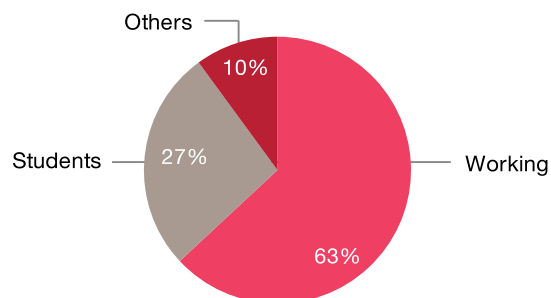
Mapping of Mobile VAS Users - Future Upside

Future Upside - Students today, working class tomorrow

Students will comprise around 28% of the estimated mobile subscribers base in 2015.

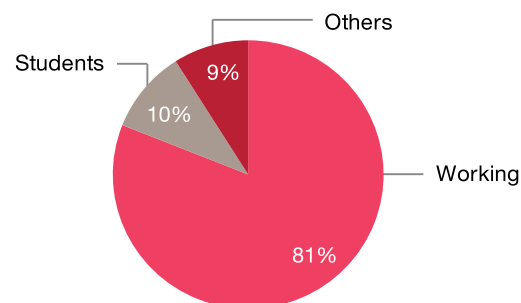
Students are expected to be the highest consumers of most VAS services based on future adoption levels. This can generate additional revenue of Rs. 1411 crores in 2015 compared with 2010

Expected mobile subscriber split in 2015



Source: PwC Analysis

Share of additional VAS revenue in 2015 by subscriber segment



Source: PwC Analysis

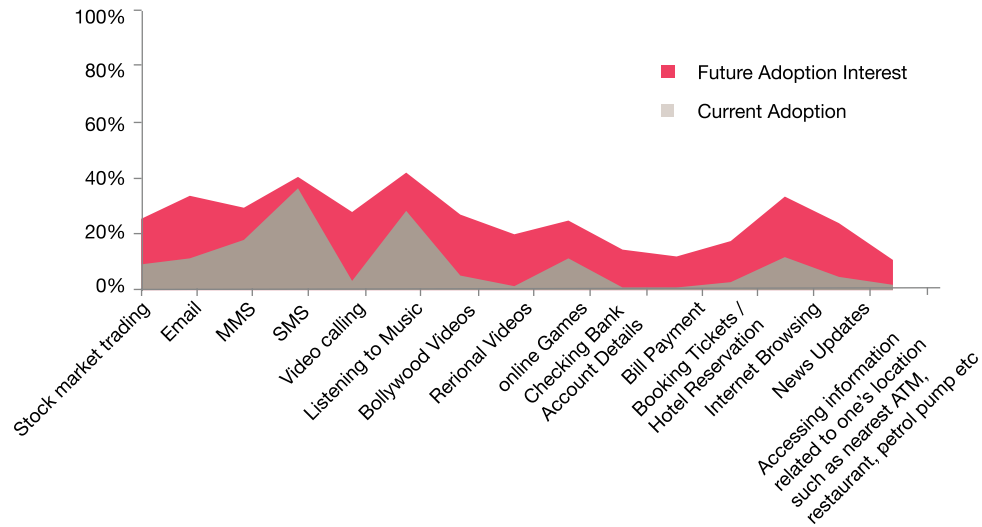
Students of today will become the working class of tomorrow. They are likely to continue their high consumption patterns for VAS specially in entertainment and communication.

Working population is expected to comprise more than 50% of the estimated subscriber numbers in 2015.

As a result of high income levels, high propensity to pay and high consumption pattern of students transitioning into working group, working individuals are likely to generate incremental revenue of Rs. 14,677 crore in 2015 compared with 2010.

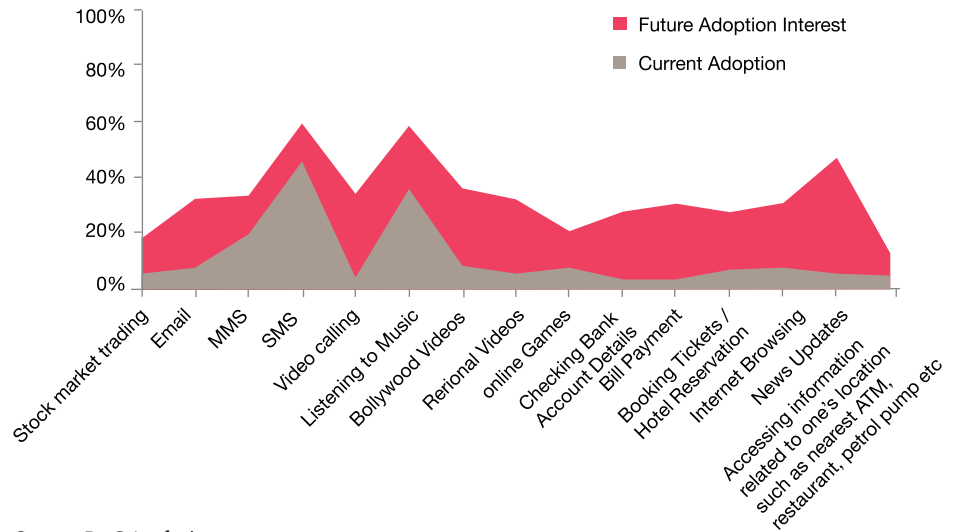
Future Upside - Students today, working class tomorrow

Students



Source: PwC Analysis

Working



Source: PwC Analysis

- The adoption interest for both students and working individuals is expected to rise across most of the VAS services
- The future adoption interest is expected to further increase in working segment as more students transition to working class
- Working class will be crucial for operators to tap as it would combine high future adoption (students) with better capacity to pay (Working)



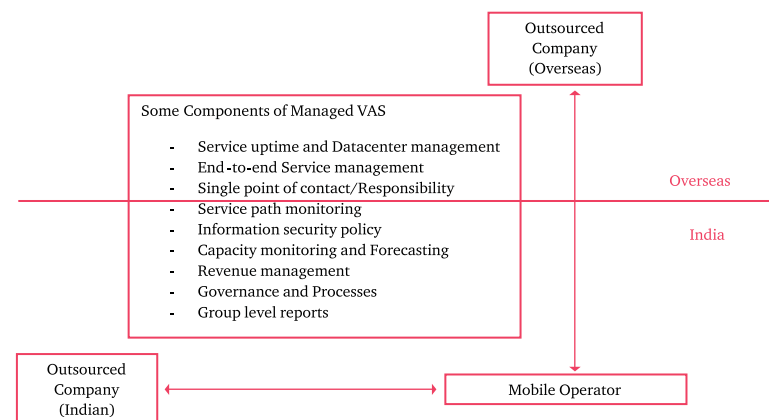
Tax Imperatives of VAS

Why Taxation aspects are important

- The auction of the 3G spectrum by the Government last year rang profit bells for the VAS industry.
- The roll-out of the 3G network is expected to fuel the growth of the Indian VAS industry. It is expected that the Indian mobile market would witness different, varied and profound VAS being offered, which were earlier not possible over the current 2G/2.5G networks.
- In view of the dynamic and ever-evolving nature of the VAS industry in India, tax implications of the innovative business combinations/joint ventures/collaborations in this space necessitate due consideration and attention on part of all the stakeholders.
- This matter assumes importance especially since the VAS industry is still perceived to be at a very nascent stage in India as compared to other developed countries of the world and consequently, most transactions/arrangements in the VAS space could involve a mind-boggling set of tax issues which are unprecedented.

In this chapter of the Report, we have highlighted some of the key tax issues which may be useful for the various stakeholders to bear in mind in view of the complex and daunting nature of the transactions in the VAS space.

Managed VAS



- With declining ARPU's, mobile operators are increasingly looking to offer a wide range of VAS that address diverse customer requirements.
- 3G technology usage will open up the pipe for a staggering number of applications that earlier speeds could not support. With video and multimedia content becoming important components of VAS, managing VAS in-house is a tough proposition for most mobile operators today.
- Managed VAS refers to the outsourcing of a part or all of the VAS operations including everyday management to another organisation, which might be a demerged company of the same group. In this connection, there are some tax neutral amalgamation/demerger related provisions under Income-tax Act, 1961 (Act), which

may be applicable and which may need to be considered. Typically, in such strategic models, end-to-end operations, right from offering services to the users, to billings are handled by the outsourced organisation.

- Though still in an infant stage, in recent times, mobile operators are increasingly turning towards the outsourcing model to manage the plethora of VAS services being offered to the users.
- Managed VAS enables mobile operators to offer value added services to their customers at reduced costs, while giving them more time and resources to focus on understanding customer requirements and creating new attractive service propositions.
- Taxation aspects assume great importance in such outsourcing arrangements due to the sheer nature of transactions involved.
- Typical issues, amongst others, involve the section of the Act/the rate at which tax is required to be deducted at source by the mobile operators before making payments to the outsourced organisations for services rendered by them.
- In case of resident outsourced companies, an issue would arise as to whether tax is required to be deducted at source under section 194C of the Act which deals with contractor payments; or whether section 194J of the Act, which deals with payments for professional services, amongst others, needs to be applied.

- Section 194C of the Act is applicable in case of contracts which involve carrying out of “work”. Section 194C of the Act contains an inclusive definition of the term “work”. On the other hand, section 194J broadly deals with payments for professional services, technical services and royalty payments.
- There could be instances where both the sections may appear to overlap. In such cases, it would be important to analyse the agreement and the exact nature of services in order to be able to analyse and differentiate between the scope of operation of these two sections of the Act.
- In case of non-resident outsourced companies, applicability of section 195 of the Act which deals with payments to non-residents would need to be examined. Section 195 of the Act would be applicable only if the income payable to the non-resident company is “chargeable to tax” in India.
- Determination of the portion of income “chargeable to tax” in India is a function of the payee company’s residential status and presence/activities in India.
- Depending upon whether the arrangement is on principal-to-principal basis or not and other factors like the nature and substance of the agreement, the transacting parties could run the risk of being treated as an “Association of Persons” (AOP). AOP is a unique concept whereby two or more parties joining together

for a common purpose/cause, may be jointly treated as a distinct, separate taxable entity under the Act.

- Formation of an AOP could have adverse implications for the parties in the form of possible higher tax rate, uncertainty on availability of benefits of Double Taxation Avoidance Agreement between India and other countries (DTAA), restrictions on allowability of carry-forward of losses etc.
- Ascertaining whether an AOP is formed or not is a tedious exercise since the Act does not define an AOP or list out the exhaustive list of factors that go towards formation of an AOP. Reliance needs to be placed on judicial precedents on the subject for the same.
- Thus, every outsourcing arrangement would involve intricate and complex tax issues, for which appropriate, advance tax planning and due deliberation is the Need of the Hour!

VAS value chain

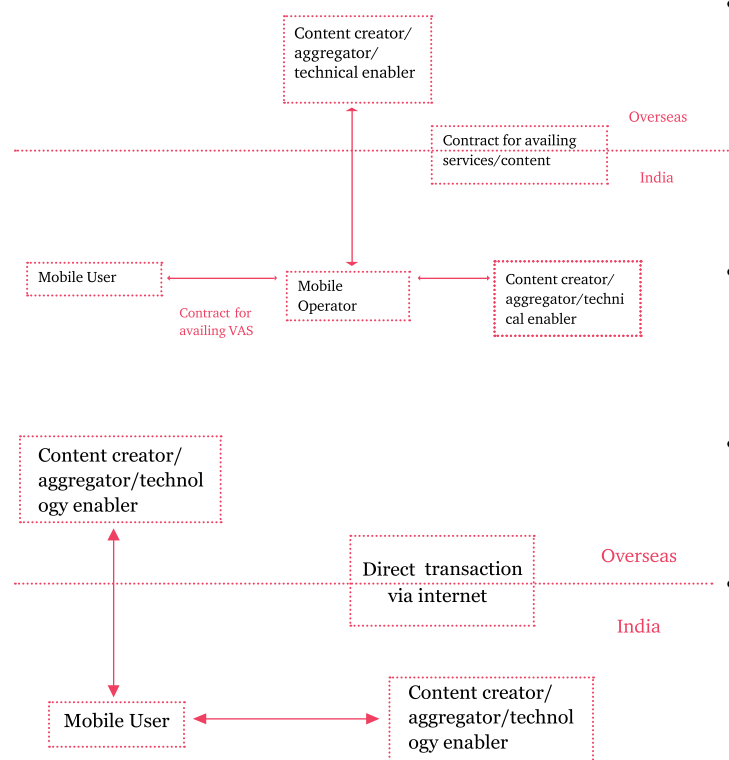
VAS seek to digitally empower mobile users by providing efficient access to essential information and services and foster inclusive growth, even without physical access.

Needless to say, the stupendous growth in the VAS sector necessitates due tax planning and structuring of the plethora of complex business transactions amongst the various stakeholders in the VAS value chain like content creators, content aggregators, technology enablers, mobile operators, handset manufacturers etc.

Typically, there are 2 ways in which content flows within the VAS value chain:

- Scenario 1: Where the user transacts directly with the content creator or the content aggregator directly for availing the VAS.
- Scenario 2: Where the user obtains the required content through the mobile operator and the mobile operator in turn contracts with the content creators, content aggregators, technology enablers, as may be required.

Since the stakeholders in the VAS value chain may be tax residents of other countries, the taxation of the income recipients and withholding tax obligations of the payers of income, in India, necessitates greater examination and analysis.



Taxability of the payees in India:

- As per the Act, the scope of taxation of the payees (entities/individuals) in India, amongst others, is dependent upon the payees' residential status under the Act. Residential status for individuals is dependent upon the number of days of stay in India. Residential status for entities in India is determined by the place of incorporation/location of the place of control and management.
- It may be possible to take recourse to the DTAA either for relief in rate/amount of tax liability or scope of taxation of items or to avoid double taxation of a particular income: both in India and the country of residence.
- Typically, payments involved in the VAS space may be characterized as "Royalty" or "Fees for Technical Services" or "Business Income" based on the facts of the case and the substance of the agreement.
- One would also need to analyze whether the payee has a "taxable presence" in India for the purpose of determination of tax liability in India. Under the Act and the DTAA, in certain cases, existence of agents in India, provision of services through employees/other personnel, availability of place at disposal, amongst others, creates a taxable presence for the payee in India.
- In case a taxable presence is created, the payee may be liable to pay tax on its income in India on a net basis and consequently issues of attribution of profits to the Indian operations, what could be a reasonable basis of attribution etc. would need to be addressed.

Mildly put, it is a highly risky proposition to assume that tax liability in India cannot be triggered in the absence of physical or other modes of presence of the payee in India.

Illustration of a transaction in the VAS value chain:

Let's take an example of a technology enabler company located overseas which has set-up a joint venture (JV) Indian company. The platform/technology is located overseas and the JV Indian company is licensed the use of the technology. In consideration for the same, the JV Indian company would pay license fees to the overseas company.

In this case, there could be an entire range of tax implications which may need to be considered like

- characterization of payments made by the JV Indian company to the overseas company: whether the same is in the nature of "Royalty"/"Fees for technical services" under the Act/respective DTAA
- withholding tax obligations of the JV Indian company while making payment to the overseas company
- whether the overseas company has a "presence" in India: whether any employees come down to India; whether any control is exercised from overseas; whether any space is being made available to the overseas company in India etc. If at all, questions are: whether presence is created, how much profits would be attributed to India; how these profits would be determined

- service tax implications and state VAT implications
- compliance with transfer pricing regulations

Tax deduction at source obligations for the payers in India:

- The Act also imposes vicarious tax deduction at source obligations on the payers of income.
- In fact, apart from stringent penalties and interest exposures, there is also the paramount risk of disallowance of the expenditure incurred, in case of default in complying with the tax deduction at source obligations.

Direct Taxes Code Bill, 2010 (DTC):

While the DTC is slated to be effective from 1 April, 2012, a revised and final draft Bill is awaited.

Some key amendments proposed in the DTC are given under:

- The DTC proposes to expand the definition of "Royalty" and "Fees for Technical Services".
- Amongst others, the definition of "Fees for Technical Services" now proposes to specifically cover 'payments for development and transfer of design, drawing, plan or software, or similar services'.
- Payments for acquisition of standardised software for providing services are also proposed to be covered within the ambit of "Fees for Technical Services".

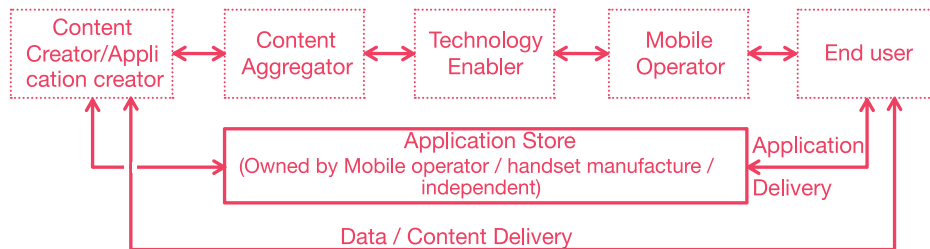
- Introduction of General Anti-Avoidance Rule, which can override DTAA's, will give the Revenue authorities wider powers to assess transactions/tax payers.

One would need to wait and watch how the DTC is finalized and enacted in the final form, as the provisions therein are likely to have far-reaching impact for the stakeholders in the VAS value chain.



VAS: Way Forward

Evolution of VAS Ecosystem from compete to collaborate



- The VAS ecosystem has evolved fast in the last few years owing to the increasing role of Application and Application Stores
- The Mobile operator continues to be the only route to tap the subscribers when it comes to VAS such as Caller Ring Back Tones, Missed Call Alerts etc.
- The application store hosts application which can deliver variety of VAS directly to consumers.
- The applications are tied to operating systems of the mobile handsets.
- Mobile operator were quick to address the changing dynamics and today application stores are owned by mobile operators (Airtel, Aircel) as well as handset manufacturer (Apple, Blackberry, Samsung).
- The content creator, in the application store stream, gets to keep larger share of the revenue (eg. 70% for Apple store)

Way forward

Mobile VAS revenues are expected to reach Rs.55,000 crore by 2015, in order to capture this opportunity the following needs to be done:

Content Creator / Content Aggregator	Handset manufacturer	Mobile operator	Regulator
<ul style="list-style-type: none"> • With the introduction of 3G the content creators / aggregators to focus on proving more interactive content to push VAS usage. • Provide more multilingual / local language content “Indian VAS companies • Develop alternate revenue channels such as off deck portals to reduce reliance on operator. • Focus on niche segments where users are willing to pay a premium for content. Go beyond entertainment and cricket and create applications for high potential VAS such as medical services, location based services etc. 	<ul style="list-style-type: none"> • Influence customer usage behaviour through closer collaboration with content/application creator to pre-load application on the handsets . Preloading will also increase penetration to users who are not touched by application stores • Handset manufacturers can also work together with operators to introduce handsets which enable easy access to advanced VAS 	<ul style="list-style-type: none"> • Mobile operator’s may invest in VAS development for increasing their proprietary content and create customer stickiness. This will be a differentiator for the operator • Increase uptake of VAS through attractive pricing and by offering relevant content. 	<ul style="list-style-type: none"> • Although, RBI has issued operative guidelines for banks on mobile payments, there is a need for a more detailed regulatory framework to encourage growth of mobile in banking in India. • Mobile payments / banking may pose risk to sensitive customer information. Existing laws need to be amended to address data security issues relating to mobile commerce.

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Notes

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