

New rules and regulations on IT and fair competition - Trends and impact



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Introduction

As Information Technology (IT) becomes the cornerstone of today's economy, the use of illegal IT continues to generate much debate. The illegal use of IT has been, and continues to be, an issue in both the consumer and enterprise arenas; additionally, as the global economy becomes progressively intertwined, and competition amongst players increases, the focus has slowly shifted to the unfair competitive advantage arising from the use of illegal IT. The use of illegal IT is no longer solely a matter of the infringement of intellectual property (IP) rights, but has now become a driver for unfair competitive advantage in some circumstances - an issue which would need to be addressed under an unfair competition and/or fair trade legislative framework.

For example, a manufacturer using illegal IT in the process of manufacturing a product incurs a lower cost than a

competitor using legal IT. This lower cost in turn may allow the manufacturer to offer its products at a lower price to its buyers, say, a retailer. The lower cost of goods sold may also then allow the retailer to offer its goods to the end user at a lower price when compared to its competitors. As can be seen, the use of illegal IT has a greater impact on an entire product supply chain (and indeed, has the potential to impact the global economy on the whole), and is not confined to a single entity along the supply chain.

This paper examines several areas pertaining to the use of illegal IT and its impact on fair competition - the trends arising as a result of the unfair advantage in business competition from use of illegal IT, the expected impact of rules and regulations concerned with illegal IT use and fair competition, and potential strategies that can be employed to address the expected impact.

Trends of unfair business advantage resulting from the use of illegal IT

Overview

The use of illegal IT is not a new issue in the global economy. For years, consumers and enterprises alike have relied on illegal IT for their computing needs for a variety of reasons, such as cost, complacency, or lack of education. As legislation designed to curb software IP rights infringement has become more commonplace in both the developing and developed countries, and enforcement of this legislation has tightened, the use of illegal IT has decreased. In addition, the increasing awareness of potential security risks as a result of using illegal IT has also contributed to the gradual decrease in its use in the enterprise environment.

However, the use of illegal IT remains a contentious issue in the business arena - players that use illegal IT in their business operations are essentially “subsidizing” the cost of providing their services or products. By capitalizing on this unfair cost reduction, such players can then offer their services or products at a lower price - essentially making it more difficult for businesses using legal IT to compete on a level playing field. This in turn can then translate into greater economic problems, such as the loss of revenue and jobs, for an industry or country that is playing by the IT rules.

This chapter looks at the trends arising as a result of the unfair competitive advantage when businesses use illegal IT. Legislation plays an important role in addressing this issue, and is hence given the appropriate emphasis in the analysis that follows. In addition, other trends and recent developments are also presented to give a balanced view on the negative impact of the use of illegal IT on business operations.

Finally, the last section of this chapter discusses different responses to the new IT legislation to prevent unfair competition. This involves the responses from stakeholders such as industry players, industry associations, law firms, trade affairs experts, and academics.

Legislation within the United States that involves IT rules and regulations to encourage fair competition

Given the bleak economic situation over the last few years and the increase in protectionism in the United States' domestic economy to prevent further losses of jobs and revenue to other countries, unfair competitive practices have received a significant amount of attention. The use of illegal IT may skew the playing field and create competitive benefits for the offender; and when a foreign company does so, it may be considered an unfair trade practice.

The United States has been at the forefront of addressing unfair competitive behaviour as a result of the use of illegal IT. The issue is broadly recognized in the United States, from the federal level down to the grassroots level. The state and federal governments in the United States are treating the problem of unfair competitive behaviour from the use of illegal IT very seriously, and have started to introduce targeted solutions - in the form of specific legislation, as well as increased enforcement avenues. Legislation has been put forward to address this issue in the traditional economy, as well as on the Internet. In addition, grassroots movements have started to target the issue as well.

One of the first states to introduce such specific legislation was the state of Louisiana in 2010. Other states have followed closely behind and introduced their own measures that take aim at IT and fair competition. In this paper, we take a closer look at the State of Washington's Unfair Competition Act, a similar piece of legislation that took effect in July 2011. The rationale for selecting Washington for further insight is that Washington is one of the more trade-dependent states in the United States^{1,2}, and its volume of manufactured imports in 2011 was more than 30% higher than that of Louisiana³.

The following sections give a more detailed analysis into the legislative and non-legislative trends that have developed to ensure that illegal IT is not used by companies to unfairly create an advantageous business environment.

Details of Washington State's House Bill 1495

In July 2011, a new law aimed at tackling the unfair competitive advantage for manufacturers using illegal IT (or stolen IT) in its business operations⁴ was passed in the State of Washington. Known as Washington's House Bill 1495 or as the "Unfair Competition Act" (UCA), the law defines "illegal IT" as hardware or software acquired

or utilized in violation of applicable law, and without the IT owner's authorization. The UCA was designed to eliminate any unfair competitive advantage by manufacturers who use illegal or stolen IT to the detriment of manufacturers using legally acquired IT, and in doing so, assist in creating an investment-friendly environment for Washington. Targeting the trade ecosystem is an important part of the UCA, as Washington is one of the more trade-dependent states in the United States.

Figure 1: Details of the UCA⁵

Details on potential liable parties and damages as stated in the UCA

- ▶ Any manufacturer of products that are sold or offered for sale in Washington can have actions brought against it. A manufacturer can be held liable as long as illegal IT is used in its business operations during the manufacturing process of such a product, regardless of whether the place of manufacture is within Washington
- ▶ Third parties with annual revenues of more than US\$ 50m (such as large, chain store retailers) can also be held responsible if they sell or offer for sale products from manufacturers that utilize illegal IT in their business operations - but only after certain conditions are met (e.g., failure of manufacturer to appear in court)
- ▶ The product in question can be sold stand-alone or as a part of another product
- ▶ Possible outcomes include:
 - ▶ in the event of a successful case brought against a manufacturer, the court may limit future sale of the product(s) in Washington, impose damages that amount to the greater of actual damages (e.g., economic loss suffered by the competitor) or the retail price of the stolen IT, and award costs and reasonable attorneys' fees incurred by the plaintiff
 - ▶ in the event of a successful case brought against a third party, the court may award damages that amount to the lesser of the retail price of the stolen IT, or US\$ 250,000
 - ▶ a grace period for third parties exist - no award of damages can be enforced before January 2013

¹ Source: US Census Bureau, *2011 US Imports of Goods by State of Destination, by NAICS-Based Product*

² Seattle, the major port of entry in the state of Washington, ranks as the seventh largest US port by trade volume. Seattle also ranks second for goods imported from Asia

³ Source: US Census Bureau, *2011 US Imports of Goods by State of Destination, by NAICS-Based Product*

⁴ Includes inventory, logistics, and accounting systems

⁵ Source: State of Washington House Bill 1495, Chapter 98, 2011 Laws

Figure 2: Eco-system illustration⁶

Eco-system illustration

- ▶ US firm A contracts an international manufacturer to make toys for sale at its chain stores in Washington and other states. US firm B, a rival of US firm A in Washington, sues the international toy exporter for unfair competition
- ▶ The international manufacturer, which uses unlicensed software in carrying out its business, is found guilty by the Washington court but refuses to pay damages to firm B. In that case, firm B has the right to sue firm A, the third party, for the damages caused by the overseas contractor. However, by refusing to pay the damages, the international manufacturer is putting itself at the risk of export blacklisting and its products may be taken off the shelves

1. The ability of a manufacturer to comply with legal IT requirements
2. The enforcement and audit capabilities of third parties in ensuring that the manufacturers of products they sell/offer for sale adhere to the legal IT requirements
3. The ability (financially and time-wise) and propensity of competitors to file lawsuits against competitors that are using illegal IT to gain an unfair competitive advantage

Additionally, the application of the UCA is fairly narrow as it excludes the following situations:

1. The product is copyrightable (e.g., films, movies or books) or manufactured for a copyright owner and consists of elements of copyrighted works
2. The product is regulated by the United States Food and Drug administration (FDA); alternatively, if the product is primarily used as a medical or medicinal product
3. The product is a food or a beverage
4. The illegal IT in question is based on a violation of an open source license
5. The illegal IT is based on a patent infringement or misappropriation of a trade secret

The effectiveness of the UCA will likely be a function of several factors:

⁶ Source: Bangkok Post; EY analysis



Similar legislation in other states

Bills similar to Washington's UCA have been introduced in several other states, including Arizona, California, Connecticut, Illinois, Indiana, Kentucky, Louisiana, Massachusetts, Missouri, New York, North Carolina, Oregon and Utah. However, these bills are largely in their infancy, or are still in the initial study phase.

The table in figure 3 gives a summary of bills related to stolen IT and the status of each bill as of early 2012.

Figure 3: Summary of similar illegal IT bills in the United States⁷

State	Bill ⁸ number: Bill title	Status of Bill	Comment
Washington	SHB 1495: Sale of products – Stolen or misappropriated information technology	Bill passed on April 18, 2011	In effect as of July 22, 2011
Arizona	SB 1529: Stolen or misappropriated information technology	Referred to Senate Commerce and Energy Committee on February 2, 2011	Includes some amendments to the Washington UCA
California	AB 473: Unfair competition	Died in Judiciary Committee on February 1, 2012	Now a 2-year UCA Includes some amendments to the Washington Bill
Connecticut	HB 6619: Unfair business practices	Referred to Joint Committee on Judiciary on March 18, 2011	Includes some amendments to the Washington UCA
Illinois	SB 1861: Software piracy SB 1075: Unfair Use of Information Technology Act ⁹	SB 1861: Re-referred to Senate Assignments Committee on April 8, 2011 SB 1075: Amendments to the Bill re-referred to the Senate Assignments Committee on July 23, 2011	SB 1861 was a placeholder bill to create the “Software Piracy Act” Amendments to SB 1075 include language regarding illegal IT
Indiana	SB 529: Stolen or misappropriated information technology	Referred to Senate Judiciary Committee on January 18, 2011	Permits plaintiff the right to “enter onto the defendant's business premises to inspect any information technology, records, files, or other evidence that is relevant to the alleged unfair practice” ¹⁰
Kentucky	HR 113 (11RS): Unfair trade practices from stolen information technology	Adopted by House on February 25, 2011	Non-binding resolution “urging the Interim Joint Committee on Judiciary to examine unfair trade practices from stolen information technology and to urge all stakeholders to develop a legislative solution to address these unfair trade practices” ¹¹
Louisiana	SB 415: Unfair trade practices and consumer protection law	Signed by Executive on June 1, 2010	One of the first pieces of legislation to address the unfair competitive advantage that can result from the use of illegal IT
Massachusetts	H.2842: Unfair competition	Referred to Joint Judiciary Committee on January 24, 2011. Hearing scheduled for February 28, 2012	Includes most amendments to the Washington UCA
Missouri	HB 1022: Stolen information technology	Referred to International Trade and Job Creation Committee on April 12, 2011	Fairly identical to the Washington UCA
New York	A.3915: Illegal use of stolen or misappropriated software A.1544: Unfair competition	A.3915: Re-referred to the Economic Development, Job Creation, Commerce and Industry Committee Economic Development Committee on January 4, 2012 A.1544: Referred to the President, the Federal Trade Commission and the United States Congress on June 21, 2012	Fairly identical to the Washington UCA
North Carolina	HB 672: Use of misappropriated IT an unfair practice	Referred to House Rules Committee on April 7, 2011	Study bill Fairly identical to the Washington UCA
Oregon	HB 3315: Prohibits sale of product produced using stolen or misappropriated information technology	In Business and Labor Committee as of June 30, 2011	Includes some amendments to the Washington UCA
Utah	SB 201: Protection against unfair competition through misappropriated technology	Died in Senate Committee on March 10, 2011	Differs somewhat from the Washington UCA

Thus far, response has been relatively encouraging in terms of the number of states with proposed bills addressing stolen IT and its impact on unfair competition. The number of bills that have been introduced shows that many states have started

to seriously consider the potentially large economic impact from anti-competitive behaviour as a result of using illegal IT. While it is likely that similar legislation will be passed across the United States, it remains to be seen if such legislation will be successful in terms of actual enforcement.

⁷ Source: J. Teague, C. Miller, M. Johnson

⁸ Bills are designated as follows: Assembly (A), Assembly Bill (AB), House (H), House Bill (HB), House Resolution (HR), Senate Bill (SB), and Substitute House Bill (SHB)

⁹ SB 1075 was originally referred to by the title “Civil Law”

¹⁰ Source: Indiana Senate Bill No. 529, Introduced Version

¹¹ Source: Kentucky House Resolution 113, 11 Regular Session

Similar legislation at the federal level

At the federal level in the United States, antitrust (or anti-competitive) behaviour is regulated by the Federal Trade Commission (FTC), an independent agency established by Congress. Currently, the FTC does not enforce any specific laws or acts pertaining to the use of illegal IT and its impact on unfair competition.

Figure 4: Attorneys-General letter to the FTC, and FTC's response¹²

Attorneys-General urge the FTC to take stronger action

- ▶ A group of Attorneys General from 36 US States and 3 US Territories wrote to the FTC in October 2011, stating their intention to use either their respective State laws or "Mini FTC Acts" to prosecute manufacturers using illegal IT to gain an unfair competitive advantage
- ▶ These Attorneys General strongly urged the FTC to use its authority and resources to take stronger action against the offending manufacturers to protect the competitive landscape for domestic manufacturers
- ▶ In response, the FTC acknowledged the unfair competitive advantage that can arise from using illegal IT, and stated that it is "deeply committed to exploring issues at the intersection of competition and intellectual property"

In his 2012 State of the Union address, US President Barack Obama indicated that the American manufacturing industry was being negatively impacted due to unfair competitive practices by foreign manufacturers. For example, by using illegal IT, some foreign manufacturers essentially had lower costs of production, giving rise to predatory pricing which made it difficult for American manufacturers to fairly compete. This in turn affects the viability of the American manufacturing industry, and results in losses in manufacturing revenues as well as jobs.

In order to moderate the impact of unfair competitive behaviour by foreign manufacturers, one of the steps taken by President Obama was the creation of the Interagency Trade Enforcement Centre (ITEC). Newly established in late February 2012, the ITEC "will bring the full resources of the federal government to bear to investigate and counter unfair trade practices around the world"¹³ by focusing on a joint approach with various government agencies to achieve its objectives.

Given that the ITEC is tasked with ensuring fair competition under international trade agreements and domestic trade laws, it is likely that the role of illegal IT in unfair competition will be investigated and pursued where relevant. This would be advantageous in setting a federal precedent with regards to the impact of illegal IT on a level playing field, which would be a boost to domestic legislation such as the UCA. In addition, greater scrutiny on this issue by the United States at a federal level could have an effect on potentially similar international legislation.

Other trends within the United States

Aside from the trends of legislative efforts that deal with illegal IT as an unfair competitive advantage, there exist other debates around the regulation of IT and IPR. In the United States, the struggle to extend existing laws, or introduce new ones, to cover the issues of IP violations on the Internet¹⁴ continues. There have been two main trends in terms of dealing with this growing issue - the first would be to design new rules and regulations specifically for Internet-only circumstances; while the second would be to view the Internet as an equivalent to the real world, and thus give similar treatment to an Internet-based violation as one would treat a real-world situation. However, extending a real-world understanding of a situation to deal with online issues can sometimes backfire.

Dealing with the issue of illegal IT is not easy, regardless of how and where these transgressions manifest themselves. While it appears that legislation on real-world situations have started to influence the developments in the online environment, care should be taken in applying such rationale as the Internet is, in actuality, a very different environment that plays by its own set of rules. Despite this understanding, it can be assumed that progress or decisions made in the real-world would have an impact on the trends and developments seen online. This would be especially true of IT legality issues, as technology remains the basis of all Internet activity, and the Internet cannot yet be considered a separate jurisdiction with its own set of binding regulations.

¹² Attorneys-General's letter to the FTC, 4 November 2011; FTC Chairman's letter to the State of Washington Attorney-General, 13 March 2012

¹³ Source: The White House, *Executive Order - Establishment of the Interagency Trade Enforcement Center*

¹⁴ Which can be considered a form of illegal IT

Figure 5: SOPA/PIPA and the ensuing protest on January 18, 2012¹⁵

SOPA and PIPA

- ▶ If the UCA is to be viewed as an example of a real-world legislation that has an analogous online counterpart, its corresponding bill to deal with similar online situations could be the Congress-introduced Stop Online Piracy Act (SOPA) and the Protect IP Act (PIPA)
- ▶ in the case of the UCA, the Bill allows domestic manufacturers in the United States to bring forth action against foreign (or domestic) manufacturers for the use of illegal IT
- ▶ similarly, SOPA and PIPA take aim at foreign (or local) websites that infringe copyrighted material, by allowing rights holders in the United States the ability to take down an infringing website, as well as seek court orders requiring payment providers, advertisers, and search engines to stop associating with the site in question
- ▶ While the UCA has been met largely with a positive response, SOPA and PIPA received a significant amount of negative feedback. Parties opposed to these two Bills organized a large-scale, Internet-wide protest on January 18, 2012 by “blacking out” over 75,000 sites online. As a direct result of the protest, Congress shelved SOPA and PIPA indefinitely

In addition to legislative trends that apply to illegal IT on the Internet, there has also been an increase in the visibility of grassroots movements speaking out against the unfair competitive advantage that arises from using illegal IT. Some movements have canvassed for the support of the United States Government’s continued action against the use of unlicensed software, while others are focused on protecting their state’s economy by protecting innovation in IT. It should be noted that while such grassroots movements may have their missions rooted in protectionism by equating the use of stolen IT to the loss of jobs, their shared objective of promoting legal IT use to help level the playing field can be seen as an extension of the trends that are occurring across the state and federal levels in the United States. The issue of using illegal IT as a means to gain unfair competitive advantage is an important one, particularly with the increased awareness of the negative effects it can bring about. It can thus be expected that a sustained interest in this issue will continue, and more developments are likely to emerge in the near future.



¹⁵ Source: Wikipedia; Wired; Zachary Johnson

Legislative trends in other countries

The United States appears to be paving the way in introducing rules and regulations that specifically target the use of illegal IT and its impact on competition. While such specific laws do not yet exist in other countries or jurisdictions, it should be noted that this does not indicate the absence of competition legislation or copyright and intellectual property (IP) legislation. In fact, most countries have competition laws that deal with anti-competitive behaviour, as well as government regulators that aid in the enforcement of such laws. Laws involving IP infringement and the use of illegal software are also common in most countries.

However, the laws that deal with anti-competitive practices are generally meant to prevent situations such as monopolistic behaviour, or address issues such as the restraint of competitive trade for a product or within an industry. Laws that target the use of illegal IT are typically compartmentalized from anti-competitive behaviour, and are invoked either by the copyright holder or the relevant enforcement agency. While the European Commission¹⁶ is said to be considering changes to its IP legislation to create greater deterrence to using and

distributing illegal IT, it remains to be seen if specific legislation similar to that of the UCA will be introduced. As a whole, regulations that address anti-competitive behaviour arising from the use of illegal IT currently remain uncommon outside of the United States.

Legislative trends in anti-competitive behaviour

Competition law¹⁷, also referred to as antitrust law, is law that promotes or maintains market competition by regulating anti-competitive conduct by companies¹⁸. As of 2008, 111 countries had enacted competition laws. In other words, more than 50% of countries with a population exceeding 80,000 people had competition laws in place by 2008. Figure 6 provides a brief overview of the competition laws currently in place in selected countries.

While the use of illegal IT may not be explicitly stated in competition laws, these should in theory cover the use of illegal IT to gain unfair competitive advantages in the marketplace. In practice, however, there does not yet appear to have been any significant cases involving the use of illegal IT as a main driver for anti-competitive behaviour.

Figure 6: Overview of competition laws in place in selected countries/areas¹⁹

Canada	<ul style="list-style-type: none"> ▶ The Competition Act, the oldest antitrust statute in the Western world, was enacted in 1889 ▶ Prohibits certain criminal offences, such as price-fixing and bid-rigging conspiracies, resale price maintenance, price discrimination and predatory pricing. Allows reviews of mergers and certain business practices (such as tied selling, exclusive dealing, refusal to deal and abuse of dominance) ▶ Applies to all businesses in Canada, with a few exemptions ▶ Enforced through the Commissioner of Competition, the Competition Bureau, the Competition Tribunal and the Attorney-General
United States	<ul style="list-style-type: none"> ▶ Antitrust laws in the US are based on four primary laws - the Sherman Act (enacted in 1890), the Clayton Act, the Federal Trade Commission (FTC) Act and the Robinson-Patman Act ▶ Prohibits horizontal price fixing, vertical price fixing, bid rigging, customer or territorial allocation, boycotts and tying arrangements. Allows reviews of potential mergers to prevent market concentration ▶ Applies to most businesses and business agreements, with exemptions including labor unions, agricultural cooperatives, and banks ▶ Enforced through the Antitrust Division of the United States Department of Justice and the FTC, as well as state Attorney Generals
United Kingdom	<ul style="list-style-type: none"> ▶ Competition law in the United Kingdom (UK) is affected by both British and European elements. The Competition Act (1998) and the Enterprise Act (2002) are the key statutes for cases with national importance ▶ Prohibits two main types of anti-competitive activity, i.e., anti-competitive agreements and abuse of dominant market position ▶ Applies to most businesses and business agreements with some exemptions ▶ Enforced through the Office of Fair Trading and the Competition Commission
European Union	<ul style="list-style-type: none"> ▶ Competition rules for the European Union (EU) were included in the Treaty of Rome in 1957 ▶ Addresses four main areas: cartels, monopolies, mergers and state aid ▶ A unique point is that since the EU is made up of independent member states, both competition policy and the creation of the European single market could be rendered ineffective, with member states free to support national companies as they see fit ▶ Enforced through the European Commission and its Directorate General for Competition, as well as national competition authorities and national courts
China	<ul style="list-style-type: none"> ▶ Competition law was drafted in the mid-1990s but only finalized in 2007 ▶ Addresses four main areas: monopoly agreements, abuse of dominant market positions, review of mergers, and IP rights ▶ Unlike in the US or the EU, Chinese competition laws apply to state-owned enterprises as well ▶ Enforced through the Ministry of Commerce, the State Administration of Industry and Commerce, and the National Development and Reform Commission
India	<ul style="list-style-type: none"> ▶ In 2002, the Competition Act replaced the Monopolies and Restrictive Trade Practices Act (1969) ▶ Prohibits enterprises to enter into anti-competitive agreements, abusing their dominant position and forming certain classes of combinations (mergers) ▶ Allows extra-territorial jurisdiction, i.e., explicitly allows the Competition Commission of India to declare any qualifying foreign merger or acquisition, which affects the relevant market in India, as void ▶ Enforced through the Competition Commission of India

Legislative trends in the infringement of software IP rights

Software IP rights infringement has become an increasingly important issue across the globe. Many countries have put in place legislation that addresses software IP rights infringement, allowing the copyright holder to seek redress in a court of law. In reflecting the seriousness of software IP rights infringement, the penalties have, correspondingly, become more severe. In general, the enforcement of software IP rights legislations is carried out by a government regulator or enforcement agency. While enforcement of this legislation plays an important role in the protection of software IP rights, the ability and effectiveness of the regulator or enforcement agency varies from country to country.

The table below gives a comparison of the types of penalties for infringing on software IP rights in some countries.

Figure 7: Comparison of penalties for infringing on software IP rights in selected countries and territories²⁰

Country/territory	Maximum financial penalty	Maximum length of imprisonment ²¹
China (mainland)	Up to RMB 100,000 (approximately US\$ 15,800) or a sum equivalent to economic losses incurred by the IP rights holder, depending on ease of calculation of losses incurred	Up to seven years' imprisonment for channel unlicensed usage
Hong Kong SAR	Up to HKD 50,000 per infringement (approximately US\$ 6,400)	Up to four years' imprisonment
India	Up to Rs 200,000 (approximately US\$ 4,000)	Up to three years' imprisonment
Malaysia	Up to RM 20,000 per infringement (approximately US\$ 6,600)	Up to five years' imprisonment
Singapore	Up to S\$ 20,000 (approximately US\$ 16,000)	Up to six months' imprisonment
United Kingdom	Up to £10,000 (US\$ 15,800) in statutory fines, while punitive damages are not recognized	Up to ten years' imprisonment
United States	US\$ 150,000 in statutory fines per infringement (civil cases), and additional punitive damages; or up to US\$ 250,000 (criminal cases)	Up to five years' imprisonment

With legislation tackling the issue of software IP rights infringement, as well as effective enforcement, most countries have managed to reduce their unlicensed software usage rate year-on-year. Along with legislation and enforcement, other factors such as education on software IP rights infringement and country-specific pricing of licensed software (e.g., pegged to a country's expendable income or average household income, etc.) have also contributed to the decrease in the rate of unlicensed software usage.

A key issue of the relationship between IP law and competition law (regardless of country) is that IP rights, by and large, can be considered to be monopolistic (or quasi-monopolistic) in nature, i.e., IP rights are exclusionary, for example, with patents and grants. The rationale for applying for IP protection is to ensure recognition (and its relevant benefits) of one's innovation. Seemingly contradictory to this would be that competition law is meant to prevent monopolistic practices. However, in the instance of a manufacturer using illegal IT to gain an advantage in business competition, competition law is likely to have a stronger influence on such a situation (when compared to IP rights laws). Hence, for jurisdictions that do not yet have a specific legislation to deal with such a situation, it can be argued that competition law would play a bigger role in assigning liability than software IP rights laws. It should be noted that an important difference between the UCA and existing IP rights laws is the impact on infringers outside their own jurisdiction, with consequences that are not just financial, but indeed have greater impact such as the potential loss of a key export market.

¹⁶ The European Commission is the executive body of the European Union (EU). It is responsible for proposing and upholding EU legislations, and has representation from all 27 EU member states.

¹⁷ Competition law typically encompasses three main elements:

1. Prohibiting agreements or practices that restrict free trade and competition between businesses. In particular, this is meant to address the negative impact on free trade caused by cartels
2. Prohibiting abusive behavior by a firm with market dominance, or anti-competitive practices that tend to lead to such a dominant position. This may include pricing-related practices such as predatory pricing or price gouging, as well as deal-related practices such as tying arrangements, boycotts (i.e., refusal to deal), etc.
3. Reviewing and overseeing the mergers and acquisitions of large corporations, including some joint ventures. Transactions that are considered a threat to the competitive process can be stopped, or approved subject to constraints to reduce potential market dominance issues

¹⁸ Source: Martyn D. Taylor, *International competition law: a new dimension for the WTO?*

¹⁹ Source: Legal publications of the listed countries; EY analysis

²⁰ Source: Legal publications of the listed countries

²¹ For criminal cases

Other trends related to IT rules and regulations to encourage fair competition

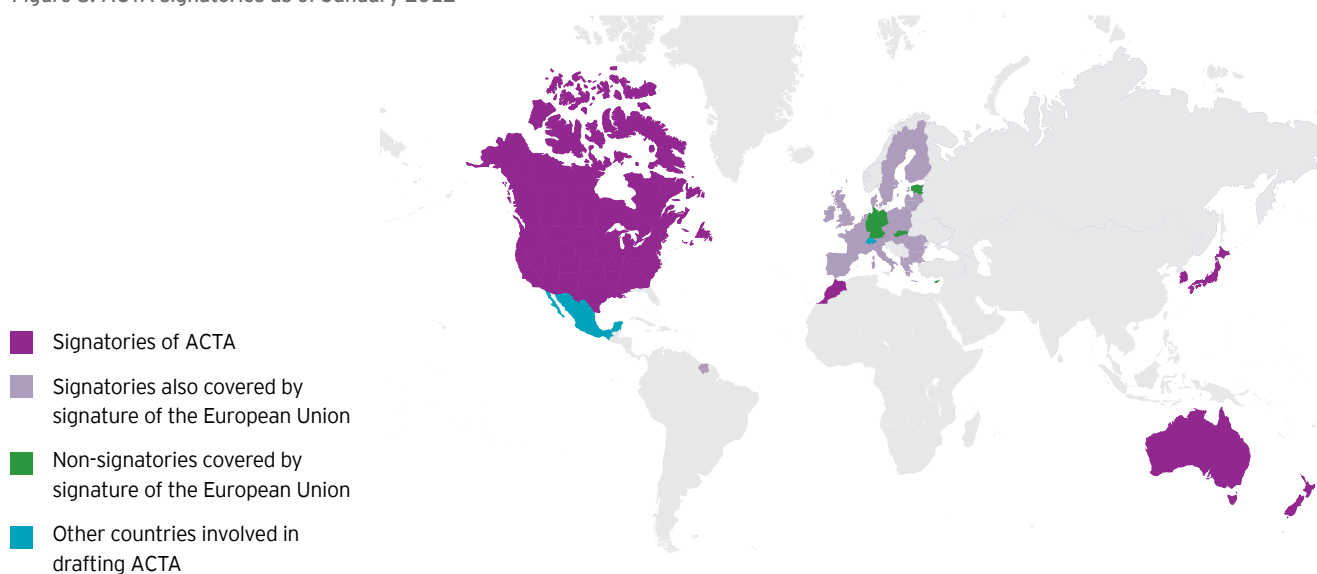
The concern over illegal IT and unfair competition continues to spread across the globe. One way in which it has manifested itself is through a multi-national treaty that is similar to the SOPA and PIPA in the United States. Known as the Anti-Counterfeiting Trade Agreement (ACTA), this treaty aims to establish international standards for IP rights enforcement. The objective of ACTA is to develop an international legal framework to deal with counterfeit products, generic medication and copyright infringement on the Internet - all of which have an impact on fair competition.

ACTA supporters back the Agreement as they believe it will contribute to a global movement to clamp down on the sale of counterfeit products and the illegal trade of copyrighted content. However, as with SOPA and PIPA, ACTA was met with opposition from some fronts. Opponents have voiced concern about the Agreement's potential effect on freedom of expression and privacy, and widespread protests were held across Europe.

To date, 31 signatories have shown their support for ACTA. However, ACTA is not currently in force as it has yet to be ratified.

In addition, the issues and importance of IPR protection and enforcement recently received strong support from the Group of Eight (G8) leaders meeting in May 2012. At their meeting, the G8 leaders highlighted the importance of ensuring high standards for IPR protection and enforcement, as these have a direct impact on jobs and economic growth. The G8 leaders stated their affirmation for IPR protection and enforcement through both international and domestic avenues, such as international legislation and assistance agreements, as well as governmental and private sector processes and best practices - all the while promoting the free flow of information. The support of IPR protection and enforcement from these international leaders and their countries is expected to increase the momentum of the cause.

Figure 8: ACTA signatories as of January 2012^{22, 23}



Responses to IT rules and regulations to encourage fair competition

The response to the UCA and similar legislation in the United States has been generally positive, both in and outside the country. Proponents of such legislation applaud the greater emphasis on IT responsibility, while opponents are concerned that factors beyond their control may still result in the potential

for liability and added financial burden. The introduction of the UCA has been a talking point across the globe, with Asian newspapers and publications paying a particular focus on its implications, given the large export volume of manufactured Asian goods to the United States.

²² Source: CMBJ; Wikimedia Commons

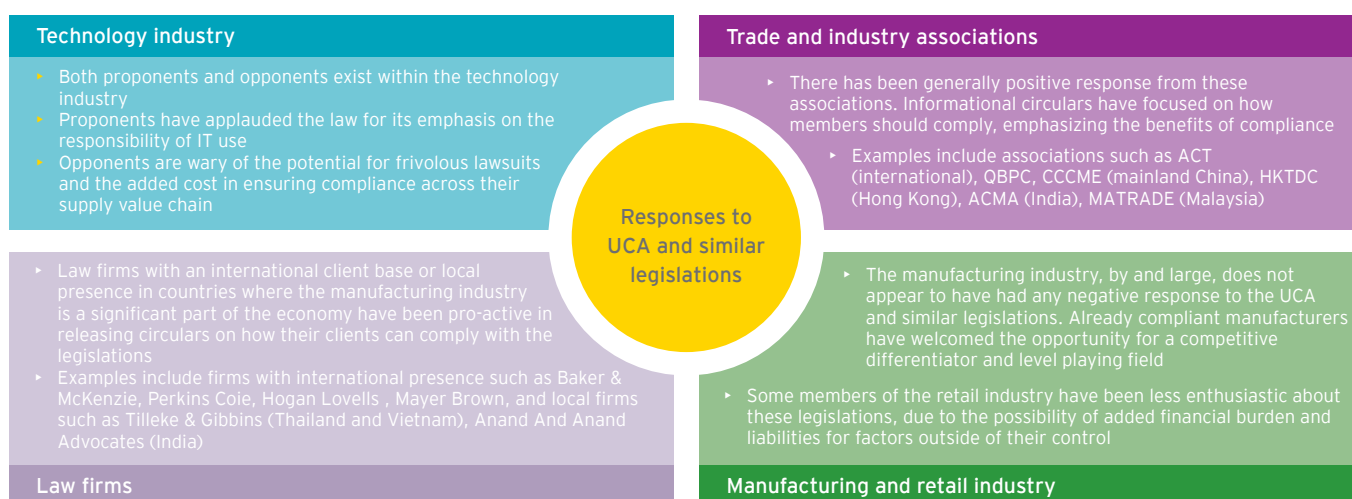
²³ Signatories are Australia, Canada, Japan, Morocco, New Zealand, Singapore, South Korea, United States, the European Union and 22 of its members states

Figure 9: UCA-related news headlines from selected Asian newspapers²⁴

Bangkok Post	<i>US states get tough on piracy</i> February 24, 2012 "Thailand could turn the UCA challenge into an opportunity [by using] the law as a competitive advantage when competing with rivals, especially China, a country with a higher software piracy rate."
The Nation	<i>Software firms say US law good for kingdom</i> October 3, 2011 "The Association of the Thai Software Industry is hopeful that the US' Unfair Competition Act will encourage more Thai businesses to "go legal" for the benefit of the entire society. [...] Going legal may not come cheap, but the cost of software legalisation is worth the peace of mind"
The Jakarta Post	<i>Improving protectionism to address economic crises</i> December 12, 2011 "Indonesia could probably well be the target of the law implemented in these two US states. In that kind of situation, the government apparently cannot just sit around and do nothing."
The Star	<i>Exporters to US told to use licensed software</i> January 12, 2012 "All they need is to get an audit certification from their external auditors to show that the software used is paid for. For this, I would imagine incremental cost to be low."
New Straits Times	<i>US law targets manufacturers using stolen IT</i> December 7, 2011 "[...] presents a golden opportunity for Southeast Asian manufacturers who have cleaned up their IT act to muscle into the Chinese export territory."
China Daily	<i>The new Unfair Competition Act of the state of Washington and its effects on the manufacturing industry of China</i> December 27, 2011 "The effects of this act upon the manufacturing industry of China mainly include: (i) Facing bigger intellectual property risks [...] (ii) Facing bigger risks of losing customers and market shares"
Vietnam Investment Review	<i>UCA an elephant in the room that needs addressing</i> December 12, 2011 "This is perhaps where there is an opportunity for Vietnam to increase exports to the US - to seize this opportunity and encourage companies to make sure they are in compliance with the UCA"

Countries with strong manufacturing interests have advised their manufacturing industry to comply with these IT legislations, indicating that compliance could be a competitive differentiator in the future. To reduce the possible negative impact on business operations, many trade associations, industry associations, and law firms have been advising their members and clients on the best way to comply with the UCA and similar legislation in the United States.

Figure 10: Selected responses to the UCA and similar legislation²⁵



As with any legislation spanning borders and industries, responses have been somewhat varied. However, the overall response to the UCA and similar legislations remains positive, and some legal and IP experts have predicted that such laws will become status quo in the future, both in the United States and worldwide.

²⁴ Source: Bangkok Post (Thailand), The Nation (Thailand); Jakarta Post (Indonesia); The Star (Malaysia), New Straits Times (Malaysia); China Daily (mainland China); Vietnam Investment Review (Vietnam)

²⁵ Source: Various sources; EY analysis



Expected impact of the new IT rules and regulations

With the new IT rules and regulations that address the use of illegal IT and its unfair advantage in the competitive marketplace, several types of impact are expected. The type of impact depends on the player involved, e.g., players in the manufacturing industry are expected to see greater impact than those outside of the manufacturing industry. Areas in which these rules and regulations are most expected to initially impact include a country's GDP growth, trade impact and import distribution, as well as industry-specific impact areas such as the expected impact on players in the manufacturing value chain and the IT industry.

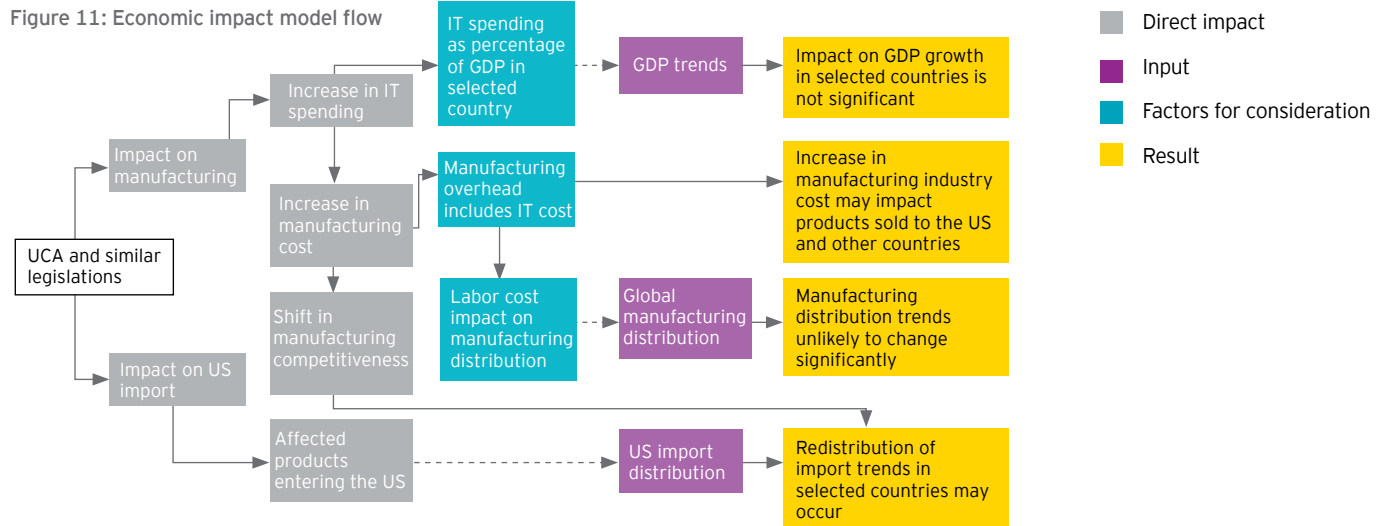
This chapter looks at how the UCA and similar legislations are expected to impact selected countries and industries, as well as the opportunities that may arise as a result. In addition, the emerging trends can give rise to a lot of flexibility and strategies with which to deal with impact, and examples of these strategies are detailed as well.

Expected impact on selected countries

There could be several direct and indirect macro-economic implications of the UCA and similar legislation addressing the use of illegal IT and the unfair competitive advantage it presents. For example, it could be argued that countries with a significant amount of trade with the United States, particularly those that have a large manufacturing export industry, are more likely to be affected. Our initial thoughts set out the possible impact in four areas:

- 1. GDP growth** - compliance with the UCA would require increased IT spending to procure legal IT within the manufacturing industry. If this increase in IT spending is significant, it could lead to an increase in GDP for the country.
- 2. Manufacturing overhead/costs** - an increase in IT spending would directly lead to an increase in the manufacturing cost of goods being produced. This increase in manufacturing cost would likely impact the selling price of products for export.
- 3. Global manufacturing export distribution** - changing mindsets to understand that the use of illegal IT has a greater impact on the marketplace as a whole, and that fair competition is an important trait of any economy. However, this is not expected to have any significant impact in the short-to-medium term.
- 4. US manufacturing import distribution** - in order to avoid the risk of not being compliant under the UCA, manufacturers could choose not to export their products to the United States, particularly if the US does not currently make up a significant portion of the manufacturer's exports. This could then lead to a redistribution of imports in selected countries.

A high-level economic model was developed to analyze the possible impact in the four areas as described. The logic driving the model can be seen in figure 11. The model was restricted to countries and territories in Asia with relatively large manufacturing industries, namely China, India, Indonesia, Malaysia, the Philippines, and Vietnam. Turkey was also included as its trade export volume is fairly similar to the Asian countries listed here; and also because the performance of its manufacturing industry has shown to be quite reactive to economic conditions worldwide.



Potential impact on nominal GDP

As a result of the UCA and similar legal IT legislation, manufacturers may decide to increase their IT spending so as to ensure compliance. This in turn leads to an increase in IT spending within the economy, which can have an impact on GDP growth if the quantum of IT spending of the manufacturing industry is large. Our model puts this hypothesis to test, but the output shows that there is no evidence of manufacturer IT spending having a significant impact on an economy's nominal GDP. This is driven by several factors, i.e., IT spending as a percentage of nominal GDP is not significant across the economies, and IT spending within the manufacturing sector is relatively small compared to overall IT spending.

As most of the economies within our model presented similar characteristics in IT spending, we chose to use China as a basis of comparison for the increase in manufacturer IT spending as a result of the UCA and similar legislation. In figure 12, we can see that China's projected nominal GDP grows at a significant rate - more than doubling between 2010 and 2016. In figure 13, with the increase in manufacturer IT spending as a result of the UCA, China's overall manufacturer IT spending is expected to account for less than 0.2% of nominal GDP. Hence, any increase in manufacturer IT spending as a result of the UCA, or similar legislations, is not expected to have a significant impact on China's nominal GDP. This is also true of the other Asian countries in our model.

Figure 12: Projected nominal GDP growth in selected economies (US\$ bn)²⁶

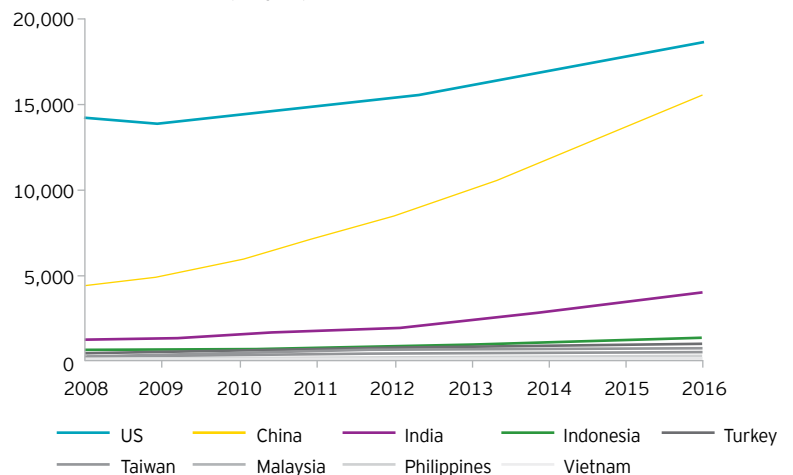
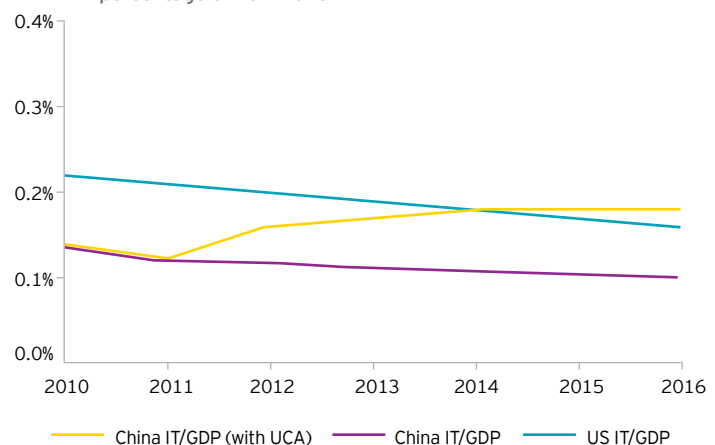


Figure 13: Forecasted manufacturer IT spending as a percentage of nominal GDP²⁷



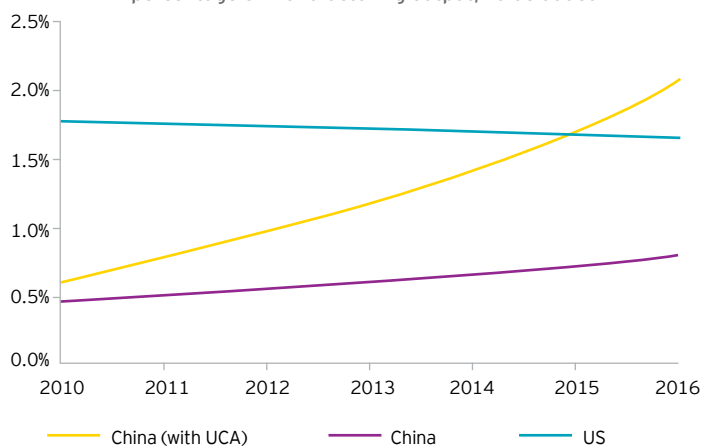
²⁶ Source: IHS Global Insight

²⁷ Source: IHS Global Insight, US Census Bureau, CCW Research; EY analysis

Potential impact on manufacturing overhead/costs

Building on the IT spending model in the previous section, we can also perform some high-level analysis on the potential impact of the UCA on manufacturing overheads in countries outside of the United States. Manufacturer IT spending as a percentage of manufacturing output (value added) is projected to see an increase over the years as a result of the UCA. A comparison between the IT spending as a percentage of manufacturing output (value added) in the US versus that of China can be seen in figure 14.

Figure 14: Forecasted manufacturer IT spending as a percentage of manufacturing output, value added²⁸



However, it should be noted that even with the impact of the UCA, IT spending is not expected to exceed 3% of manufacturing output (value added). Compared to labor costs, which typically make up 30% - 40% of manufacturing output (value added), the quantum of IT spending can be considered to be fairly insignificant. As such, the impact on overall manufacturing costs is not expected to be substantial enough to influence overall cost trends and composition; in addition, this impact is unlikely to affect other factors that may be cost-driven²⁹.

Potential impact on global manufacturing export distribution

While the UCA may contribute to changing the manufacturers' mindsets to understand that the use of illegal IT has a greater impact on the marketplace as a whole, it is not expected to have any tangible impact on global manufacturing export distribution patterns in the short-to-medium term. However, in the long run, manufacturers in countries with a higher rate of illegal IT usage may eventually become less competitive in the global export marketplace.

Potential impact on trade import distribution in the United States

In this section, we look at the potential impact on trade import distribution in the United States, as the legal IT and fair competition legislation is currently in effect in several states. Additionally, as Washington is a major import hub for the United States, we assume here that the location of import is not a factor in the possibility that the imports will not be affected by the UCA.

Of the countries selected for analysis (i.e., China, India, et al), the majority of the economies are not major exporters to the United States. However, China stands as an exception - China's exports to the United States comprised 18% of total US imports in 2011.

Figure 15: Percentage of US imports from selected countries/territories vs. estimated rate of enterprise unlicensed software use, 2011³⁰

Country/Territory	% of US imports	Key imports	Rate of enterprise unlicensed software use
China (mainland)	18.1%	Computers and computer-related products, household goods, toys	79%
Hong Kong SAR	0.2%	Jewellery, telecoms equipment, computer-related products, toys	45%
India	1.6%	Gems, apparel, pharmaceutical products	42%
Indonesia	0.9%	Apparel, natural rubber	87%
Malaysia	1.2%	Semiconductors, telecoms equipment, computer-related products	56%
Philippines	0.4%	Semiconductors, computer-related products, food oils	69%
Taiwan	1.9%	Household goods, semiconductors, computer-related products	37%
Turkey	0.2%	Cars, iron-related products, apparel	62%
Vietnam	0.8%	Apparel, furniture, footwear	82%

²⁸ Source: World Bank ; EY analysis

²⁹ Such as raising product prices to account for higher IT spend

³⁰ Source: US Census Bureau, BSA; estimates from industry experts

Assuming that countries/territories with more than 60% of enterprises using unlicensed software run a higher risk of non-compliance with the UCA and similar legislation, we can infer that those that could be more vulnerable to the impact of the UCA would be Indonesia, Vietnam, China, the Philippines and Turkey. However, output from our model has shown that an increase in IT spending (to ensure compliance with the UCA and similar legislation) does not have a significant impact on manufacturing costs. Given this information, it can be expected that an increase in manufacturer IT spending is unlikely to directly result in price increases of US imports. Hence, the impact of the UCA and similar legislations can be expected to be more direct, i.e., directly driven by a lack of compliance instead of being driven by a price increases as an indirect impact of the UCA. This would also imply that it would be advantageous for a manufacturer to ensure compliance in order to secure future manufacturing contracts from partners in countries with legal IT legislation in place.

Taking a look at the top import partners and corresponding key imports for the United States can also give an indication on the potential impact of the UCA and similar legal IT legislation (that exist within the US). Figure 16 highlights a couple of factors:

- **Rate of unlicensed software use:** For the majority of the top import partners, the UCA and similar legislation is unlikely to have a significant impact due to the relatively low rate of unlicensed software use within the country.
- **Manufacturing-related imports:** Countries that have a high rate of unlicensed software use may not necessarily export manufacturing-related products to the United States. For example, Venezuela has a high rate of unlicensed software use (88%), but its key exports to the US are oil and petroleum-related products. These countries are, therefore, unlikely to be affected by the UCA and similar legislation.

Figure 16: Top 15 US trading partners for imports, 2011³¹

Rank	Country/ Territory	Imports (US\$ bn)	% of total US imports	Key imports	% of unlicensed software use ³²
1	China (mainland)	399.3	18.1%	Computers and computer-related products, household goods, toys	79%
2	Canada	316.5	14.3%	Oil and other petroleum products, cars	28%
3	Mexico	263.1	11.9%	Oil, other manufactured products, cars	58%
4	Japan	128.8	5.8%	Cars, industrial machinery	20%
5	Germany	98.4	4.5%	Cars, pharmaceutical products, industrial machinery	27%
6	South Korea	56.6	2.6%	Cars, household goods, semiconductors	40%
7	United Kingdom	51.2	2.3%	Pharmaceutical products, other petroleum products, cars	27%
8	Saudi Arabia	47.5	2.2%	Oil and other petroleum products	52%
9	Venezuela	43.3	2.0%	Oil and other petroleum products	88%
10	Taiwan	41.3	1.9%	Household goods, semiconductors, computer-related products	37%
11	France	40.0	1.8%	Pharmaceutical products, aircraft and aircraft-related products	39%
12	Ireland	39.2	1.8%	Pharmaceutical products, household goods, beverages	35%
13	India	36.2	1.6%	Gems, apparel, pharmaceutical products	42%
14	Russia	34.6	1.6%	Oil and other petroleum products	65%
15	Italy	34.0	1.5%	Cocoa beans, sugar, meat products	49%

The redistribution of import trends may occur, but is hard to quantify at the moment as the shift in import trends can depend on several factors - such as the importers' risk appetite, legal activity resulting from UCA and related legislations, availability of substitute imports, percentage of a country's exports that consist of manufactured products, etc. Currently, there is no quantifiable evidence to demonstrate that US import trends from selected countries/territories will be affected by the UCA and similar legislation, but this may change in the future.

³¹ Source: US Census Bureau, BSA, estimates from industry experts; EY analysis

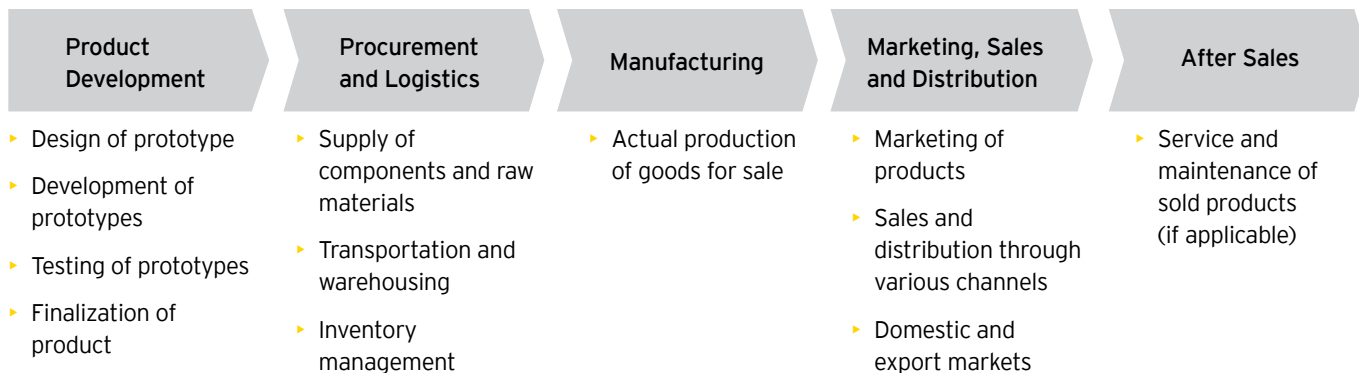
³² Source: BSA; estimates from industry experts

Expected impact on manufacturing value chain

The UCA and similar legislation were designed to specifically address the use of illegal IT within the course of business operations for offending manufacturers. In addition, third parties such as retailers can also be held liable for the lack of compliance by its suppliers. As a result, it can be expected that the impact of the UCA and similar statutes of law are most prominent for players within the manufacturing value chain.

Figure 17 describes the players within the manufacturing value chain, as well as the key functions they support.

Figure 17: Manufacturing value chain and its key functions³³



It should be noted that some manufacturers are end-to-end players, and thus encompass all the key functions listed here under one entity. These tend to be the larger manufacturers, such as certain OEM manufacturers for technology companies that are global or industry leaders. In such situations, it would be unrealistic to consider the implications on a compartmentalized basis, as the use (or the lack thereof) of legal IT within the company would affect all the downstream and upstream processes in the manufacturing value chain.

Implications for players in the manufacturing value chain

Figure 18 expands on the implications, potential benefits, and potential impact on cost that are likely to be experienced by each type of player in the manufacturing value chain. Players that are adjacent to the manufacturers on the manufacturing value chain are most likely to see the greatest impact. Conversely, players upstream of the retailers and distributors are not expected to see any significant impact on their businesses, as the UCA and similar legislation has been designed to specifically address the manufacturers and third-parties such as retailers.

³³ Source: Value Chain Group, Supportian; EY analysis



Figure 18: Manufacturing value chain and its key functions

Manufacturing value chain player	Implications	Potential benefits	Potential impact on cost ³⁴
Product development houses	<ul style="list-style-type: none"> Would need to ensure compliance with the legal IT regulations as these players tend to rely on IT quite significantly in their business operations 	<ul style="list-style-type: none"> Companies may be more inclined to invest their efforts in creating innovative products, if they know that the products that are being created with legal IT are likely to have a competitive advantage in export markets 	<ul style="list-style-type: none"> Given that IT plays a major factor in the product development process, the cost of procuring legal IT could be fairly significant if the company is not already using legal IT
Suppliers of components and/or raw material	<ul style="list-style-type: none"> Sales of components and/or raw materials may be adversely affected if upstream players are found to be liable in lawsuits involving legal IT (i.e., if products are banned from being imported by countries such as the United States) 	<ul style="list-style-type: none"> Ensuring compliance could lead to an increase in demand for components and/or raw material as manufacturers seek out compliant suppliers in line with the UCA and similar legislations 	<ul style="list-style-type: none"> Given the business requirements of these suppliers, total annual IT spending (for legal IT) is not expected to exceed more than 3% of annual operating expenditure (OPEX)
Transportation firms	<ul style="list-style-type: none"> Demand for transportation services may be affected if upstream players are found to be liable in lawsuits involving legal IT Conversely, demand could be unchanged if upstream players decide to shift their existing exports to other countries with less stringent legislations, resulting in no change in the amount of product being exported 	<ul style="list-style-type: none"> Could result in new transportation routes if upstream players decide to explore export alternatives 	<ul style="list-style-type: none"> Annual IT spending is estimated to be less than 4% of annual OPEX
Warehouses	<ul style="list-style-type: none"> Warehousing IT systems will need to be compliant to ensure that partners continue to be comfortable doing business with the warehousing firms However, it is likely that warehousing firms already use legal systems given the degree of specialization and customization required for such software 	<ul style="list-style-type: none"> If manufacturers are unable to sell their products, warehouses may or may not benefit. If the components or raw material have already been ordered, additional warehousing may be required at the benefit of the warehouses However, the manufacturers may also decide to reduce production output, thereby requiring fewer components or raw material, which would then negatively affect the warehousing requirements 	<ul style="list-style-type: none"> The warehousing management system is expected to take up the bulk of software spending, but it is unlikely that such software is unlicensed. Hence, the potential impact on cost is expected to be insignificant
Manufacturers	<ul style="list-style-type: none"> Being held liable for the use of illegal IT could produce the side effect of a ban on their product sales in the United States Some manufacturers have indicated that it would be easier for them to consider exporting to countries without such regulations, so as to avoid having to be compliant Manufacturers might take a "wait-and-see" attitude before considering their next steps 	<ul style="list-style-type: none"> Potential benefits include cost and time savings, competitive advantages in the marketplace, improved security, and financial advantages These opportunities are outlined in greater detail later 	<ul style="list-style-type: none"> An increase in the cost of IT (due to the need for legalization and compliance) may affect the manufacturer's overall costs. This could then impact the selling price of its product, not just to countries with legal IT regulations Annual IT spending is expected to be between 3-4% of OPEX
Marketing and PR firms	<ul style="list-style-type: none"> Would require working knowledge of the UCA and similar laws to ensure that marketing and PR messages are appropriately scripted to tackle the compliance angle 	<ul style="list-style-type: none"> Potential increase in the demand for marketing and PR campaigns on behalf of manufacturers (to spread the message that they use legal IT) 	<ul style="list-style-type: none"> Impact on cost is not expected to be significant
Distributors and other sales channels	<ul style="list-style-type: none"> Domestic retailers in the United States need to be very vigilant in terms of their downstream value chain players, to ensure that their possible lack of compliance does not become an issue Could request proof of compliance from suppliers and manufacturers when negotiating agreements Legal representatives within these firms need to be familiar with the UCA and similar legislations to be able to provide advice and suggest strategies to limit liability 	<ul style="list-style-type: none"> Consumers may be more likely to purchase products that were made in line with legal IT legislation 	<ul style="list-style-type: none"> Cost impact could be a result of the additional due diligence required to ensure compliance of downstream value chain players May incur significant legal cost if required to mount a defence
Service and maintenance companies	<ul style="list-style-type: none"> Unlikely to be impacted in a significant manner because these players are upstream from the manufacturing and retail players that are the target segments in the UCA 	<ul style="list-style-type: none"> Unlikely to see any significant benefit 	<ul style="list-style-type: none"> Unlikely to see any significant cost exposure

³⁴ Source: Selected figures from Gartner; EY analysis

We conducted several interviews with IT service providers in Asia to gain a better understanding of the existing state of play for IT spending in the manufacturing industry. The following is a case study of the IT spending and legal IT awareness in the manufacturing industry in Asia.

Figure 19: Case study of IT spending and legal IT awareness in an Asian manufacturing industry³⁵



Conclusions that can be drawn from this case study include the following:

- Willingness to spend on IT:** Manufacturers are increasingly willing to spend on IT, given the right drivers. Education plays an important role in encouraging manufacturers to adopt legal IT in their business operations.
- Importance of local governments and industry associations:** Local governments and industry associations play an important part in educating enterprises on the need to use legal IT. Governments and industry associations should continue to emphasize the benefits of using legal IT to encourage its use.
- Gap in awareness and compliance:** While awareness of the need for legal IT is fairly high across the board, compliance remains an issue, particularly in areas where enforcement remains weak.
- Service providers can be valuable partners in compliance:** Service providers have the skills and expertise to assist their clients in becoming compliant with legal IT requirements. However, many manufacturers are still taking a “wait-and-see” attitude. Service providers can do more in reaching out to their clients in order to change this mindset.

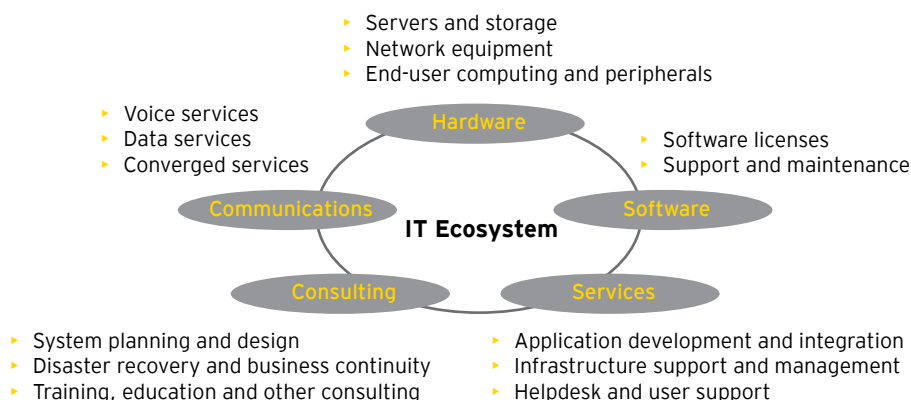
Implications and opportunities for IT players

Given that the new IT rules and regulations address the use of illegal IT and its adverse impact on fair competition, it can be expected that there will be direct implications and opportunities for IT players. In this section, we take a look at the qualitative impact on the various players of the IT ecosystem – ranging from hardware players, to software players, to players in IT consulting.

Definition of the IT ecosystem

For the purposes of this paper, the IT ecosystem is defined as containing IT players in the categories of hardware, software, services, communications, and consulting. Details of the various components within each category are shown in shown in figure 20.

Figure 20: High-level IT ecosystem³⁶



³⁵ Source: Interviews with various IT service providers in Asia; EY analysis

³⁶ Source: Ovum; EY analysis

Potential impact on the IT ecosystem

The potential impact on the IT ecosystem, and its various players, largely depends on the touchpoints of these players with the issue of illegal IT. For example, it can be expected that software players will see the greatest (positive) impact as a result of these new IT rules and regulations, simply due to the fact that illegal IT in companies is often driven by the use of unlicensed software, or the misuse of volume licenses. However, other players such as those in the consulting and services category will potentially see positive impact as well. Figure 21 gives an indication of the types of impact and opportunities that may exist for each type of player within the IT ecosystem.

Figure 21: Implications for the IT ecosystem

Hardware	<ul style="list-style-type: none"> Infrastructure equipment may see an increase in demand if there exists a misuse of volume licenses, i.e., more software is deployed than is paid for To reduce efforts spent in-house on compliance, enterprises may choose to lease hardware from compliant service providers instead
Software	<ul style="list-style-type: none"> Previously unlicensed copies of software will have to be converted to legal licenses - this is likely to be significant in countries that have a large manufacturing industry, coupled with high rates of illegal software use Benefits both local and international software providers, irrespective of the size of the software company Support and maintenance could increase as well if these software-related services are required in line with the deployment of legal software licenses
Services	<ul style="list-style-type: none"> There will likely be opportunities to address the need for legal IT compliance, such as the implementation of Software Asset Management (SAM) and IT Asset Management (ITAM) systems Opportunities also exist in developing compliance measures for companies that currently do not use legal IT
Communications	<ul style="list-style-type: none"> There may be an increase in opportunities for data service provision due to the implementation of SAM/ITAM systems (and the resultant use within the company) However, there will unlikely be significant impact otherwise as a result of the new IT rules and regulations on legal use and fair competition
Consulting	<ul style="list-style-type: none"> There will likely be opportunities to offer consulting services to new clients that need assistance with issues surrounding compliance and legal IT, e.g., IT audits, contract/agreement reviews, etc In addition, there will likely be potential training opportunities, e.g., employee education on the importance of legal IT in the workplace, training programs to ensure sufficient professionals to provide compliance-related services

Figures 22 and 23 give an idea on how IT spending (in particular, software spending) could be affected by the UCA and similar legislation addressing legal IT and fair competition. It can be seen that the Asia-Pacific region software spending is far less than that of the Americas and EMEA regions - one explanation for this could be the high rates of use of illegal software within the region.

Given that the leading manufacturing exporters for the United States are located within the Asia-Pacific region, it would be reasonable to assume that software spending (to acquire licensed software) could increase as a result of the UCA and similar legislation. However, it should be noted that informal conversations with some manufacturers within the Asia-Pacific region have indicated a near-term preference to stop exporting their products to the United States, instead of investing in strategies to ensure that their business operations are driven solely by legal IT.

Figure 22: Quantum of enterprise software spending by region, 2010 (US\$ bn)^{37, 38}

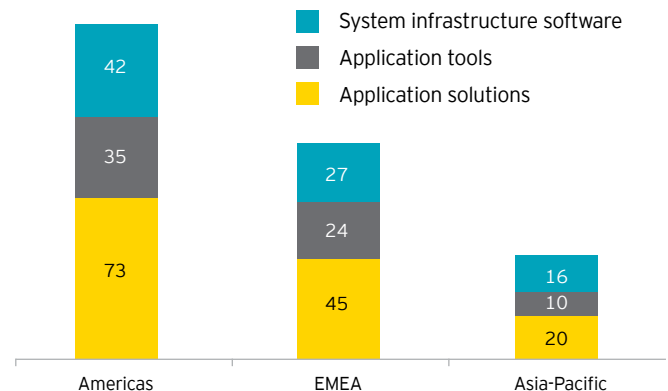
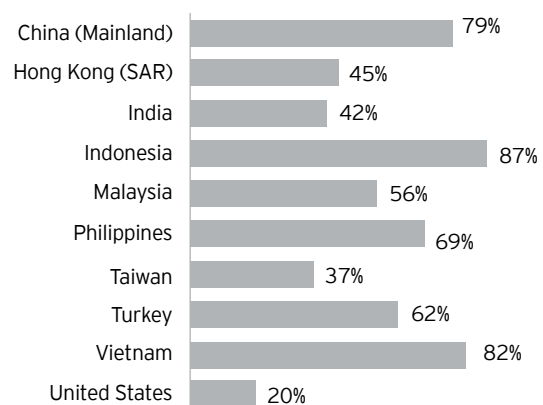


Figure 23: Estimated rates of illegal software used in enterprises, by country/territory³⁹



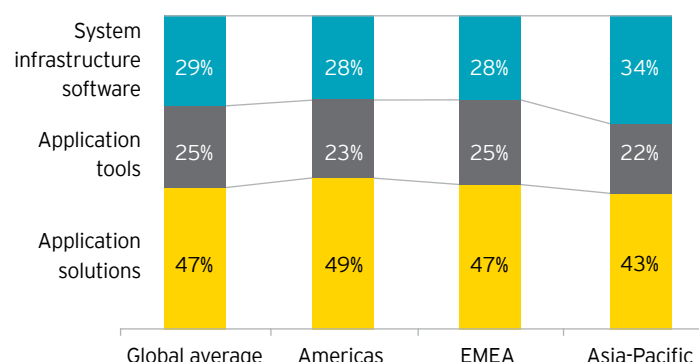
³⁷ Source: IDC; EY analysis

³⁸ Note: "Application solutions" refers to applications such as ERP, CRM and SCM applications; "application tools" refers to development, middleware and data analysis software; "system infrastructure software" refers to security, system and storage software.

³⁹ Source: Industry experts' estimates based on BSA's 2010 Piracy Study

An analysis of the regional enterprise IT spending patterns could give an indication of the increase in IT spending that could occur as a result of the UCA and similar legislation. For example, looking at the enterprise software spending by region for 2010 (refer to figure 24), countries within the Asia-Pacific region tend to spend more on system infrastructure software, and less on application solutions, when compared to the other regions. If more companies within the Asia-Pacific region decide to implement an SAM system to assist in compliance to the UCA and similar legislations, there could be an increase in the IT spending on application solutions to that of EMEA or North American levels.

Figure 24: Distribution of enterprise software spending by region, 2010⁴⁰



Opportunities that may arise

Being in line with the current (and future) IT rules and regulations will require a company's commitment to using legal IT, as well as initiatives to educate stakeholders about the pitfalls of failing to do so - all of which come at a cost. However, a company can look at the costs as a form of investment in order to realize potential long-term benefits, such as:

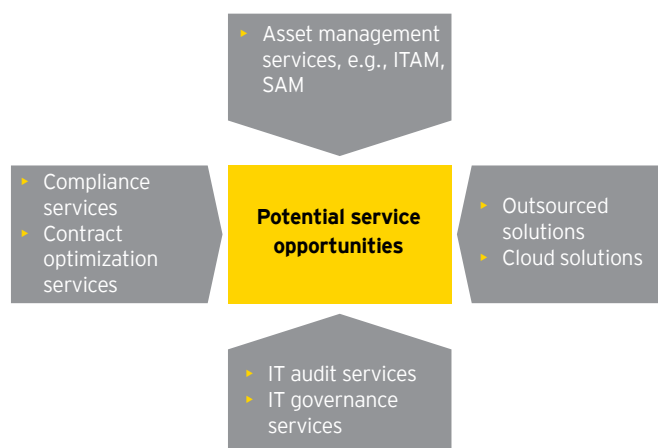
- ▶ **Cost and time savings:** Having an automated, consolidated software asset management system that can help reduce software licensing and support costs, as well as reduce the time spent on tracking and updating software licenses
- ▶ **Competitive advantages:** Having competitive advantages over companies that do not use legal IT in their business operations, as foreign partners are more likely to work with companies that use legal IT in their business operations
- ▶ **Improved security:** Avoiding security risks from using illegal IT and preventing business disruptions as a result
- ▶ **Financial considerations:** Avoiding potential financial penalties from the use of illegal IT - some countries view the use of illegal IT as a form of tax evasion, which can incur heavy financial penalties if discovered. In addition, legal costs can be significant if a law suit were to be brought against a company as a result of a law such as the UCA

Along with company-wide potential benefits, industry-wide opportunities will likely be seen across the IT industry. This section presents a discussion on some of the opportunities that will arise in the IT ecosystem as a result of legislation addressing the use of illegal IT and its impact on fair competition.

Service-based opportunities

Ensuring compliance with legislation revolving around legal IT and fair competition would be a key factor for manufacturers - and potentially, for entities in other industries in the future. IT service providers are already providing services that address compliance concerns, and it would be fairly straightforward to extend such existing services to meet the requirements for compliance with legal IT legislation.

Figure 25: Potential opportunities for IT service providers⁴¹



⁴⁰ Source: IDC; EY analysis

⁴¹ Source: Various IT service providers; EY analysis

Figure 26: Examples of potential opportunities for IT service providers⁴²

Service category	Objective	Examples of possible services
Asset management services	Mitigate risk exposure due to the use of illegal IT within the enterprise through detailed asset tracking	<ul style="list-style-type: none"> Assessment, design and implementation of a Software Asset Management (SAM) system Assessment, design and implementation of an IT Asset Management (ITAM) system Adherence to SAM/ITAM ISO standards and principles
Compliance services	Ensure that the enterprise understands and adheres to compliance requirements, while identifying external parties that may have compliance issues	<ul style="list-style-type: none"> Review and analysis of vendor, partner, external agreements and contracts to ensure compliance Assessment of supply chain compliance Review and gap analysis of software license compliance for internal and external parties Identification of IT licensing requirements to aid purchase negotiations (e.g., with software vendors) Educational sessions on the need for compliance and licensing
IT audit and governance services	Ensure that policies and processes are in place to enable ease of IT licensing and compliance	<ul style="list-style-type: none"> Review of applications and infrastructure that may impact compliance Assessments on areas of potential risk Review and improvement of company policies and procedures Review and improvement of processes and controls Review of regulatory compliance
Outsourced services	Mitigate exposure to illegal IT by outsourcing part, or all of, an enterprise's IT systems	<ul style="list-style-type: none"> Managed services, e.g., fully outsourcing IT systems to an external vendor Implementation and maintenance services Cloud-based solutions

In addition, there may be an increase in the demand for training programs to ensure a sufficient number of trained professionals exist to provide the aforementioned services. These training programs may be of greater demand in countries where manufacturers are more likely to be affected by legal IT legislations.

New certifications/standards

Currently, there does not exist a unifying body that oversees the certification of the use of legal IT within a company. However, some software vendors currently have their own SAM programs, which they encourage their customers to implement as a way in which to ensure that legal IT is being utilized.

In the future, large OEM buyers may require their vendors to issue certification or proof of legal usage of IT products for their IT infrastructure. To meet these demands, a third party certification organization authorized by major software vendors may provide IT audit and compliance services for enterprises.

Additionally, an internationally-respected and recognized body may provide a "whitelist" service that would allow trade partners to perform background checks on manufacturers, so as to ensure that they are dealing with manufacturers that use legal IT in the course of their business operations. This would reduce the due diligence necessary on the trade partners' part, saving on time and cost, which in turn benefits the end consumer.

⁴² Source: Various IT service providers; EY analysis



Summary of strategies for countries and companies to deal with the potential impact

The impact of the legislation on legal IT and fair competition varies depending on the stakeholder, and the possible strategies in which to address the impact would thus differ. For example, the impact on a company would be fairly different from the impact on a country, and different strategies would then have to be used to address the potential impact. However, regardless of the stakeholder, there are two central strategies that can be employed to address the possible impacts:

1. **Compliance** - ensuring compliance through various measures, ranging from the co-operative to the adversarial
2. **Education** - changing mindsets to understand that the use of illegal IT has a greater impact on the marketplace as a whole, and that fair competition is an important trait of any economy

This section will look at the strategies that countries and companies can employ in order to deal with the potential impact of legislation on legal IT and fair competition.

Strategic options at the national level

While it may be challenging to derive the potential negative financial impact on trade between countries as a result of laws similar to the UCA, it is important that countries with large manufacturing export industries implement strategies to address the possible negative effect. Strategies targeted at the root of the problem (i.e., the use of illegal IT) are expected to be long-term in nature, and hence have less of a short-term impact. These strategies and initiatives will revolve around compliance and education.

Strategies that can be employed at a country-wide (national) level include:

- ▶ **Greater enforcement of IP rights:** IP rights laws are fairly strong in most countries, but countries with high rates of unlicensed software use typically have poor enforcement

capabilities. Increased enforcement can take several forms, depending on the country. For example, greater enforcement could be a result of increased raids or routine inspections, stiffer penalties for infringing parties, the set up of specialized departments to deal with legal IT use, etc.

- ▶ **Programs to incentivize the population:** Programs could include those that encourage whistleblowers to come forward with information on the use of illegal IT at their workplace (e.g., via incentives and rewards), or tax breaks or rebates for companies that can show proof of use of legal IT throughout their business operations.
- ▶ **Alternative options to consider:** In countries where the cost of legal software licenses is a barrier of entry to the marketplace for companies, in particular for small- and medium-sized enterprises (SMEs), the government or relevant industry association could perhaps work with IT companies to develop country-specific pricing so as to encourage legal IT use. Additionally, industry associations could suggest other options such as using alternative platforms and/or services, using solutions produced by the domestic market (which are typically more affordable), etc.
- ▶ **Introduce new educational initiatives:** Education is an important aspect of dealing with the use of illegal IT, and many countries already have educational or social awareness initiatives in place. Educational initiatives targeted at industries should address and discourage the use of illegal IT in business operations, highlighting the trade impact for both the country and the company in question. In addition, initiatives to change the mindset of the population in general can also be considered. The aim of such initiatives would be to inculcate the importance of IP rights and the use of legal IT both at home, in the school or at the workplace.



Figure 27: Examples of government-led initiatives dealing with illegal IT⁴³

<p>Philippine antipiracy drive focuses on enterprises</p> <p>MANILA - A coalition of law enforcement agencies has uncorked an intensified nationwide campaign against software piracy, focusing primarily on the country's business districts.</p> <p>Members of the Philippine Anti-Piracy Team (PAPT) said in a press briefing Thursday that the crackdown would soon commence in Makati City, the country's main financial hub, where businesses have been given until Mar. 26 to "legalize their software or face the risk of a raid or routine inspection".</p>
<p>Thai police target 3% drop in software piracy</p> <p>BANGKOK - Police are stepping up the war on personal computer software piracy and aim to reduce it by a further 3 per cent this year, the Economic Crime Division said on Tuesday.</p> <p>The renewed crackdown would begin this month and initially target Samut Prakan, Chon Buri, Rayong, Chanthaburi and Trat provinces, ECD deputy commander Chainarong Chareonchaiyanon said.</p> <p>The crackdown will focus mainly on business and commercial companies where use of pirated software is carried out on a larger scale.</p>
<p>Tightened government measures cut software piracy</p> <p>BEIJING - Government's intensified efforts to root out software piracy are bringing concrete benefits to software providers.</p> <p>This year, China has organized teams of inspectors to canvass central and local government computers to ensure that all the departments are using authorized software, and stepped up inspections of software pre-installation on computers sold in the country.</p> <p>The government's frequent campaigns against intellectual property infringement helped create a sound business environment and greatly boosted the development of the country's software industry.</p>

These initiatives and programs can be a result of a well-drafted, end-to-end government-backed compliance strategy model. For example, the Department of Commerce of the Government of Western Australia has developed a comprehensive framework to ensure compliance with regulatory requirements. Although this framework was designed for consumer and employment laws, it can serve as a guide in the development of a compliance strategy model for legal IT.

Governments and industry associations will need to emphasize the benefits of any initiative that is implemented to address the potential negative impact on trade as a result of using illegal IT. Figure 28 gives examples of potential benefits that can be realized through compliance and education on the importance of using legal IT.

Figure 28: Benefits of compliance and education on a national level

Benefits of compliance	Benefits of education
<ul style="list-style-type: none"> ▶ Competitive differentiator ▶ Time and cost savings ▶ Increase in quality of foreign and domestic investment dollars (due to stronger compliance) ▶ Productivity gains ▶ Improved reputation in the international marketplace 	<ul style="list-style-type: none"> ▶ Driver for the Knowledge Economy ▶ Change in mindset of future generations ▶ Increased innovation and creativity ▶ Domestic industry growth

Regardless of the strategies that are adopted and implemented, tackling the use of illegal IT requires significant time and effort - particularly as a main factor in the success of these strategies would be that of changing the mindset of the population. Despite this, the benefits are significant and tangible, and the outcome will be an important drive in cementing a country's reputation in trade fairness and IP rights protection.

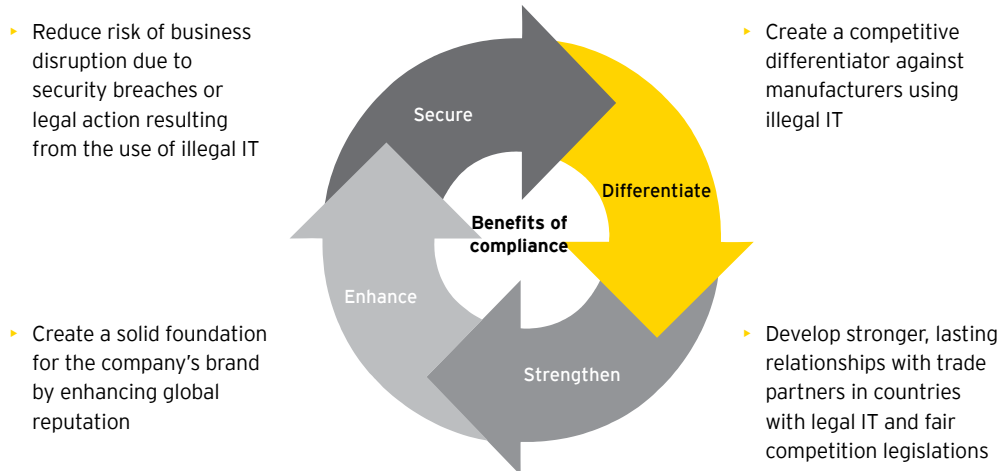
Strategic options within a company

The overarching strategy that a company (be it a manufacturer or third party) can employ to deal with the potential impact of the new IT rules and regulations, with respect to fair competition, would be to ensure compliance. This compliance needs to be within the enterprise itself, as well as along its supply chain, where possible. Compliance with this new legislation can be achieved in different ways, which will be discussed in the latter portion of this section.

A motivating factor for a foreign manufacturer to comply with the new IT rules and regulations dealing with fair competition would be that compliance can become a competitive differentiator for the manufacturer. Along with being a competitive differentiator, there are several benefits to compliance, and a broad overview of the benefits is shown in figure 29. These benefits can eventually drive the company's overall business strategy - for example, by actively differentiating itself from other non-compliant companies, the potential for foreign trade contracts and the ability to build stronger relationships with trade partners would be higher.

⁴³ Source: ZDNet Asia, March 2010; Bangkok Post, January 2012; China Daily, December 2011

Figure 29: Benefits of a manufacturer's compliance with the new IT rules and regulations pertaining to fair competition⁴⁴



A company can employ several strategies to ensure that it is in line with the new IT rules and regulations involving the use of legal IT and fair competition. For example, the company can:

- ▶ Be proactive in ensuring compliance of existing and future IT systems - for example, by working with IT consulting firms with relevant compliance expertise
- ▶ Obtain certification from an internationally-recognized certification board (or certification provider) to show compliance or legality of existing IT
- ▶ Ensure contracts with external parties include indemnity clauses that clearly state that legal IT should be used in the partners' business operations, thereby reducing the risk of future business disruptions due to legal action resulting from the use of illegal IT down the company's supply chain
- ▶ Provide education within the company on the importance of complying with such legislation, and the adverse effect on business operations otherwise
- ▶ Employ a combination of the above strategies, or other strategies that have not been specifically discussed here

Competitive strategies to consider

The underlying rationale for the legal IT legislation is the need for fair competition in a marketplace. Manufacturers compliant with the legal IT and fair competition legislation can use their compliance as a (fair) competitive advantage over other players in the field. A manufacturer that is compliant can promote itself as a "safe" trading partner in the global marketplace, which could improve its relationships with foreign trade partners. This in turn could result in an increase of trading agreements as well as an increase in the number of partners the manufacturer deals with.

Having an external party perform IT audits on the legality of IT used in an enterprise, or perhaps with a certificate as proof of use of legal IT throughout the enterprise, could be beneficial to a manufacturer. This would allow greater ease in negotiations with foreign partners, which would be another competitive advantage over those using illegal IT. In the future, there may even exist a whitelist of compliant manufacturers that would enable contract negotiations to be carried out without the need for extensive background checks.

Third parties such as retailers could use the knowledge that its supply chain is compliant with legal IT legislations as a marketing tool. Past advertising campaigns have exhorted consumers to shun counterfeit or illegal products in favour of legal or original products. Retailers could likewise spread a similar marketing message to their potential consumers - that

the products available for purchase would have been produced without the use of illegal IT. This could appeal to consumers who believe in the importance of using legal IT.

Specific legal strategies for third parties (with regards to the UCA)

With regards to the UCA, a third party can potentially defend itself through the following avenues if a lawsuit were to be brought against it⁴⁵:

- ▶ If it can show that it is an end consumer of the product in question
- ▶ If it can show that it purchased the product made using illegal IT from an end consumer
- ▶ If it can show that it does not have any contractual relationships with the manufacturer using illegal IT
- ▶ If it has existing code of conduct to govern its relationships with manufacturers (e.g., contractual requirements to use legal IT)
- ▶ If it has obtained written assurances that no illegal IT was used in the manufacture of the product

However, the UCA does not currently state the specific details regarding the types of evidence that a third party can use as part of its defense. This is likely to be clarified in the near future, as non-compliant manufacturers and third parties are brought to task.

⁴⁴ Source: AmCham India; EY analysis

⁴⁵ Source: *State of Washington House Bill 1495*, Chapter 98, 2011 Laws



Conclusion

The trends arising from IT rules and regulations with respect to fair play in the marketplace can be expected to impact the way companies do business. While the macro-economic impact of these rules and regulations cannot yet be discerned, there is expected to be some impact across the entire manufacturing value chain and IT ecosystem. Players that are adjacent to the manufacturers on the manufacturing value chain are most likely to see the greatest impact, while players upstream of the retailers and distributors are less likely to see any significant impact on their businesses. Similarly, the potential impact on the IT ecosystem and its various players will largely depend on the touchpoints of these players with the issue of illegal IT.

How these players react to the rules and regulations will depend on the strategies they implement to do so – in order to be in line with the IT rules and regulations, such strategies are likely to center on the pillars of compliance and education. While there may be costs involved in order to comply with these new rules and regulations with regards to the use of illegal IT, there are also likely to be potential benefits for players within the value chain. Essentially, a company can look at such costs

as a form of investment in order to realize potential long-term benefits – for example, cost and time savings, competitive advantages, improved security, and possible financial upsides, along with other benefits.

The eventual effectiveness of the IT rules and regulations that address the use of illegal IT and its impact on unfair competition is largely dependent on how compliant the value chain players will be. This in turn depends on how stringent the enforcement of these rules are, be it through requiring certification to prove that legal IT is employed, or through an increase in legal action against offenders, or via other avenues.

Ultimately, IT rules and regulations that target unfair competition as a result of illegal IT use are expected to become more commonplace not just across the United States, but also globally. Players within the manufacturing industry and IT ecosystem would put themselves in better position by implementing relevant strategies, in order to ensure that they can realize the benefits that could present themselves as a result of these rules and regulations.



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