

# Technology-based Business Model for Facing ASEAN Economic Community

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**ABSTRACT---** *Implementation of the ASEAN Economic Community (AEC) is a double-edged sword for Indonesia; the AEC might lead to bigger business opportunities in the ASEAN market, but the AEC represents greater threats to parties who do not comply with international standards. For entrepreneurs who rely on technology, or technopreneurs, the selection of suitable business models that match current technology might lead firms to success when dealing with the AEC. An inappropriate selection of technology-based business models will burden firms financially. Formulating a suitable model is challenging, but using an in-depth understanding of the ASEAN market, and analyzing data using a combination of MIT 90's Framework and IMRA, technopreneurs will have greater success with expanding their businesses.*

**Keywords---** ASEAN economic community, ASEAN market, international standards, technopreneur

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## 1. INTRODUCTION

Rapid innovations in technology and globalization created enormous opportunities for entrepreneurs worldwide. Some entrepreneurs succeed with technology implementation, and others use information technology as the core of a business. These entrepreneurs, called *technopreneurs*, combine new business models with different ways of adopting or adapting technology. Some attract huge numbers of customers, even in the global market. However, failures are also common. Disparate depths of understanding of social-culture and economic backgrounds of target markets can lead a successful technology-based business model to fruition in one market yet failure in another. One lesson learned from failure is not only to focus on technology, but also modifying technology to a business model that matches market characteristics—henceforth, a *technology-based business model*. A challenging question is how to create a technology-based business model in the ASEAN (Association of South East Asia Nations) region? Introducing a combined framework, this article discusses several components that should be considered before technopreneurs begin expanding into other ASEAN countries.

## 2. ASEAN MARKET AND AEC: OPPORTUNITIES OR THREATS FOR TECHNOPRENEURS?

Founded in 1967, ASEAN has members that include Indonesia, Brunei, Malaysia, Singapore, the Philippines, Thailand, Cambodia, Laos, Myanmar, and Vietnam, and all are at different stages of development. The diverse social, political, economic, and cultural backgrounds of these countries lead to complexities and contradictions. Instead of huge income diversity, all share immense growth potential. Establishment of the ASEAN Economic Community (AEC) in 2015 opened excellent opportunities for accessing the huge ASEAN market of US\$2.6 trillion and 622 million people [1]. Through the AEC, the 10 ASEAN members are economically integrated so that they are more sustainable in the global economy, and near the goal of shared prosperity among members. Using the AEC Blueprint 2025, which provides broad directions through to strategic measures from 2016 to 2025, ASEAN will have proactive frameworks to operate as an economic community, with a collective identity. Access to 622 million people represents a good opportunity for technopreneurs. To characterize success in dealing with ASEAN's complexities and contradictions, Vinayak, Thompson, and Tonby [2] offer seven insights.

First, ASEAN is a diverse group of nations, especially regarding economics and incomes. Although ASEAN's average per-capita income is about US\$3,900, huge variability in its member's incomes include US\$1,200 in Cambodia to over US\$50,000 in Singapore [3]. Singapore's GDP per capita is more than 50 times greater than Myanmar's, which

still represents a frontier market working to build its institutions, and even surpasses mature economies such as Canada and the United States. In comparison to European Union members, ASEAN countries have a standard deviation that is more than seven times the average incomes among its members. Economic diversity also extends to culture, language, and religion. Ninety percent of Indonesians are Muslim, 80% of Filipinos are Roman Catholic, and 95% of Thais are Buddhist. These religious backgrounds create barriers for technopreneurs if they do not consider them when expanding their businesses to the ASEAN market. A comprehensive understanding about local preferences and cultural sensitivities is crucial; technopreneurs cannot rely on a one-size-fits-all strategy across such widely varying markets.

Second, ASEAN’s growth is supported by its macroeconomic stability. In comparison to the European Union, ASEAN has had much lower volatility in economic growth since 2000. Savings have remained steady since 2005. There are two categories with regards to savings — high-savings economies such as Brunei, Malaysia, and Singapore, and low-savings economies such as Cambodia, Laos, and the Philippines.

Third, ASEAN, with its AEC, will have greater intra-regional trade. The AEC allows freer movement of goods, services, skilled labor, and capital. Although tariffs on goods are close to zero in many industries among the original six member states (i.e., Brunei, Indonesia, Malaysia, the Philippines, Singapore, and Thailand), ASEAN is experiencing slower progress concerning the liberalization of services and investment. ASEAN also forged free-trade agreements elsewhere with partners that include Australia, China, India, Japan, New Zealand, and South Korea.

Fourth, ASEAN is the fourth largest exporting region in the world, trailing only the European Union, North America, and China/Hong Kong. Each ASEAN member diversified its exports, from manufactured products such as textiles and apparel (e.g., Vietnam), electronics (e.g., Singapore and Malaysia), and vehicle and automotive parts (e.g., Thailand) to natural resources such as palm oil, coal, cocoa, and tin (e.g., Indonesia), and oil, gas, and precious minerals (i.e., Myanmar). ASEAN is located at the strategic crossroads of many global flows, and Singapore plays a role in both the import and export of goods, services, finance, and people, and also the flows of data and communication.

Fifth, ASEAN is home to many globally competitive companies. The region boasts 227 of the world’s companies with more than \$1 billion in revenues. Singapore is a standout, ranking fifth worldwide for corporate-headquarters density, and first for foreign subsidiaries. The AEC offers an opportunity to create a seamless, regional market and production base. If its implementation is successful, ASEAN will prove that the whole exceeds the sum of its parts.

Sixth, ASEAN is a major global hub of manufacturing and trade, and the fastest-growing consumer market in the world. Stronger, steadier growth is expected in 2016, led by Indonesia due to accelerated government spending [4]. Population characteristics, consumer spending and retail sales from an expanding middle class represent promising business opportunities. Figure 1 shows shares of ASEAN households (excluding Brunei) in each income bracket, based on purchasing power parity (PPP). The middle class comprises over 150 million people, or one-quarter of the ASEAN population, supported by Indonesia as the largest contributor (over 70 million) and Vietnam as the country with the fastest-growing middle class [3]. ASEAN consumers are potential customers of technopreneurs since they are increasingly using online technologies. There are vast disparities in technology adoption, such as Singapore with 75% of its population online, and Myanmar at 1%. With the world’s fourth largest population, Indonesia is rapidly becoming a digital economy, with about 282 million mobile subscriptions and over 100 million Internet users in 2016.

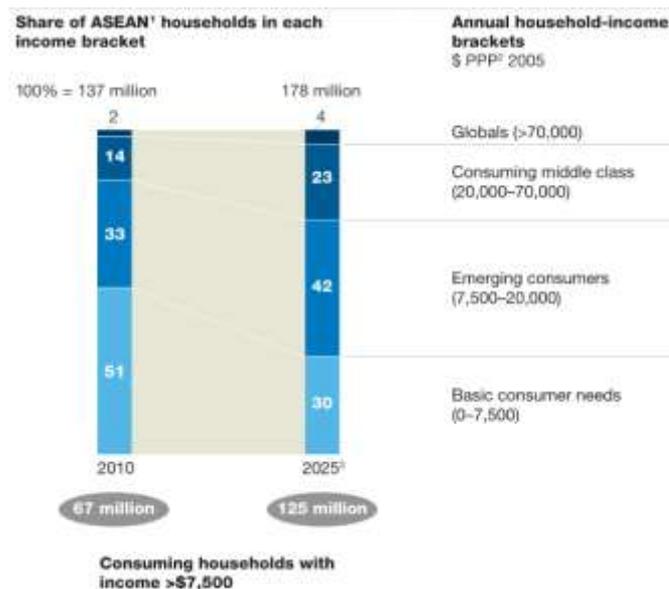


Figure 1. Comparison on income classes in ASEAN. McKinsey Global Institute Cityscope database, McKinsey Global Institute Analysis.

Seventh, ASEAN is supported by labor-force expansion and productivity improvements that led to its GDP growth. Growth in manufacturing, retail, telecommunications, and transportation was supported by ASEAN's youthful population. If ASEAN were a single country, it would already be the seventh largest economy in the world. However, ASEAN must develop its human capital and workforce skills. Between 2025 to 2035, Indonesia will have more productive-age people than elderly people and children, which is a demographic bonus. This demographic bonus will lead Indonesia to significant growth if productive-age people have internationally recognized work skills and aptitudes. Eighty percent of Indonesians dropped out of high school, and in 2013, 86.5% of Indonesian workers were unskilled, 9.7% were lightly skilled, 8% were trained, and 3.8% were skilled [5]. How fast Indonesia can increase its national standard workforce skills to garner international recognition, and prepare its human capital so it can compete in the AEC, are crucial.

With recent technological developments and the AEC, entrepreneurs in ASEAN countries will have greater opportunities to expand their businesses and tap into customers from other countries. The digital-economy trend is becoming increasingly important globally. ASEAN technopreneurs might be able to capture Indonesian markets easily. If Indonesian Go-Jek is not first in the Indonesia market, and it does not implement a suitable technology-based business model that matches Indonesian's characteristics, Malaysia's GrabBike, with its experience in the Malaysian market and strong capital, might capture the largest portion of the Indonesian market [6]. Indonesia needs more technopreneurs who can lead Indonesia to be more competitive in both Indonesian and ASEAN markets [7]. This argument accords with the intentions presented by Indonesian President Joko Widodo, who visited Silicon Valley to talk with CEOs of the world's leading digital and technology companies such as Facebook, Twitter, Google, and Plug and Play.

### **3. COMBINED FRAMEWORKS FOR INCREASING TECHNOPRENEUR SUCCESS**

ASEAN is a contrasting group of nations with various local preferences and variability regarding economics, culture, language, and religion. To transform ASEAN's high number of middle-class people into loyal customers, technopreneurs cannot rely on a one-size-fits-all strategy. Before expanding, technopreneurs must understand the ASEAN market, analyzing it with a suitable structure. One such framework is a combination of MIT 90's framework, which focuses on alignment between external and internal organizational environments [8, 9, 10], and the IMRA framework, which focuses on how to strategize when starting up a business [11]. The use of MIT 90's framework will enable an understanding within technopreneurs as to the importance of adaptability as the result of the dynamic situation occurring from the joining of the external social economic environments and the technological playing field [12]. This extends to possible changes in strategy, role, organization structure, managerial process and the technology used.

Using the MIT 90's framework, the senior management will have a better understanding of the interconnections between strategy and practice, this will allow acute evaluation and informed decisions on the changes in technology used by the companies [13, 14, 15]. MIT 90's is an effective framework for aligning IT strategy within existing industries. However, the use of this structure for a start-up business will take more time as the start-up must formulize the strategy, design its managerial roles, organization structure, and managerial processes [13].

IMRA framework is a powerful framework in the entrepreneurship field for turning a business idea into reality [11]. The IMRA framework leads the management in checking if a new idea can be implemented by determining whether the company have the sufficient level of ability and enough resources to attempt the idea. The management will also be prompted on how to motivate parties who have the required abilities and resources. Although the IMRA framework is for general business, and not only related to IT, this framework can be implemented in the IT field due to its focus on the emerging business reality.

When considering the AEC, a combination of the MIT 90's framework and the IMRA is required because when technopreneurs want to expand their businesses to another ASEAN country, they must have an awareness of the socioeconomic and technological environments of the target country. They should revise their initial ideas to accommodate the preferences of the target market, discover what motivations are necessary, and consider which resources and abilities are needed to make the ideas successful. After formulating an organizational strategy to target a market, technopreneurs should align internal environments of the organization. Figure 2 shows a framework that technopreneurs can use, and a brief explanation on how to use the combined models follows.

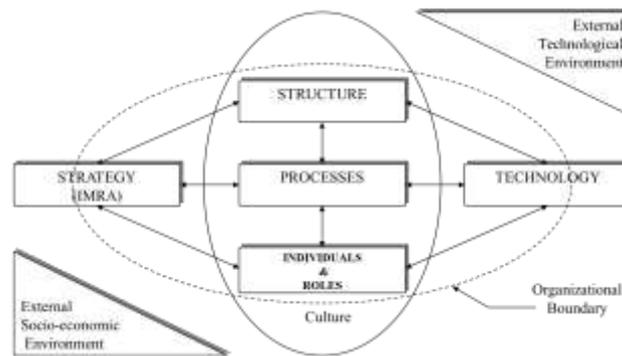


Figure 2. Combined model of MIT 90's framework and IMRA model. Adapted from Scott-Morton (1991) and Durham University Business School (2009).

Initially, technopreneurs should start by analyzing the external socioeconomic environment. A thorough comprehension of ASEAN's economic, cultural, language, and religious differences should be acquired. Technopreneurs should learn what values are important in the targeted market, including cultural sensitivities, before formulating a strategy. Analysis should also be conducted to understand the preferences of a targeted group. By gaining knowledge about cultural values and preferences, a targeted group can become loyal customers. Second, technopreneurs should analyze the technological environment of a specific country, which is crucial to ascertaining which technologies can be used. It would be disastrous if a technology used by technopreneurs cannot operate properly in a targeted ASEAN country because the country's technological infrastructure does not support it.

Third, technopreneurs should use their awareness of socioeconomic and technological environments to create new ideas, which should combine original ideas with those that match local cultural values and preferences. After formulating a suitable idea for a target market, a technopreneur must think about how to motivate a targeted group to use the technopreneur's services. This represents a critical stage that prevents losses during implementation. Besides finding ways to motivate potential buyers, technopreneurs also need to consider how to motivate organizational resources such as employees, suppliers, and local partners. Without obtaining strong commitments to support a technopreneur, the business can experience obstacles with maintaining a positive reputation. Entrepreneurs also need to identify resources and abilities necessary for running the business; they need to ensure that sufficient resources and acceptable levels of competence are available. Varying standard workforce skills and levels of human capital in these countries might push technopreneurs to revise their ideas regarding conducting business. After securing 1) ideas that motivate people related to a business, 2) required resources, and 3) acceptable levels of abilities, technopreneurs can combine them into long- and short-term strategies to penetrate a market.

Fourth, technopreneurs should identify roles necessary for running a business, or indicators that ensure the business will be prosperous. Such indicators include selecting individuals who will play these roles. This stage is particularly important if a person who takes on a role is not the technopreneur themselves. Technopreneurs should ensure that the person will perform well and still become a member of the organization when the business operates. Fifth, technopreneurs should design structures and job descriptions that match local cultural values and preferences. Performance indicators for each job in the structure should be determined in advance, and align with the strategy. Sixth, technopreneurs should design managerial processes required to operate the business. How to operate the enterprise, make things convenient for customers, and gain insights on customer preferences should be designed well. Technopreneurs should also layout detailed activities that become success indicators when delivering services. Finally, technopreneurs should pattern technologies that match local cultural values and preferences, including the software, networks, and hardware required to operate the business. Security should also be a concern.

A meticulous understanding of ASEAN's external environments support technopreneurs to create good ideas, develop effective strategies, monitor internal human capital's performance, and transform crucial managerial processes into technologies for the business. Using a combined framework, technopreneurs can reduce risks while penetrating a market using disparate characteristics such as those found among ASEAN members.

#### 4. SUMMARY

Through AEC implementation, technopreneurs have opportunities to penetrate ASEAN markets. Business in the ASEAN is promising because members are located at a strategic crossroads of many global flows, with stable macroeconomic conditions. Most importantly, technopreneurs are eager to penetrate ASEAN markets because of high numbers of middle-class people who increasingly have discretionary money for higher standards of living. This population is also accustomed to technological development and the digital economy. However, technopreneurs cannot rely on a universal strategy across such distinct market characteristics. Disparate economic, cultural, language, and religious diversity in proximate socioeconomic environments, and technology conditions in a targeted country, should be analyzed. Technopreneurs should also revise their strategies by creating new ideas and discovering ways to motivate

customers and employees that match a target market's preferences. Technopreneurs are required to rethink the resources and abilities needed to support a strategy before aligning internal organizational environments such as individuals and roles, structures, managerial processes, and technologies.

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