The number of MVNOs in operation worldwide rose to almost one thousand by the end of last year, due to regulatory policy designed to increase competition and a growing interest in the MVNO market from ecosystem players such as ISPs and device manufacturers, new research from GSMA Intelligence has found.

Regulators have been particularly active in Europe, which is home to two thirds of domestic MVNOs, with the EC having begun applying conditions on MVNO access before approving mergers between mobile network operators (MNOs). Meanwhile, internet players such as WhatsApp and Alibaba and device manufacturers including Xiaomi have all launched MVNOs in the last year, and emerging asymmetric business models (e.g. the rumoured entry by Google into the MVNO market) could potentially prove disruptive.

As of the end of 2014, the world’s MNOs hosted 992 MVNOs and 260 MNO sub-brands. This represents a total of more than 1,250 mobile service providers worldwide hosted by MNOs, in addition to their own core brands. Our research shows that MVNOs remain most...
prevalent in mature markets where penetration (based on connections) has surpassed one hundred percent. Europe is home to two thirds of domestic MVNOs (585), followed by Asia Pacific (129) and Northern America (107). By contrast, the MVNO sector remains in its infancy in Sub-Saharan African markets with just eight MVNOs across the region. ‘International’ MVNOs, i.e. those that target roamers and thus operate across multiple markets, make up ten percent of global MVNOs.

![Figure 2: International MVNOs account for ten percent of all MVNOs worldwide (excluding sub-brands)](Source: GSMA Intelligence)

The presence of MVNOs is limited to less than a third of countries worldwide as they are a phenomenon that mainly applies to saturated mobile markets. The average connections (excluding cellular M2M) penetration rate among the 72 countries that host MVNOs stands at 128 percent, compared to the global average of 97 percent. This explains the large number of MVNOs in Europe, which has the second-highest regional penetration level (126 percent) and saw early moves by regulators to establish an MVNO market.

MVNOs have long been encouraged in Europe by regulators as a way to increase competition and reduce prices, and their presence has been one of the contributing factors to the steady decline in consumer revenues in the region. Over the three years to Q3 2014, ARPU in Europe fell by seven percent on average per annum, against a backdrop of economic recession, price cutting by newer entrants to the MNO market (e.g. Free Mobile in France, Three in multiple markets) and OTT competition as well as MVNO activity. Meanwhile ARPU declined by two percent per annum in Asia Pacific and Northern America saw growth of one percent a year. This erosion of ARPU has inevitably had an adverse effect on investment levels in Europe, and is a key reason as to why the region lags behind the US and Eastern Asia in terms of 4G adoption.
How MVNOs target different market segments

GSMA Intelligence has identified eight separate categories of MVNOs, namely discount, telecom, media/entertainment, migrant, retail, business, roaming and M2M. ‘Discount’ and ‘telecom’ (i.e. an MVNO that forms part of a range of telecom services such as fixed phone and broadband) are the most prominent types of operation, accounting for 47% of the global MVNO market, while 18% are owned by companies from adjacent industries (e.g. retailers, banks, TV or media organisations), leaving 35 percent of the market to specialised providers focused on segments such as business, migrant, M2M and roamers. Globally, 93 MVNOs offer data-only services via dongles, tablets etc., accounting for nine percent of the market.

Media/entertainment and retail MVNOs have generated a considerable number of connections as many operate under well-known brands that reach beyond the telecoms industry. So while these categories respectively account for just eight percent and ten percent of MVNOs worldwide, both include large standalone operations in terms of connections. For example, in the media/entertainment sector, Virgin Mobile reported more than 3 million connections for its UK brand in Q3 2014, while in retail, Italy’s PosteMobile had 3.2 million. However, it is important to point out that a number of high-profile brands such as BestBuy, Time Warner and Comcast have tried and failed in the MVNO market, eventually closing or merging their operations. Indeed many MVNOs have gone out of business in recent years due to the low margins and highly competitive nature of the market, especially in Europe.

Figure 3: Market segmentation by category, MVNOs and sub-brands, global, 2014
Source: GSMA Intelligence
Operator sub-brands

GSMA Intelligence has also recorded 260 MNO sub-brands spread across 56 countries. Sub-brands differ from MVNOs in that they are wholly-owned and operated by their MNO parent, despite being marketed independently of that MNO. Some MVNO brands also operate as MNO sub-brands; those that have international presence include Virgin Mobile, which is a sub-brand in Australia, Canada, India and the US, and Red Bull Mobile, which can be found in Austria, Belgium, Hungary, Poland, South Africa and Switzerland.

Some 48 percent of sub-brands offer prepaid tariffs only, while the proportion that are contract-only stands at 21 percent. Sub-brands tend to be focused on prepaid tariffs as, like MVNOs, they are used by operators to attract new customers in lower price segments without diluting their core brand proposition or exposing it to excessive price competition. As such, the use of sub-brands is a strategy that tends to be limited to mature, saturated markets in Europe, Northern America and Asia Pacific – the average penetration rate for countries that feature sub-brands stands at 127 percent. In terms of categories, discount, media/entertainment and retail take the largest share of the sub-brand market with 38 percent, 23 percent and 16 percent respectively.

The role MVNOs play in driving operator growth

MVNOs are an attractive strategy to MNOs for several reasons. They can use them to gain more customers through different brands, increase their market share in mature markets, expand into niche segments, and also generate additional revenue from leasing out their networks. For example, in 2014 Nextel in Chile announced its intention to launch a prepaid MVNO to make it more competitive. Nextel’s president, Estanislao Pena, explained that its “[current] business model focuses on serving a niche of high-value customers and the current cost structure… is not profitable for the prepaid market”. The operator intends to offer prepaid services as an MVNO whilst continuing to serve the contract segment under its existing brand.

Our research found that for the 14 MNOs that report hosted MVNO connections, MVNOs made up 12 percent of total connections on average as of Q3 2014. However, MVNOs support MNO connections growth to varying levels. For example, as a market where handsets are largely unsubsidised and 48 percent of connections are on prepaid tariffs, Belgium is a country where MVNOs are well positioned to influence MNO growth, and MVNO connections accounted for a third of Mobistar’s 4.6 million connections in Q3 2014. Conversely, in Finland, where just seven percent of the connections base is prepaid, only two percent of DNA’s 2.5 million connections were MVNOs.

How the MVNO market is evolving

While the development of the MVNO market has long been encouraged by regulators in Europe, more recently there have been examples of MVNOs being used directly as a regulatory instrument. For example, as European markets have begun to consolidate, the European Commission (EC) has looked to use them as a tool to preserve competition in the region - by applying conditions related to MVNO access before approving mergers between MNOs. Prior to its merger with O2 (Telefonica) in Ireland, 3 was required to commit to selling up to 30 percent of the merged company’s network capacity to two
MVNOs. Shortly afterwards, to gain EC approval for its takeover of E-Plus in Germany, Telefonica itself agreed to similar conditions which could potentially create up to three new MVNOs in the country.

As their markets mature, MVNOs have become increasingly appealing to regulators in other countries. For example, MVNO licences were granted in China for the first time during 2014, numbering more than 40 by the end of the year. However the impact of MVNOs on the overall market remains negligible thus far - while regulator MIIT projected that the number of MVNO connections in the country would reach 50 million by the end of 2015, the figure was just 2.1 million at the end of 2014.

Perhaps the most interesting development in the Chinese MVNO market is the list of organisations that have acquired MVNO licences, which includes internet players such as Baidu and Alibaba (HiChina) and handset vendors Xiaomi, Lenovo and Foxconn. While the extent to which these companies will use their licences remains to be seen, in each case they will have seen the potential benefits of vertically integrating an MVNO with their core businesses and playing a bigger role in the overall mobile customer ecosystem. For example, Europe has already seen a third party ecosystem player enter the MVNO market, with WhatsApp launching a prepaid offer on E-Plus’ (since merged with O2) network in Germany. Being seen as an operator brand by consumers could give WhatsApp greater leverage as it rolls out its planned voice offering and further revenue generating services.

Reports from earlier this year suggest that Google also understands the potential benefits of MVNO integration and is planning to launch in the US on the networks of Sprint and/or T-Mobile. The US MVNO market is overcrowded and does not generate high levels of ARPU, so any such move would likely be part of a wider strategy by Google, for example to complement investments it is also making in fixed broadband and (reportedly) Wi-fi infrastructure with the ultimate goal of driving increased usage of its internet applications. An MVNO powered by a company with the global presence and customer base of Google could potentially cause considerable disruption for mobile operators, and presents the possibility of other major ecosystem players bringing asymmetric business models to the MVNO market.