

Chapter 2

Global and Regional Trends and Prospects

In the next six years, the Central Visayas region will be affected by developments not only within the region and the nation but across the globe. It is therefore important to take into consideration these trends, issues and prospects to prepare the region for any positive or negative impact on the region's socio-economic condition. These areas, as identified in the Philippine Development Plan 2017-2022, may include economics, politics, demographics, technology and environment.

Economic Trends

Growth of global economies has been sluggish since the global financial crisis in 2008-2009 without any immediate prospect of renewed economic vigor. Average growth of the economy had gone down from 5.1 percent in 2003-2007 to 3.2 percent in 2008-2015.¹ Since some sectors of the regional economy of Central Visayas are tied up with the export markets, this situation has and will continue to affect its merchandise exports especially those industries which are located in the various export processing zones mostly in the province of Cebu. It is therefore important for the Central Visayas region to explore new markets, develop new export products and undertake research and development to diversify products, innovate and become more competitive.

Weak Export Market

The export performance of the region has been on a boom-and-bust cycle for the last seven years.

Performance of the sector has been greatly affected by the economy of the export markets, which will continue to affect this sector. While the region has little control over this phenomenon, it is imperative for it to know the prospects in the international scene to identify and implement mitigating measures.

This weak export market has likewise resulted to the weak performance of the region's imports as many export products of the region are heavily dependent on imported materials. Again, the double strategy of exploring new export markets and developing new export products should be complemented with a third strategy of harnessing local raw materials for manufactured goods which would cater to local consumption.

The region's economy is dependent on imported oil. Oil prices are also expected to rise gradually following the agreement among OPEC members and several other major producers to limit supply. Nevertheless, oil prices are not expected to return to pre-2014 levels given the rise of shale oil, in addition to increasing the adoption of renewable

¹ National Economic and Development Authority, *Philippine Development Plan, 2017-2022*, (Pasig City: NEDA, 2017) 15.

energy and conservation measures. Figure 2.1 shows the actual and projected average prices of oil up to 2025.²

Foreign Investments

ASEAN received only US\$52 billion in Foreign Direct Investments (FDIs) on average in 2003-2007, but this increased by 93 percent to US\$100.2 billion on average in 2008-2015. In 2015, FDI in low-income economies such as Myanmar and Vietnam soared, but this was offset by the lackluster performance of higher-income countries, including Indonesia, Malaysia, and Singapore.

Hindered by the current global and regional economic slowdown, FDI inflows to developing Asia are expected to decline in 2016 by about 15 percent, reverting to their 2014 level. Data on cross-border merger and acquisition sales and announced greenfield investment projects support the expected decline. However, flows to Asian economies such as China, India, Myanmar, and Vietnam are likely to see a moderate increase in inflows in 2016.

Over the medium term, global FDI flows are projected to resume growth in 2017 and to surpass US\$1.8 trillion in 2018, reflecting an expected increase in global growth.

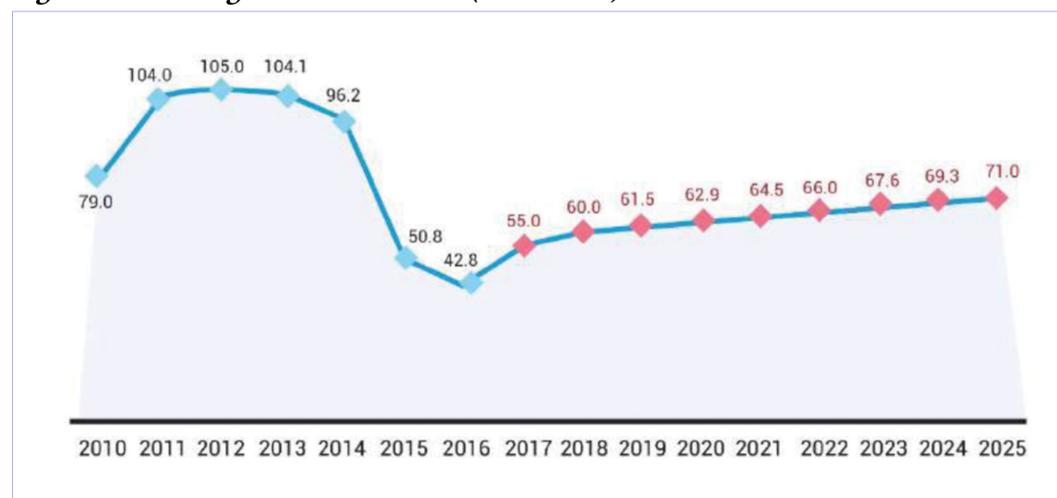
There are indications that intraregional investments are rising, and among the most important industries driving this development are infrastructure and electronics. In 2015, 53 percent of the value of greenfield projects came from developing Asia, particularly from China, India, the Republic of Korea, and Singapore.³

This development in the international community will impact on the investment situation of the region. It should be noted that investments in Cebu Economic Zones in 2012 and 2013 had reached an average of PhP25 billion per year. However, this declined to PhP9.9 billion in 2014 and went down further to PhP8.4 billion in 2015.

Political Trends

As a consequence of the global financial crisis, there has been a growing backlash on the consequences of globalization. Over the medium-

Figure 2.1 Average Crude Oil Price (in US\$/bbl)



Source: Actual Data from World Bank Commodity Price Data - the Pink Sheet (January 2017); Forecasts in red from World Bank Commodity Market Outlook (January 2017).

² Ibid., 16.

³ UNCTAD, October 2016. Global Investment Trend Monitor

term, it can be expected that politicians and interest groups will capitalize on the backlash to push for populist and protectionist agenda. This situation raises the risk of providing an avenue for the rise (or reinforcement) of authoritarian governments.

This backlash seems to be manifested in the results of the United Kingdom (UK) referendum on Brexit and the US Presidential elections. The UK seems headed for a “hard Brexit”, wherein it would likely leave the EU Single Market, though possibly in phases. While the UK government is keen on concluding the process within two years as provided under Article 50 of the EU Treaty, negotiations on the terms could take much longer, leading to further uncertainties. A full-blown trade war between the US and China could plunge the global economy into a recession.

Upcoming changes in political leadership in France, Germany, Netherlands, and Italy could further fuel this trend, possibly calling into question the future of the European project. Political developments in China and Russia need to be keenly watched as well.⁴

Ageing Populations

The ageing workforce in advanced economies such as Europe, Northern America, China, and even in the ASEAN such as Thailand and Vietnam, will continue to support the demand for migrant workers. In contrast, the workforce in the Philippines will remain relatively young for some time. However, the backlash against globalization is also bringing a rising sentiment against immigration in some countries. This could lead to more stringent migration policies and procedures, as well as to less hospitable working environments for migrant workers.

In Central Visayas, a total of 227,803 migrant workers have been recorded in 2013. For the last

5 years, they were able to remit back an average of PhP35.72 million per year. This money has contributed to the increase in domestic consumption which includes demand for housing and real properties. Thus, if demand for foreign workers will decrease in the coming years, this will have repercussions on the domestic consumption in the region.

Upcoming Disruptive Technologies⁵

Among the most promising and potentially disruptive emerging technologies are the Internet of Things (IoT), big data analytics, artificial intelligence, neurotechnologies, nano- or microsatellites, nanomaterials, additive manufacturing, advanced energy storage technologies, synthetic biology, and blockchain.

The Internet of Things envisions a hyper-connected, digitally-responsive society. The largest impacts are expected in the health care sector, the manufacturing sector, network industries, and local government. While it has great potential to support human, societal, and environmental development, several safeguards need to be put in place to ensure data protection and security.

Big data analytics is defined as a set of techniques and tools used to process and interpret large volumes of data that are generated by the increasing digitization of content, the greater monitoring of human activities, and the spread of the Internet of Things. This will play a key role in innovation and competitiveness of firms. Its application to public sector data can improve government policies and public services. Monitoring and predictive analytics can lead to earlier detection of pathologies. However, it is important to balance the need for openness with the threats to privacy, security, equity, and integrity.

⁴ National Economic and Development Authority, *Philippine Development Plan*, 21.

⁵ *Ibid.*, 25-26.

Artificial intelligence is defined as the ability of machines and systems to acquire and apply knowledge and carry out intelligent behavior. This technology makes robots capable of adjusting to changing working conditions, reduces work accidents, and enhances decision-making in hazardous and dangerous situations that could lead to substantial savings and raise productivity.

Demand for knowledge workers who are able to develop artificial intelligence will increase. Creative or tacit knowledge, which is less codifiable, and skills requiring social interaction or physical dexterity, which are less easily automatable, are likely to remain unaffected.

Advances in artificial intelligence are expected to have beneficial impacts in the fields of health, environment, etc. It may take more time though before societies and governments become at ease and are able to put in place the appropriate regulations for its use, especially in sensitive areas such as transport and medicine. However, application of artificial intelligence in less sensitive areas such as voice computing could see faster progress, posing a challenge to the call center industry for instance.

Neurotechnology can be defined as any artificial means to interact with the brain and nervous system to investigate, access and manipulate the structure and function of neural systems. These could greatly enhance diagnosis and therapy. However, some neurotechnologies raise certain ethical, legal, social and cultural questions.

Nano/microsatellites, which weigh between 1 kilogram (kg) and 50 kg, offer vast opportunities in terms of the speed and flexibility of construction and can be used for navigation, communications or remote sensing – for both civilian and defense purposes. Increasing use of such satellites requires the right regulatory frameworks and business environments to ensure proper use.

Nanomaterials are defined as material with any external dimension in the nanoscale (10^{-9} meter).

These typically display unique optical, magnetic, and electrical properties that can be applied in various areas, from healthcare to energy technologies. However, technical constraints and uncertainties over their toxicity to humans and the environment need to be considered.

Additive manufacturing is also commonly known as three-dimensional (3D) printing and encompasses different techniques that build products by adding material in layers, often using computer-aided design software. 3D printing technologies may bring about new products in health, medicine, biotechnology, and metal processing among others. It could lead to changes in work and production patterns. As 3D printing becomes more accessible, legal and regulatory issues regarding data protection, product liability and intellectual property will become increasingly important.

Energy storage technology can be defined as a system that absorbs energy and stores it for a period of time before releasing it on demand to supply energy or power services. Advances in this technology are important to optimize energy systems and allow the integration of renewable energy systems. As the materials, technologies and deployment applications for storing energy are created, ensuring safety, minimizing the risk of failure, and loss are crucial.

Synthetic biology is a new field of research in biotechnology that draws on engineering principles to manipulate the genetic make-up of organisms. It allows new biological parts to be constructed and the natural biological systems to be re-designed. It is expected to have a wide range of applications in health, agriculture, industry, and energy, but it also raises major legal and ethical issues.

The **Blockchain** is a database that allows the transfer of value within computer networks. This technology is expected to disrupt several markets by ensuring trustworthy transactions without the necessity of a third party. However, it is

constrained by unresolved technical issues and risk of abuse for illegal purposes.

Environmental Trends

The science of climate change may continue to be controversial and highly uncertain, though there is a majority professional consensus predicting gradually rising average temperatures and climate volatility. The next six years is filled with great challenges for policymakers in emerging economies, such as the Philippines, which have

little control over these global and regional trends. In Central Visayas climate change will continue to affect the agriculture and fishery sectors which have not been performing very well in terms of production for the last few years. Farming will become less predictable as rainfall may change overtime leading to low farm productivity and low farm income. This will contribute to higher poverty incidence, which unfortunately is highest in the agriculture and fishery sector. This situation will affect the supply of agri-fishery products leading to high food prices which will have the biggest impact to the low-income households.