Alternative Futures for Brunei: Exploratory Development Scenarios

Ivana Milojević, Yuzilawati Abdullah and Liew Chee Hau

Abstract

It is well established in theory and practice that one of the key factors preventing adequate and flexible responses to ever changing global and local conditions is the diminished ability to imagine futures beyond "business as usual". Brunei, like most other countries and regions, is in the midst of a challenging global transformation, with a restructuring of its economy, society and human engagement with its environment. The country is experiencing an economic downturn, with falling oil prices substantially affecting the oil-driven economy, coupled with decades-long efforts to diversify the economy which have not significantly materialised. As a response, the Brunei government has recently introduced unusually drastic budget cutbacks which are likely to continue. Even with the possibility of Brunei's sovereign funds moderating the ups and downs of the economy, it is likely that "business as usual" approaches will no longer be adequate in a constantly changing world.

The Centre for Strategic and Policy Studies (CSPS) has therefore embarked on the ambitious and challenging task of infusing proactive and anticipatory approaches into advising policymaking. More concretely, CSPS has engaged in the Foresight Study Project in order to: (1) identify emerging issues and trends likely to impact Brunei in the near and medium term future, (2) conduct thorough horizon scanning processes in order to provide more futures-oriented policy advice, (3) expand the current mindset from "more of the same"/"business as usual" approaches to strategic planning, and, (4) identify specific strategies and policies more likely to lead towards the fulfilment of the overall goals and the eight main strategies of Wawasan Brunei 2035.

This report summarises the outcomes of one section of CSPS's Foresight Study Project: a scenario generating process and the further research and the subsequent application of scenario methodology. The action-learning process was undertaken in 2016, involving most researchers within CSPS.

As a pilot study, this alternative development scenarios process focused on generating innovative and diverse ways to question the future and thereby "open up the future" towards multiple possible options and solutions. This has been recognised to enhance planning in times of uncertainty and to enable more robust and informed decisions to be made by policy makers. The main policy implication of this study is to instill the importance and the urgency of infusing scenario development processes within specific policy making areas.

This study has a number of important limitations. First, the likely probability of each scenario is not discussed, as the scenarios are intended to be exploratory, and not predictive. Second, as this is a preliminary study and there are numerous uncertainties as to the future direction of Brunei, specific policy recommendations are beyond the scope of this paper. Its main purpose is to stimulate thinking about Brunei's future and initiate a general discussion of policy initiatives needed in order to go beyond "business as usual" approaches to addressing change.

Keywords: *Alternative futures, exploratory development scenarios, Brunei Darussalam*

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1.0 Introduction: Policy Context

The latest International Monitory Fund World Economic Outlook (World Economic Outlook, 2016) summarises the current state of the world economy as "Too Slow for Too Long". Further to this, the uncertainties and the risks of weaker growth scenarios have increased. Growth in emerging markets and developing economies declined for five consecutive years in the period between 2010 and 2015 and the recent upward trend in 2016 has been modest. A similar economic downturn has occurred in Brunei. The recent decline in the price of oil in the oil-driven economy, where efforts to diversify the economy are yet to manifest, has caused the country's once large current account surplus to reverse into deficit (Roberts & Cook, 2016). This has prompted the Brunei government to introduce budget cutbacks for the first time in many years, affecting almost all sectors of the economy.

While the good news for Brunei is that growth in emerging markets and developing economies, including Brunei, is projected to increase over the next few years, Brunei's continual reliance on oil and gas and the oversupply and low prices projected in the sector for the foreseeable future, may see the country continually mired in deep recession in the years to come. The more optimistic "Emerging Market and Developing Economies" chart below, with data for Brunei, therefore, should not be taken for granted.

Table 1.

Emerging Market and Developing Economies: Real GDP (Annual percent change)

Table A4. Emerging Market and Developing Economies: Real GDP
(Annual percent change)

	Average									Projections		
	1998–2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2021
Brunei Darussalam	2.0	–2.0	–1.8	2.7	3.7	0.9	–2.1	–2.3	–0.2	–2.0	3.0	6.8

Source: IMF, World Economic Outlook, April 2016.

This projected growth is dependent on a number of assumptions, which may or may not occur. Further, increasingly volatile future environments may significantly challenge this upward trend in economic growth.

During times of diminished economic outlook, diminished possibilities, high volatility and uncertainty, the key task for policymakers is to better manage vulnerabilities and build resilience

against potential future shocks to the economy while simultaneously searching for alternative opportunities to stabilise and/or further develop the economy. Brunei's current economic difficulties are both significant and fundamentally linked to what has, paradoxically, previously been its economy's main strength. In changing environments, it is important to look for novel and diverse approaches aimed at aiding strategic planning among policy makers.

2.0 Developing Scenarios

OECD summarises the importance of developing scenarios as follows (OECD, n.d.):

- They help reveal the dynamics of change.
- They assist in developing insights in order to reach sustainable solutions to the challenges at hand.
- They help stakeholders break through communication barriers and see how current and alternative development paths might affect the future.
- They illuminate issues and break impasses, which makes them extremely effective in opening new horizons, strengthening leadership and enabling strategic decisions to be made.

Scenarios are also recognised as a tool *par excellence* of futures studies, futures thinking and strategic foresight. They can best be understood as narratives or images of the future. Their importance lies in making the present remarkable and allowing futures beyond "business as usual" to emerge. There are numerous scenario methods and approaches. While there are many ways to understand scenarios and how they are best used, the following classification is the most relevant for this article. The first approach is *exploratory*, focused on alternative futures. In this approach, prediction is not the goal; rather a deeper and more robust discussion among stakeholders is of primary importance. The future is thus opened and novel possible pathways can emerge after "business as usual" is challenged. A second approach is *normative*, focused on the desired future, and the ways in which the preferred can be achieved. The third approach is *predictive*, and uses quantitative modelling to articulate the most probable future. In this approach, uncertainty is reduced through data-based models or through expert opinions via methods such as Delphi. This article uses the exploratory approach. It is based on the "four generic alternative futures" method developed by Professor Jim Dator, the founder of the Manoa School of futures studies at the Hawaii Research Center for Futures Studies, University of

Hawaii. These four generic futures are recognised as: (1) continued growth, (2) collapse or catastrophe, (3) reversion to the past, and (4) transformation. The reason why this scenario method works well is based on historical experience and structural reasons (Inayatullah, 1993): either the present continues, collapses or declines, reverts back to a prior state, or transforms. Or in "plain English": things go up, things go down, things return, things transform – there are no other choices (Ibid.).

CSPS has conducted this scenario-generating foresight exercise to better illuminate key possibilities – four scenarios – for Brunei's future development, and to ascertain what can be learned from each scenario. The process included a series of internal meetings and discussions in May 2016 which were attended by a group of twenty people from various backgrounds, where the scenarios were presented and discussed further. In addition to scenario development, a modified STEEP analysis method[1] was also used to generate the features of each alternative future. The segments that were highlighted comprised: Society, Technology, Economy, Environment, Politics and Education. To visually present each scenario, a simple chart of what would be the key focus at the systemic level within each alternative future is provided. As can be seen in the sections that follow, these charts focus on different key indicators of development. As the preferred scenario is the amalgamation of the four generic futures, the chart it uses to measure development is more complex. Lastly, to personalize each future, a "day in the life of a citizen" narrative is articulated. These narratives enable us to think about future implications of each scenario in more concrete detail.

3.0 Alternative Scenarios for Brunei

As stated earlier, scenarios highlight various possibilities for the future. Some of these possibilities are more and others less likely. As well, some of the possibilities are more or less desirable. However, all need to be clarified in order to help policy makers minimise risks and enhance opportunities in the context of changing local and global environments. In other words, each scenario gives insight into either aspects of the future to be avoided or to be enhanced. As a result, policy makers are better informed to create solutions which help solve tomorrow's problems today.

[1] To Society, Technology, Economy, Environment, and Politics (STEEP) Education was added as the additional segment, requiring a separate attention given its significance in shaping Brunei's economy.

Scenario 1. Continued Growth: Oil Now, Oil Tomorrow

Image 1.

Are dark clouds gathering over Brunei's main economic strength? Or, is the rain to come and go?

Source: http://capetocape.blogspot.com/2013/08/cycling-brunei.html

Scenario factors:

The **Continued Growth** scenario predominantly focuses on and assumes economic growth. It paints a future where oil and gas resources remain abundant and oil prices remain high and stable. This could be achieved by new technological innovations and under the key assumptions that: 1) the demand for oil and gas remains high in the future, and 2) the threat of climate change will not put significant political restraints on oil exploitation. If crises do occur, they are temporary and will eventually go away. The continued growth scenario is also based on the assumption that Brunei will succeed in diversifying its economy, making way for SMEs (small and medium-size enterprises) and FDI (foreign direct investment) to fully flourish under an enabling environment and infrastructure. The Brunei sovereign fund aids in this diversification.

Outcome for Brunei:

In this future scenario, the national vision of the country, *Wawasan 2035*, continues to be achieved incrementally. The main goals are met, with high standards of living, near zero poverty, near full employment, a highly qualified and skilled society, a stable political climate with its people enjoying peace and harmony, with cultural integration and support for Malay Islamic

Monarchy's core values. Specific characteristics of this scenario utilising the STEEP method are outlined below:

Economy:

Brunei achieves more prosperity with the help of economic diversification via some of its viable industries. Small and medium enterprises (SMEs), together with foreign direct investments into the country, continue to build momentum. Brunei is still an oil and gas based economy, but oil and gas prices remain high and Brunei has successfully created new growth sectors. Economic growth is the central focus, and it is assumed that there will be an automatic trickle-down effect towards community development. Government services including social services are steadily privatized. Public and private partnerships (PPP) become the norm. The tourism industry achieves modest success. The diversification drive is able to help Brunei generate near full employment.

Society:

Welfare and other benefits continue to be provided by the government, but there is a preference for self-reliance and in fact, corporatisation of key welfare and government services is pursued. Poverty is expected to be eliminated with growth and with the emergence of a middle class society. People live in relative peace and harmony, with very low crime rates – amongst the lowest in the world. Cultural integration is maintained and the support of the country's core values continues. With more and more people becoming highly qualified though, graduate unemployment and qualification inflation increase.

Environment:

There are some attempts to protect the environment, with new technologies which assist in this. However, increasingly rampant industrialization, which is the prime goal, continues to have a significant environmental impact. Liveable cities strategies such as sustainable transportation, leisure and recreational infrastructures are only implemented if there are commercial benefits. Transportation continues to follow the car model; however, automated / driverless cars (less car ownership) and electric car technology help to make this more efficient. Despite this, traffic jams continue as population pressures offset efficiency gains.

Technology:

E-government services are implemented, and successfully enhance productivity in the government sector. FDI is successful in bringing in new technologies and skills. The

society is up to date with the latest technologies. However, there is some information overload, the costs of new technology implementation keep on rising and security breaches occasionally occur.

Education:

There is a continued expansion in the university sector, together with vocational and technical education, which supports the economy and social development. The population increasingly becomes highly qualified.

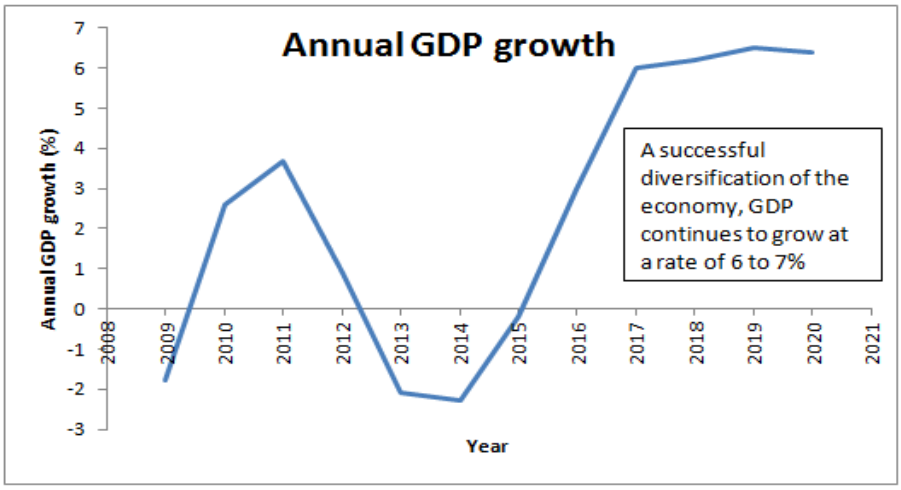
Politics:

A stable and legitimate political structure exists, and the government is able to deliver the required services to the nation. With this, there is certainty and predictability for the future.

The key measurement, an indicator of progress and development, is summarized in the following diagram:

Scenario 1 Diagram.

Hypothetical projection of GDP growth.



Source: Author's calculations

Lastly, a day in the life of a citizen may look like this:

Lina, a teenager from a wealthy family, would like to continue her studies in a higher education institution. Her options are many. She is able to either go abroad or study at the local university; in both cases her studies are paid for by the government under the available scholarship schemes.

As she is still thinking about her options, she decides to take up a part-time job in a local retail shop as a procurement assistant organising stocks for sales. Her friends take similar paths, as part-time jobs are widely available in the increasing number of SMEs in the country. While Lina thinks that going abroad to further her studies is a great idea, she does not want to leave her ill mother behind. Lina's mother underwent multiple surgeries in the last few months, where all medical bills are being paid for by the government. Her mother encourages her to study abroad and tells Lina not to worry as she would be taken care of by other family members. Six years later, after completing her degree and internships abroad, Lina returns home and obtains employment in one of the top companies in Brunei and becomes a high flyer. Many of her friends too return home and are able to obtain jobs easily as employment opportunities are abundant but increasingly competitive. In addition, consumerism take over the lives of the people, and for Lina and her friends, the highlight would be getting the latest designer bags and driving the most expensive cars.

Scenario 2. Collapse: The Death of Oil

Image 2.

What if there is a major and swift collapse of fossil-fuel based economies in the future?

Source: Author's image

Scenario factors:

Although a **Collapse** scenario would seem undesirable, this scenario was generated to picture what could happen if Scenario 1 fails to materialise. The collapse scenario could be spawned due to oil and gas resources fast depleting and/or no workable energy alternatives being developed, or alternatively because of severe political restrictions on fossil fuel exploitation due to climate change. In addition to the prospect of depleting resources, climate change thus may also drive disruption. The Brunei sovereign fund is not sufficient to arrest the collapse.

Outcome for Brunei:

In this future scenario, Brunei's diversification efforts become largely unsuccessful. Unable to diversify, and facing the reality of depleted resources, Brunei finds itself economically stranded, with poor energy systems, uncompetitive in non-oil industries and facing sharp declines in revenue. As well, major regional and global climate disasters increase. Specific characteristics of this scenario utilising the STEEP method are outlined below:

Economy:

In this situation, oil and gas resources are either quickly becoming exhausted or the production of oil and gas is no longer viable, and there are limited energy alternatives that have been established. Brunei's diversification efforts did not take off and SME-supported industries failed to thrive. The country is unable to attract FDI inflows, and the existing FDI is leaving the country. The country faces a high budget deficit. There is serious unemployment among graduates and non-graduates, massive brain drain, and mass labour emigration. Underground activities and black markets emerge to help people make ends meet; various forms of environmental and social exploitation thrive.

Society:

There is a mass poverty and the standard of living as well as all of the other indicators of human development – as summarized in the human development index – drop, some of them drastically. Crime becomes rampant and there is public disorder, social and civil unrest. Social security becomes unavailable; there is widespread sickness and diseases, and high mortality rates. Cultural disintegration takes place, accompanied by apathy, nihilism / drug use and increasing violence and social disruptions (such as riots).

Environment:

Environmental catastrophes and disasters become commonplace. The Heart of Borneo is increasingly threatened and becomes non-existent. Clean air, water and quality food can

no longer be taken for granted. Outbreaks of infectious diseases are common. There is little funding for environmental preservation strategies, disease prevention or for properly disposing of industrial by-products. The environment is compromised by illicit or pragmatic money making strategies. Without well established smart and clean technologies there is a reliance on the diminishing returns of dirty industries.

Technology:

A technology revolution fails to take off, and most services remain manually based. Technological innovation does not occur in Brunei and even the take up/consumer adoption of new technologies remains severely limited, due to economic constraints and social apathy.

Education:

Schools and higher education institutions experience high drop-out rates, and the country fails to provide universal or mass education, let alone quality education. Many schools do not have the resources to take students for free, and the costs of education are too high for the average Bruneian. People drop out of education to do basic jobs to survive. The Education Act can no longer be enforced. The mainstream population in general and young people in particular become less concerned with education.

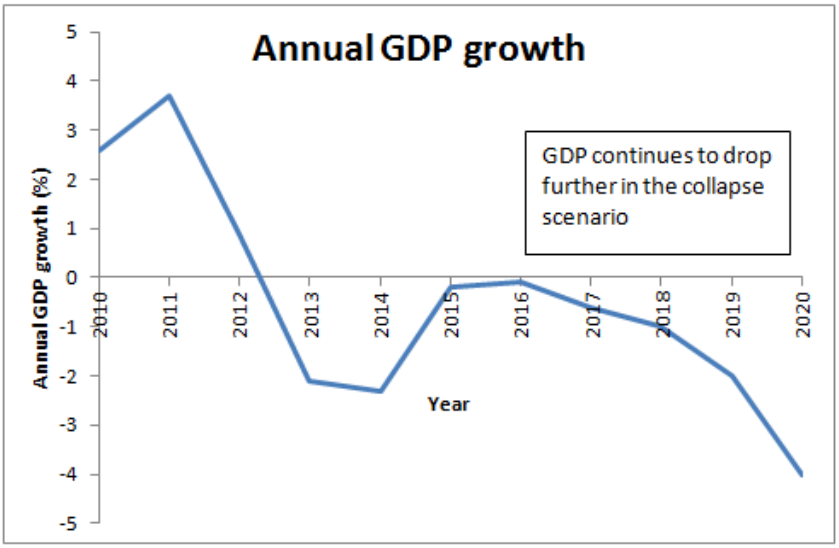
Politics:

Social and civil unrest takes place. The existing political structure becomes unstable and lacks legitimacy. There is great disparity in wealth between Brunei's elite and mass poverty and this drives widespread resentment and conflict. A mature political culture deteriorates in many aspects. The results are high uncertainty and the lack of political predictability.

The key measurement is still the annual GDP growth, but in this future scenario, all that can be measured is a free fall:

Scenario 2 Diagram.

Hypothetical projection of GDP growth.



Source: Author's calculations

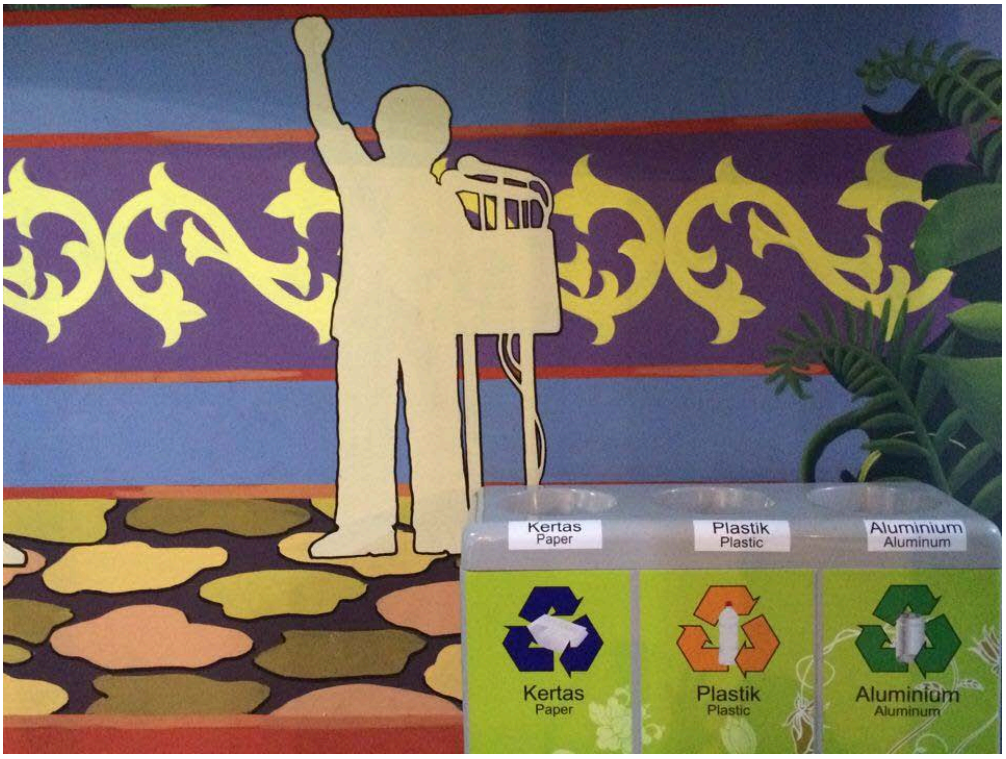
A day in the life of a citizen could look like this:

Lina, a teenager graduating from secondary school wishes to continue her studies at college; however, as competition is fierce she is struggling to obtain scholarships. Her family is unable to provide education funding, so the other option is to obtain a student loan. But this option too is quite difficult, and she is thinking of getting a job instead, even though her chances of getting a job are slim during a recession. Still, she has to try because her parents are no longer able to work and support the family. Her ill mother is dying as they are unable to pay for the medications she needs. There is limited support or welfare from the government. A week ago, her brother was arrested again for attempting to traffic a half kilo of marijuana. If convicted this time, he will face the death penalty. Furthermore, their house has recently been damaged by constant flooding, and limited help has been provided to affected households in their town. The damage has also affected their electricity supply and water, which is worsening the wellbeing of the family. Not able to access clean air, food or water, and with not much hope of improving their lives, Lina's whole family is experiencing worsening physical and mental health.

Scenario 3. Finding inspiration in the past: A Disciplined and Sustainable Society

Image 3.

What would a green and clean "Kingdom of Unexpected Treasures" look like?



Source: Author's image

Scenario factors:

In this scenario, societies around the world experience a gradual increase in resource and ecological constraints, putting limits on economic growth. However, the decline in economic growth is not rapid and allows societies to find a variety of ways to maintain wellbeing and further social progress. The Brunei sovereign fund is used to moderate economic decline. Newer more sustainable energy and production technologies become widespread; simultaneously, they require more modest lifestyles. Living in excess and consumerism is frowned on, and people are obliged to live more disciplined, if not wholesome, lives. Rather than the one size fits all of the neo-liberal model, different countries find radically different solutions.

Outcome for Brunei:

Unlike Scenario 1, the **Disciplined Future** scenario predominantly advocates community development over growth. In this future, community development and sustainability are the

primary concerns of government, in order to foster the overall wellbeing of its citizens. It is a paternalistic approach based on the assumption that when the needs of the community are met, economic growth will find its appropriate expression. Specific characteristics of this scenario utilising the STEEP method are outlined below:

Economy:

The country goes into a "back-to-basics" way of life. Consumerism is shunned as decadent, and people are encouraged to use their spare time to engage in healthy and productive lifestyles and volunteer to support the needy. Traditional environmental preservation and conservation efforts are highly valued. Economic activities are concentrated on green and self-sustaining activities. The sharing economy plays a major role, helping citizens to mutualise redundant resources, share skills and knowledge and get basic needs met. Much of the sharing economy is facilitated by the government, who give prizes and honours to outstanding citizens.

Society:

The emphasis is to carry out community development projects, for example public transportation, community based healthcare, welfare and leisure which can be accessed by all of society. Social security for the people is obtained through a careful audit of core needs, which supports and provides for them in times of crisis. Families are supported, while maternity leave is increased. People generally disavow materialism and embrace basic needs; however it is generally understood that it is for a greater cause. Paradoxically, while society disavows materialism, poverty levels and income inequalities are reduced, which improves the overall feeling of quality of life. Cultural diversity and alternative lifestyles are tolerated so long as they do not challenge the existing political structure. The government remains paternalistic in emphasizing and encouraging healthy values and practices, while disciplining and ostracizing those that do not conform.

Environment:

Major efforts are carried out to clean up the environment, and the Heart of Borneo (HoB) initiative is preserved. Strict environmental regulations are enforced in order to sustain a healthy environment. Alternative energy sources are pursued on an appropriate scale, and energy smart buildings are enforced. It is hard work, but preserving a clean environment provides a sense of pride and satisfaction to citizens.

Technology:

Technological innovation is not emphasised in this scenario, as many of the new technologies have proven to create more harm than good. Therefore, a careful selection of technologies is observed and where necessary, their use must be justified. The sharing economy is embraced; sharing skills and knowledge between citizens is a common practice. Sustainable energy production is also encouraged, and Bruneians feel a responsibility to become a post-fossil fuel state. But virtual reality technology, which is seen to promote escapism and which is energy intensive is shunned.

Education:

Quasi-liberal education is encouraged, and life-long learning is emphasised over elite and vocational education. Traditional arts and crafts are relearned. The Kampong becomes one of the places where learning of old ways is passed on to subsequent generations. Further, education which emphasises materialism and possessiveness, non-traditional viewpoints and non-ecological views is censured.

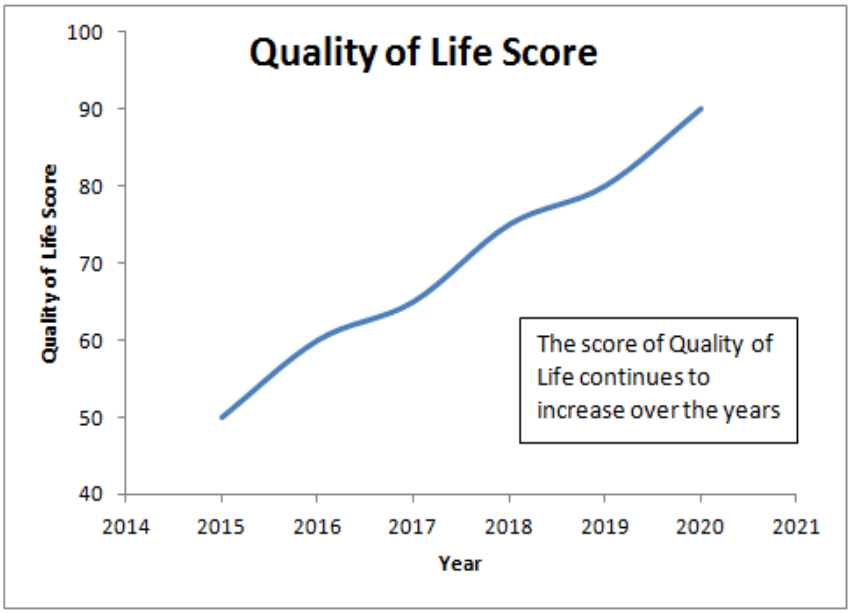
Politics:

The political structure is paternalistic and quasi-authoritarian, and high censorship is imposed, on the basis of protecting society. Some citizens welcome this as it gives them a sense of security and they see the need for a disciplined society in the context of environmental and other challenges. Others feel stifled and unable to innovate, emigrating to other regions.

The key measurement is no longer the annual GDP growth, but quality of life as measured by the overall well-being of citizens.

Scenario 3 Diagram.

Hypothetical projection measuring quality of life



Source: Author's calculations

A day in the life of a citizen might look like this:

Lina wakes to her daily spiritual journey and is thankful that she has been given another day to live and be happy. Worldly possessions do not concern her too much. Her main goal in life is to help her community towards sustainable development, and to lead a peaceful life. TV, radio or the internet do not fill the lives of her community. Richness is observed in moral values and ethics, and being environmentally conscious is a norm for Lina and the community. Brunei's heritage and traditional values are emphasised and the Brunei identity continues to be preserved. Lina does not have to worry about education and healthcare as it is being provided by the government and community free-of-charge. Lina aspires to become an environmentalist and herbal pharmacist seeking new natural solutions to boost energy and pursue natural healing. Her mother is gravely ill, but illness is perceived as a natural part of life and in her last days she is tended gently by her family and community.

Scenario 4. Transformed, Hi-Tech Future: Discovering Virtual Brunei

Image 4.

What if a major transformation of economy and society takes place in the future?

Source: Brunei Times (2016)

Scenario factors:

The **Transformed Hi-Tech** future focuses on tapping major breakthroughs in technology and transforming the economy into a hi-tech enabling environment. In this scenario real breakthrough technologies driven by the global centres for technological innovation have become widespread. 3D printing of most products has become widely available and cheap, transforming manufacturing and creating micro-manufacturing hubs in every country. New bio- and medical technologies allow for comprehensive early diagnosis of disease and treatment, extending lives and health. Automation coupled with artificial intelligence is able to replace half of the workforce, creating a wave of redundancies and layoffs. Energy production is transformed as new technologies driven by global innovation create a variety of energy options. The Brunei sovereign fund is used to kick-start these initiatives. Subsequent funding is crowd-sourced.

Outcome for Brunei:

In this scenario, Brunei prospers with an economic diversification strategy that is based on social development. Energy technology diversification means that the world is less dependent on oil and oil prices remain low. However, Brunei has found key niche areas to compete, developed SMEs, and FDI and growth remain strong. This leads to a transformation from traditional community social structures, e.g. family, education and traditional values into high-tech communities and global citizens. There is extremely high productivity due to the transformation of work structures and distributed production technologies (in energy and manufacturing). The general public is given a choice to either not work but receive a basic income, or work and earn more, on top of the basic income received. Liberal arts and spiritual development are encouraged. There is near zero poverty with people enjoying high standards of living. Green technologies are adopted while still being able to preserve, if not enhance, the Heart of Borneo (HoB).

Specific characteristics of this scenario utilising the STEEP method are outlined below:

Economy:

The economy is completely transformed, with automation as part of people's lives. Global markets and high tech industries (e.g. additive manufacturing/3D printing, nanotechnology, virtual reality, artificial intelligence, robotics, biotechnology, and neural-enhancement) take over the economy. These high tech industries are self-sustaining and globally oriented. The concept of work is transformed and work is flexible. As automation takes over, mass unemployment takes place. The employment option is retained mostly for professionals in key skilled areas such as computer and information sciences, engineering, management, finance and health.

Society:

Stratification exists between elites who control technology and those who do not. Society becomes just another part of the global community and global citizenry, and the disappearance of family and tradition occurs. People continue to enjoy welfare provided by the government, but this has transformed into a basic income. Jobs become largely non-existent or meaningless for people. People work not for survival, but because it provides meaning and purpose in their lives. Culture is engineered with allowance for some diversity of lifestyles. Simultaneously, the society is constantly being monitored from within.

Environment:

The environment is abundantly green and clean, with strict environmental regulations, and the Heart of Borneo continues to be preserved and enhanced. Hi-tech innovations are put in place to monitor preservation of the environment and to ensure repercussions for those that break the rules. Drone technology, remote photography and satellite imagery eliminate ecological criminal activity. The smart cities concept is widely adopted throughout the country.

Technology:

Technologies used are green technologies, and high criteria ensure they remain clean and sustainable. High-tech technologies enable a move towards a knowledge economy, the "internet of things" and the virtuality of common spaces. Clean tech is a powerful industry sector that provides robust energy solutions within ecological constraints. Peer-to-peer technologies that allow "Design Global Manufacture Local" become common.

Education:

Lifelong education is emphasised, whereby liberal arts and spiritual development are encouraged. Importantly, there is borderless access to education. Brunei's institutions of higher learning diversify; they provide MOOCs (Massive Open Online Courses) and virtualised learning spaces for people both inside and outside Brunei.

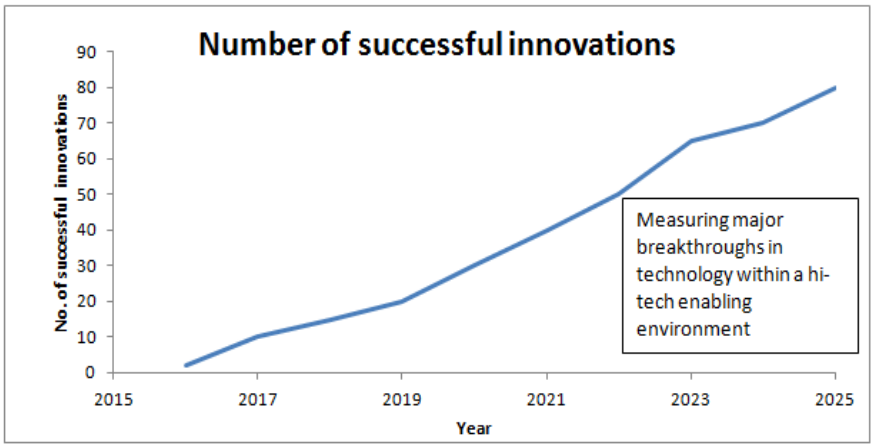
Politics:

An authoritarian political structure is in place; everything is policed as in the book "1984". Overall, there is high certainty and predictability. This leads people to feel secure about the future although some complain about the boredom and the lack of freedom. Surveillance is common, both by people and public camera surveillance systems. Hackers, however, find ways out of surveillance. New technologies are also used to join alternative online communities and niche interest groups.

The key measurement in this future is the number of successful technological innovations:

Scenario 4 Diagram.

Hypothetical projection measuring technological breakthroughs.



Source: Author's calculations

A day in the life of a citizen could look like this:

Lina wakes up in the morning after spending yet another night in virtual reality - under the stars. She presses a button, and her techno-revolving chair takes her to the bathroom in the next room. She has a shower and gets ready in ten minutes, as her clothes are readily available by the press of a button. She has her breakfast - where its energy and calories have already been formulated according to her weight and activity for the day. Lina does not need to leave home to obtain a university degree - everything is learnt from home - via a virtual classroom, and access available to online teachers and friends, as well as other learning resources. Her once terminally ill mother is now cured thanks to breakthroughs in medicine and technology. But a couple of her friends had their identity stolen and are now struggling to reinstate some sense of normalcy into their offline lives. Others are struggling with social alienation, frustration and boredom. Lina's nearby neighbours worry about not being able to prevent their children's access to harmful online content. They also sometimes feel their children are becoming overly dependent on high tech, turning them into 'brainless zombies'.

Learning from Scenarios: Preferred Future for Brunei

Image 5.

Bruneians flying high whilst remaining connected to the roots.

Source: https://shantiodyssey.wordpress.com/tag/brunei/

The four scenarios outlined represent a concentrated effort to investigate future possibilities, so that some possible occurrences can be prevented and others created. It is highly unlikely that any given scenario will become the predominant one in the future. Rather, a combination of all four could be anticipated. The key for the successful combining of multiple future options lies in: (1) the clarity of articulating the preferred future; and (2) the subsequent development of policy responses to help such preferred future to come into being.

After development and the lengthy discussion on the four generic alternative futures model, the preferred future, favoured by most participants, represents a hybrid of scenarios 1, 3 and 4. This preferred future draws from the "desirable" features of these three scenarios:

> **From Scenario 1**: The emphasis on economic diversification and economic growth, e.g. using the cluster approach to foster a competitive environment. Some examples of developing industries include: knowledge-based industries, downstream and upstream oil and gas, tourism, Islamic finance and halal industries. SMEs and FDI are still encouraged, especially in the knowledge-based sector.

From Scenario 3: Industries carefully selected based on the ability to give back to society and to take into the account the sustainability of the environment. Economic growth must therefore be sustainable and balanced. The emphasis is on the importance of an overall sense of safety, peace and harmony, and low crime rates. Economic development is important, but community development and caring for the social fabric even more so.

From Scenario 4: Industries carefully selected in terms of their competitive edge and the ability to provide gainful employment and entrepreneurship. Government services are privatised where possible. Social stratification still exists but there is a move towards a middle class society where poverty is eliminated and the meritocratic reward system is established. Therefore the standard of living increases for all, i.e. inclusive growth.

These and other specific characteristics of the preferred future scenario utilising the STEEP method are outlined below:

Economy:

Economic growth is pursued through robust diversification strategies where the government provides full support by executing the necessary policies, with proper monitoring and adjustment mechanisms in place. Government services are privatised where possible to boost efficiency and effectiveness, but not where perverse incentives (or monopolies) are created that work against development goals. Productivity is emphasised in systems and wastage is eliminated. Employment opportunities and meaningful work made available for citizens are one of the key criteria for foreign direct investments. Flexible employment options and flexible working hours are common, and there is allowance for voluntary exit from the job market by providing support systems (e.g. universal basic income). The sharing economy helps to mutualise community resources, skills and knowledge. Reward systems are restructured according to more relevant universal KPIs (key performance indicators) and genuine progress indicators.

Society:

Community development is emphasised amidst the pursuit of economic growth. Traditional values and the Bruneian heritage are preserved and further enhanced. Cultural diversity is respected, and religious tolerance is practiced. The government significantly intervenes to reduce poverty levels via sustainable mechanisms and programmes, such as practical educational pathways, which lead to higher standards of living and the

elimination of poverty. A basic universal income for the unemployed and disadvantaged is provided. There is less discrimination on the basis of cultural backgrounds and gender, and higher acceptance of cultural diversity and highly skilled foreign workers. This becomes the seed for the creation of cosmopolitan Brunei.

Environment:

The adoption of green technologies is enforced in order to preserve the environment and at the same time achieve a higher standard of living. A clean environment is seen as the key factor in preserving a good quality of life and also in attracting tourism. Smart cities living and liveability is of utmost importance. Brunei becomes internationally recognized for its leadership in developing proactive environmental policies and practices.

Technology:

Technological advancements are pursued and carefully selected based on clear criteria for wellbeing (rather than technology for technology's sake). FDI brings in new technologies and enhances productivity, boosting economic growth. At the same time, technological innovation develops locally, which is stimulated by various governmental initiatives, for example by using the "Design Global, Manufacture Local" model (Ramos, 2016).

Education:

Equitable and inclusive quality education and lifelong learning are achieved. The focus is on creating a highly qualified population, not only in mainstream education but also in liberal arts, natural sciences and adult education. Brunei not only teaches itself its native heritage and traditional knowledge through peer-to-peer education but the society has embraced its own unique strengths and shares them with the world through virtualised learning opportunities.

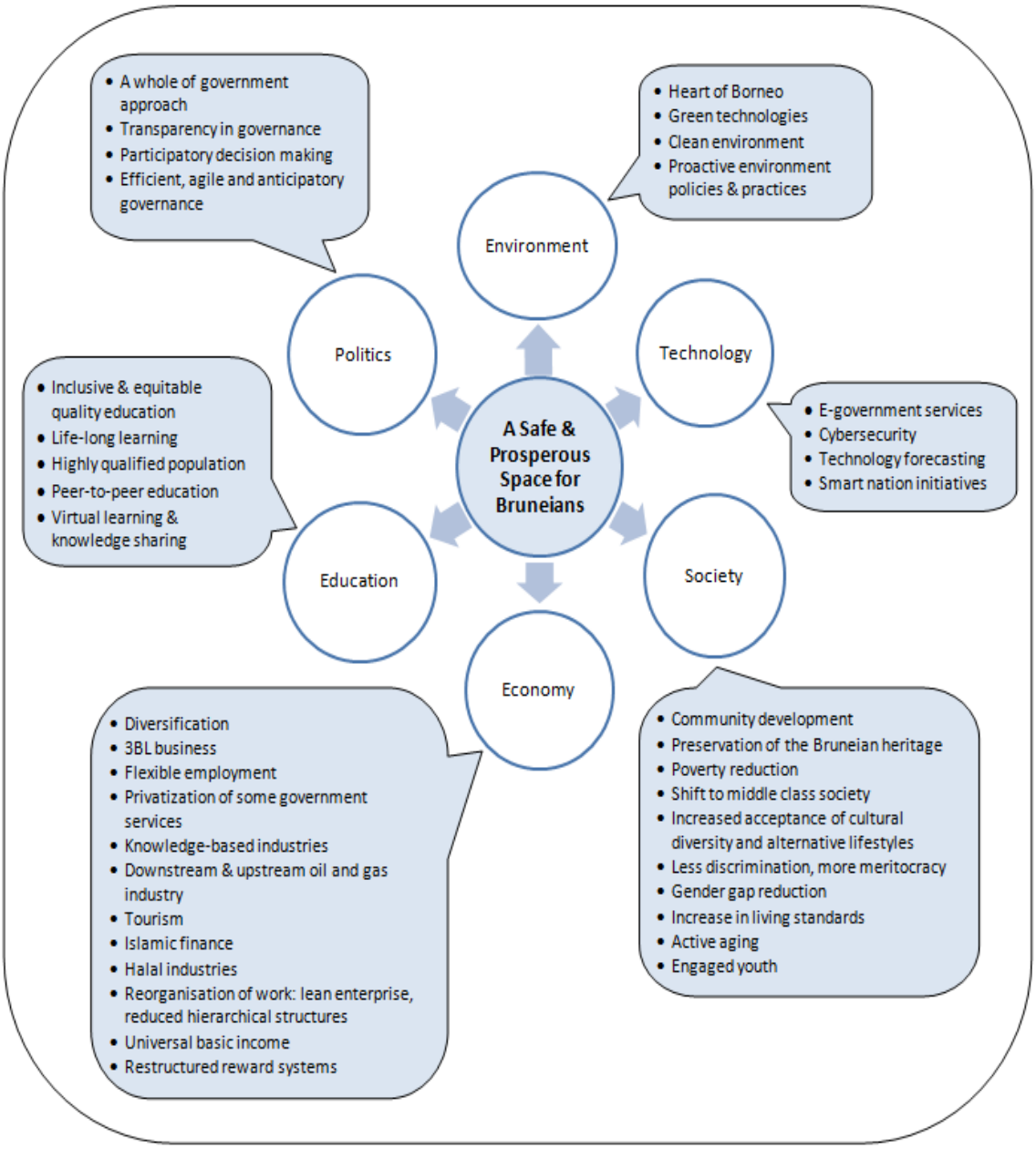
Politics:

A Whole of Government Approach (WGA) is adopted in order to create transparency in governance and participatory decision making. Public policy becomes integrated and holistic; each public service is no longer only practiced within the boundaries and silos of a particular ministry or department. Rather, the services are well connected and a high level of cooperation takes place. Governance becomes more efficient, agile and anticipatory – solving problems before they become big – whilst simultaneously seizing emerging opportunities for investment.

Such a complex future cannot be simply summarized in a two by two table. That is, a more holistic and interactive measurement mechanism is introduced:

Diagram 5.

Modified STEEP analysis-based indicators for the preferred future of Brunei.



Source: Author's diagram

Finally, a day in the life of a citizen could look like this:

The future is bright for young people like Lina. The economy is growing and there are many business and employment opportunities, including in the high-tech and environmental sectors. Community development and environmental conservation are emphasized more than ever, and the accompanying values are instilled in young children in various educational environments and embraced by adults in their lives and working environments. As Lina is graduating from school, she is considering multiple options for her future. She can choose to pursue further training and education. She could either look for more traditional work and focus on productivity to generate more income, or choose not to engage in the formal economy and receive a basic (minimal) income from the government whilst pursuing other interests (such as family care, community development, environmental preservation or ongoing learning). Whichever way she chooses to go, the government system in the country will support her. Recently created anticipatory and whole of government approaches are efficient, eliminate wastages, and uphold meritocracy. Cultural and lifestyle diversity is encouraged, and helping the community eliminate poverty is the norm in the country. Lina appreciates that she can meet all of her basic needs effortlessly and that she can focus on developing her strengths for the benefit of others. She feels that she belongs and she feels safe in knowing that whatever challenges she and her family may face, they will be assisted by the community and the government, which solve problems in their earliest stages.

4.0 Policy Implications and Recommendations

While it is common knowledge that the future is unknown, by investigating current trends and emerging issues it is possible to have enhanced insight into some plausible future developments. Further, it is possible to become more proactive about creating the future preferred by most. So, what can be learned from the scenario development process which is relevant for policy makers in Brunei?

Several **key conclusions** can be drawn from the underlying research behind this article:

1. The future is not static and will not occur along a straight line, merely extrapolating based on past events.
2. Current disruptions and uncertainties, including economic restrictions, are likely to continue in the future.

3. At any given moment in the present there are multiple possibilities for the future. Policy makers would benefit from clarifying these possibilities in their specific areas of interest.
4. Policy makers can utilize insights from scenario generation processes to introduce policies designed to prevent or minimize undesirable features which may occur and enhance desirable characteristics of the preferred future. Such an approach will have very concrete implications for the lives of Bruneian citizens, in the short, medium and long-term future.

From these conclusions, the **key recommendations** are as follows:

1. A generic scenario development method should be implemented across the board to better inform decision making processes, including in the context of very specific policy issues.
2. Our pilot study has shown that there was an overall agreement with regard to the preferred future for Brunei. However, this pilot study should be expanded to include more diverse participants and larger groups. In addition, a feasibility study should focus on specific strategies needed to move closer to such a preferred future.
3. Based on our preferred scenario for the future of Brunei, policy responses should simultaneously take into account a (diversified) economy, an (inclusive and diverse) community, (social and economic) security and a (protected) environment. For this to occur, a new way to measure successful development which moves beyond "business as usual" and traditional GDP growth charts needs to be developed and more widely utilized. Thus, new measurements are required to measure new futures.

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