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Apinya Bunditwuthisagul
University of the Thai Chamber of Commerce

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Toward a Knowledge-Based Economy: TPP and Thailand's Experience and Concerns

*Dr. Apinya Bunditwuthisagul**

ABSTRACT

This article analyzes the structure of Thailand's economy, which is extremely dependent on exports and foreign direct investments (FDIs). The Author argues that exports and FDIs are the external factors not sustainable for Thailand's economic growth. Thailand has pursued trade agreements with many countries to expand markets and attract foreign investors for developing the economy, notwithstanding the fact that some trade agreements demand stringent intellectual property standards that result in negative impacts for Thailand. It is necessary for Thailand to transition towards a knowledge-based economy, which requires knowledge and innovation for sustainable economic development.

I. INTRODUCTION

Presently, trade liberalization is imperative to economic development in many countries,¹ including Thailand.² It is argued that trade liberalization enables countries to increase international trade volume and attract FDIs, resulting in economic growth.³ Thailand is a good example of a country that is highly dependent on international trade and FDIs for economic development.⁴ This is an important reason for Thailand to pursue free trade agreements (FTAs) to expand export markets and attract foreign investors.⁵ But, some FTAs require Thailand to strengthen the standards of intellectual property (IP) protection beyond international standards under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) mandated by World Trade Organization (WTO).⁶

* Dr. Apinya Bunditwuthisagul is a Law Lecturer at the University of the Thai Chamber of Commerce.

1. *Global Trade Liberalization and the Developing Countries*, INT'L MONETARY FUND (Nov. 2001), <https://www.imf.org/external/np/exr/ib/2001/110801.htm>.
2. Neil Dias Karunaratne, *Trade Liberalization in Thailand: A Computable General Equilibrium (CGE) Analysis*, 32 J. DEVELOPING AREAS 515, 515-40 (1998), <http://www.jstor.org/stable/4192806>.
3. *Global Trade Liberalization and the Developing Countries*, *supra* note 1.
4. *SCB Insight*, SIAM COMM. BANK (Dec. 2009), <http://www.scb.co.th/eic/doc/en/insight/SCB%20Insight-Dec%202009-EN.pdf>.
5. *Thailand's Free Trade Agreements*, THAI. INV.REV., http://www.boi.go.th/tir/issue/200507_17_6/17.htm (last visited Feb. 2, 2018).
6. For example, the failed Thailand-US FTA and the suspended Thailand-EU FTA are FTAs that required IP protection beyond the TRIPS standards. See Rafel Pastor, *The Impact of Free Trade Agreements on Intellectual Property*

It is likely that the stringent IP standards would negatively impact social, environmental, and cultural perspectives in Thailand.⁷ But, if Thailand mainly relies on exports and FDIs for its economic development, it will not be able to avoid trade agreements that maintain stringent IP regimes.⁸ It is necessary for Thailand to reform the structure of its economic development by focusing on science, technology, and innovation. The country should also move towards a knowledge-based economy for sustainable economic growth.

The article is organized as follows. The first section provides an overview of Thailand's economic development from an agricultural economy to an industrial economy. The second section addresses the negative effects of the stringent IP standards required by recent free trade agreements. The last section highlights the policies necessary to move toward a knowledge-based economy for Thailand's sustainable economic growth.

II. THAILAND'S ECONOMIC DEVELOPMENT

Thailand is a country in Southeast Asia with the total population of approximately 68.23 billion.⁹ It ranked as the world's 28th largest economy in 2016.¹⁰ Thailand's economic development is one of the world's best success stories. In the 1980s, Thailand was still a low-income country.¹¹ But, it took only a few decades to make a transition from a low-income country to an upper-middle income country.¹² Notwithstanding the fact that Thailand is a

Standards in a Post-TRIPS World, BILATERALS.ORG (Apr. 4, 2006), <http://www.bilaterals.org/?the-impact-of-free-trade&lang=es>.

7. See *EU-Thailand FTA Negotiations: What Fate for Access to Medicines?*, INFOJUSTICE.ORG (Mar. 6, 2013), http://infojustice.org/archives/28847#_edn2; see also Jakkrit Kuanpoth, *TRIPS-Plus Intellectual Property Rules: Impact on Thailand's Public Health*, 9 J. WORLD INTELLECTUAL PROP., 573, 573–91 (2006), <http://ro.uow.edu.au/cgi/viewcontent.cgi?article=1284&context=lawpapers> (criticizing the negative impact of Thailand-US FTA to public health in Thailand).
8. It is likely that Thailand will participate in an FTA with the United States in the framework of the US-ASEAN FTA that requires a high standard of IP protection. *Thailand Braces for Trump Dumping TPP*, THE NATION (Nov. 23, 2016), <http://www.nationmultimedia.com/news/business/30300628>.
9. *Thailand Population*, WORLDOMETERS, <http://www.worldometers.info/world-population/thailand-population/> (last visited Feb. 2, 2018) (Thai population as of 2016).
10. *List of Countries by Projected GDP*, STAT. TIMES (Oct. 21, 2016), <http://statisticstimes.com/economy/countries-by-projected-gdp.php>.
11. See *Top 10 Largest Economies in Asia 2015*, RICHEST LIFESTYLE (Jan. 1, 2015), <http://richestlifestyle.com/largest-economies-in-asia/>.
12. The World Bank upgraded Thailand to an upper-middle income country in 2011. *Thailand Overview*, WORLD BANK, <http://www.worldbank.org/en/country/thailand/overview#3> (last updated Apr. 2017).

developing country, its economic size is the second largest in Southeast Asia,¹³ and the ninth largest in Asia.¹⁴

Thailand has transformed from an agricultural economy to an industrialized economy, and until recently was an export dependent country.¹⁵ In the 1960s and 1970s, Thailand was one of the fastest growing economies and one of the most successful developing countries in the world due to large inflows of FDIs in manufacturing industries.¹⁶ The world has known Thailand as one of the world's main rice exporters,¹⁷ but that is no longer the case. In 2015, the agricultural sectors in Thailand accounted for only 9.1 percent of the country's total GDP, while the industrial and service sectors accounted for 35.7 and 55.1 percent, respectively.¹⁸

Recently, Thailand's top exports are sourced from manufacturing industries such as automobiles, computers, and integrated circuits.¹⁹ These industries are the main contributors to Thailand's economic growth since World War II. During the 1960s and 1970s, Thailand was one of the fastest growing economies in the world because of FDIs²⁰ in manufacturing industries.²¹

In 1972, the Thai government adopted the export promotion policy,²² promoting export-oriented industries.²³ The country has become more depen-

13. Justin Keupper, *Guide to Investing in Thailand*, ABOUT MONEY, <http://internationalinvest.about.com/od/globalmarkets101/a/Guide-To-Investing-In-Thailand.htm> (last visited Feb. 2, 2018).
14. *Top 10 Largest Economies in Asia 2015*, *supra* note 11.
15. See *The World Factbook*, CENTRAL INTELLIGENCE AGENCY, <https://www.cia.gov/library/publications/the-world-factbook/fields/2012.html> (last visited on Feb. 2, 2018).
16. Peter G. Warr, *What Happened to Thailand?*, 22 *WORLD ECON.* 631, 633 (1999), <http://onlinelibrary.wiley.com/doi/10.1111/1467-9701.00222/abstract>.
17. Daniel Workman, *Rice Exports by Country*, *WORLD'S TOP EXPORTS* (Dec. 8, 2016), <http://www.worldstopexports.com/rice-exports-country/>.
18. *The World Factbook*, *supra* note 15.
19. *Thailand (THA) Exports, Imports, and Trade Partners*, OBSERVATORY OF ECON. COMPLEXITY, <http://atlas.media.mit.edu/en/profile/country/tha/> (last visited Feb. 2, 2018).
20. Warr, *supra* note 16, at 633.
21. Archanun Kohpaiboon, *Foreign Direct Investment and Technology Spillover: A Cross-Industry Analysis of Thai Manufacturing*, 34 *WORLD DEV.* 541, 542 (2006), <http://www.sciencedirect.com/science/article/pii/S0305750X05002238>.
22. Krist Dacharuk et al., *Thailand's Investment in the Post-Crisis Era: Issues and Challenges*, in *BANK OF THAILAND DISCUSSION PAPER 12* (Apr. 2009) (on file with author).
23. Somboon Siriprachai, *Export-Oriented Industrialisation Strategy with Land-Abundance: Some of Thailand's Shortcomings* 16 *THAMMASAT ECON.* 2, 83–138.

dent on exports and FDI from multinational companies that employ Thailand as a manufacturing base for exports.²⁴ Consequently, a substantial portion of Thailand's GDP has come from exports of products and services, which accounted for more than 70 percent of GDP for the last ten years.²⁵

It is obvious that Thailand's current economy is extremely dependent on international trade and foreign investment for economic growth. Thailand had to liberalize trade and foreign investment after it was hit hard by the 1997 economic crisis.²⁶ This liberalization led Thailand to pursue many international agreements, including bilateral, multilateral, and regional agreements to create more opportunities for Thai traders in international markets.²⁷

III. THAILAND AND FREE TRADE AGREEMENTS

In moving towards a trade liberalization policy, many countries around the world participate in the global free trade agreement and pursue regional and bilateral agreements to liberalize trade for economic developments.²⁸ Following suit, Thailand became a member of the World Trade Organization (WTO), or the global free trade agreement, in 1995 to gain WTO trade benefits.²⁹ In addition, Thailand, as an export-oriented economy, has since 2002 negotiated Free Trade Agreements (FTAs) on bilateral and regional levels to expand international trade.³⁰

Thailand's FTAs, like most FTAs, relate to trade in goods and services, investments, and intellectual property. The Thai Department of Trade Negotiations (DTN) has set strategic goals to establish Thailand FTAs for export expansion, investment inflow and outflow, resource-seeking, and human re-

24. *Foreign Investment in Thailand on the Rise*, THAI NEWS UPDATE 24 (May 9, 2012), <http://thainewsupdate24.blogspot.com/2013/03/foreign-investment-in-thailand-on-rise.html>.

25. *Exports of Goods and Services (% of GDP)*, WORLD BANK, <http://data.worldbank.org/indicator/NE.EXP.GNFS.ZS> (last visited Feb. 2, 2018).

26. Dacharuk et al., *supra* note 22, at 11.

27. *Id.* at 14.

28. *Free Trade Agreements*, ASIA REGIONAL INTEGRATION CTR., <https://aric.adb.org/fta-all> (last visited Feb. 2, 2018).

29. *Thailand and the WTO*, WORLD TRADE ORG., http://www.wto.org/english/thewto_e/countries_e/thailand_e.htm (last visited Feb. 2, 2018).

30. *India-Thailand Free Trade Area: ITFTA*, THAI DEP'T OF TRADE NEGOTIATIONS, <http://www.thaifta.com/engfta/Home/FTAbyCountry/tabid/53/ctl/detail/id/83/mid/480/usemastercontainer/true/Default.aspx> (last visited Feb. 2, 2018) (Thailand and India set up a joint working group and concluded that a free trade agreement would be created after four rounds of meetings between May and December 2002.).

source and technology development.³¹ The DTN expects that FTAs would lead to export expansion of goods, such as automotive and auto parts, food and food products, fabric and garments, electronic products and parts, gems and jewelry, plastic and some chemical products, and many agricultural products including rice, rubber, cassava, fresh shrimp, fruit, and sugar.³² Also, the service sectors, such as tourism, healthcare, logistics, entertainment, design and construction, and repair services are expected to expand because of the FTAs.³³

Since 2002, Thailand has initiated FTA negotiations with many countries in Asia, Australia, North America, South America, and Europe.³⁴ At present, Thailand has concluded five FTAs with Australia, New Zealand, Japan, Peru, and Chile.³⁵ Moreover, Thailand is in the process of negotiating bilateral FTAs with India, Canada, Turkey, and the European Union.³⁶ At the regional level, Thailand is a member of the Association of Southeast Asian Nation (ASEAN), is part of six implemented ASEAN FTAs, and is currently undergoing negotiations for two additional FTAs.³⁷

The trade relationship between Thailand and the United States has been well-established since 1832.³⁸ Today, the United States is still one of Thailand's most important trade partners. In 2016, the United States was Thailand's largest export partner with the share of 11.4 percent.³⁹ Moreover, for a significant period of time Thailand enjoyed trade benefits from the United

31. *FTA Strategic Goals*, THAI DEP'T OF TRADE NEGOTIATIONS, <http://www.thaifta.com/thaifta/Home/strategy/tabid/52/Default.aspx> (last visited Feb. 2, 2018).
32. *See Thailand's Free Trade Agreements*, *supra* note 5.
33. *Id.*
34. *FTA/RTAs*, THAI DEP'T OF TRADE NEGOTIATIONS, MINISTRY OF COM. (2007), <http://www.thaifta.com/english/dtn/ftarta.html> (last visited Feb. 2, 2018).
35. *Id.*
36. Eva Tallaksen, *EU Suspends Free Trade Talks with Thailand*, UNDERCURRENTNEWS (June 26, 2014, 4:17 PM), <https://www.undercurrentnews.com/2014/06/26/eu-suspends-free-trade-talks-with-thailand> (The FTA negotiations between Thailand and the European Union were suspended due to the recent military coup in Thailand on May 20, 2014.); *see also Agreements*, THAI DEP'T OF TRADE NEGOTIATIONS, MINISTRY OF COMM. (2007), <http://www.thaifta.com/english/dtn/ftarta.html>.
37. *Id.* (ASEAN has six FTAs with India, South Korea, Japan, China, Australia, and New Zealand in effect and is determining the possibility of FTAs with Pakistan and the Gulf Cooperation Council).
38. *U.S. Relations With Thailand*, Bureau of East Asian and Pacific Affairs Fact Sheet, U.S. DEP'T OF STATE, BUREAU OF PUBLIC AFFAIRS (Jan. 24, 2017), <https://www.state.gov/r/pa/ei/bgn/2814.htm>.
39. *Trade Summary Between Thailand and the United States*, THAI MINISTRY OF COMM., http://www.ops3.moc.go.th/infor/menucomen/trade_sum/report.asp (last visited Feb. 2, 2018).

States under the Generalized System of Preference (GSP) program.⁴⁰ Until recently, this has made the United States one of the top export destinations of Thailand.

President George W. Bush of the United States and Prime Minister Thaksin Shinawatra of Thailand initiated the Thailand-U.S. Free Trade Agreement in 2003 to maintain and further trade relations between the two countries.⁴¹ Unfortunately, the FTA was suspended in February 2006 due to aggressive protests in Thailand over intellectual property issues.⁴² Since this suspension, the two countries have not renewed FTA negotiations.⁴³

Thailand, as an export driven economy, wants to conclude trade negotiations with the world's largest economies, like the United States, to expand trade and investment for its economic development.⁴⁴ While the United States was negotiating the Trans-Pacific Partnership (TPP) with eleven countries in the Asia-Pacific region.⁴⁵ President Obama of the United States invited Thailand to join the TPP during his visit to Thailand in November 2012.⁴⁶ The Thai government promptly responded by announcing that Thailand would initiate negotiations on the TPP.⁴⁷

During the course of TPP negotiations, Thailand's former Prime Ministers Vejjajiva and Shinawatra expressed interest in joining TPP trade talks.⁴⁸ The TPP was finally concluded on October 5, 2015 without Thailand, but the present Thai government was considering participation in the agreement real-

40. *About GSP*, UNITED NATIONS CONFERENCE ON TRADE & DEVELOPMENT, <http://unctad.org/en/Pages/DITC/GSP/About-GSP.aspx> (last visited Feb. 2, 2018) (GSP program introduced by the United Nations Conference on Trade and Development (UNCTAD) helped reduce or eliminate tariff rates in developed countries for importing products from developing countries).

41. *Fighting FTAs: The Experience in Thailand*, FTA WATCH (Oct. 2007), <http://www.bilaterals.org/?fighting-ftas-the-experience-in>.

42. *Id.*

43. *Id.*

44. Charles Riley & Ivory Sherman, *World's Largest Economies*, CNN MONEY, http://money.cnn.com/news/economy/world_economies_gdp/ (last visited Dec. 19, 2016).

45. Press Release, Notice of Intention to Enter into the Trans-Pacific Partnership Agreement, WHITE HOUSE, 2015 WL 6746774 (Nov. 5, 2015).

46. *Thailand to Join TPP Talks Critics Call Pact a Tactic by US to Counter China*, BANGKOK POST (Nov. 13, 2012), <http://www.bangkokpost.com/news/local/320886/thailand-to-join-tpp-talks>.

47. *Thailand Expresses Interest in Joining Trans-Pacific Trade Talks, as TPP Leaders Set New Deadline*, 16 BRIDGES 40 (2012), <http://www.ictsd.org/bridges-news/bridges/news/thailand-expresses-interest-in-joining-trans-pacific-trade-talks-as-tpp>.

48. *Id.*

izing that Thailand would have less bargaining capacity than the original signatories.⁴⁹

According to the Thai government's studies, the TPP would increase Thailand's economic growth by 1.54% and significantly expand trade and investments in Thailand.⁵⁰ In terms of trade benefits, joining the TPP would open Thailand to a large market accounting for almost thirty percent of the world's trade volume.⁵¹ But the TPP Agreement, similar to the failed Thailand-U.S. FTA, was widely opposed by many sectors in Thailand, particularly over intellectual property protection issues.⁵²

The TPP has raised great concerns in Thailand because it established high standards of intellectual property protection that adhere to U.S. standards.⁵³ These standards, also known as TRIPS-plus standards, are set higher than the requirements of the WTO.⁵⁴ Major non-governmental organizations in Thailand claim that the TRIPS-plus standards in the TPP would negatively impact Thai people and the country as a whole.⁵⁵

Major areas of public opposition relating to intellectual property issues include the provisions regarding: data exclusivity, evergreening patents, patents on plants and animals, and the accession to the International Union for the Protection of New Varieties of Plants 1991 (UPOV).⁵⁶ The public was concerned that the data exclusivity and evergreening patent provisions would hinder the introduction of generic drugs, which are the main source of

49. *Pacific Shift: Trans-Pacific Partnership Could Change the Trade Landscape in Asia and Cause Non-Members Including Thailand to Consider Joining Before They Lose Out*, BANGKOK POST (Feb. 12, 2016, 03:46 AM), <http://www.bangkokpost.com/print/726692/>.
50. Olak Sukkasem, *Why Thailand Has to Enter TPP*, THANSETTAKIJ (Oct. 28, 2015), <http://www.thansettakij.com/2015/10/28/15836>.
51. Martin Klose, *Trans Pacific Partnership (TPP) and Its Implications on Thailand*, RÖDL & PARTNER, http://www.roedl.com/locations/asiapacific/thailand/trans_pacific_partnership_tpp_and_its_implications_on_thailand.html (last visited Feb. 2, 2018).
52. *People Demand Government Stop the Process of Joining the Asian Pacific Economic Cooperation (TPP)*, FTA WATCH (Dec. 18, 2015), <http://www.ftawatch.org/node/50409>.
53. *See id.*
54. Erik Kain, *IP Protection Standards in TPP Represent the Downside of the Trans-Pacific Partnership*, FORBES (Jan. 25, 2012, 12:08 PM), <http://www.forbes.com/sites/erikkain/2012/01/25/ip-protection-standards-in-tpp-represent-the-dark-side-of-the-trans-pacific-partnership/#5415d8f415fb>.
55. *See People Demand Government Stop the Process of Joining the Asian Pacific Economic Cooperation (TPP)*, *supra* note 52.
56. *Trans-Pacific Strategic Economic Partnership: TPP*, FTA WATCH (2015), http://www.ftawatch.org/sites/default/files/documents/2015_TPP.pdf.

medicine in Thailand.⁵⁷ In addition, patents on plants and animals would increase the risk of “bio-piracy” in Thailand.⁵⁸ Lastly, the accession to the UPOV 1991 would make it impossible for Thai farmers to save and re-use seeds for agriculture.⁵⁹

Despite these concerns, the Thai government still wants to join the TPP Agreement and hopes that the TPP would bring more benefits to Thailand than negative impacts. A recent Thai government study claims that Thailand will receive more foreign investment and maintain the existing investments in the country under the TPP.⁶⁰ But, will these benefits last forever? Thailand needs to consider whether it should continue trading off the benefits of local communities for international trade and foreign investments or if Thailand should build a knowledge-based economy for self-reliance and sustainable development.

IV. THAILAND: TOWARDS A KNOWLEDGE-BASED ECONOMY

Thailand has promoted the export promotion policy for economic development since 1972.⁶¹ But, the economic growth in trade and investment resulting from the export promotion policy is not sustainable without the development of internal factors such as technological development and human capital.⁶² Thailand has to change its attitude towards policy making and reform the structure of Thailand’s economic development by focusing on the factors important to technological innovation. For too long, Thailand has only focused on the growth of manufacturing exports and promoting foreign direct investments without realizing the importance of internal factors.⁶³ The policies necessary for Thailand to build a foundation towards a knowledge-

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57. WORLD HEALTH ORG., REGIONAL OFFICE FOR SOUTH EAST-ASIA, INTELLECTUAL PROPERTY RIGHTS AND ACCESS TO MEDICINES: A SOUTH-EAST ASIA PERSPECTIVE ON GLOBAL ISSUES 37 (2008), http://www.searo.who.int/entity/intellectual_property/trh.pdf.
 58. Jakkrit Kuanpoth, *Major Issues in the Thai Patent System*, THAI L. FORUM, <http://www.thailawforum.com/articles/jakpat4.html> (last visited Feb. 2, 2018).
 59. *Will the TPP Free Trade Agreement Have a Negative Effect on Thailand?*, ASIAN CORRESPONDENT (Nov. 30, 2015), <https://asiancorrespondent.com/2015/11/will-the-tpp-free-trade-agreement-have-a-negative-effect-on-thailand/>.
 60. Petchanet Pratuangkrai, *Thailand Seeks Japan’s Support in Joining TPP: Somkid*, THE NATION (June 1, 2016), <http://www.nationmultimedia.com/news/business/EconomyAndTourism/30287110>.
 61. Dacharuk et al., *supra* note 22, at 11.
 62. Aurora Teixeira & Natércia Fortuna, *Human Capital, Innovation Capability and Economic Growth: Portugal, 1960–2001* 18–19 (Universidade Do Porto, FEP, Working Paper No. 131, 2003), <http://wps.fep.up.pt/wps/wp131.pdf>.
 63. See Juthathip Jongwanich & Archanun Kohpaiboon, *Export Performance, Foreign Ownership, and Trade Policy Regime: Evidence from Thai Manufacturing*

based economy for sustainable economic development must include a research and development (R&D) policy, skilled-labor development, and advancing technology transfers.

Regarding a R&D policy, Thailand needs to increase R&D in the private and public sectors, as well as increase the number of research and development personnel.⁶⁴ Additionally, Thailand must encourage university research and create university-industry linkages to effectively exploit university research in the R&D industry.⁶⁵ It is also important that Thailand develop a skilled Thai workforce in order to increase production levels and fulfill industry needs, particularly in technological industries.⁶⁶

In terms of technology transfers Thailand has taken measures to attract FDIs, but fails to embrace technology transfers for the development of domestic R&D. Thailand should create a policy that emphasizes technology transfers to local industries, such as stimulating the learning environment in Thai industries, and the giving of rewards to companies that succeed in technology transfer development. In addition, if necessary, the government should help subsidize part of the technology implementation costs for local industries⁶⁷ and give tax incentives and other privileges to foreign companies that support technology transfers in Thailand.⁶⁸

(Asian Dev. Bank Econ., Working Paper No. 140, 2008), <http://www.adb.org/sites/default/files/publication/28379/economics-wp140.pdf>.

64. *Compare Thailand's Budget in Brief Fiscal Year 2015*, BUREAU OF THE BUDGET (2015), http://www.bb.go.th/budget_book/e-Book2558/PDF/Budget-in-Brief-2015.pdf (Thailand provided a very low budget for development of science, technology, and innovation, which only accounted for 0.19% of the GDP), with *Research and Development Expenditures*, WORLD BANK (2016), <http://data.worldbank.org/indicator/GB.XPD.RSDV.GD.ZS> (China's budget accounted for 1.98% of GDP and Singapore's accounted for 2.10% of GDP).
65. See Kitipong Promwong, *Thailand STI Reform: Build Up Favourable National Innovation System*, NAT'L SCI. TECH. & INNOVATION POL'Y OFF., at 31 (Dec. 3, 2014), <http://snti.theweb.co.kr/file/01/Thailand%20STI%20Reform%20and%20Current%20Policy%20-%20final.pdf> (co-research between university and industry should be stimulated to encourage entrepreneurs to utilize university resources for R&D).
66. *Population Dynamics 2011*, NAT'L STAT. OFF., (Thai), <http://service.nso.go.th/nso/nsopublish/download/files/lfsSum54.pdf> (last visited Feb. 2, 2018). Notably, 52.9% of the Thai workforce has a primary education or less, while the share of the workforce having lower secondary, upper secondary, and higher education levels was 16%, 14.1%, and 16.7%, respectively. *Id.*
67. Dr. Young Roak Kim, *Technology Commercialization in Republic of Korea*, WORLD INTELLECTUAL PROP. ORG., at 11, <https://pdfs.semanticscholar.org/c35b/e30d6eda6868c74dfd97704af7db8baa0da4.pdf> (last visited Feb. 2, 2018).
68. Nanorit Bisoryabut & Chatra Kamsaeng, *Local Innovation Vital to Sustain Thailand's Growth*, E. ASIA FORUM (May 7, 2015), <http://www.eastasiaforum.org/2015/05/07/local-innovation-vital-to-sustain-thailands-growth/>.

V. CONCLUSION

Thailand drove its economic development policy towards an export dependent economy for decades. Thailand was motivated by the need to join free trade agreements to gain benefits for exports and foreign direct investments. If Thailand developed its manufacturing industries to be driven by knowledge and innovation, it would gain more economic development from the value added products in the international markets.⁶⁹ This knowledge-driven economy would lead Thailand to long-term economic growth.

69. *Creative Economy: Implication for Thailand*, INT'L INST. FOR TRADE & DEV., at 5, <http://thaifranchisedownload.com/dl/group12720130102154336.pdf> (last visited Feb. 2, 2018).