

# COUNTRY: VIETNAM

SCORE: 40.07 | RANK: 24/24

Vietnam continues to develop relevant cyberlaws that will enhance confidence in the digital economy and facilitate cloud computing. However, gaps still exist in key areas.

Modern laws are in place for electronic commerce, electronic signatures, and intellectual property. However, only very limited laws are in place for cybercrime and privacy, and these would require significant expansion to align Vietnam with international models.

An additional risk is that Vietnam has not yet developed appropriate laws and policies on interoperability and government procurement. However, of greater concern is that Vietnam is in the process of erecting some trade barriers may hamper the development of cloud computing

and the digital economy, including a Draft Decree on IT Services and a Draft Decree on the Management, Provision and Use of Internet Services and Information on the Network. These decrees may require cloud service providers to establish a presence and locate servers in Vietnam, as well as other onerous registration and licensing requirements

Broadband penetration in Vietnam remains low, although there has been very strong growth in a number of key infrastructure indicators.

Overall, Vietnam's results have not changed significantly in the 2013 Scorecard, but the country's ranking has slipped one spot — to 24th.

Q VIETNAM	RESPONSE	EXPLANATORY TEXT
<b>DATA PRIVACY</b>		
1. Are there laws or regulations governing the collection, use, or other processing of personal information?	●	Vietnam does not have comprehensive privacy legislation, but it does have a short privacy section in its Law on E-Transactions 2005 that could serve as a foundation for more detailed legislation in the future.  Article 46 of the law covers information confidentiality in e-transactions: 1. Agencies, organizations, and individuals shall have the right to select security measures in accordance with the provisions of the law when conducting e-transactions. 2. Agencies, organizations, and individuals must not use, provide, or disclose information on private and personal affairs or information of other agencies, organizations, and/or individuals which is accessible by them or under their control in e-transactions without the latter's consents, unless otherwise provided for by law.  In addition, Articles 21 and 22 of the Law on Information Technology stipulates that more detailed regulations regarding information protection in the environment such as regulations on collection, process, use, storage, and provision of personal information, may be developed in the future.
2. What is the scope and coverage of privacy law?	Not applicable	Privacy law in Vietnam is extremely limited in scope, and full coverage will not be achieved until further regulations are developed.
3. Is the privacy law compatible with the Privacy Principles in the EU Data Protection Directive?	✘	Vietnam's privacy principles are very short and do not appear to be based on an international model.
4. Is the privacy law compatible with the Privacy Principles in the APEC Privacy Framework?	✘	Vietnam is a member of APEC, but its short privacy principles are not compatible with the APEC Privacy Framework at this stage.

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5. Is an independent private right of action available for breaches of data privacy?	Undecided	<p>Vietnam does not have a developed system of law relating to personal data protection. However, there appear to be some vague rights under the Civil Code cover privacy.</p> <p>Article 34.1 of the Civil Code provides that an individual's right to privacy "shall be protected by law," but there are no further regulations.</p> <p>Similarly, Article 34 of the Civil Code provides that the collection and publication of material relating to "the private life of an individual" is prohibited except with the consent of the individual or where such collection is in accordance with the decision of a "competent state authority." No definition is provided of information relating to the private life of an individual, and therefore the phrase may be broadly interpreted by the authorities.</p> <p>It is unclear whether these rights are actionable by individuals.</p>
6. Is there an effective agency (or regulator) tasked with the enforcement of privacy laws?	None	There is no privacy agency, although the Ministry of Information and Communications has broad responsibility for e-commerce law and regulation.
7. What is the nature of the privacy regulator?	Not applicable	
8. Are data controllers free from registration requirements?	✓	There are no registration requirements in Vietnamese privacy law.
9. Are cross-border transfers free from registration requirements?	✓	There are no registration requirements in Vietnamese privacy law.
10. Is there a breach notification law?	✗	There is no breach notification requirement in Vietnamese privacy or security law.
<b>SECURITY</b>		
1. Is there a law or regulation that gives electronic signatures clear legal weight?	✓	<p>The Law on E-Transactions 2005 includes provisions on e-signatures and certification of e-signatures and e-signature certificate services and management of e-signature services.</p> <p>On February 15, 2007, the government issued Decree No. 26 providing detailed regulations on the implementation of the Law on E-Transactions on digital signature and digital signature certification services, applicable to agencies and organizations providing digital signature certification services as well as agencies, organizations, and individuals seeking to use digital signature and digital signature certification services in electronic transactions. This decree has been amended by Decree No. 106/2011/ND-CP issued on November 23, 2011.</p>
2. Are ISPs and content service providers free from mandatory filtering or censoring?	✗	<p>Vietnam currently regulates access to both Internet infrastructure and content.</p> <p>(a) Internet users in Vietnam are required to connect to the Internet via a licensed Internet Service Provider (ISP);</p> <p>(b) Paragraph 3.2(c), Section II of Circular 04 on Internet prohibits any access to foreign ISPs by direct dialing international telephone numbers; and</p> <p>(c) Internet users are not permitted to use Internet application services to the extent that the use of those services is prohibited or is not expressly permitted by law pursuant to paragraph 3.2(e), Section II of Circular 04 on Internet.</p> <p>Article 47 of the Law on E-Transactions also contains a requirement for ISPs to cooperate with authorities in relation to online content regulation.</p>
3. Are there laws or enforceable codes containing general security requirements for digital data hosting and cloud service providers?	Limited coverage in legislation	Article 44 of the Law on E-Transactions 2005 contains a number of broad security requirements. However, the provision is vague and does not set out any detailed security requirements, which may be established by more detailed regulations in the future.
4. Are there laws or enforceable codes containing specific security audit requirements for digital data hosting and cloud service providers?	None	There are no security audit requirements in Vietnam.
5. Are there security laws and regulations requiring specific certifications for technology products?	No requirements	Vietnam is not a member of the Common Criteria Recognition Agreement (CCRA) < <a href="http://www.commoncriteriaportal.org">www.commoncriteriaportal.org</a> >. Certifications are generally not used in Vietnam.

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<b>CYBERCRIME</b>		
1. Are cybercrime laws in place?	✓	<p>In 2008 the Government issued Decree No.97/2008/ND-CP on the management, provision and use of Internet services and electronic information on the Internet, and this created a number of cyber offenses (Article 6).</p> <p>Offenses under the decree include:</p> <ul style="list-style-type: none"> <li>• the use of software tools, passwords, encryption codes or personal information to access Internet services illegally;</li> <li>• the theft and publication of a password, access code or private information of an organization;</li> <li>• use of the Internet with the intention to harass, threaten, or defame another person; and</li> <li>• the creation and dissemination of computer viruses on the Internet.</li> </ul> <p>Articles 224, 225, 226, 226a and 226b of the revised Penal Code, which was issued on June 19, 2009, specify cyber offenses, including: spreading computer viruses; obstructing or disordering the operation of computer networks; illegally uploading information; and, illegally accessing computer networks. These offenses are subject to a fine of from 10 million to 100 million VND (approximately US\$500 to US\$5,000) or significant prison terms.</p>
2. Are cybercrime laws consistent with the Budapest Convention on Cybercrime?	✗	Cybercrime laws in Vietnam cover a limited range of activities and are not as extensive as the offenses contained in the Convention on Cybercrime.
3. What access do law enforcement authorities have to encrypted data held or transmitted by data hosting providers, carriers, or other service providers?	Unlimited access	<p>Under the Law on National Security (Law No. 32/2004/QH11 passed by the National Assembly on December 3, 2004), the state agency in charge of the protection of national security has the right to examine communication equipment or computers and computer networks and materials of individuals and organizations if there is any reasonable suspicion of a breach of national security. It is therefore very likely that this security agency shall have the right to access all information, including encrypted data, in case of a suspected violation of national security.</p> <p>In addition, Decree 55 and Decision 71 require Internet service suppliers to arrange necessary technical and material facilities for the relevant state authorities to take measures to protect national security as well as to protect information and network security. Though the measures are not described in specific detail, they likely include access to encrypted data stored or used on the Internet and in the network.</p>
4. How does the law deal with extraterritorial offenses?	Limited coverage	<p>The Law on National Security provides that any foreign individual who violates the national security of Vietnam outside the territory of Vietnam shall be penalized in accordance with the laws of Vietnam, if this is stipulated in an international treaty to which Vietnam has acceded or is a participant.</p> <p>However, Vietnam is not a party to any relevant international treaties on information security.</p>
<b>INTELLECTUAL PROPERTY RIGHTS</b>		
1. Is the country a member of the TRIPS Agreement?	✓	Vietnam became a member of the TRIPS Agreement in 2007.
2. Have IP laws been enacted to implement TRIPS?	●	As a developing nation, Vietnam has been given more time to comply with TRIPS and is working toward this goal. The criminalization of acts of piracy remains pending due to a lack of implementing guidance for the revised Penal Code, which became effective on January 1, 2010.
3. Is the country party to the WIPO Copyright Treaty?	✗	Vietnam has not signed the WIPO Copyright Treaty.
4. Have laws implementing the WIPO Copyright Treaty been enacted?	●	Intellectual Property law in Vietnam is largely compliant with the key provisions in the treaty.
5. Are civil sanctions available for unauthorized making available (posting) of copyright holders' works on the Internet?	✓	Article 28(10) of the Law on Intellectual Property 2005 includes civil sanctions for posting copyrighted works online.

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6. Are criminal sanctions available for unauthorized making available (posting) of copyright holders' works on the Internet?	✓	<p>Article 170a of the Revised Penal Code 2009 may potentially impose criminal sanctions for posting copyrighted works online, but only if the posting was on a commercial scale.</p> <p>Otherwise, the "catch-all" provisions of Article 131 could apply.</p> <p>Article 226 of the revised Penal Code concerns the "Illegal uploading information onto or using information on computer networks, telecommunications networks and Internet":</p> <p>1. Those who commit any of the following acts of infringing upon interests of agencies, organizations and individuals, social order and safety, causing serious consequences, shall be imposed a fine of between 10 million and 100 million dong, non-custodial reform of up to three years or a prison term of between six months and three years:</p> <p>a) Uploading onto computer networks, telecommunications networks and Internet information contrary to law, but not falling into cases specified in Articles 88 and 253 of this code;</p> <p>b) Trading in, exchanging, donating, modifying, or making public lawful private information of other agencies, organizations and individuals on computer networks, telecommunications networks and Internet without permission of owners of such information;</p> <p>c) Other acts of illegally using information on computer networks, telecommunications networks, and Internet.</p>
7. Are there laws governing ISP liability for content that infringes copyright?	✗	There do not appear to be specific laws allocating liability to ISPs for infringing content. This issue is untested in the courts in Vietnam.
8. Is there a basis for ISPs to be held liable for content that infringes copyright found on their sites or systems?	✗	There do not appear to be specific laws allocating liability to ISPs for infringing content. This issue is untested in the courts in Vietnam.
9. What sanctions are available for ISP liability for copyright infringing content found on their site or system?	Not applicable	There do not appear to be specific laws allocating liability to ISPs for infringing content.
10. Must ISPs take down content that infringes copyright, upon notification by the right holder?	✗	There is currently no specific regulation on the take-down, by an ISP, of infringing content, upon notification by the right holder. Generally the rights holder will have the right to seek the assistance of a competent state authority (the Inspectorates of Ministry of Culture, Sports & Tourism, Ministry of Information & Communication, or the courts) to prevent or stop the infringement of his or her rights. In these circumstances the authorities would state the time frame for compliance with any order it might make.
11. Are ISPs required to inform subscribers upon receiving a notification that the subscriber is using the ISP's service to distribute content that infringes copyright?	✗	There are no notification requirements in place.
12. Is there clear legal protection against misappropriation of cloud computing services, including effective enforcement?	No protection	There are no specific legal protections for cloud computing. However, the "catch-all" nature of Article 131 of the Penal Code might provide some protection. Vietnam also has significant enforcement issues in the area of intellectual property protection, as well as gaps in privacy protection.
<b>SUPPORT FOR INDUSTRY-LED STANDARDS &amp; INTERNATIONAL HARMONIZATION OF RULES</b>		
1. Are there laws, regulations or policies that establish a standards-setting framework for interoperability and portability of data?	✓	On June 29, 2006, the National Assembly of Vietnam promulgated the Law on Standards and Technical Regulations, effective January 1, 2007.
2. Is there a regulatory body responsible for standards development for the country?	✓	<p>The Directorate for Standards, Metrology and Quality (TCVN) &lt;www.tcvn.gov.vn&gt; is a government agency (at the level of General Department, the head of which bears ranking of quasi-vice minister) under the Ministry of Science and Technology (MOST) having responsibility for advising the government in the field of standardization, meteorology, and quality management and representing Vietnam in international and regional organizations.</p> <p>Standards are developed and published by the Vietnam Standard and Quality Institute &lt;vsqi.gov.vn&gt;.</p>

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3. Are e-commerce laws in place?	✓	The Law on E-Transactions contains functional equivalence provisions including for electronic signatures and electronic communications. The legislation also contains provisions creating legal rules that govern the circumstances surrounding when an electronic contract is formed, such as time and place of dispatch and receipt of an electronic message.
4. What international instruments are the e-commerce laws based on?	UNCITRAL Model Law on E-Commerce	The Law on E-Transactions is based on the UNCITRAL Model Law on Electronic Commerce (1996).
5. Is the downloading of applications or digital data from foreign cloud service providers free from tariff or other trade barriers?	✗	<p>The laws of Vietnam do not require foreign software suppliers to obtain import licences or to set up local establishments or otherwise meet investment requirements in connection with the supply of software to local customers in Vietnam — both in the case of digital transactions (such downloading software via the Internet) and in the case of the import of software on physical media.</p> <p>However, regulations relating to technology transfer and industrial property licensing may (in certain circumstances) apply, both to software downloaded and to software imported on physical media.</p> <p>Under Decree 45 and Circular 1254 (collectively the Technology Transfer Regulations), a contract for “technology transfer” must:</p> <ul style="list-style-type: none"> <li>(a) contain certain compulsory terms and conditions, including terms relating to price and duration;</li> <li>(b) be approved by and/or registered with the Ministry of Science and Technology; and</li> <li>(c) where applicable, be registered at the National Office of Industrial Property (NOIP).</li> </ul> <p>The definition of “technology transfer” under the Technology Transfer Regulations is very widely drafted and is potentially broad enough in scope to cover almost any activity concerned with supply of technology or licensing of intellectual property rights whether within Vietnam or from overseas to Vietnam, and related services.</p> <p>However, Article 1.3 of Circular 1254 creates further uncertainty because it provides that the transfer of computer software is subject to the Technology Transfer Regulations only if it accompanies other items of technology listed in Decree 45 used by the transferee for the purposes of manufacturing products or providing services. Software that does not “accompany” such other items of technology is not subject to the Technology Transfer Regulations.</p>
6. Are international standards favored over domestic standards?	🕒	Recent standards development processes have favored international standards. However, older standards development processes favored national standards, and many of these are still in use.
7. Does the government participate in international standards-setting process?	✓	Vietnam participates in relevant ISO and IEC standard-setting processes and is a full member of the ISO.
<b>PROMOTING FREE TRADE</b>		
1. Are any laws or policies in place that implement technology neutrality in government?	✗	Vietnam has a range of procurement decrees and circulars that set out government procurement policy. Although they promote an open and transparent system of procurement, they do not discuss technology neutrality.
2. Are cloud computing services able to operate free from laws or policies that mandate the use of certain products (including, but not limited to, types of software), services, standards, or technologies?	✗	In 2009 the Vietnam Minister of Information and Communications announced that it was mandatory that “100% of clients of IT divisions of government agencies must be installed with open source software.” Note that a lower limit (70%) applied to non-IT agencies.
3. Are cloud computing services able to operate free from laws or policies that establish preferences for certain products (including, but not limited to, types of software), services, standards, or technologies?	✗	The 2009 announcement by the Vietnam Minister of Information and Communications includes mandatory requirements for the selection of open source software.
4. Are cloud computing services able to operate free from laws that discriminate based on the nationality of the vendor, developer, or service provider?	✗	<p>The April 20, 2010, Prime Minister’s Directive on Public Procurement states that international bids will be invited only when local goods and equipment cannot meet the requirements of a tender.</p> <p>In 2012, Vietnam became an observer to the WTO plurilateral Agreement on Government Procurement, and this may encourage further liberalization.</p>

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<b>ICT READINESS, BROADBAND DEPLOYMENT</b>		
1. Is there a national broadband plan?	<ul style="list-style-type: none"> <li>By 2015, 20-30% of households to have access to broadband</li> <li>By 2020, 50-60% of households have access to broadband, of which 20-30% access via fiber optic cable</li> </ul>	<p>In February 2011, the Vietnamese Prime Minister approved the Master Plan on Information Technology (Decision No. 1755/QĐ-TTg) &lt;<a href="http://www.digitaldivide.org/wp-content/uploads/2011/08/Vietnam-Broadband-Policy.pdf">www.digitaldivide.org/wp-content/uploads/2011/08/Vietnam-Broadband-Policy.pdf</a>&gt;, which sets a number of goals:</p> <ul style="list-style-type: none"> <li>By 2015: <ul style="list-style-type: none"> <li>provide wireless broadband coverage to 85% of the population</li> <li>20-30% of households have access to broadband</li> </ul> </li> <li>By 2020: <ul style="list-style-type: none"> <li>completion of the broadband network to almost all villages and hamlets</li> <li>provide wireless broadband coverage to 95% of the population</li> <li>50-60% of households have access to broadband, of which 20-30% access via fiber optic cable</li> </ul> </li> </ul>
2. Are there laws or policies that regulate the establishment of different service levels for data transmission based on the nature of data transmitted?	No regulation and limited public debate	There has limited formal and public consideration of net neutrality regulation in Vietnam at this stage.
<b>3. Base Indicators</b>		
3.1. Population (2011)	88,791,996	In 2011, the population of Vietnam increased by 1%. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) < <a href="http://www.itu.int/ITU-D/ict/publications/world/world.html">www.itu.int/ITU-D/ict/publications/world/world.html</a> >]
3.2. Urban Population (%) (2011)	31%	[United Nations, Department of Economic and Social Affairs, Population Division (2012). World Urbanization Prospects: The 2011 Revision, < <a href="http://esa.un.org/unup/CD-ROM/Urban-Rural-Population.htm">esa.un.org/unup/CD-ROM/Urban-Rural-Population.htm</a> >]
3.3. Number of Households (2011)	17,936,000	In 2011, the number of households in Vietnam increased by 4%. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) < <a href="http://www.itu.int/ITU-D/ict/publications/world/world.html">www.itu.int/ITU-D/ict/publications/world/world.html</a> >]
3.4. Population Density (people per square km) (2010)	280	[World Bank, Data Catalog, Indicators, Population Density (2012) < <a href="http://data.worldbank.org/indicator/EN.POP.DNST">data.worldbank.org/indicator/EN.POP.DNST</a> >]
3.5. Per Capita GDP (US\$ 2011)	\$1,411	In 2011, the per capita GDP for Vietnam increased by 5.9% to US\$1,411. [World Bank, Data Catalog, Indicators: GDP per capita, current US\$ (2012) < <a href="http://data.worldbank.org/indicator/NY.GDP.PCAP.CD">data.worldbank.org/indicator/NY.GDP.PCAP.CD</a> > and GDP growth, annual % (2012) < <a href="http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG">data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG</a> >]
3.6. Public Cloud Services Market Value (2011) (Billions of US\$)	—	Vietnam is not included in this Gartner forecast. [Gartner, Forecast Overview: Public Cloud Services, Worldwide, 2011-2016 (August 2012 Update) < <a href="http://www.gartner.com/id=2126916">www.gartner.com/id=2126916</a> >]
3.7. Personal Computers (% of households) (2011)	16%	In 2011, 16% of households in Vietnam had personal computers. This is a 12.8% increase since 2010 and ranks Vietnam 114 out of 182 countries surveyed. The growth from 2010 is below the five-year compound annual growth rate (CAGR) from 2006-2011 of 16.4%. [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) < <a href="http://www.itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx">www.itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx</a> >] Note: In some jurisdictions this is an estimate and subsequent editions of the ITU ICT Indicators Database may update this indicator for prior years.
<b>4. ICT and Network Readiness Indicators</b>		
4.1. ITU ICT Development Index (IDI) (2011) (Score is out of 10)	3.68	Vietnam's ITU ICT Development Index (IDI) for 2011 is 3.68 (out of 10), resulting in a rank of 81 (out of 161 economies). The 2011 IDI for Vietnam has increased by 7.9%, and the IDI ranking has improved by five places from a rank of 86 since 2010. [International Telecommunication Union (ITU), Measuring the Information Society (2012) < <a href="http://www.itu.int/ITU-D/ict/publications/idi/2012">www.itu.int/ITU-D/ict/publications/idi/2012</a> >] Note: In some jurisdictions this is an estimate and subsequent editions of the ITU ICT Indicators Database may adjust this indicator, both for 2011 and prior years.

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4.2. World Economic Forum Networked Readiness Index (NRI) (2012) (Score is out of 7)	4.24	Vietnam has a Networked Readiness Index (NRI) score of 4.24 (out of 7), resulting in a rank of 65 (out of 142 economies) and a rank of 4 (out of 34) in the lower-middle income grouping of economies. The 2012 NRI for Vietnam has increased by 8.7% and declined from a rank of 55 since 2011.  [World Economic Forum, Global Information Technology Report (2012) <www.networkedreadiness.com/gitr>]
4.3. International Connectivity Score (2011) (Score is out of 10)	2.73	Vietnam has a Connectivity Score of 2.73 (out of 10), resulting in a rank of 13 (out of 25) in the resource-driven grouping of countries/economies.  [Nokia Siemens, Connectivity Scorecard (2011) <www.connectivityscorecard.org>]
4.4. IT Industry Competitiveness Index (2011) (Score is out of 100)	27.10	Vietnam has an IT Industry Competitiveness Index Score of 27.1 (out of 100), resulting in a rank of 53 (out of 66 countries/economies included in the index). The 2011 index score is a 12.4% increase on the 2009 score. Vietnam has moved up the ranking by three places since 2009.  [Business Software Alliance (BSA) / Economist Intelligence Unit (EIU), IT Industry Competitiveness Index (2011) <globalindex11.bsa.org>]
5. Internet Users and International Bandwidth		
5.1. Internet Users (2011)	31,139,353	[calculated from 8.3.1. and 8.5.2.]
5.2. Internet Users as % of Population (2011)	35%	In 2011, 35% of the population in Vietnam used the Internet, resulting in a ranking of 105 out of 199 countries surveyed. This is a 14.4% increase since 2010. The growth from 2010 is below the five-year CAGR from 2006 to 2011 of 15.2%.  [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (December 2012) <www.itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx>]  Note: There may be some variations as to how countries calculate this. Some countries base this upon all or part of the population, such as between 16 and 72 years of age.  Note: In some jurisdictions this is an estimate and subsequent editions of the ITU ICT Indicators Database may adjust this indicator, both for 2011 and for prior years.
5.3. International Internet Bandwidth (bits per second per Internet user) (2011)	9,998	Vietnam's International Internet Bandwidth (per Internet user) has increased by 100% since 2010.  [International Telecommunication Union (ITU), Measuring the Information Society (2012) <www.itu.int/ITU-D/ict/publications/idi/2012>]
5.4. International Internet Bandwidth (2011) (total gigabits per second [Gbps] per country)	311	Vietnam has increased its International Internet Bandwidth by 132% since 2010 to 311 Gbps and is ranked 38 out of 188 countries surveyed. The growth from 2010 is above the five-year CAGR from 2006 to 2011 of 113.2%.  [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) <www.itu.int/ITU-D/ict/publications/world/world.html>]
6. Fixed Broadband		
6.1. Fixed Broadband Subscriptions (2011)	3,838,206	Vietnam has increased the number of fixed broadband subscribers by 5% since 2010, to 3,838,206, and is ranked 21 out of 182 countries surveyed. The growth from 2010 is below the five-year CAGR from 2006 to 2011 of 49.3%.  [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) <www.itu.int/ITU-D/ict/publications/world/world.html>]  Note: In some jurisdictions this is an estimate and subsequent editions of the ITU ICT Indicators Database may adjust this indicator, both for 2011 and for prior years.
6.2. Fixed Broadband Subscriptions as % of Households (2011)	21%	[calculated from 8.3.3. and 8.6.1.]  Note: This may be skewed by business usage in some countries (refer to OECD comments about this).
6.3. Fixed Broadband Subscriptions as % of Population (2011)	4%	Vietnam has increased its fixed broadband subscriptions (as a share of the population) by 3% since 2010, which is below the five-year CAGR from 2006 to 2011 of 47.7%. This ranks Vietnam 21 out of 187 countries surveyed.  [International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (July 2011) <www.itu.int/ITU-D/ICTEYE/Indicators/Indicators.aspx>]
6.4. Fixed Broadband Subscriptions as % of Internet Users (2011)	12%	[calculated from 8.5.1 and 8.6.1]

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7. Mobile Broadband		
7.1. Mobile Cellular Subscriptions (2011)	127,318,045	<p>In 2011, Vietnam increased the number of mobile cellular subscriptions by 14.1% and is ranked 8 out of 195 countries surveyed. The number of subscriptions account for 143% of the population.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) &lt;<a href="http://www.itu.int/ITU-D/ict/publications/world/world.html">www.itu.int/ITU-D/ict/publications/world/world.html</a>&gt;]</p> <p>Note: This figure may be inflated due to multiple subscriptions per head of population but excludes dedicated mobile broadband devices (such as 3G data cards and tablets).</p>
7.2. Active Mobile Broadband Subscriptions per 100 inhabitants (2011)	18%	<p>Vietnam has increased the number of active mobile broadband subscriptions (as a share of the population) by 125% since 2010. This ranks Vietnam 63 out of 144 countries surveyed.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) &lt;<a href="http://www.itu.int/ITU-D/ict/publications/world/world.html">www.itu.int/ITU-D/ict/publications/world/world.html</a>&gt;]</p> <p>Note: This refers to the sum of standard mobile-broadband and dedicated mobile broadband subscriptions to the public Internet. It covers actual subscribers, not potential subscribers, even though the latter may have broadband-enabled handsets.</p> <p>Note: In some jurisdictions this is an estimate and subsequent editions of the ITU ICT Indicators Database may adjust this indicator, both for 2011 and for prior years.</p>
7.3. Number of Active Mobile Broadband Subscriptions (2011)	16,014,991	<p>In 2011, Vietnam has increased the number of active mobile broadband subscriptions by 128% and is ranked 63 out of 145 countries surveyed.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec 2012) &lt;<a href="http://www.itu.int/ITU-D/ict/publications/world/world.html">www.itu.int/ITU-D/ict/publications/world/world.html</a>&gt;]</p>