

# Case Study 1

## 1.1.3 Analyst Overview of the Global Telecommunications Industry

- Unit:** Study Unit 3 – Strategic Treasury Solutions
- Case:** Case study 1 – Treasury Opportunities
- Date:** 1 September 2016
- Summary:** An overview of the telecommunications market for use in the Victor Case Study in Unit 3. Explains a number of key features of the market and applies several analytical tools including PEST, product lifecycle, Porter and the Market Environment Matrix.
- Key words:** analytical tools, PEST, product lifecycle, Porter, market environment matrix

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# 1 The telecommunications industry today

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The telecommunications industry is a large one, generating around US\$1.5 trillion of revenue annually, from seven billion mobile phone customers and one billion fixed line customers.

## 1.1 The global mobile market

### 1.1.1 Scale and structure

The mobile industry has 7.2 billion users, generating around one trillion US dollars of annual service revenue every year. Around 60% of revenue comes from traditional calls. However, over the last few years the demand for mobile data services, such as watching videos and internet browsing on a smartphone, has accelerated, and today around 40% of revenue is from data, up from around 30% in 2012. The majority of mobile users, around 76%, are in emerging markets, such as India and Africa. This reflects the typical combination of large populations and the lack of fixed line infrastructure, which means that the mobile internet is often the only connection to the internet for people in these regions. It is estimated that in 2015 over half of the world's mobile internet users came from emerging markets. In contrast, the reported proportion of the population with a phone – or mobile penetration – tends to be high in mature markets (usually over 100%) – as some people have more than one device. Mobile penetration is usually lower in emerging markets, particularly in rural areas, due mainly to lower incomes and less network coverage.

### 1.1.2 Growth

The demand for mobile services continues to grow strongly. In the last three years the number of users increased by 20%. In 2012 global mobile penetration was only 87%, and by 2015 it had risen to 101%. Most of the increase in users has been from emerging markets due to favourable growth drivers – young and expanding populations, faster economic growth, low but rising mobile penetration, and less fixed line infrastructure. The other key area of growth is data, which is being driven by increasing smartphone and tablet penetration, better mobile networks, and an increased choice of internet content and applications ('apps').

### 1.1.3 Competition

The mobile industry is highly competitive, with many alternative providers. In each country there are typically at least three to four mobile network operators ('MNOs') such as Victor. Across Europe there are more than 100 MNOs. In addition, there can be numerous mobile virtual network operators ('MVNOs') – suppliers that rent capacity from mobile operators to sell on to their customers. There is also competition from other communication providers using internet-based rather than cellular services such as WiFi calling or instant messaging.

### 1.1.4 Regulation

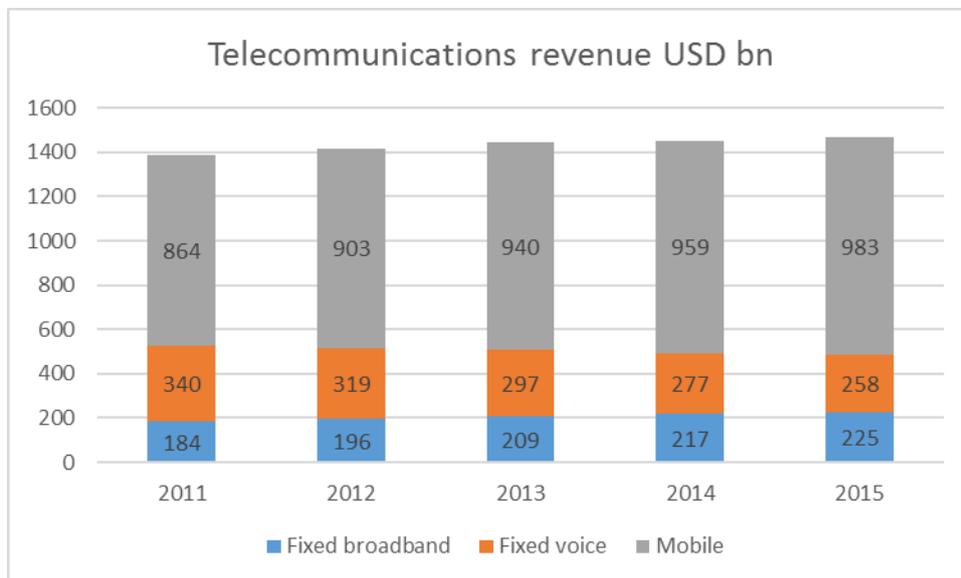
The mobile industry is heavily regulated by national and regional authorities. Regulators continue to lower mobile termination rates ('MTRs') which are the fees mobile companies charge for calls received from other companies' networks, and to limit the amount that operators can charge for mobile roaming services. These two areas represent around 11% of service revenue for Victor.

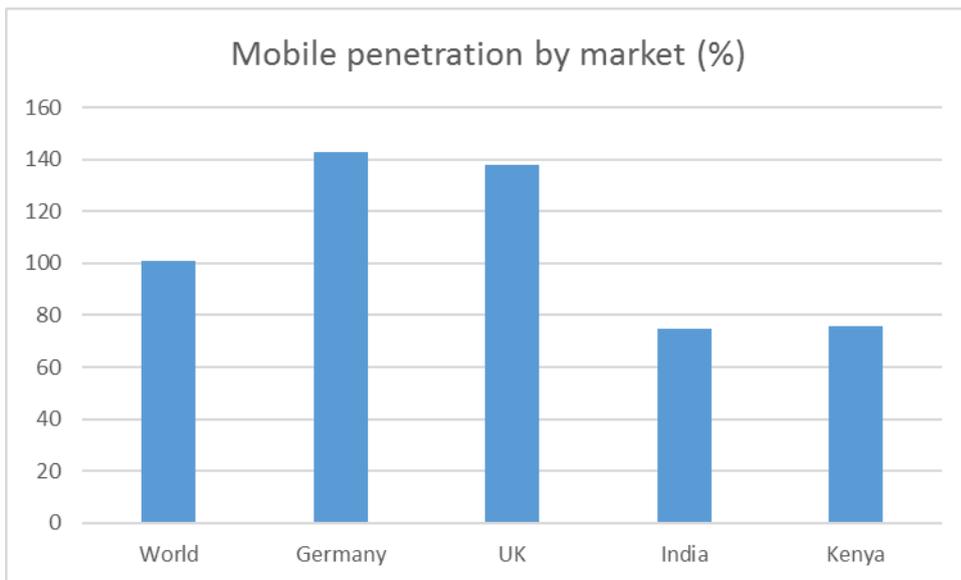
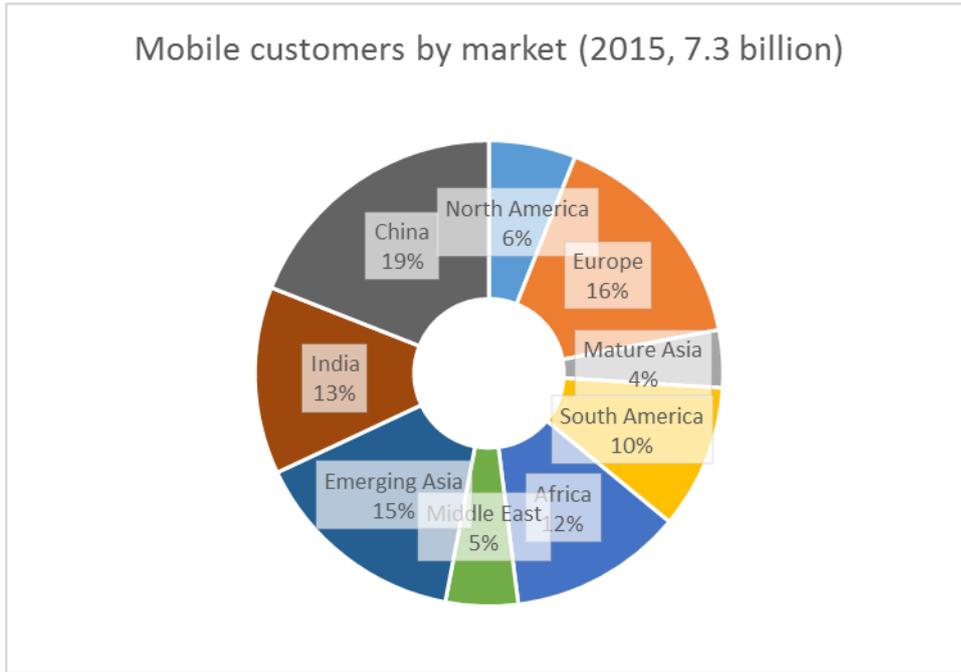
### 1.1.5 Revenue trends

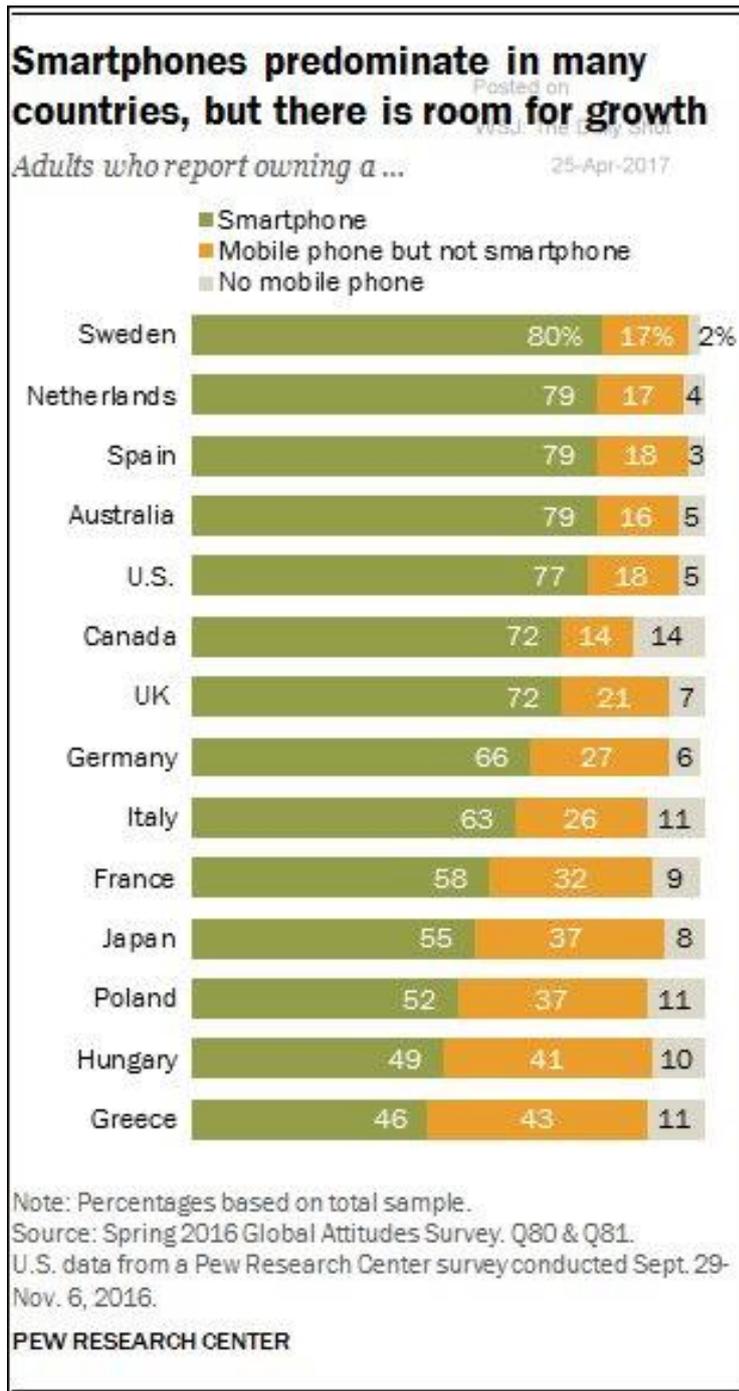
In an environment of intense competition and significant regulatory pressures, the average global price per minute of a mobile call has fallen by over a third in the last three years to five US cents. However, with both more mobile phone users, and more usage of mobile services, global mobile revenue remains on a positive trend and expanded by 9% over the same period.

### 1.2 The global fixed market

The fixed communications market generates around US\$500 billion of revenue annually. Over the last three years, revenue from voice services has declined as the demand for traditional fixed line calls has remained static at around one billion users. In contrast, revenue from fixed broadband or internet usage is growing with an estimated 690 million customers worldwide – an increase of 21% over the last three years. This growth has been spread across all forms of broadband – copper, cable and fibre – and within this, there is a growing preference for the high speed capability provided by cable and fibre.







## 2 Where the industry is heading

The pace of change in the industry is expected to remain significant –the demand for data is accelerating, there is an ongoing shift towards fixed and mobile bundles, networks are improving, and the market environment is becoming more positive.

### 2.1 Growing importance of data, emerging markets and other new revenue areas

Traditional revenue sources – mobile voice and texts – have reached maturity in a number of markets. Therefore, to deliver future growth opportunities, Victor is investing in newer revenue areas such as data. It is estimated that between 2015 and 2019 mobile data

revenue will grow by 18%, compared to a 7% decline in voice revenue over the same period. The demand for data will continue to be driven by rising smartphone and tablet penetration and usage, and improvements in mobile network capability. Already 95% of the world's total traffic on mobile networks is data. The data services most used are video streaming and internet browsing which require high speed networks. Therefore, operators are investing more in 4G in European markets and a combination of 4G and 3G in emerging markets to provide much faster data speeds. Emerging markets have significant potential for customer and revenue growth driven by rising populations, strong economic growth, lower mobile penetration and a lack of alternative fixed line infrastructure. By 2019 it is expected that there will be 1.5 billion new mobile users in emerging markets, taking their share of global users to 79%. Other new revenue streams are being pursued which extend the use of mobile beyond everyday communication. These include money transfers and payments using a handset, and M2M services such as smart metering and the location monitoring of vehicles, through a SIM card embedded in the vehicle.

## **2.2 Convergence of fixed and mobile into unified communications**

It is expected that there will be a continued trend towards unified communications or bundled mobile, fixed and TV services so that customers can use data services wherever they are and on whatever device they want. The demand for bundled services has been a feature of the enterprise market for several years and is becoming more visible in the consumer market. This demand, combined with technological advances delivering easier connection of multiple data devices, will support strong data growth in the future. Therefore, this will need to be managed by access to next generation fixed networks, principally cable or fibre, to support increased speed and meet capacity requirements.

## **2.3 Continued network innovation**

The pace of innovation and development in the networks is increasing. For example, 4G, which was launched in 2010, already accounts for 30% of data traffic on Victor's European networks. Standard 4G provides speeds of up to 150 Mbps, which is more than three times the highest 3G speeds. The next stage of 4G development is 4G+, which bonds together multiple spectrum blocks to provide typical peak speeds of up to 450 Mbps. High-Definition voice is another new mobile technology which provides customers with crystal clear call quality. In the fixed broadband sector operators are investing more in fibre which provides data speeds typically up to 300 Mbps to 1 Gbps, compared with up to 24 Mbps on copper broadband.

There is also some research being done into 5G, with several different bodies providing research funds. Trials on 5G were conducted in the rural Netherlands in 2015 and some have expressed hope that the new standard could be rolled out from 2020. This will all require further investment by the industry.

Further growth might be expected from the 'Internet of Things', the connectedness of all manner of devices, all of which will depend on sound networks to drive them.

## **2.4 Continued high level of competition**

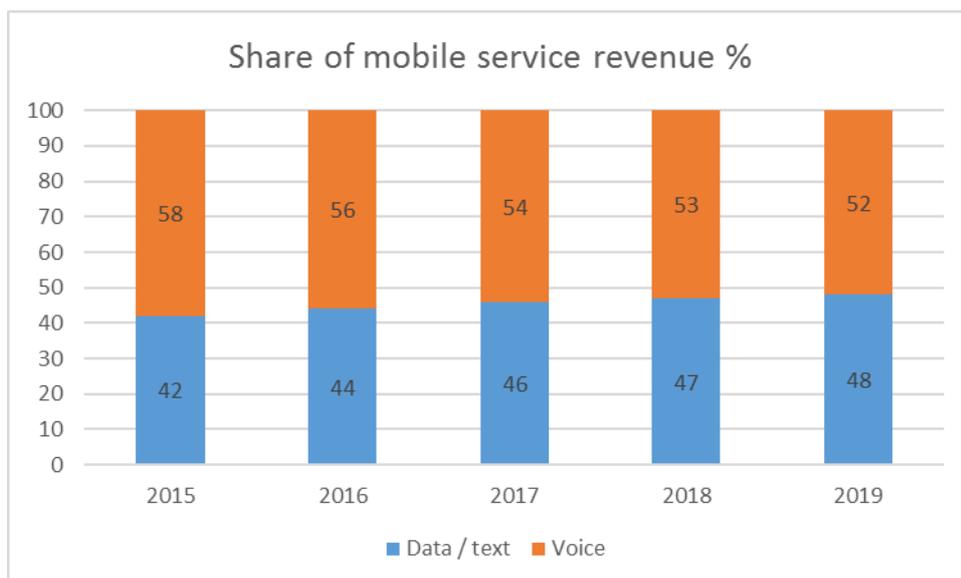
The high level of competitive intensity in the communications industry is expected to continue between established MNOs, MVNOs, fixed operators and internet-based services providers. MVNOs and smaller mobile operators are often attractive to value seekers. However, the high level of investment in 4G and unified communications by larger MNOs, such as Victor, enables differentiation through higher network and service quality. Fixed operators often bundle their services with mobile, leading Victor to acquire fixed capability to bundle with mobile, through investment in fibre networks, acquisitions and wholesale agreements. Internet-based providers often offer “free calls and texts” services, so mobile operators increasingly sell unlimited voice and text bundles, and combine this with a fixed fee for data usage. While the level of competition is expected to remain robust, there are some encouraging signs of consolidation among European telecoms operators which is supportive of further investment. There seems to be a fine balance between the number of competitors that regulators seem to require for a competitive market to exist and the number of competitors that justify adding extra capacity to the existing networks.

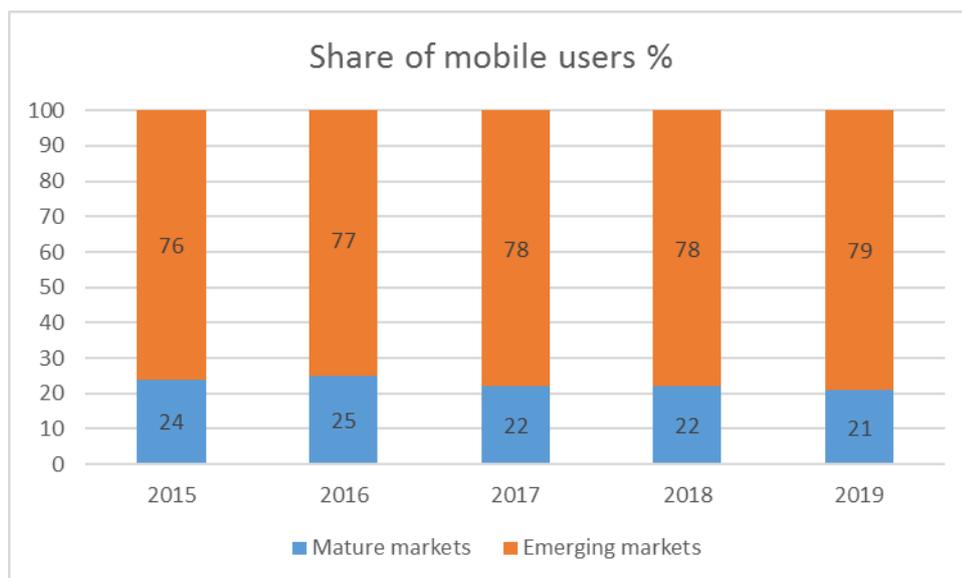
There is also competition from operators such as Skype, Netflix and Spotify, which piggyback on telecom systems.

Current operators seem to have very different customer level satisfaction on service levels.

## 2.5 Improving business environment in Europe

As Europe represents the majority of revenue, the environment is important to Victor. The economic recession in Europe over the last few years has been a key driver of the declining revenue trends in the region for many operators. However, the return to GDP growth in 2014 bodes well for the future. The regulatory environment in Europe remains challenging, as a result of ongoing cuts to regulated revenues such as roaming and MTRs. The European Commission has recently announced a new Digital Single Market package of legislative measures. While this emphasises the need to improve the investment climate, it still needs to translate into specific legislative measures which – if rapidly adopted – would have a positive impact.





## 2.6 Conclusion

The transformational impact of digitisation (the mass adoption of connected digital technologies and applications by consumers, enterprises, and governments) will be the driver of telecommunications operators' most critical strategic and operational decisions. Telecom companies must try to monetize their infrastructure investments and exploding data traffic, boost newly needed capabilities, rationalize their product and service offerings, improve the customer experience, and evolve their asset portfolios and business models.

However, complex legacy architectures and systems and legacy products and services often stand in the way of making meaningful inroads into the digital experience. Indeed, because of their size and relative agility, smaller telecom companies appear to be better prepared to pivot away from older systems and provide truly customer-friendly business processes. However, the larger companies may have more capacity for capital expenditure, making this evenly balanced.

Ideally, they should offer high-quality, state-of-the-art, and reliable communications services; popular and fresh content on mobile and desktop platforms; and consumer-friendly websites with online billing, troubleshooting, scheduling, and account support. They also should sell their expertise in security, identity authentication, and billing to their business customers. And they must work to monetize the mountains of data that flow through their networks by shifting to experience-based pricing, phasing out unlimited and free data plans, and promoting the consumption of data-heavy content.

This may be hardest in emerging markets where the average revenue per user (ARPU) is lowest and so where investment is all the harder. In these cases, they may come up against regulation as a key business driver with its inherent consumer protective approach.

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## 3 Business analysis

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### Macro-economic screening (PEST) - significant factors

- Political - legal - regulation and licensing are a fact of life; with both positive and negative aspects.
- Protectionism in favour of national operators in some countries - negative. An example of this has been the treatment of Victor in India with regards to tax treatment and other issues. De-regulation is generally good for the business, especially European-based operators.
- Economic - growth in world economy and strong growth in big, emergent markets means excellent business growth prospects. Personal disposable income and ever-increasing business use of mobiles is also good for business although many users are very economical. For example, missed calls (uncharged) are often used as substitute messaging. Low interest rates help a capital-intensive business.
- Socio-Cultural Demographic - the mobile and smart 'phone market very much driven by powerful lifestyle factors under this heading. Very favourable although arguably more important in developed markets.
- Technical, i.e. digitisation and Internet of Things – again a very strong driver, affecting sales volumes, ever-expanding variety of product/service offerings, delivery capabilities, also margins expanding. Very favourable.

### Product life cycle

Big contracts between different mature markets globally:

- North and Western Europe where markets are more or less stagnant, down from prior growth of up to 6% to 10%, close to saturation in terms of market penetration. However, in terms of data usage, growth is strong and will probably continue to be so. Better technology gives greater growth. Current trend to unified services should allow growth as fixed line services increase penetration.
- Developing markets in Africa, Asia, Eastern Europe at the rapid growth stage, with growth rates of 20 to 30 to 60%, where market penetration can be less than 30%. However, average revenue per user (ARPU) is substantially lower.

Implications:

- Mature markets - priorities given tougher price competition are cost reduction (outsourcing, efficient distribution) and revenue stimulation, (product development, brand defence, customer retention, innovative bundling of services).

- Developing markets – good margins, brand establishment, building market share, winning licences, developing/improving network coverage, winning capital investment and acquisitions, financing.
- Generic Strategies - Developing markets - Differentiation technology/services/networks
- Requirements - strong marketing, R&D-based product design, network coverage and distribution channels

Mature markets - Cost leadership/differentiation:

- Maintained capital investment, control of labour costs. (IT and customer management) low-cost distribution, outsourcing, supply-chain management, standardisation, shared service platforms.
- Strategy is to grow by market penetration, product development, market development and diversification - by organic growth acquisitions or joint ventures, especially in the new areas of M2M. Very ambitious and risky.

#### **Porters Five Forces**

- The industry - large players globally, e.g. Deutsche Telekom (T-Mobile), 3, Victor, Orange, Airtel, Telefonica, BT, Verizon, Sprint plus others in China and elsewhere. Very competitive mix of big global players and strong, protected natural or regional operators, but fast-growing and rapidly changing so not too adverse. However, using Europe and UK as an example, the existence of four major networks has discouraged investment because of its high cost relative to consumer base. Reduction to three may be helpful and this is mirrored elsewhere. Conclusion – OK but not brilliant.
- Suppliers - about five big global equipment (mobile handsets) manufacturers and similar number for networking equipment, but global buyers like Victor in a very strong position (Cost of handset affects cost of acquiring new customers and retaining existing ones). Low switching costs for mobile network operators. Conclusion - very favourable.
- Customers - their bargaining power is strong because they can easily go elsewhere (relatively low switching costs, e.g. inconvenience). But customers individually make small value purchases. Conclusion - favourable.
- New entrants - difficult in developed, unprotected markets with strong, well-established players (entry business - brands, economies of scale, retaliatory pricing, R&D-based technological developments, licences, difficult to access distribution channels). But converging technologies mean competition from, e.g. virtual network operations, fixed line companies, internet-based companies and the bundling of those services. Conclusion - favourable.
- Substitute Products – only if operators fall behind technologically hence critical importance of R&D and innovation/creativity re service offering. Substitution is also from operators such as Skype and Netflix as seen in 'New entrants'. Conclusion - very favourable.

### **Markets Environment Matrix**

This is a classic “volume” market - characterised by the following;

- essentially cost / price competition
- big economies of scale
- mass market for standardised products
- a few large players dominate pricing
- make big, stable profits
- small players cannot compete (unless protected locally) but may be more nimble
- very centralised management control
- big marketing spend
- strategy of dominance
- “systems and resources productivity”

### **Market key performance indicators**

#### ***Financial KPIs***

- Annual growth in total revenues
- Gross margins
- Total overheads % sales
- Employee costs % sales
- R&D spend % sales
- EBITDA % sales

#### ***Non-financial KPIs***

- Total number of customers globally
- Market shares in all key markets
- Pre-paid vs post paid percentages
- Annual customer churn %
- Average revenue per user (ARPU)
- Voice minutes per user
- Non-voice service revenues %
- Average requisition cost of a new customer